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Former Chevron Property Remedial Investigation/Feasibility Study Report

City of Bremerton

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Parametrix

Former Chevron Property Remedial Investigation/Feasibility Study Report

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CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

09/30/2011



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KEY TERMS

AO	Agreed Order
ARARs	Applicable or Relevant and Appropriate Requirements
ASTs	aboveground storage tanks
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
chemox	chemical oxidant
cm/s	centimeters per second
COCs	Contaminants of Concern
CSM	conceptual site model
cy	cubic yard
DCAP	Draft Cleanup Action Plan
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
FS	feasibility study
IA	Interim Action
MCLs	maximum concentration limits
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MTCA	Model Toxics Control Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NTR	National Toxics Rule
NTUs	nephelometric turbidity units
PAHs	polycyclic aromatic hydrocarbons
ppmv	parts per million by volume
QA/QC	Quality Assurance/Quality Control
RI/FS	Remedial Investigation/Feasibility Study
SEPA	State Environmental Policy Act
site	Former Chevron Property
SMS	Sediment Management Standards
SVE	soil vapor extraction
TPH	total petroleum hydrocarbons
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

This report describes the results of investigation and cleanup activities performed at the Former Chevron Property (site) by the City of Bremerton. The site is the former location of a Chevron bulk fuel tank farm used for commercial sale of petroleum products. While the tank farm was in operation, an unknown amount of petroleum was released into the site's soil and groundwater. The City of Bremerton purchased the property in 2005 for the purposes of cleaning it up and developing it into an addition to the adjacent Evergreen Rotary Park. Site contamination was discovered by Chevron in 1988 when the tank farm was decommissioned. Chevron conducted cleanup at the site from 1988 through 2003, including the installation and operation of a vapor extraction remediation system. However, at the time the City purchased the property, significant contamination remained in the former tank area and operations area where tanker trucks were loaded.

Initial cleanup activities by the City consisted of a review of the site's historical data and development of cleanup approaches and preliminary cost estimates. The initial preferred cleanup approach selected by the City consisted of installing a cap and groundwater cutoff wall to encapsulate the contaminated soil and groundwater. Following this work, the City began negotiations with the Washington State Department of Ecology (Ecology) for establishing an Agreed Order (AO) for cleanup. Establishment of an AO provided the City with a funding opportunity under Ecology's Remedial Action Grant program. The AO was finalized on November 20, 2007, and the City began the Remedial Investigation/Feasibility Study (RI/FS).

As an initial step, the City developed an alternative to the initial cleanup approach that involved treating the majority of the site's contaminated soils in place (in situ) using chemical oxidation (chemox). Chemox was selected for the purposes of either significantly reducing or completely treating the contamination, a requirement of Ecology under the Washington State Department of Ecology Model Toxics Control Act (MTCA). The City proposed to implement this alternative approach as an interim action (IA) intended to meet the requirements of a final cleanup action. Ecology accepted the IA approach and an RI/FS and IA work plan was developed and approved.

RI sampling was conducted to evaluate the extent of contamination at the site. The sampling showed that the extent of the contamination was similar to that seen historically but that concentrations in soil and groundwater were generally lower. RegenOx was selected as the chemical oxidant for the in-situ treatment of contamination. A pilot study and bench scale test were performed to establish an optimal rate of RegenOx application (pounds of reagent per unit volume of soil). The IA was performed during the summer of 2009; RegenOx was applied to the contaminated soil using a dual-axis soil mixing tool. Excavation and removal of "hot spot" contaminated soils was also performed in several areas. The results of confirmatory soil samples collected from the soil mixing zone indicated that approximately 70 percent of the soil contaminant mass was destroyed by the RegenOx application. Although this reduction is significant, some residual soil contamination was detected at concentrations above cleanup levels.

Residual contamination in soil and groundwater is currently undergoing natural attenuation, which has been enhanced by oxygen releasing compound applied at the same time as the RegenOx. Three quarterly groundwater sampling rounds conducted after the IA confirmed that natural attenuation had occurred based on a decreasing trend in groundwater concentrations and geochemical parameters (such as low dissolved oxygen levels) that indicate aerobic and anaerobic biological respiration is occurring at the site. In late 2010, the City and Ecology negotiated an agreement to perform additional work including a quarterly sampling round and injection of oxygen releasing compound in select areas where elevated groundwater concentrations were observed. A round of ambient air samples was also

included in the additional work. All additional work was completed by June 8, 2011. The results of the additional testing indicated that natural attenuation is continuing to occur in groundwater and that air at the site has not been impacted by volatile hydrocarbons.

The next steps for the site are to complete a Draft Cleanup Action Plan (DCAP) for submittal to Ecology. Ecology will publish the DCAP for public comment and finalize the plan based on comments received. The DCAP will outline a final cleanup action for the site consisting primarily of long-term groundwater monitoring to confirm that natural attenuation is continuing to occur. Once groundwater concentrations reach cleanup levels at the point of compliance, groundwater monitoring will be discontinued.

The City of Bremerton has indicated its ability to fund any follow-on cleanup activities and on-going groundwater monitoring will be severely limited due to financial hardship. This limitation will affect both the scope and implementation schedule of these activities in the near term. The City and Ecology will coordinate specifics to ensure the DCAP and implementation schedule acknowledge this issue to ensure the City has the resources to successfully implement all follow-on work.

1. INTRODUCTION

This report describes the Remedial Investigation/Feasibility Study and Interim Action performed at the Former Chevron Property located at 1310 Highland Avenue in Bremerton, Washington (Figure 1). The currently vacant site is the former location of a Chevron bulk fuel tank farm. Historical spills and releases of petroleum from the tank farm caused widespread soil and groundwater contamination at the site. The City of Bremerton is in the process of cleaning up the site in preparation for its development into an addition to the adjacent Evergreen Rotary Park.

In 2007, the City entered into an Agreed Order with the Washington State Department of Ecology to conduct the RI/FS and IA. A work plan for RI/FS and IA activities was developed for tasks to be performed under the AO (Parametrix 2007). The contents of this report describe the RI/FS and IA activities including soil and groundwater sampling, pilot testing of remedial technologies, excavation and in-situ treatment of contaminated soils, confirmational sampling, and development of recommendations for follow-on work to complete the site cleanup process.

1.1 PURPOSE/REGULATORY FRAMEWORK

The RI/FS and IA was completed in accordance with procedures contained in Washington Administrative Code (WAC) 173-340, Model Toxics Control Act (MTCA) [Ecology 2007]. The purpose of the RI/FS was to define the nature and extent of contamination, develop and evaluate appropriate cleanup action alternatives, and select a preferred alternative. The IA performed was intended to meet the requirements of the IA section of MTCA (WAC 173-340-430). MTCA requires cleanup actions to be protective of human health and the environment by eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route. Specifically, MTCA requires that cleanup actions be evaluated on the basis of:

- Protection of human health and the environment.
- Compliance with cleanup standards.
- Compliance with applicable state and federal laws.
- Provision for compliance monitoring.

Cleanup actions should also use permanent solutions to the maximum extent practicable, provide for a reasonable restoration timeframe, and consider public concerns.

2. SITE BACKGROUND

2.1 SITE DESCRIPTION AND HISTORY

The Former Chevron Property is a 1.4-acre waterfront property located adjacent to Evergreen Rotary Park on the Port Washington Narrows. The historical bulk fuel tank farm operated at the site from prior to 1946 until circa 1988 (Figure 2). Based on aerial photographs, the facility was expanded northward to its present boundaries between 1946 and 1963 (Figure 3) by the placement of fill in the intertidal zone. This filling created a relatively level "lower yard" area where commercial fueling operations were conducted. The site uplands or "upper yard" are the former location of the aboveground bulk fuel tanks (Figure 4). The majority of the site's shoreline is armored with concrete rubble or steel and wooden bulkheads.

Products handled at the tank farm consisted primarily of diesel and gasoline (Hart Crowser 1989a). Fuel was offloaded from barges at a fueling pier in the Port Washington Narrows and pumped through aboveground piping to twelve aboveground storage tanks (ASTs) located in the upper yard. Fuel transfer also occurred through the use of underground piping. This is supported by observations made during the IA, when corroded steel piping was exposed in a soil excavation conducted to remove hot spot soils in the lower yard. Leaks from this underground piping are the likely source of the majority of the subsurface contamination at the site. Fuel was loaded from the ASTs to tank trucks at four loading racks located in the lower yard. Piping south of the former garage extended underground beneath the driveway to supply fuel to the southwestern loading rack. All aboveground structures were removed by the end of 1988 (GeoEngineers 1998).

2.2 PHYSICAL CHARACTERISTICS OF THE SITE

2.2.1 Geologic and Hydrogeologic Conditions

Soils in the upper yard consist of glacial till underlain by interbedded dense silts and silty sands (outwash). This soil unit was consolidated during the most recent glaciation and, as a result, is typically very dense and relatively impermeable. The lower yard is underlain by silty sand fill, which was used to extend the lower yard into Port Washington Narrows. The fill is underlain by silty sand outwash at a depth of approximately 20 feet below ground surface (bgs). A section view showing site geologic conditions is provided on Figure 5. The results of slug testing performed by Hart Crowser (1989b) indicate that the hydraulic conductivity of the fill soils is approximately $5x10^{-5}$ centimeters per second (cm/s).

Groundwater at the site occurs at depths of approximately 4 to 10 feet bgs in the lower yard and 5 to 20 feet bgs in the upper yard. Previous site explorations investigated the possible presence of separate upper and lower water bearing units in the upper yard. However, study results indicate that the potential lower water bearing unit did not likely consist of a distinct, second water bearing zone (PEG 1994).

2.3 SUMMARY OF PREVIOUS SITE INVESTIGATIONS

Environmental work at the site began in 1988 following demolition of the bulk fuel facility (GeoEngineers 1988). A timeline of historic events and work conducted at the site prior to the RI activities is provided in Table 1. Detailed summaries of the pre-Agreed Order site investigations described in the table are provide in the site's RI/FS and IA Work Plan provided in Appendix A.

3. REMEDIAL INVESTIGATION

The purpose of the RI activities was to define the nature and extent of soil and groundwater contamination remaining at the site to evaluate the appropriateness of the selected IA and to assist in its design.

3.1 RI ACTIVITIES SUMMARY

RI activities were reported in technical memoranda following completion of each major activity (Parametrix 2008; 2009). These memoranda are included for reference in Appendix C and D, respectively. A summary of activities is provided in Table 2 below.

Table 2. Remedial Investigation Activities Summary

Date	Event Description
March 2008	RI activities conducted consist of soil and groundwater sampling from four surface stations, 19 push probes, and two newly-installed monitoring wells. Groundwater samples were also collected from 10 existing monitoring wells. Refer to Figure 6 and Figure 7 for push probe and well locations.
April 2008	Test pits excavated to confirm depth and location of buried bulkhead. Pilot Scale Test Plan submitted summarizing RI results and presenting a proposed plan to test injection of RegenOx into the contaminated soils within the lower yard.
May 2008	Pilot scale RegenOx injection test performed in nine locations on 10-foot centers.
June 2008	Confirmation samples for pilot test collected; results indicated injection was generally effective.
February 2009	Bench scale test performed to assess performance of in-situ soil mixing as an alternative to injection. Test results were used to select a RegenOx dosing rate of 10 pounds reagent per cubic yard (cy) of soil, which was expected to reduce soil contaminant concentrations by 70 to 75 percent. An aggressive dosing rate of 20 pounds per cy was also developed for discrete high concentration areas.
March 2009	Interim Action Plan submitted summarizing pilot and bench scale tests and proposing an IA consisting of hot-spot soil removal and in situ chemical oxidation followed by enhanced bioattenuation. Bioattenuation to be supported by application of an oxygen releasing compound in the soil mixing zone. The selected oxygen releasing compound was ORC by Regenesis at a dosing rate of 1.5 pounds per cy. IA Plan approved by Ecology and construction plans and specifications were prepared.

3.2 INTERIM ACTION

3.2.1 Interim Action Activities

The objective of the IA was to significantly reduce contaminant levels at the site and enhance natural attenuation processes so that cleanup levels are met within a reasonable timeframe. It is anticipated that the restoration timeframe following the IA will be on the order of 5 years.

The IA was conducted during June through August 2009 in accordance with the IA Work Plan (Appendix D). Results of the IA were reported previously (Parametrix 2010; Appendix E). During the IA, approximately 4,000 cy of contaminated soil were mixed in situ with RegenOX™ and ORC™. Soil mixing was accomplished using a dual-axis mixing tool affixed to a track backhoe arm. Chemical reagents were injected into the contaminated soil zone between 8 and 14 feet bgs while the soil was simultaneously mixed with the tool. The soil mixing area is shown on Figure 8 and Figure 9. Confirmation soil samples were collected the same day as mixing and sent to the analytical laboratory for analysis at 7 days following mixing (when approximately 90 percent of the chemical oxidation reaction had taken place). If analytical results were elevated in a sample, the corresponding site area was remixed and a second confirmation sample was collected and analyzed. Confirmation results (shown on Figure 9) indicate that, average mass reduction rates achieved were 78 percent for gasoline, 88 percent for diesel, and 40 percent for lube oil. Contaminants exceeding their respective cleanup levels in the confirmation soil samples consisted of gasoline, BTEX compounds, and benzo(a)pyrene.

An additional 1,200 cy were excavated from three hot-spot areas and transported off site for disposal at Waste Management's Columbia Ridge Landfill (see Figure 8). Confirmation soil samples were collected from the bottom and sidewalls of the completed excavations and analyzed to confirm that the cleanup was successful. Analytical results confirmed that all contaminated soil with concentrations above cleanup levels had been successfully removed. An exception is Area 3, where no confirmation samples were collected since the area was located within the soil mixing area. Photographs of IA activities are provided in Appendix F.

3.2.2 Replacement Well Installation and Soil Sampling

Following the IA, a total of ten monitoring wells (MW-4R, MW-9R, MW-10R, MW-13R, MW16R, MW-18R, MW-19R, MW-21R, MW-22R, and MW-26R; Figure 10) were installed to replace wells formerly located within the soil mixing and hot-spot excavation areas. Soil samples were collected from selected wells and six push probe boring to assess soil conditions at 6 months following treatment. Soil results are shown on Figure 10. The results of the sample analyses indicated that contaminant concentrations were generally similar to concentrations measured during the IA. Concentrations of gasoline, BTEX compounds, and/or benzo(a)pyrene exceeded cleanup levels in nine of the thirteen samples collected. Monitoring well logs are provided in Appendix G.

3.2.3 Performance Groundwater Monitoring

Groundwater samples were collected from twelve monitoring wells at 6, 9, and 12 months following the IA to assess the effectiveness of soil treatment and ORC™ application (1st, 2nd, and 3rd quarterly monitoring events). A summary of analytical results is provided in Table 3. Figures 11, 12, and 13 show analytical results for the second, third, and fourth quarter monitoring events as well as groundwater elevation contours and inferred groundwater flow directions. A similar figure was not prepared for the first event since the sampling was split into two separate events, and a single "snapshot" measurement of groundwater elevations in all wells was not collected. Analytical results show significant post-IA contaminant concentration reductions. Gasoline and benzene concentration trends with time are presented on Figures 14 and 15. An exception is Well MW-9, which is exhibiting increasing concentrations. This may be due to an increase in the amount of suspended sediment in the sample collected during the third sampling event. Suspended sediment containing sorbed contaminants can cause sample results to be biased high. The sample from MW-9 saw a marked increase in turbidity during the third sample event as compared to the first two events. Field logs from the three quarterly sampling events

(including turbidity measurements) are provided in Appendix H. The cause for the increase in turbidity is not known be may be due to insufficient well development. This well and any wells that did not produce clear samples during the third event will be redeveloped prior to future sampling during long-term monitoring activities.

Natural attenuation parameters shown in Table 3 indicate that the oxygen levels were enhanced by the oxygen release compound (ORC™) through the second (9-month) sampling event. Oxygen was depleted by the third event indicating that site groundwater conditions no longer support aerobic respiration of contaminants. Evidence that aerobic respiration has been occurring is provided by depleted oxygen levels and elevated alkalinity as compared to upgradient wells such as MW-16. Evidence that anaerobic respiration is currently occurring is provided by the depleted oxygen levels, low oxidation/reduction potentials, and elevated dissolved methane concentrations.

All analytical data generated during the RI and IA was reviewed as part of the project's Data Quality Assurance/Quality Control (QA/QC) procedures. Data QA/QC review memoranda are provided in Appendix I. Appendix J contains hard copies of all analytical laboratory reports.

3.3 SUPPLEMENTAL RI/FS AND INTERIM ACTION ACTIVITIES

In early to mid-summer of 2011 the following activities were conducted as part of the supplemental work proposed to complete the RI/FS. This work was performed in accordance to the work plan dated February 15, 2011 (Parametrix 2011):

- Installation of one new monitoring well (MW-27) to assess cross to downgradient conditions and plume extent from MW-9R.
- Collection of seven air samples to evaluate potential park user exposure to benzene and total volatile organic compounds (VOCs).
- Development and sampling of the new well and twelve existing wells to evaluate current groundwater conditions.
- Injections of ORC™ at select locations to stimulate aerobic bioattenuation.

3.3.1 New Well Installation, Well Network Development, and Groundwater Sampling

One new monitoring well was installed (MW-27) off-site approximately 25 feet west of the site near the City of Bremerton Sewer Pump Station (Figure 13). Following the well installation, the entire monitoring well network for the site (a total of 13 wells) was developed to improve water quality since the site had been producing persistently turbid samples due to the geology and hydrogeology of the area and the IA soil mixing. While the goal was to achieve less than 10 nephelometric turbidity units (NTUs) for each well, only five wells were able to meet this criterion and ten of the thirteen were below 100 NTU. In comparison to the previous sampling completed in August 2010, none of the wells were below 10 NTUs and only five were less than 100 NTUs, showing a marked increase in water quality.

Following development, all thirteen wells were sampled. Results of the sample analysis are provided in Table 3 and field data sheets are provided in Appendix H. In comparison to the last quarterly sampling in August 2010, results were very similar with the exception of MW-21 which exhibited more than one and three quarters times increase in gasoline concentration and one and two third times increase in benzene.

3.3.2 Air Sample Collection

A total of seven ambient air tests (A01 through A07) were performed using a piston hand pump (Sensidyne Gas Detector) and colorimetric tubes for benzene with a detection limit of 0.1 parts per million by volume (ppmv). In addition, ambient air at each sample location area was screened for the presence of total VOCs using a photoionization detector (PID). Air sample locations are shown on Figure 16. The ambient air tests did not detect benzene or VOCs at any of the seven locations tested. Note that location A07 was intended as a background location.

3.3.3 ORC Injection

ORC was injected at 108 locations (shown on Figure 17) between May 26 and June 6, 2011. Application was accomplished using a direct push-probe rig and injection pump to inject a slurry consisting of approximately 1/3 ORC and 2/3 water. Injection points were spaced 10 feet on-center in rows spaced 10 feet apart to create a grid pattern near wells with elevated gasoline and benzene concentrations. The top of the vertical treatment zone was selected based on groundwater depths at the time of treatment. Injection was performed starting at 1 foot above the current groundwater table (as measured in the nearby wells) and extended a total depth of 6 feet below this depth. A general dosing rate of 65 pounds of ORC per injection point was used for a total injected weight of 7,050 pounds of ORC. Dosing rates were field adjusted at some locations. The general dosing rate equates to approximately 3 pounds of dry ORC per cubic yard of treated soil. This rate is approximately twice what was used during the original soil mixing application of ORC during the Interim Action. ORC injection field logs are included in Appendix K.

3.4 NATURE AND EXTENT OF CONTAMINATION

The nature and extent of contamination at the site has been well delineated by the investigations performed to date and is described in the following sections. For evaluation purposes, soil and groundwater analytical data were compared to MTCA Method A Cleanup Levels (MTCA Tables 720-1 and 740-1) provided in Table 4.

3.4.1 Soil

3.4.1.1 Pre-IA Extent of Soil Contamination

Soil with contamination in excess of cleanup levels was found exclusively in lower yard subsurface soils during the RI sampling. An approximate extent of soil contamination is shown on Figure 6. Contaminated soils were observed between the depths of 8 and 14 feet bgs in a “smear zone” corresponding to the annual groundwater table fluctuation. The contamination consisted mainly of gasoline at concentrations as high as 5,100 mg/kg. Benzene was detected in samples containing elevated gasoline at concentrations as high as 21 mg/kg. Diesel was detected above cleanup levels at three locations (PP08, PP14, and PP16) at concentrations as high as 2,316 mg/kg. Motor oil was detected above the cleanup level at a single location (PP14) at a concentration of 3,800 mg/kg. Polycyclic aromatic hydrocarbons (PAHs) exceeded the cleanup level in two samples at concentrations of 0.1 to 0.25 mg/kg total PAHs (by toxicity equivalency method). Note the buried wooden bulkhead shown on Figure 6. Based on the RI data, the bulkhead may have acted as a barrier to contaminant migration in the downgradient direction. This bulkhead was removed during the IA.

No contaminated soils were detected in the upper yard during the RI; however, a limited zone of soil contamination was assumed to exist near Wells MW-16, MW-18, and MW-19 based on the presence of floating product in the wells or elevated groundwater concentrations.

No contaminants were detected in the surface soil samples collected during the RI. Surface soil sampling locations were selected based on the results of field screening conducted on surface soils at 24 locations. No indication of surface contamination was observed during the field screening.

3.4.1.2 Post-IA Extent of Soil Contamination

Residual contaminated soils with concentrations exceeding cleanup levels remain in some lower yard areas; however, residual concentrations are significantly reduced from pre-IA levels (Figure 9 and Figure 10). Contaminants that currently exceed cleanup levels in lower yard subsurface soils consist of gasoline, benzene, total xylenes and polycyclic aromatic hydrocarbons (PAHs). Lead testing was conducted but no detected concentration exceeded the cleanup level.

As described previously, all upper yard contaminated soils were removed during the IA.

3.4.2 Groundwater

The approximate extent of groundwater contamination exceeding cleanup levels is shown on Figures 7, 11, 12, and 13. As shown, the extent of post-IA groundwater contamination has significantly reduced with respect to the pre-IA contamination. Contaminants that currently exceed cleanup levels in groundwater consist of gasoline, diesel, and benzene. A general decreasing trend in concentrations is observed. Two exceptions are MW-09R and MW-21R, which are exhibiting increasing gasoline concentrations. Evidence that aerobic respiration has been occurring in these wells is provided by depleted oxygen levels (Table 3). Evidence that anaerobic respiration is currently occurring is provided by elevated dissolved methane concentrations.

The additional ORC^{TM} injection conducted was intended primarily to provide additional treatment of gasoline in the vicinity of these two wells by aerobic respiration. It is anticipated that a decreasing trend will be observed in the sampling conducted during upcoming long-term monitoring.

Testing was conducted for both total and dissolved lead during the sampling events; the only results that exceeded cleanup levels were total lead results from wells MW-09R, MW-20, and MW-21R (Table 3). In general, corresponding dissolved results did not exceed cleanup levels, indicating that the total results were biased high by the presence of suspended sediment. An exception is a single dissolved lead result from well MW-09R in August 2010, which slightly exceeded the cleanup level.

3.5 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) identifies primary contaminant sources, release mechanisms, transport mechanisms, secondary contaminant sources, potential pathways, and exposure routes. Existing chemical data, site characterization data, future land uses, and identification of potential human and ecological receptors were used to develop the model presented in Figure 18. The CSM is discussed further below.

3.5.1 Primary Sources of Contamination and Primary Release Mechanisms

The primary contaminant source is the bulk fuel tanks and piping, including potential releases from tanks, dispensers, piping, and spilled products. Contaminants associated with the bulk fuel tanks consist of petroleum hydrocarbons and lead.

3.5.2 Secondary Sources and Release Mechanisms

When a released contaminant is retained in an environmental medium such as soil, the medium functions as a secondary source for further chemical release. Secondary release mechanisms for contaminants potentially present at the Site include the following:

- Leaching from on-site soil to groundwater.
- Volatilization from soil and groundwater to air.
- Downgradient discharge from groundwater to surface water.

3.5.3 Pathways and Potential Receptors

An exposure pathway is a mechanism by which receptors are assumed to contact contaminants. MTCA defines an exposure pathway in terms of four components (WAC 173-340-200):

- A source and mechanism of chemical release (e.g., a release of contaminants to the subsurface).
- A retention or transport medium (e.g., groundwater).
- A point of potential exposure to a contaminated medium (e.g., commercial worker in an on-site building located above the groundwater plume).
- An exposure route at the exposure point (e.g., inhalation of vapors).

If any of these four components is not present, then a potential exposure pathway is considered incomplete and is not evaluated further in a risk assessment. If all four components are present, a pathway is considered complete.

Potential exposure routes for human and ecological receptors at the site include the following:

- **Dermal/Direct Contact**. Exposure to chemicals in soil may occur through direct contact with soil. Direct contact is a potential exposure route for current and future on-site workers or recreational visitors. Burrowing or ground-dwelling mammals and invertebrates may be exposed directly to soil contaminants.
- **Inhalation**. Particulates from soil can be transported by air and inhaled by potential on-site and off-site receptors. Emissions of volatile chemicals from soil and groundwater may also be transported as vapors by air. Terrestrial biota could also be exposed to chemicals volatilizing to outdoor air, but if this exposure actually occurs, the duration of exposure would be expected to be relatively short. Burrowing animals (e.g., shrew) may be exposed to volatile air contaminants in underground stagnant air while spending time within the burrow.
- **Ingestion**. Ingestion of chemicals in soil is a primary exposure route for human and ecological receptors. Uptake by plants is also a potential exposure route.

Potentially complete exposure pathways include the following:

- Current/Future Outdoor Recreational User:
  - Inhalation of vapors from the subsurface (groundwater and soil) in outdoor air.
- Current/Future Construction/Utility Worker:
  - Incidental soil ingestion and dermal contact.
  - Inhalation of vapors from the subsurface soil in outdoor air.
  - Inhalation of vapors from or dermal contact with groundwater in a trench or excavation.
- Ecological Receptors:
  - Incidental soil ingestion and dermal contact in a burrow.
  - Inhalation of vapors from the subsurface soil in outdoor air or in a burrow.
  - Inhalation of vapors from or dermal contact with groundwater in a burrow.

3.5.4 Fate and Transport

The primary contaminant transport mechanisms are advection and dispersion caused by seepage of groundwater through the contaminated smear zone soils. Residual petroleum constituents may desorb from contaminated soil particles into groundwater and become transported in the downgradient direction where they may resorb to clean soil particles or continue to travel with the groundwater. Dissolved petroleum constituents are typically subject to biodegradation by naturally occurring soil bacteria. Low dissolved oxygen concentrations measured in site wells during the third quarterly sampling event suggest that sufficient oxygen is not available to support aerobic biodegradation (the most efficient biodegradation process).

Vapor migration from soil and/or groundwater is a potential transport mechanism at the site. The occurrence of such migration has not been established. In an outdoor park setting, soil vapors are expected to be rapidly diluted by ambient air currents and are not anticipated to present an exposure risk.

3.6 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Cleanup actions under MTCA (WAC 173-340-710) require the identification of all ARARs. These requirements are defined as:

> "Applicable" requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site.
>
> "Relevant and appropriate" requirements means those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site.

The potential ARARs for the site include three types:

- Chemical-specific.
- Location-specific.
- Action-specific.

Potential ARARs were identified for each medium of potential concern in Table 5.

3.6.1 Terrestrial Ecological Evaluation

Potential terrestrial receptors identified in the SEPA environmental checklist developed for the site (Parametrix 2007) include hawks, herons, bald eagles, songbirds, waterfowl, otter, raccoons and other small mammals. No endangered or threatened terrestrial species were identified.

Terrestrial ecological evaluation procedures are provided in MTCA Section WAC 173-340-7490. The site meets criteria for an exclusion from a terrestrial ecological evaluation if a conditional point of compliance is set at the biologically active depth of 6 feet bgs. All residual contaminated soil at the site is located below this depth (at 8 to 14 feet bgs based on the RI and post-IA soil sampling). According to WAC 173-340-7490 (4)(a), sites with institutional controls to prevent excavation of deeper soil may set a conditional point of compliance. It is anticipated that institutional controls preventing excavation of contaminated soils will be established at the site for the protection of potential future site workers as discussed in Section 4.1.3.

3.7 ASSESSMENT OF RISK

Current risks to human receptors at the site appear limited since residual contaminated soils are located at depths below 8 feet. These soils do not present a direct contact risk under a scenario consisting of recreational use at an outdoor park. Use of the site as an outdoor park also greatly reduces (or eliminates) the potential for exposure to soil vapors as compared to potential indoor exposures under a residential scenario. The apparent greatest potential risk to human receptors is to construction workers who may come into direct contact with contaminated soil during future excavation/trenching activities. Ecological receptors have a similar risk of exposure under this excavation scenario if deeper contaminated soils are deposited on or near the ground surface.

Groundwater is not currently used at the site nor is it likely to be under any potential future site use scenario. This is supported by MTCA 173-340-720(2)(d), which recognizes that, for sites with shallow groundwater in close proximity to marine water, there is an extremely low probability that groundwater will be used for drinking water. The groundwater may be classified as non-potable since the following conditions of 340-720(2)(d) are met:

- 340-720(2)(a) – The groundwater does not currently serve as a source of drinking water;
- 340-720(2)(c) - It is unlikely that hazardous substances will be transported from the contaminated groundwater to groundwater that is a current or potential source of drinking water;
- 340-720(2)(d)(ii) – There are known points of entry of the groundwater into the surface water;
- 340-720(2)(d)(iii) – The surface water is not classified as a suitable domestic water supply source under WAC 173-201A and;

- 340-720(2)(d)(iv) – The groundwater is sufficiently hydraulically connected to the surface water that the groundwater is not practicable to use as a drinking water source.

Risk posed by the groundwater to surface water pathway appear to be minimal. This observation is supported by the results of the sediment chemical and biological testing described in Section 2.3. As described, sediments adjacent to the site were tested during two separate sampling events and were shown to pass applicable SMS criteria. In addition, contaminant concentrations in three of six wells located adjacent to the shoreline are either not detectable or are below cleanup levels (Figure 13: wells MW-27, MW-26R, and MW22R. The remaining three wells (MW-21R, MW-13R, and MW-25) contain gasoline and benzene contamination at concentrations slightly to moderately above cleanup levels. Gasoline and benzene are relatively highly soluble and are expected to be diluted many times over as soon as they enter surface water.

Risks at the site can be mitigated by the establishing institutional controls for the property that prevent or control excavation activities within the contaminated soil and that prevent the use of groundwater for any purpose (see Section 4.1.3).

3.8 CLEANUP LEVELS SELECTION

Applicable cleanup levels for the site were established in the RI/FS and IA work plan and consist of:

- MTCA Method A Soil Cleanup Levels for Unrestricted Land Use (WAC 173-340, Table 740-1).
- MTCA Method A Cleanup Levels for Groundwater (WAC 173-340, Table 720-1).

Applicable MTCA Method A cleanup levels are included in Table 4 and in the results summary tables and figures provided in this report.

4. FEASIBILITY STUDY

The purpose of a feasibility study (FS) is to select a preferred cleanup action through a process of evaluating and comparing alternative approaches. An FS should include the evaluation of a reasonable number of cleanup action alternatives that meet the minimum requirements of MTCA. The IA accepted by Ecology for implementation at the site was developed using the FS approach and is intended to satisfy the requirements for a cleanup action. The process under which the IA was selected, minimum cleanup action requirements, proposed points of compliance, and proposed future cleanup action activities are described in the following sections.

4.1 INTERIM ACTION DEVELOPMENT

The IA approach used at the site was negotiated by the City and Ecology during discussions that led up to the establishment of the site's Agreed Order. Prior to these negotiations, four conventional cleanup approaches were developed and evaluated by the City (including cost estimates) for pre-purchase planning purposes (Parametrix 2005). Alternatives evaluated included monitored natural attenuation, capping, installation of a groundwater cutoff wall, and complete removal of contaminated soil by excavation. The preferred approach identified during this analysis consisted of an impermeable cap coupled with a groundwater cutoff wall.

During the AO negotiations, Ecology indicated that acceptable cleanup approaches included only those that would result in significant reduction/destruction of source contamination or its complete removal by excavation. Since none of the original approaches were acceptable, the City developed the IA approach used. This approach was proposed as an alternative to complete soil removal since this was estimated to be a prohibitively expensive option. The IA is intended to constitute a "permanent cleanup" as defined by MTCA in that cleanup standards will be met at the site without further action being required. Since the City and Ecology agreed to a permanent cleanup approach, a detailed evaluation of cleanup alternatives and the disproportionate cost analysis of WAC 173-340-360(3)(e) are not required per WAC 173-340-360 (3)(d).

A summary of estimated costs associated with the initial alternatives evaluated and the IA approach selected is provided as follows:

- Monitored Natural Attenuation – $260,000
- Impermeable Cap – $430,000
- Impermeable Cap and Groundwater Cut Off Wall – $850,000
- Complete Soil Excavation and Removal – $5,700,000
- In-Situ Chemical Oxidation and Hot Spot Soil Removal $980,000 (actual construction cost)

It may be observed from the above that the IA conducted provided a relatively high benefit to cost ratio as compared to the other alternatives.

4.2 MINIMUM REQUIREMENTS FOR CLEANUP ACTIONS

4.2.1 Threshold Requirements

MTCA requires that all cleanup actions meet the following threshold requirements to be considered viable (WAC 173-340-360[2][a]):

- **Protection of Human Health and the Environment**: The IA will meet this requirement through source reduction in soils and meeting the cleanup levels for groundwater at the conditional point of compliance established for the site (see Section 4.2). The protectiveness of the remedy will be maintained through the use of institutional controls.
- **Compliance with Cleanup Standards**: This requirement will be met through the actions described under "Protection of Human Health and the Environment" above.
- **Compliance with ARARs**: In addition to meeting cleanup standards, compliance requires that the cleanup actions also meet location-specific and action-specific state and federal requirements (see Table 5). The IA was designed and implemented to meet the requirements of this threshold criterion.
- **Provision for Compliance Monitoring**: This requirement was met in part by the confirmational soil and groundwater samples collected during and following the IA. Continued groundwater monitoring through a long-term groundwater monitoring program (to be implemented) will complete this requirement.

4.2.2 Other Requirements

In addition to the threshold requirements, WAC 173-340-360(2) requires cleanup actions to meet "other requirements" that are part of the minimum requirements for cleanup actions. These other requirements include the following:

- **Use Permanent Solutions to the Maximum Extent Practicable**: The IA meets this requirement by reducing or eliminating the sources of petroleum at the site. As described in the IA Report (Parametrix 2010), a total of 1,644 tons of contaminated soil were excavated and removed from the site. In addition, an approximate total of 3,900 cubic yards of contaminated soil were treated in situ using RegenOx and ORC. Based on post-IA soil testing, the average mass reduction achieved for gasoline, diesel, and lube oil was 78 percent, 88 percent, and 40 percent respectively.
- **Provide for a Reasonable Restoration Timeframe**: Significant reductions in soil and groundwater contaminant concentrations were achieved during the IA. The supplemental ORC injection event is expected to result in continued reductions in both soil and groundwater concentrations. Once the ORC is expended (within approximately one year from the date of injection), natural attenuation of contamination should continue at the site, although at a slower rate. A 5-year restoration time frame is estimated based on anticipated performance of the ORC and follow-on natural attenuation. The cleanup actions performed at the site to date provide for a reasonable restoration time per WAC 173-340-360(4) since they address the factors described in 173-340-360(4)(b) as follows:
    - 173-340-360(4)(b)(i) – Potential risks posed by the site to human health and the environment are minimal.
    - 173-340-360(4)(b)(ii) – The practicality of achieving a shorter restoration timeframe was addressed during the consideration of preliminary alternatives described Section 4.1 above. Achieving a shorter time frame would involve a prohibitively expensive alternative such as complete excavation and removal;
    - 173-340-360(4)(b)(iii/ iv) – Releases from the site are not expected to affect resources that are associated with current and future uses of the site and surrounding areas;

- 173-340-360(4)(b)(v) – Alternative water supplies at the site are available (City water utility).
- 173-340-360(4)(b)(vi) – Institutional controls are expected to be highly effective at the site.
- 173-340-360(4)(b)(vii) – Control and monitoring of migration of hazardous substances from the site is easily achievable.
- 173-340-360(4)(b)(viii) – The toxicity of hazardous substances at the site is relatively low.
- 173-340-360(4)(b)(ix) – Natural processes such as natural attenuation have been documented as occurring at the site.

- **Consider Public Concerns**: The RI/FS and IA Work Plan (Parametrix 2007) was made available for public comment prior to final approval by Ecology. No substantive public comments were received.

4.2.3 Institutional Controls

WAC 173-340-360(2)(e) requires cleanup actions to use institutional controls to limit or prohibit activities that may interfere with the integrity of a cleanup action or that may result in exposure of hazardous substances at a site. They are required to ensure the continued protection of human health and the environment and the integrity of the cleanup. Institutional controls may include physical measures (such as fences), restrictions on the use of the property, maintenance requirements for engineering controls (e.g., maintenance of caps), education programs, and financial assurances.

The following institutional controls are proposed for the site:

- **Land Use Restrictions**: A restrictive covenant (or Ecology-approved equivalent) will be executed by the City and recorded with the register of deeds for Kitsap County. At a minimum, the restrictive covenant will describe procedures to be followed during any future site excavation activities that could result in worker exposure or the transfer of contaminated soils to the ground surface. Such procedures shall include worker health and safety training requirements and contaminated soil management procedures. Use of site groundwater for any purpose will be prohibited. The restrictive covenant will also require that Ecology be notified of the City's intent to convey any interest in the site. Final requirements for the restrictive covenant (or equivalent) will be negotiated by Ecology and the City.

4.3 POINT OF COMPLIANCE

WAC 173-340-200 defines "point of compliance" as the point or points where cleanup levels established shall be attained. Conditional points of compliance are allowed in instances where cleanup levels are not met at the standard point of compliance under the selected cleanup action. Points of compliance for soil and groundwater shall be established as follows:

- **Soil (Human Health)**: The point of compliance for protection of human health shall be established in the soils throughout the site. Per WAC 173-340-740(6)(f), Ecology recognizes that for cleanup actions that involve containment of hazardous substances, soil cleanup levels may not be met at the point of compliance. "Containment" in this case is achieved by the presence of a minimum of 8 feet of clean soils overlying the residual contaminated soils in the lower yard. Under future use as a park, these clean soils will be vegetated and/or paved and will act as a physical barrier to prevent direct

human contact with contaminated soils. Under MTCA, the cleanup action may be determined to comply with cleanup requirements providing the action is protective of human health (173-340-740(6)(f)(ii)).

- **Soil (Terrestrial Ecological Receptors)**: For terrestrial ecological receptors, WAC 173-340-7490(4)(a) states that the biologically active zone may be assumed to extend to a depth of 6 feet. As previously stated, residual contaminated soil in the lower yard is located below the depth of 8 feet; thus the cleanup action is protective of terrestrial ecological receptors. A conditional point of compliance for protection of terrestrial ecological receptors shall be set at 6 feet bgs.
- **Groundwater**: A conditional point of compliance for groundwater shall be set at the property boundary as allowed by WAC 173-340-720(8)(i). Monitoring points to establish whether or not cleanup levels are met shall be the downgradient monitoring wells MW-21R, MW-26R, MW-22R, MW-13R, MW-25, and MW-27.

4.3.1 Follow-On Cleanup Action Activities

The primary follow-on step to the RI/FS and IA is the development of a DCAP that addresses completion of the cleanup action began by the IA. The DCAP will be finalized by Ecology (thus becoming a final "CAP") based on comments received during a public comment period. At this time, a second AO for implementation of the CAP will be negotiated and a second Remedial Action Grant Agreement will be established for eligible cleanup action activities. It is anticipated the CAP will contain the following cleanup action activities:

- Institutional Controls Implementation – Institutional controls as described in Section 4.1.3 will be established at the site.
- Additional Well Development – Monitoring wells that continue to exhibit elevated suspended sediment loads and high turbidity readings based on post IA quarterly monitoring will be redeveloped to provide clear, unbiased groundwater samples.
- Long Term Groundwater Monitoring – A long-term groundwater monitoring program will be implemented. Groundwater monitoring will be continued until groundwater concentrations meet cleanup levels at the conditional point of compliance. It is anticipated that a minimum of four consecutive quarters of sample results showing groundwater concentrations below cleanup levels will be required for cessation of monitoring.

The City of Bremerton has indicated its ability to fund the activities listed above, along with on-going groundwater monitoring will be severely limited due to financial hardship. This limitation will affect both the scope and implementation schedule of these activities in the near term. The City and Ecology will coordinate specifics to ensure the DCAP and implementation schedule acknowledge this issue to ensure the City has the resources to successfully implement all follow-on work.

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FIGURES

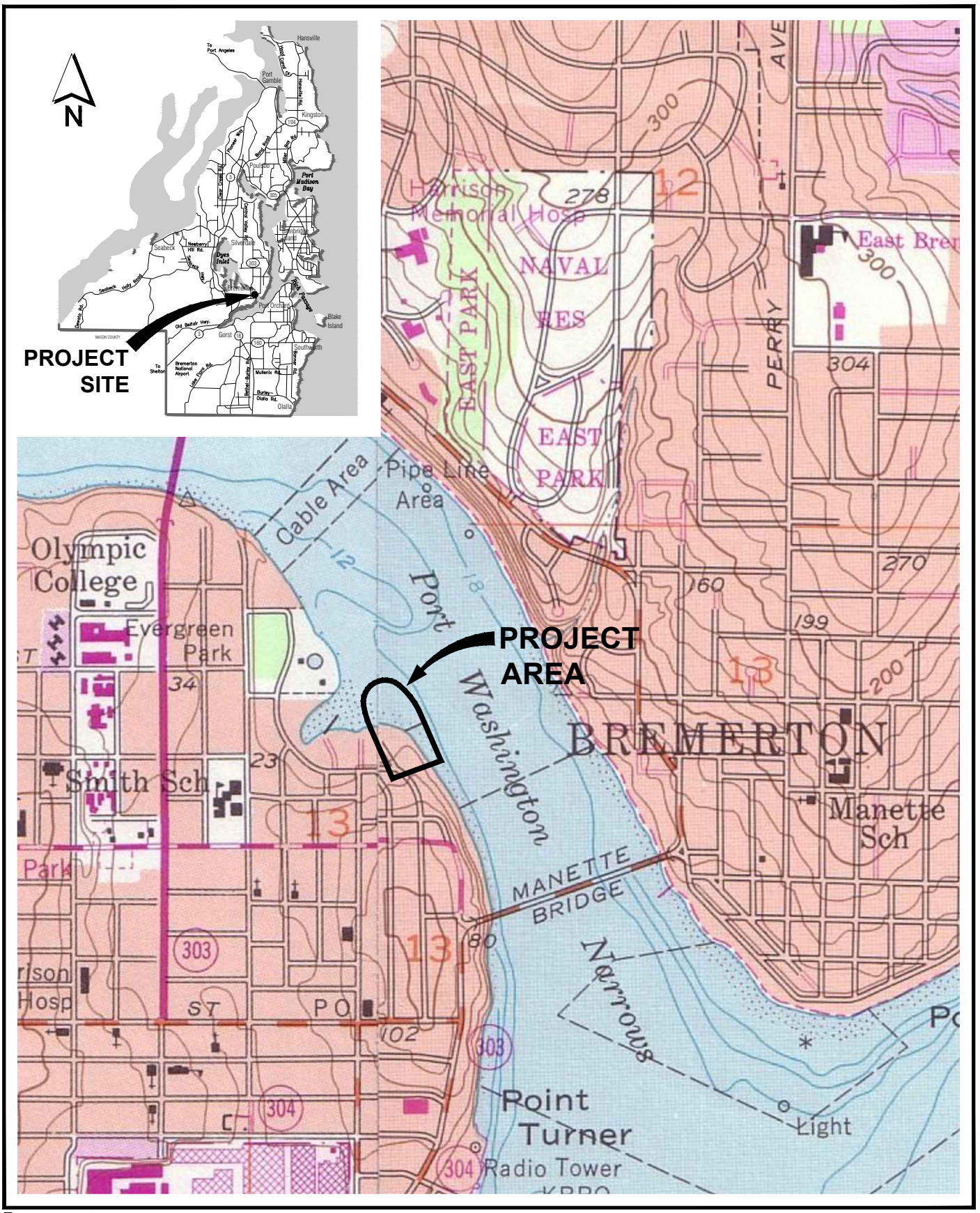


Figure 1
Former Chevron Property RI/FS
Project Vicinity



Parametrix DATE: S□□12, 2011 FILE: BR1896063P04T1304 098 F02

N

0

NO SCALE

Figure 2
Former Chevron Property RI/FS
1963 Aerial Photograph



Parametrix DATE: S□□12, 2011 FILE: BR1896063P04T1304 098 F02

0 N

NO SCALE

Figure 3
Former Chevron Property RI/FS
CIRCA 2005 Aerial Photograph

C-4
C-2
C-1
PIER
Fig 7-8
C-6
C-6-S
C-11
C-12
C-8
C-8-S
BIOASSAY
SAMPLE
C-9
C-9-S
METAL
SHEETPILES
WOODEN
BULKHEAD
C-10
C-10-S
C-13
C-7
C-7-S
SEWER PUMP
STATION
MW 22
MW 8
MW 13
TP-8
BURIED WOODEN
BULKHEAD
MW 5
MW 6
FORMER
WAREHOUSE
PLATFORM
MW 7
TP-14
TP-12
LOWER YARD
MW 21
TP-10
TP-9
MW 4
MW 14
C-3
C-5
TP-11
TP-7
MW 15
TP-13
FORMER
LOADING
RACKS
MW 9
MW 20
MW 10
TP-2
MW 23
MW 12
TP-3
TP-4
UPPER YARD
MW 19
MW 16
MW 24
TP-6
TP-5
FORMER
GARAGE
MW 18
MW 17
TP-16
MW 11
TP-15
TP-1
TOWER PEDESTALS
FOOTBRIDGE
HIGHLAND AVE
PLUMBER'S
UNION HALL
13TH ST

NOTES

CONTOUR DATUM NAVD 88
LOCATIONS OF FORMER TANKS, PIPING AND BUILDINGS
FROM HART CROWSER DRAWING DATED 11/89

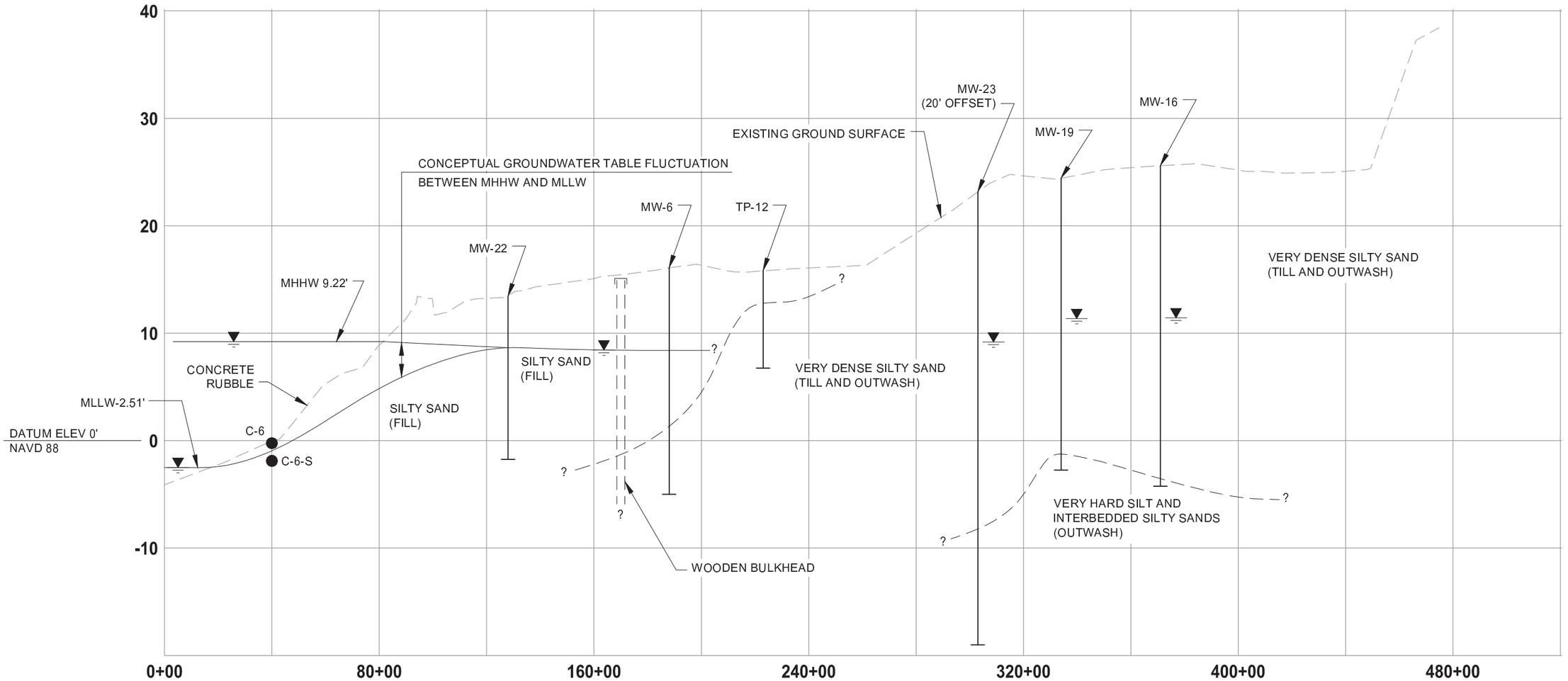
Parametrix DATE: Sep 12, 2011 FILE: BR1896063P04T1304 098 F04

N
0 50
SCALE IN FEET

LEGEND

- INTERTIDAL SEDIMENT SAMPLE
- SUBTIDAL SEDIMENT SAMPLE
- EXISTING MONITORING WELL
- TEST PIT , GEO ENGINEERS 1988
- TEST PIT, HART CROWSER 1989
- DESTROYED MONITORING WELL
- EXISTING CONCRETE PAD
- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- FORMER PIPING/BUILDING/ LOADING RACK
- C-6 SURFACE SEDIMENT SAMPLE
- C-6-S SEDIMENT SAMPLE COLLECTED AT 2 FT DEPTH
- FORMER ABOVEBROUND STORAGE TANK
- GENERAL GROUNDWATER FLOW DIRECTION

Figure 4
Former Chevron Property RI/FS
Historical Site Features



SECTION A

HORIZ: 1"=40'
VERT: 1"=10'

Parametrix DATE: Sep 12, 2011 FILE: BR1896063P04T1304F-02-4

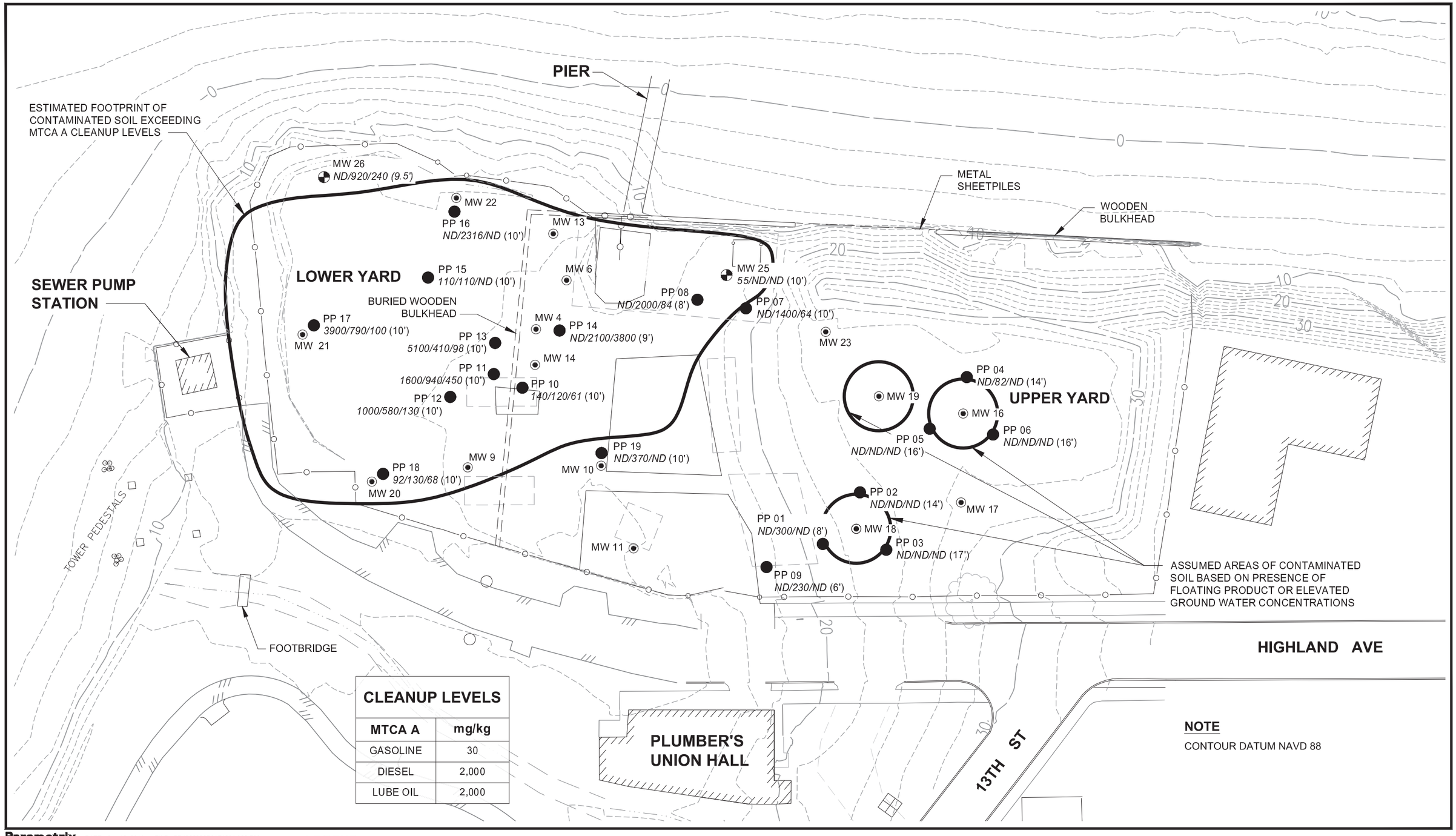
NOTES:

MEAN HIGHER HIGH WATER (MHHW) AND MEAN LOWER LOW WATER (MLLW) ELEVATIONS OBTAINED FROM NOAA RECORDS FOR TIDAL STATION BREMERTON, WA, ID NO. 9445958

LEGEND

- GROUNDWATER TABLE ELEVATION MEASURED 10/24/06
- SEDIMENT SAMPLES

Figure 5
Former Chevron Property RI/FS
Section A



CLEANUP LEVELS	
MTCA A	**mg/kg**
GASOLINE	30
DIESEL	2,000
LUBE OIL	2,000

NOTE

CONTOUR DATUM NAVD 88

Parametrix DATE: Sep 12, 2011 FILE: BR1896063P04T1304 098 F06

N

0 40

SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- *ND* NOT DETECTED
- EXISTING MONITORING WELL
- NEW RI/FS PUSH PROBE
- RI/FS MONITORING WELL
- *ND/920/240* (9.5') RI/FS SOIL RESULTS FOR: *GASOLINE/DIESEL/LUBE OIL* (SAMPLE DEPTH) RESULTS IN mg/kg

Figure 6
Former Chevron Property
RI/FS Subsurface
Soil Sampling Locations

PIER

ESTIMATED CONTAMINATED GROUNDWATER PLUME EXCEEDING MTCA A CLEANUP LEVELS

METAL SHEETPILES

WOODEN BULKHEAD

MW 22
ND/ND/ND (7.9')

MW 26
1300/1300/ND (9.0')

MW 13

MW 6

MW 25
1600/1200/ND (8.3')

LOWER YARD

SEWER PUMP STATION

BURIED WOODEN BULKHEAD

MW 4
5400/27000/2300 (12')
(SAMPLE HIGHLY TURBID)

MW 21
9200/1700/ND (8.9')

MW 14

MW 23
530/ND/ND (20.5')

MW 19
ND/8100/ND (10.9')

MW 16

UPPER YARD

MW 20
ND/ND/ND (7.5')

MW 9

MW 10
ND/160,000/ND (8.4')

MW 17

MW 18

MW 11
ND/270/ND (6.9')

TOWER PEDESTALS

FOOTBRIDGE

HIGHLAND AVE

PLUMBER'S UNION HALL

13TH ST

CLEANUP LEVELS	
MTCA A	**ug/L**
GASOLINE	800
DIESEL	500
LUBE OIL	500

NOTE

CONTOUR DATUM NAVD 88

Parametrix DATE: Sep 12, 2011 FILE: BR1896063P04T1304 098 F07

N

0 40

SCALE IN FEET

LEGEND

EXISTING BUILDING

CHAIN LINK FENCE

DRAINAGE DITCH

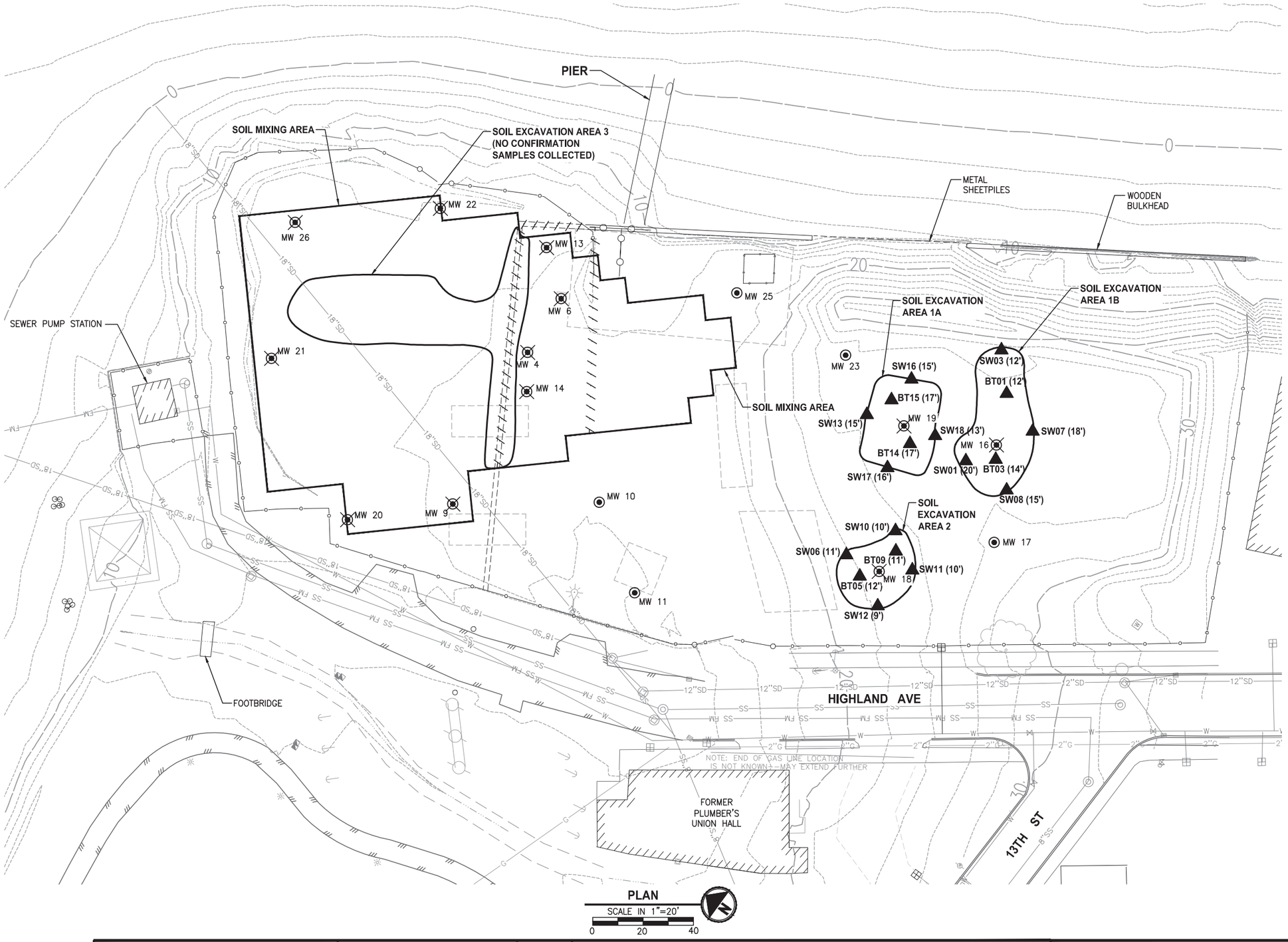
ND NOT DETECTED

EXISTING MONITORING WELL

RI/FS MONITORING WELL

ND/920/240 (10') RI/FS GROUNDWATER RESULTS FOR: *GASOLINE/DIESEL/LUBE OIL* (GROUNDWATER DEPTH BELOW TOP OF WELL CASING) RESULTS IN ug/L

Figure 7
Former Chevron Property
RI/FS Groundwater Sampling Locations



PLAN
SCALE IN 1"=20'
0 20 40

LEGEND

- EXISTING BUILDING
- EXISTING CHAIN LINK FENCE
- MW 10 — EXISTING MONITORING WELL
- REMOVED MONITORING WELL
- BT01 (10') — CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- SOIL EXCAVATION AREA

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

BT BOTTOM SAMPLE

SW SIDEWALL SAMPLE

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 1

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: SBR DATE 10/09
DESIGN BY: DD WASH. P.E. # DATE 10/09
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY RI/FS
INTERIM ACTION
SOIL EXCAVATION AREAS

FIG. NO. 8

PN: 255-1896-063

SHEET 1 OF 1

BREMERTON BOARDWALK PROJECT

FILE: BR189606JP041304_098 F08
DATE: Sep 12, 2011 - 2:20pm PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREF's: XB-BREM_WTRFRNT-BA-SV-061201 | XBR189606JP041301F-BA

LEGEND

PP-11 ●	RI/FS PUSH–PROBE LOCATION
MW-10 ◉	EXISTING MONITORING WELL
B7(10') ▲	CONFIRMATION SAMPLE LOCATION AND DEPTH
▭	TREATMENT CELL–BASLINE DOSE (10LB/CY REGENOX)
▨	AGGRESSIVE DOSE TREATMENT AREA (20LB/CY REGENOX)
⊗	MONITORING WELL REMOVED FOR SOIL MIXING
GRO	GASOLINE RANGE ORGANICS
DRO	DIESEL RANGE ORGANICS
OIL	LUBE OIL RANGE ORGANICS
mg/kg	MILLIGRAMS PER KILOGRAM
400	SAMPLE RESULT IN mg/kg

CLEANUP LEVELS	
MTCA A	mg/kg
GASOLINE	30
DIESEL	2,000
LUBE OIL	2,000

SOIL MIXING AREA, TREATED ZONE 8 FT TO 14 FT BGS

MW-26 · MW-22 · ND/2316/ND (10') · PP-16 · H2 (10') · C2 (9.5') · PP-24 · PP-25 · MW-13 · G4 (10') · PP-15 · PP-28 · L5 (10') · PP-26 · MW-6 · K5 (10') · PP-27 · MW-25 · PP-8 · PP-7 · R7 (8') · MW-21 · PP-17 · B7 (10') · J7 (10') · MW-4 · PP-20 · PP-23 · PP-13 · L8 (9') · MW-14 · PP-11 · PP-10 · PP-12 · H10 (10') · BURIED BULKHEADS AND CONCRETE SLABS REMOVED FOR SOIL MIXING · MW-9 · MW-10 · D13 (10') · MW-20 · PP-18 · 18" SD REPLACED W/ 14" HDPE BY PIPE BURSTING

C2	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	7	920	240
POST TREATMENT	340	120	87

H2	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	40	2,316	120
POST TREATMENT	120	260	190

G4	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	110	110	29
POST TREATMENT	150	240	190

K5	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	5,100	2,200	150
POST TREATMENT	190	210	130

L5	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	400	320	380
POST TREATMENT	1,800	460	190

J7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	5,100	410	98
POST TREATMENT	380	160	150

L8	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	50	6,900	1,100
POST TREATMENT	140	88	90

R7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	55	2,000	98
POST TREATMENT	7	180	150

B7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	3,900	790	100
POST TREATMENT	190	34	29

H10	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	1,000	580	130
POST TREATMENT	180	100	110

D13	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	92	130	68
POST TREATMENT	29	78	180

PLAN
SCALE IN 1"=20'
0 20 40

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=10' VERT. N/A

FIELD BOOK

DRAWING NO. 2

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: JLP DATE 4/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY RI/FS INTERIM ACTION SOIL MIXING AREA AND CONFIRMATION SAMPLE RESULTS

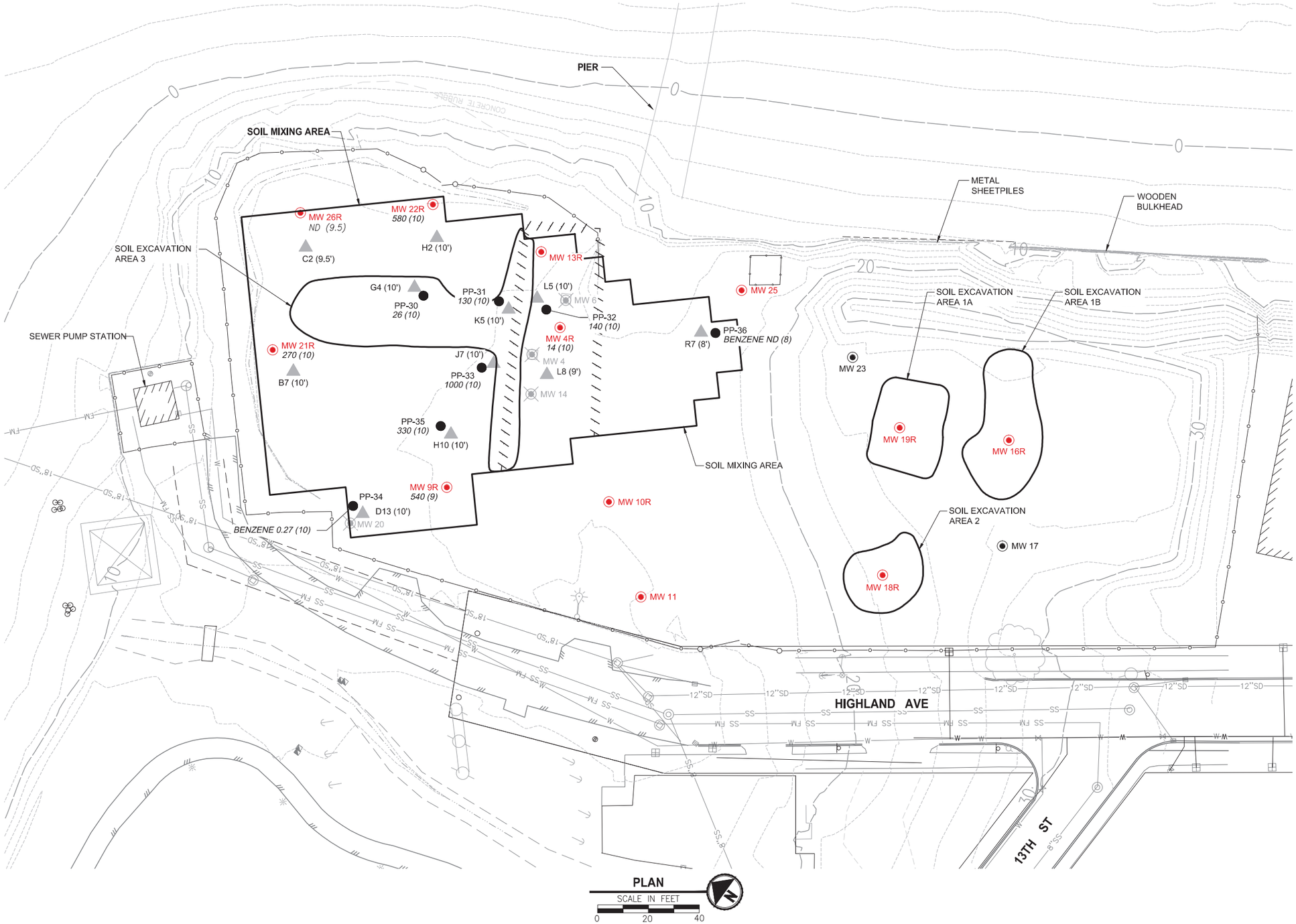
FIG. NO. 9

PN: 255-1886-063

SHEET 1 OF 1

BREMERTON BOARDWALK PROJECT

FILE: BR189606.3P041304 038 F09
DATE: Sep 29, 2011 – 10:31am PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XBR189606.3P041301F-BA



LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- H2 (10') — SOIL MIXING AREA CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- PUSH-PROBE LOCATION
- SOIL EXCAVATION AREA
- MW 14 — WELL DESTROYED DURING INTERIM ACTION
- MW 19R — WELL INCLUDED IN CONFIRMATION SAMPLING PROGRAM
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING
- 540 — GASOLINE OR BENZENE CONCENTRATION IN mg/kg
- ND — NOT DETECTED
- mg/kg — MILLIGRAMS PER KILOGRAM
- (6) — SAMPLE DEPTH IN FEET

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

CLEANUP LEVELS	
MTCA A	**mg/kg**
GASOLINE	30
BENZENE	0.03

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: JLP DATE 4/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY RI/FS
INTERIM ACTION
WELL LOCATION PLAN AND
6-MONTH POST TREATMENT SOIL RESULTS

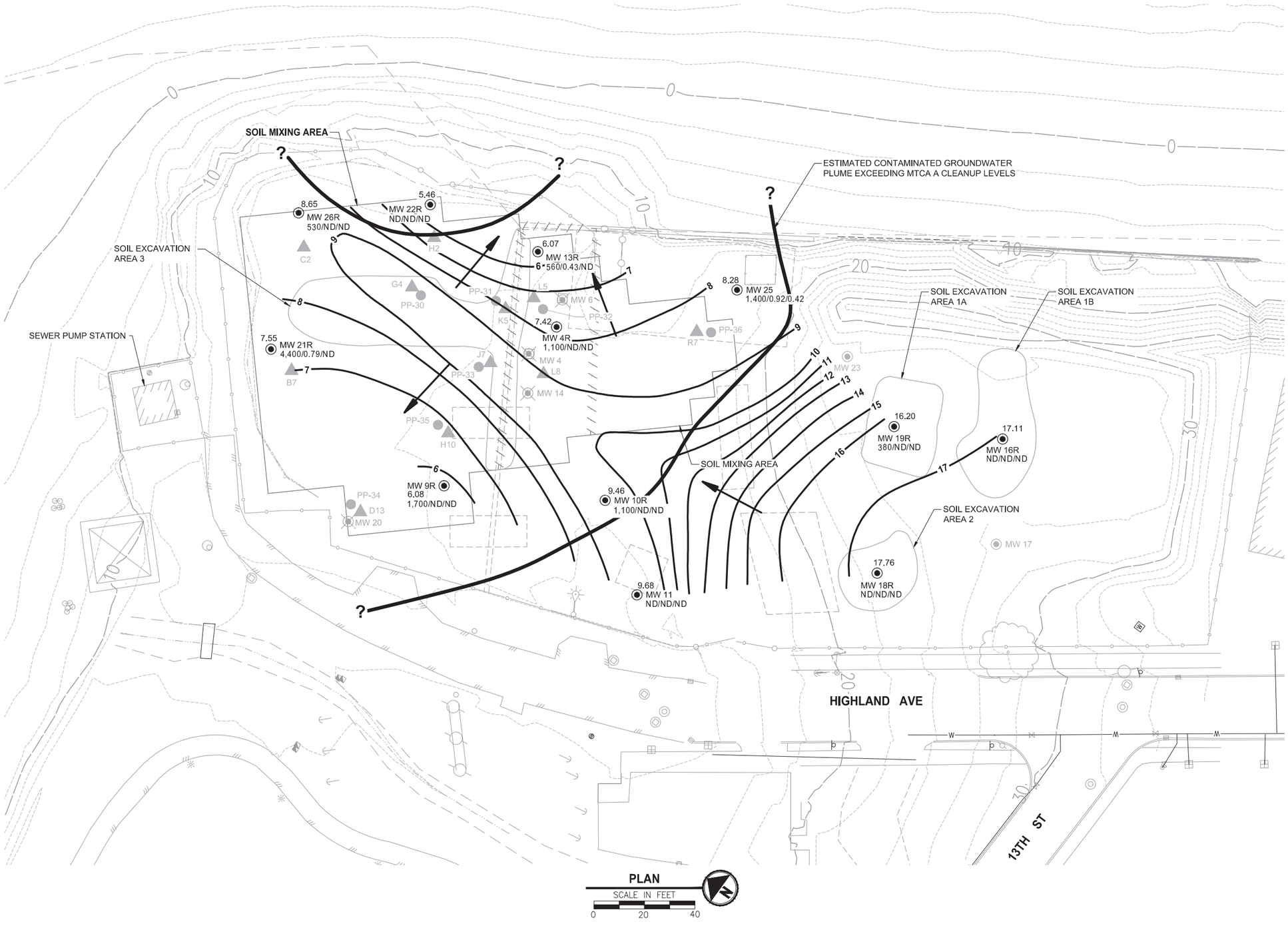
FIG. NO. 10

PN: 255-1886-063

SHEET 1 OF 1

BREMERTON BOARDWALK PROJECT

FILE: BR1896063P04T1304 038 F10
DATE: Sep 29, 2011 - 10:30am PLOTTED BY: peterjul
IMAGES:
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XB-BREM_WTRFRNT-BA-SV-061201



LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- SOIL MIXING AREA CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- PUSH-PROBE LOCATION
- SOIL EXCAVATION AREA
- MW 14 — WELL DESTROYED DURING INTERIM ACTION
- MW 19R — QTRLY MONITORING WELL LOCATION
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING
- 10 — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION
- 17.76 — GROUNDWATER ELEVATION AT TIME OF SAMPLING
- ESTIMATED CONTAMINATED GROUNDWATER PLUME EXCEEDING MTCA A CLEANUP LEVELS
- 1,000/0.62/ND — GW RESULTS FOR GASOLINE/DIESEL/LUBE OIL RESULTS IN ug/L

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

CLEANUP LEVELS	
MTCA A	ug/L
GASOLINE	800
DIESEL	500
LUBE OIL	500

REVISIONS

NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: JLP DATE 4/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY 2nd QUARTER GROUNDWATER CONTOURS MAY 2010

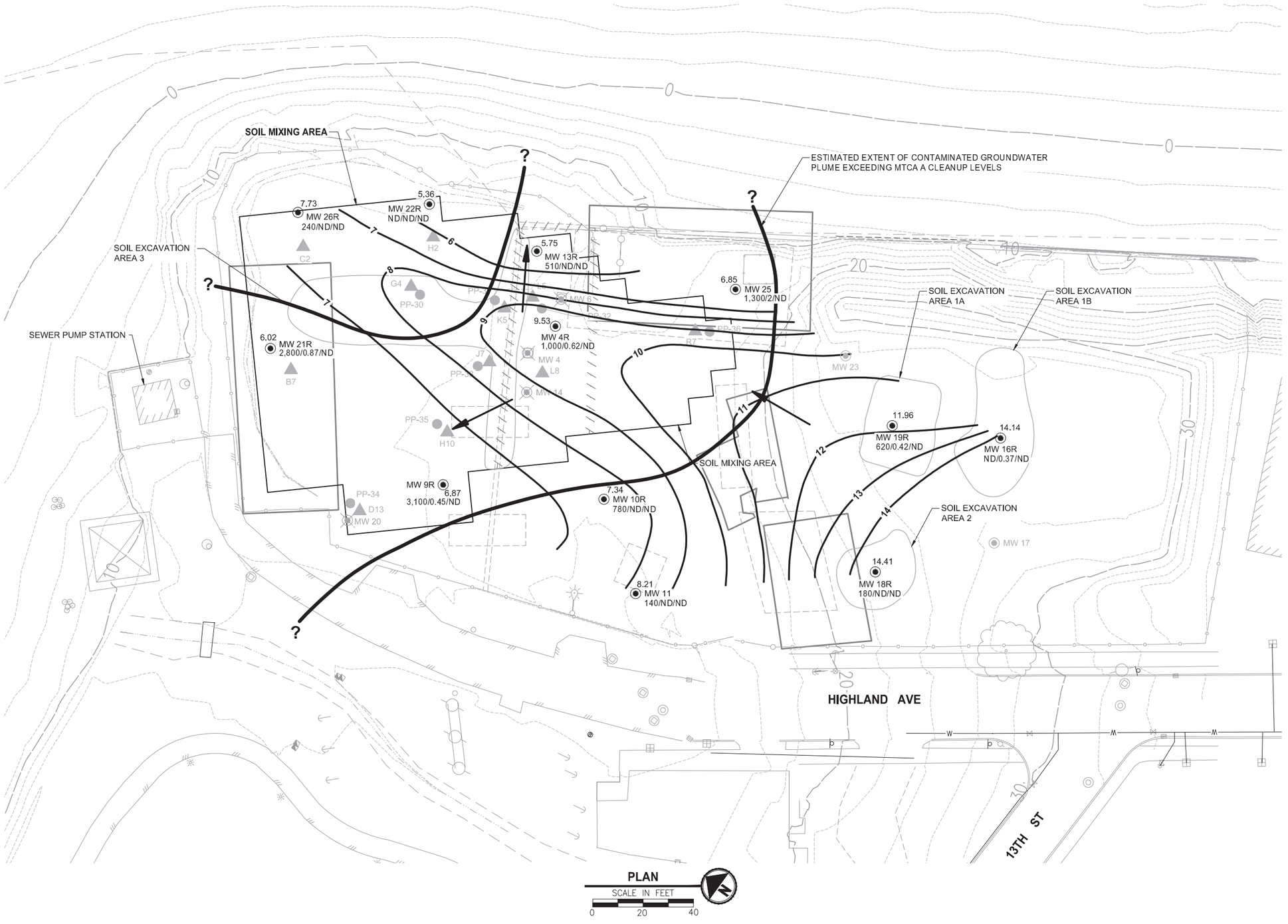
FIG. NO. 11

PN: 255-1896-063

SHEET OF

BREMERTON BOARDWALK PROJECT

FILE: BR189606\3P041304.098 F11
DATE: Sep 12, 2011 – 1:56pm PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XBR189606\3P041303F-BA



LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- SOIL MIXING AREA CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- PUSH-PROBE LOCATION
- SOIL EXCAVATION AREA
- MW 14 — WELL DESTROYED DURING INTERIM ACTION
- MW 19R — QTRLY MONITORING WELL LOCATION
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING
- 10 — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION
- 15.11 — GROUNDWATER ELEVATION AT TIME OF SAMPLING
- ESTIMATED CONTAMINATED GROUNDWATER PLUME EXCEEDING MTCA A CLEANUP LEVELS
- 1,000/0.62/ND — GW RESULTS FOR GASOLINE/DIESEL/LUBE OIL RESULTS IN ug/L

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

CLEANUP LEVELS	
MTCA A	**ug/L**
GASOLINE	800
DIESEL	500
LUBE OIL	500

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: SBR DATE 9/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
3rd QUARTER GROUNDWATER CONTOURS
AUGUST 2010

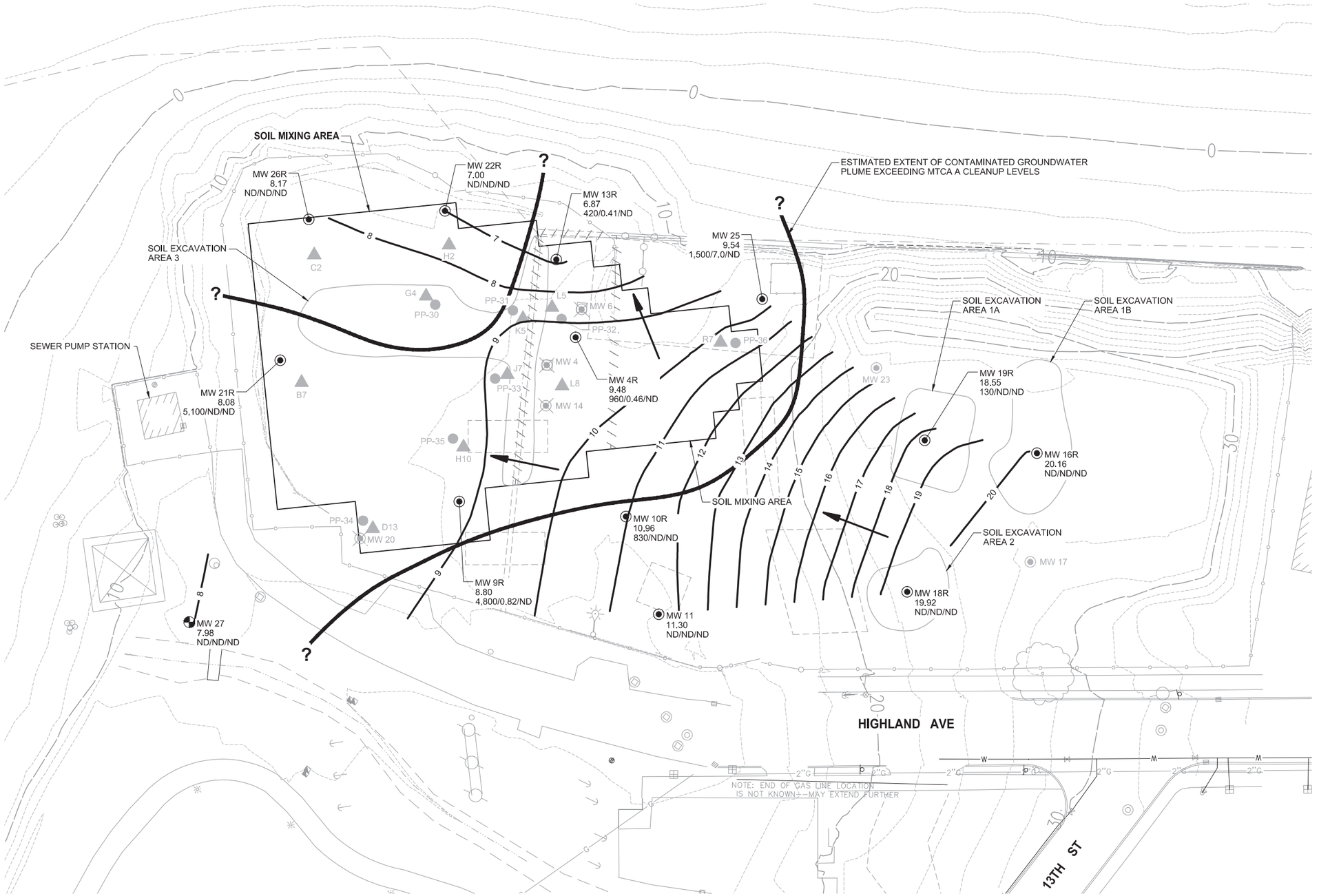
FIG. NO. 12

PN: 255-1896-063

SHEET OF

BREMERTON BOARDWALK PROJECT

FILE: BR1896063P041304_098 F12
DATE: Sep 12, 2011 – 1:59pm PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XBR1896063P041303F-BA



PLAN
SCALE IN FEET
0 20 40

LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- SOIL MIXING AREA CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- PUSH-PROBE LOCATION
- SOIL EXCAVATION AREA
- MW 14 — WELL DESTROYED DURING INTERIM ACTION
- MW 19R — QUARTERLY MONITORING WELL LOCATION
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING
- 10 — GROUNDWATER ELEVATION
- GROUNDWATER FLOW DIRECTION
- 15.11 — GROUNDWATER ELEVATION AT TIME OF SAMPLING
- ESTIMATED CONTAMINATED GROUNDWATER PLUME EXCEEDING MTCA A CLEANUP LEVELS
- 1,000/0.62/ND — GW RESULTS FOR GASOLINE/DIESEL/LUBE OIL RESULTS IN ug/L
- NEW WELL INSTALLED IN MARCH 2011
- INJECTION POINT WITH NUMBER OF INJECTION POINTS 10' OC. TYP EACH ROW 108 INJECTIONS POINTS TOTAL
- 9.54 / 1,500/7.0/ND(13') — 4TH QUARTER RESULTS

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88
2. APPLIED DOSAGE RATE WAS 67 LBS ORC PER INJECTION POINT.

CLEANUP LEVELS	
MTCA A	**ug/L**
GASOLINE	800
DIESEL	500
LUBE OIL	500

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: SBR DATE 9/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
4th QUARTER GROUNDWATER CONTOURS
APRIL 2011

FIG. NO. 13

PN: 255-1896-063

SHEET OF

BREMERTON BOARDWALK PROJECT

FILE: BR189606JP0411304_098 F13
DATE: Sep 12, 2011 - 2:08pm PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREF's: XB-BREM_WTRFRNT-BA-SV-061201 | XBR189606JP0411301F-BA

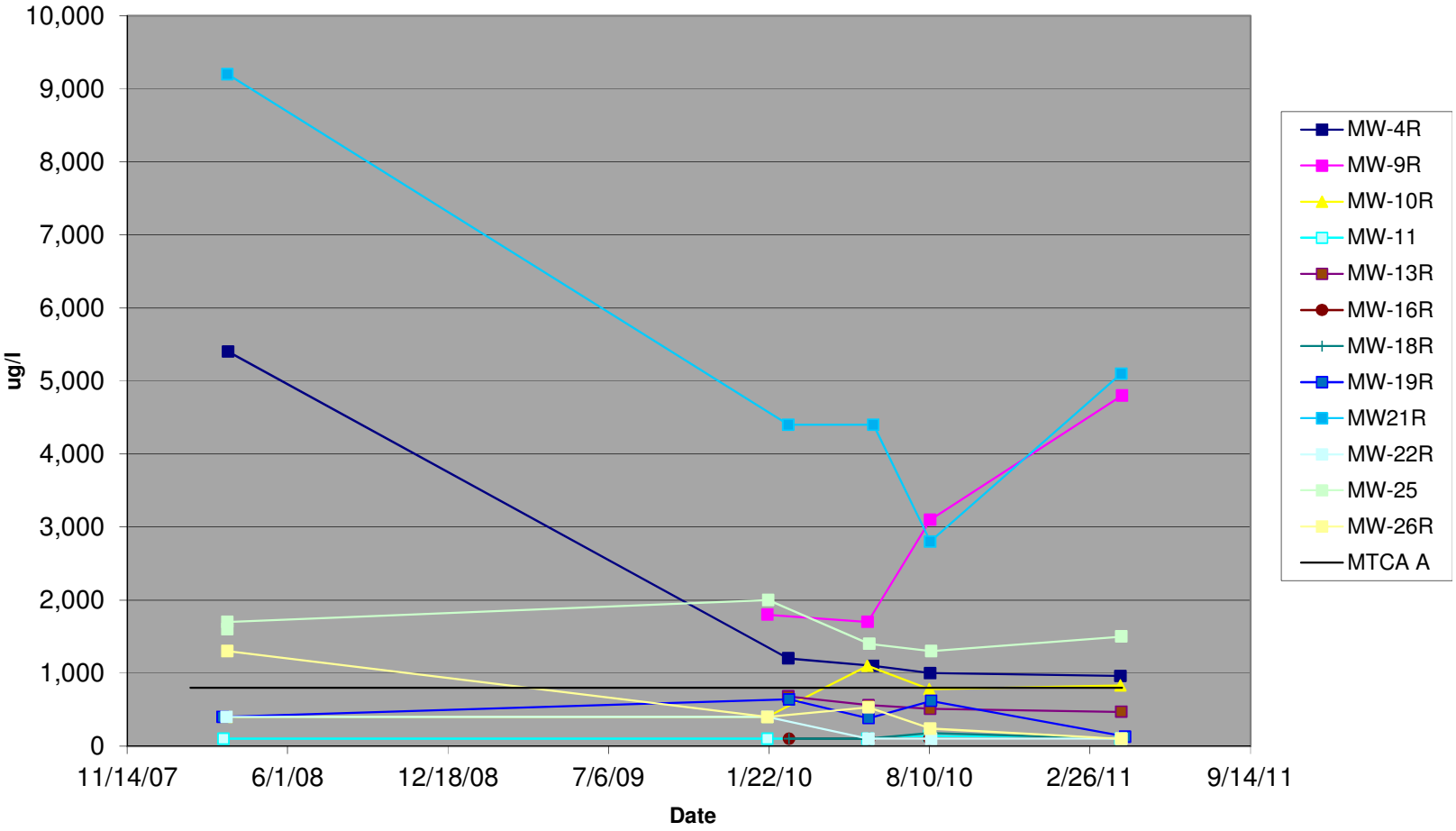


Figure 14. Gasoline Results - RI and Quarters 1-4 Samples

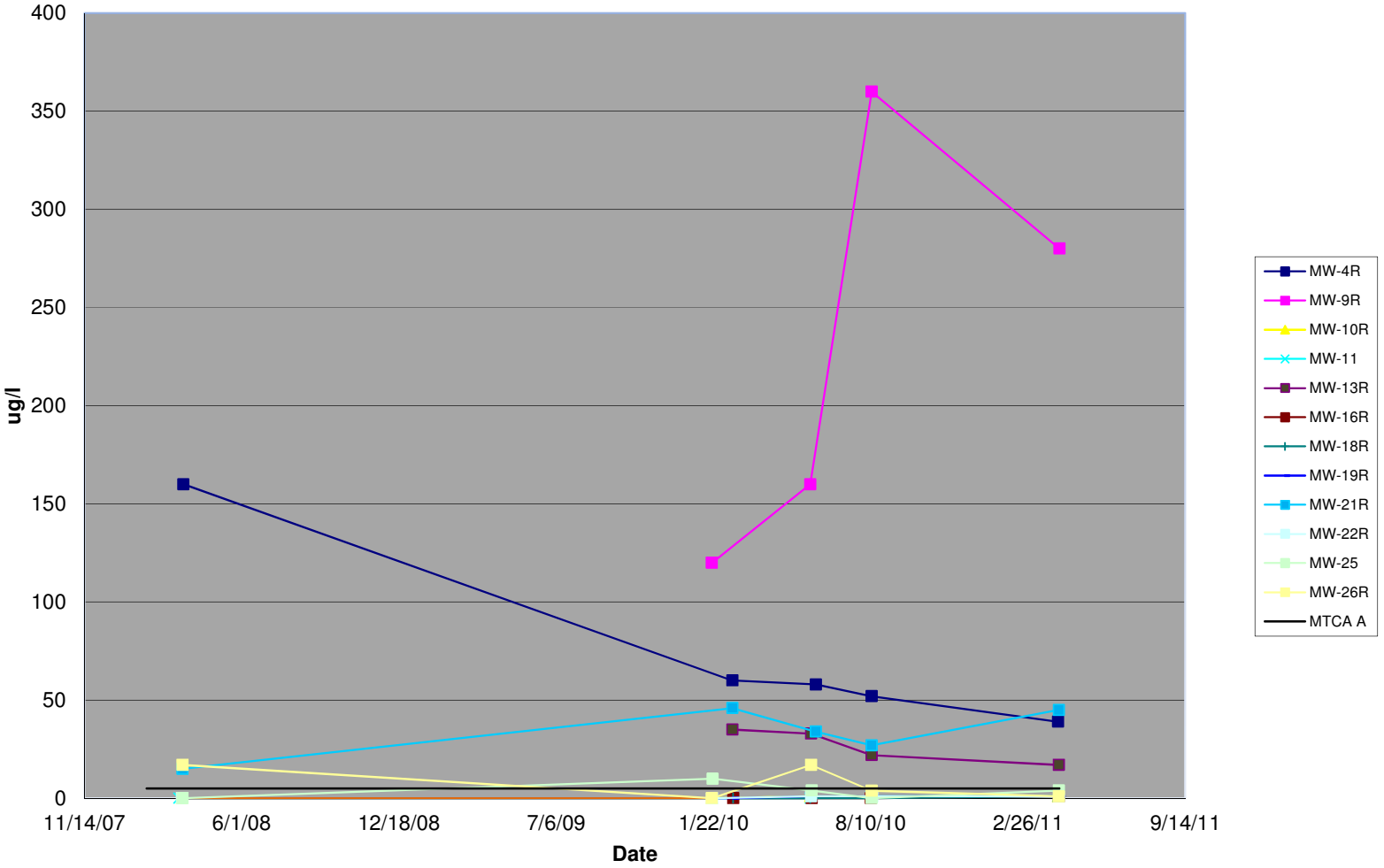


Figure 15. Benzene Results - RI and Quarters 1-4 Samples



LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- SOIL EXCAVATION AREA
- MW 23 — WELL DECOMMISSIONED DURING INTERIM ACTION
- MW 19R — QUARTERLY MONITORING WELL LOCATION
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

SOURCE: PARAMETRIX 2010 DRAFT RI/FS REPORT.
FIG 3-7 3RD QUARTER GROUNDWATER CONTOURS AUG 2010

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

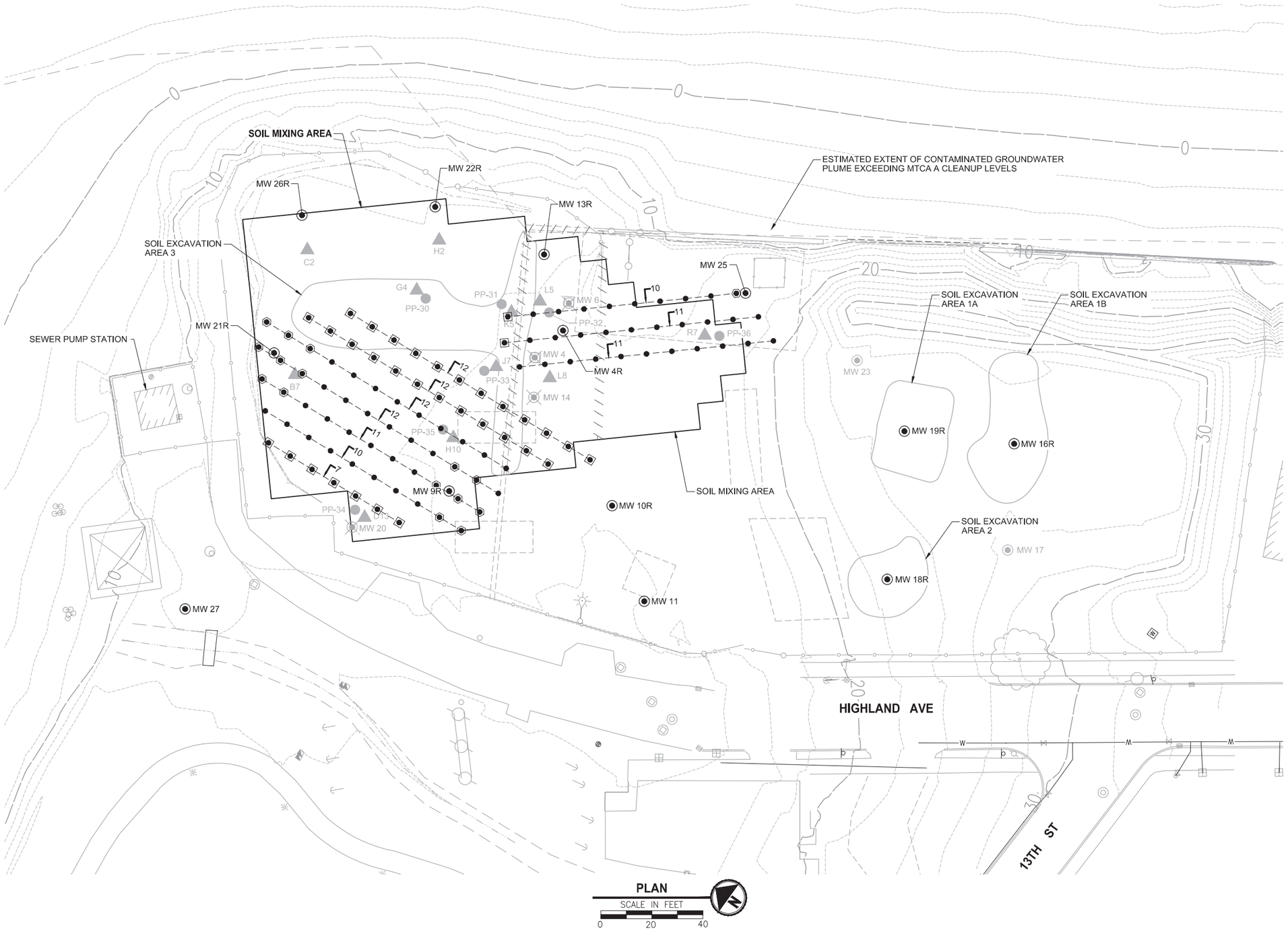
DRAWN BY: SBR DATE 3/11
DESIGN BY: DLD WASH. P.E. # DATE 3/11
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY RI/FS
AIR SAMPLE LOCATIONS

FIG. NO. 16
PN: 255-1896-063
SHEET OF

BREMERTON BOARDWALK PROJECT

FILE: BR189606.3P04T1304 098 F14
DATE: Sep 29, 2011 – 10:35am PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XBR189606.3P04T1301F-BA



LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING MONITORING WELL
- SOIL MIXING AREA CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- PUSH-PROBE LOCATION
- SOIL EXCAVATION AREA
- MW 14 — WELL DESTROYED DURING INTERIM ACTION
- MW 19R — QUARTERLY MONITORING WELL LOCATION
- R — INDICATES REPLACEMENT WELL INSTALLED FOR POST TREATMENT GROUNDWATER MONITORING
- STANDARD DOSAGE
- DOUBLE DOSAGE
- HALF DOSAGE

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88
2. APPLIED STANDARD DOSAGE RATE WAS 65 LBS ORC PER INJECTION POINT.

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: SBR DATE 9/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
ORC INJECTION AS-BUILT
APRIL 2011

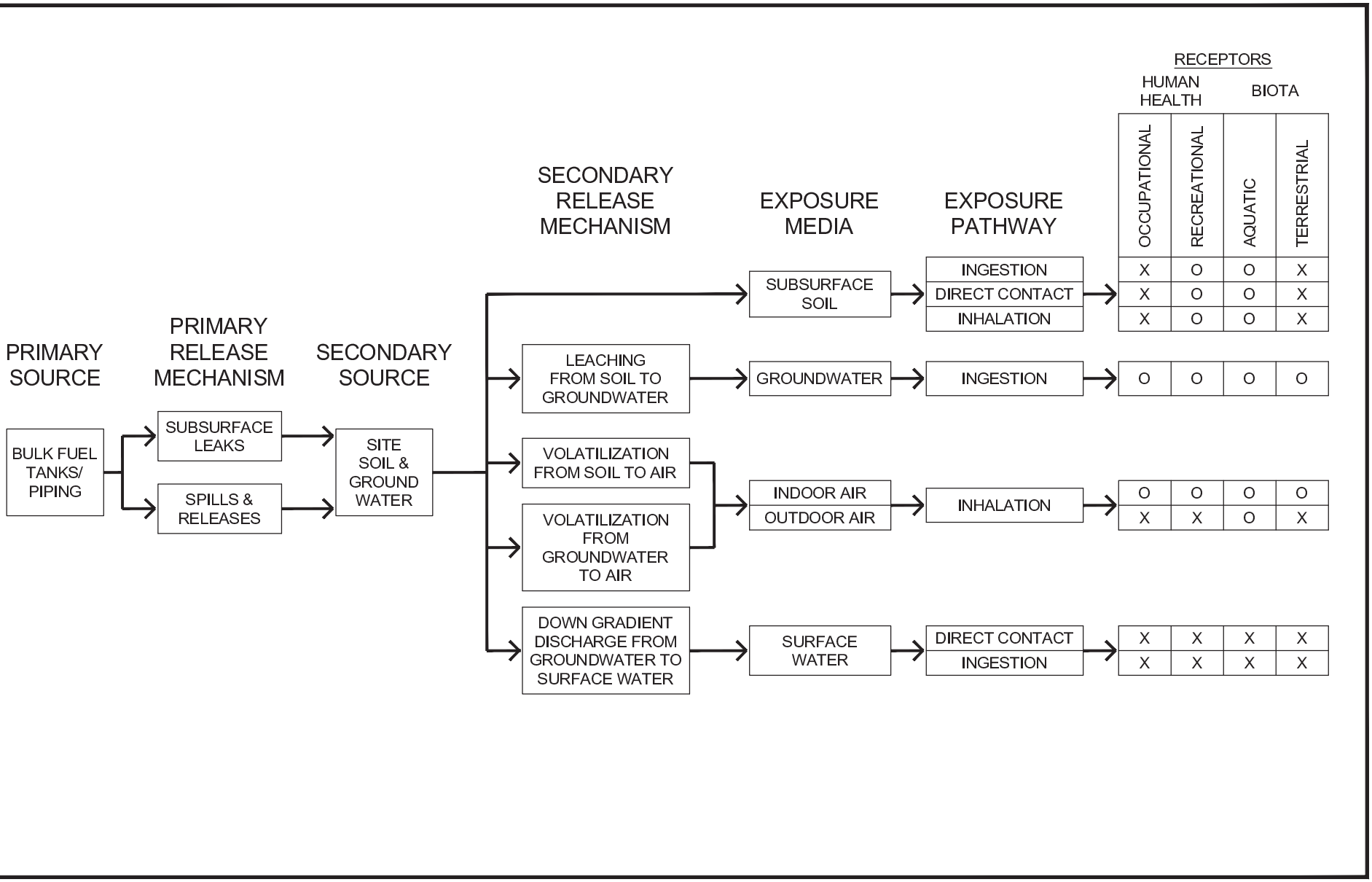
FIG. NO. 17

PN: 255-1896-063

SHEET OF

BREMERTON BOARDWALK PROJECT

FILE: BR1896063P041304_098.F15
DATE: Sep 29, 2011 - 10:36am PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WTRFRNT-BA-SV-061201 | XBR1896063P041301F-BA



Parametrix DATE: Sep 12, 2011 FILE: BR1896063P04T1304 098 F16

LEGEND

X COMPLETE

O INCOMPLETE

Figure 18
Former Chevron Property RI/FS
Conceptual Site Model

TABLES

Table 2. Chronology of Site History and Previous Site Investigations

Date	Event	Highlight
Prior to 1946 to 1988	Bulk fuel distribution operations.	Land and water operations.
1988	Fuel distribution facility demolition.	Environmental investigations began.
1988	Installation and sampling of nine wells (MW-4 through MW-12) and in total 16 test pits (GeoEngineers 1988; Hart Crowser 1989).	Highest soil impacts were seen in soils in the lower yard with gasoline concentrations as high as 25,000 milligrams per kilogram (mg/kg) and diesel concentrations as high as 17,000 mg/kg. Groundwater contamination detected in the majority of the wells with total petroleum hydrocarbons (TPH) concentrations as high as 1,742 milligrams per liter (mg/L). In addition, floating free product was measured in some of the wells at thickness of up to 4 feet.
1990	Installation of a soil vapor extraction (SVE) system by Chevron consisting of 11 shallow extraction wells and installation of three more monitoring wells (MW-13 through MW-15).	SVE system installation was to address floating product and soil contamination.
1993	Installation and sampling (soil and groundwater) of nine additional monitoring wells (MW-16 through MW-24).	Installation to expand the monitoring network (PEG 1994). Gasoline and diesel concentrations exceeding Washington State Department of Ecology MTCA Method A criteria were detected in only four of the nine wells (MW-19 through MW-22). Benzene exceeded criteria in two of these wells. Lower yard wells showed highest impacts with gasoline concentrations exceeding MTCA A criteria in four wells. Five upper yard wells exceeded MTCA A criteria for benzene, toluene, ethylbenzene, and xylene (BTEX), and one exceeded gasoline criteria.
1994	SVE system shut down due to diminishing returns.	It was estimated that a total of approximately 195,000 pounds of hydrocarbons were removed during system operation (Emcon 1995).
1994 to 1997	Quarterly groundwater monitoring.	All site wells were included in the monitoring program during at least one sampling event.
1998 to 2003	Semi-annual groundwater monitoring.	General decline in groundwater concentrations and floating product thickness observed.
2005	City of Bremerton purchased Former Chevron Property.	Negotiations with Ecology regarding Agreed Order begin.
2006	City of Bremerton Sediment Characterization Study (Parametrix 2006).	Sediment samples were collected from a total of 19 stations within intertidal and subtidal areas for an assessment of site sediments. One station failed Sediment Management Standards (SMS) for chemistry. The follow on biological test passed. Refer to Appendix B for a summary of sampling activities and results.

(Table Continues)

Table 2. Chronology of Site History and Previous Site Investigations (Continued)

Date	Event	Highlight
2006	Parametrix performed well survey.	Sixteen existing wells were located and measured for depth to groundwater. Two wells (MW-16 and MW-18) contained 3/8-inch floating product.
2007	Ecology performed independent sediment sampling event (Hart Crowser 2007).	An additional thirteen sediments samples were collected from the site vicinity. Samples results passed both chemical and biological SMS criteria. Refer to Appendix B for a summary of sampling activities and results.
2007	City of Bremerton signed AO with Ecology.	AO stipulated the City perform an RI/FS and IA for cleanup of the property.
2007	Ecology approved RI/FS and Interim Action Work Plan (Parametrix 2007).	Interim Action negotiated with Ecology consisting of hot spot soil removal and in- situ chemical oxidation of contaminated soils.

Table 3 Groundwater Results Summary, RI and 1st through 4th Monitoring Events (February, May, and August 2010, and April 2011)
Former Chevron Property RI/FS

PARAMETERS	Units	Monitoring Well No.	MW-04R								MW-09R						MW-10R					MW-11						
		Sample Date	3/19/08[1]	1/21/10	6/1/10	6/1/10*	8/11/10	8/11/10*	4/5/11	4/5/11*	1/20/10	5/25/10	5/25/10*	8/11/10	4/7/11	4/7/11 Z	3/17/08[1]	1/20/10	5/25/10	8/10/10	4/5/11	3/13/08	1/20/10	5/25/10	8/10/10	8/10/10*	4/5/11	4/5/11*
		MTCA A																										
VOLATILE ORGANICS (BTEX)																												
Benzene	ug/L	5	160	60 J	58	--	52	--	39	--	120 J	160	170	360	280	170	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	ug/L	1,000	10 U	2.0 J	1.0 U	--	1.0 U	--	4.0 U	--	4 U	3.2	3.6	11	11	7.6	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	700	45	31 J	45	--	40	--	17	--	89 J	89	97	230	220	120	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m,p-Xylene	ug/L	1,000	86	15 J	7.6	--	4.7	--	9.4	--	170 J	120	140	400	300	180	6.8	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	ug/L	1,000	12	1.8 J	1.0 U	--	1.0 U	--	4.0	--	4 U	3.5	3.9	8.1	11	6.7	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TOTAL PETROLEUM HYDROCARBONS																												
Gasoline	ug/L	800	5,400	1,200 J	1,100	--	1,000	--	960	--	1,800 J	1,500	1,700	3,100	4,800	3,100	400 U	400 U	1,100	780	830	100 U	100 U	100 U	140	130	100 U	100 U
Diesel	mg/L	0.5	27	0.64 M	0.34 U	--	0.62 M	--	0.46	--	0.31 U	0.29 U	0.69	0.45 M	0.82	--	160	0.27 U	0.61 U	0.42 U	0.45 U	0.27	0.17 U	0.26 U	0.25 U	0.25 U	0.26 U	0.26 U
Lube Oil	mg/L	0.5	2.3	0.45 U	0.42 U	--	0.41 U	--	0.42 U	--	0.49 U	0.47 U	0.66	0.42 U	0.43 U	--	8.8 U	0.44 U	0.42 U	0.45 U	0.43 U	0.40 U	0.27 U	0.42 U	0.41 U	0.41 U	0.42 U	0.42 U
METALS																												
Total Lead	ug/L	15	--	8.2	--	--	--	--	--	--	80	36 J	74 J	21 J	170	--	--	3.8	--	--	--	--	4.7	--	--	--	--	--
Dissolved Lead	ug/L	15	--	1.0 U	--	--	--	--	--	--	13	12	14	17	3.0	--	--	2.2	--	--	--	--	1.4	--	--	--	--	--
Dissolved Iron	ug/L		--	4,200	--	--	--	--	--	--	34,000	--	--				--	6,400	--	--	--	--	270	--	--	--	--	--
Total Ferrous Iron	mg/L		--	--	7.36	--	9.75	--	5.4	--	--	46.2	42.1	29.2	49.4	--	--	--	25.2	34.4	12.4	--	--	19.0	30.4	30.0	2.66	2.74
Dissolved Manganese	ug/L		--	3,000	4,600	--	4,400	--	3,400	--	5,000	3,600	3,900	4,200	4,500	--	--	1,100	1,400	2,000	1,500	--	300	1,400	2,600	2,600	400	400
PAHs																												
Naphthalene	ug/L		--	1.4	--	--	--	--	1.0 U	1.0 U	6.4	--	--	--	--	--	--	0.14	--	--	--	--	0.13 U	--	--	--	--	--
2-Methylnaphthalene	ug/L		--	0.20	--	--	--	--	1.0 U	1.0 U	2.8	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
1-Methylnappthalene	ug/L		--	3.2	--	--	--	--	4.7	4.9	2.2	--	--	--	--	--	--	21	--	--	--	--	0.13 U	--	--	--	--	--
Acenaphthylene	ug/L		--	0.23	--	--	--	--	1.0 U	1.0 U	0.11 U	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
Acenaphthene	ug/L		--	1.9	--	--	--	--	3.3	3.4	0.18	--	--	--	--	--	--	0.23	--	--	--	--	0.13 U	--	--	--	--	--
Flourene	ug/L		--	1.8	--	--	--	--	2.3	2.3	0.14	--	--	--	--	--	--	0.32	--	--	--	--	0.13 U	--	--	--	--	--
Phenanthrene	ug/L		--	0.15	--	--	--	--	1.0 U	1.0 U	0.17	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
Anthracene	ug/L		--	0.44	--	--	--	--	1.0 U	1.0 U	0.11 U	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
Fluoranthene	ug/L		--	0.39	--	--	--	--	1.0 U	1.0 U	0.11 U	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
Pyrene	ug/L		--	0.26	--	--	--	--	1.0 U	1.0 U	0.11 U	--	--	--	--	--	--	0.12 U	--	--	--	--	0.13 U	--	--	--	--	--
Benzo(a)anthracene	ug/L		--	0.047	0.032	0.03	0.050 U	0.042	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.014	--	--	--	--	0.013 U	--	--	--	--	--
Chrysene	ug/L		--	0.033	0.010 U	0.010 U	0.050 U	0.023	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Benzo(b)fluoranthene	ug/L		--	0.013	0.010 U	0.010 U	0.010 U	0.010 U	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Benzo(k)fluoranthene	ug/L		--	0.028	0.010 U	0.010 U	0.010 U	0.010 U	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Benzo(a)pyrene	ug/L	0.1	--	0.020	0.010 U	0.010 U	0.010 U	0.010 U	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L		--	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L		--	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
Benzo[g,h,i]perylene	ug/L		--	0.010 U	--	--	--	--	0.10 U	0.10 U	0.011 U	--	--	--	--	--	--	0.012 U	--	--	--	--	0.013 U	--	--	--	--	--
GENERAL CHEMISTRY																												
Alkalinity	mg/L		--	190	1,900	--	2,100	--	2,300	--	700	720	730	800	730	--	220	190	200	210	230	170	52	210	120	110	70	66
Nitrate (as Nitrogen)	mg/L		--	0.050 U	0.050 U	--	0.050 U	--	0.050 U	--	0.050 U	0.050 U	0.050 U	0.14	0.050 U	--	0.050 U	0.77	0.094	0.050 U	0.050 U	0.050 U	0.050 U	0.070	0.086	0.1	0.050 U	0.050 U
Sulfate	mg/L		--	250	150	--	120	--	110	--	30	7.5	7.4	5.0 U	5.0 U	--	5.0 U	10	10 U	5.0 U	5.0 U	5.0 U	8.8	10 U	25 U	25 U	5.0 U	5.0 U
Chloride	mg/L		--	290	250	--	250	--	230	--	77	120	120	78	91	--	2.5	10	10	14	6.8	5.2	3.1	7.9	8.8	9.4	6.0	5.5
Dissolved Methane	ug/L		--	710	590	--	670	--	740	--	2,100	8,600	7,800	6,600	9,900	--	--	170	510	260	590	--	15	1,200	870	730	310	340
BOD5	mg/L		--	8.97	8.1	--	8.6	--	--	--	5.46	3.0	4.3	12.3	--	--	--	3.06	2.0	12 U	--	--	3.36	3.1	12 U	12 U	--	--
FIELD PARAMETERS																												
Turbidity	NTU		--	333	5.3	5.3	106	106	9.0	9.0	146	57.9	57.9	>1000	>1000	>1000	208	54.7	3.0	235	2.7	12.6	165	1.5	32.9	32.9	3.4	3.4
pH	--		--	6.63	6.90	6.90	7.01	7.01	7.09	7.09	6.36	6.77	6.77	6.94	6.78	6.78	6.38	6.00	6.32	6.05	6.50	6.20	5.27	6.20	6.27	6.27	6.17	6.17
Specific Conductance	mS/cm		--	3.50	3.42	3.42	32.6	32.6	35.1	35.1	1.52	1.42	1.42	2.65	1.81	1.81	53.4	35.9	51.2	90	90	63.5	10.3	32.0	90	90	64.3	64.3
Dissolved Oxygen	mg/L		--	4.91	4.55	4.55	0.0	0.0	4.02	4.02	9.65	0.96	0.96	0.0	0.40	0.40	0.0	5.38	6.31	2.38	2.20	0.0	5.87	0.90	0.0	0.0	2.67	2.67
ORP	mV		--	-136	-115	-115	-161	-161	-149	-149	-124	-136.8	-136.8	-169	-134	-134	-35	-64	-19.0	-79	-110	62	169	-49.3	-110	-110	-31	-31

Notes:

1 Sample collected from original well decommissioned during 2009 Interim Action.

* Duplicate collected.

CAL = Value out of calibration range.

J = Analyte was detected. Reported concentration should be considered an estimate.

M = Hydrocarbons in the gasoline range are impacting the diesel range result.

mg/L= Milligrams per liter.

mS/cm= Millisiemens per centimeter.

mV = Millivolts.

NC = Parameter not collected due to malfunctioning equipment.

NTU = Nephalometric turbidity units.

O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

ORP = Oxidation reduction potential.

R = Replacement well.

µg/L = Micrograms per liter.

U = Analyte not detected above practical quantitation limit given.

U1 = The practical quantitation limit is elevated due to interferences present in the sample.

Z = Sample collected was unpreserved and allowed to settle prior to analysis. Results provided to assess affects of suspended sediment in the samples.

Exceeds MTCA A cleanup level.

Table 3 Groundwater Results Summary, RI and 1st through 4th Monitoring Events (February, May, and August 2010, and April 2011)
Former Chevron Property RI/FS

PARAMETERS	Units	Monitoring Well No.	MW-13R					MW-16R					MW-18R				MW-19R						MW-20	MW-21R					
		Sample Date	2/15/10	5/26/10	8/11/10	4/6/11	4/6/11 Z	2/16/10	5/27/10	8/10/10	4/6/11	4/6/11 Z	2/16/10	5/25/10	8/10/10	4/6/11	3/12/08[1]	2/16/10	5/26/10	8/12/10	4/7/11	4/7/11 Z	3/13/08	3/18/08[1]	2/15/10	6/1/10	8/11/10	8/11/10*	4/6/11	4/6/11*
		MTCA A																												
VOLATILE ORGANICS (BTEX)																														
Benzene	ug/L	5	35 J	33	22	11	17	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	15	46 J	34	27	--	45	--
Toluene	ug/L	1,000	4.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	3.7	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	91	5.0 J	2.9	1.7	--	6.7	--
Ethylbenzene	ug/L	700	13 J	15	10	2.6	3.3	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	620	230 J	240	120	--	340	--
m,p-Xylene	ug/L	1,000	4.0 U	1.4	1.7	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5	1.0 U	910	190 J	210	100	--	290	--
o-Xylene	ug/L	1,000	4.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	110	8.9 J	2.3	1.9	--	4.0 U	--
TOTAL PETROLEUM HYDROCARBONS																														
Gasoline	ug/L	800	680 J	560	510	420	470	100 U	100 U	100 U	100 U	400 U	100 U	100 U	180 O	100 U	400 U	640 J	380	620 O	130	280	100 U	9,200	4,400 J	4,400	2,800	--	5,100	--
Diesel	mg/L	0.5	0.49 U1	0.43	0.39 U	0.41	--	0.28 U	0.27 U	0.37	0.28 U	--	0.27 U	0.26 U	0.27 U	0.27 U	8.1	0.29 U	0.26 U	0.42 M	0.26 U	--	0.27 U	1.7	0.89 U1	0.79 U	0.87 M	--	0.68 U	--
Lube Oil	mg/L	0.5	0.70 J	0.45 U	0.43 U	0.42 U	--	0.44 U	0.43 U	0.39 U	0.44 U	--	0.43 U	0.42 U	0.43 U	0.43 U	0.42 U	0.46 U	0.42 U	0.42 U	0.42 U	--	0.44 U	0.40 U	0.46 U	0.42 U	0.41 U	--	0.42 U	--
METALS																														
Total Lead	ug/L	15	5.2	--	--	--	--	1.4	--	--	--	--	1.6	--	--	--	4.5	5.7	--	--	--	--	15	10	15	2.8 J	10 J	5.5 J	1.1	1.1 U
Dissolved Lead	ug/L	15	1.1	--	--	--	--	1.0 U	--	--	--	--	1.0 U	--	--	--	1.0 U	1.0 U	--	--	--	--	1.0 U	8.9	2.3	1.4	1.4	1.0	1.0 U	1.0 U
Dissolved Iron	ug/L		3,600	--	--	--	--	56 U	--	--	--	--	830	--	--	--	--	5,100	--	--	--	--	--	--	18,000	--	--	--	--	--
Total Ferrous Iron	mg/L		--	15.2	9.31	7.94	--	--	1.66	0.336	0.094	--	--	12.1	17.8	1.48	--	--	15.4	17.4	0.839	--	--	--	--	16.2	17.9	--	10.1	--
Dissolved Manganese	ug/L		1,500	1,300	2,000	1,800	--	10 U	3,800	11,000	10 U	--	1,200	2,800	9,500	1,900	--	2,200	2,400	3,500	1,600	--	--	--	4,100	4,500	3,500	--	4,200	--
PAHs																														
Naphthalene	ug/L		15	--	--	0.35	--	0.11 U	--	--	--	--	1.0	--	--	--	0.88	0.43	--	--	--	--	0.12 U	18	18	--	--	--	--	--
2-Methylnaphthalene	ug/L		1.1	--	--	0.10 U	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.11 U	0.17	--	--	--	--	0.12 U	32	7.3	--	--	--	--	--
1-Methylnappthalene	ug/L		4.7	--	--	0.38	--	0.11 U	--	--	--	--	0.10 U	--	--	--	15	4.3	--	--	--	--	0.12 U	20	18	--	--	--	--	--
Acenaphthylene	ug/L		1.1	--	--	0.40	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.42	0.12	--	--	--	--	0.12 U	0.099	1.1 U	--	--	--	--	--
Acenaphthene	ug/L		48	--	--	22	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.96	0.58	--	--	--	--	0.38	1.1	1.3	--	--	--	--	--
Flourene	ug/L		21	--	--	7.6	--	0.11 U	--	--	--	--	0.10 U	--	--	--	5.2	1.5	--	--	--	--	0.12 U	0.96	0.61	--	--	--	--	--
Phenanthrene	ug/L		3.2	--	--	0.70	--	0.11 U	--	--	--	--	0.10 U	--	--	--	2.9	0.31	--	--	--	--	0.12 U	0.65	0.44	--	--	--	--	--
Anthracene	ug/L		1.9	--	--	1.2	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.15	0.10 U	--	--	--	--	0.12 U	0.095 U	0.26	--	--	--	--	--
Fluoranthene	ug/L		1.5	--	--	1.2	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.11 U	0.10 U	--	--	--	--	0.12 U	0.11	0.12	--	--	--	--	--
Pyrene	ug/L		0.91	--	--	0.58	--	0.11 U	--	--	--	--	0.10 U	--	--	--	0.11 U	0.10 U	--	--	--	--	0.12 U	0.095 U	0.11 U	--	--	--	--	--
Benzo(a)anthracene	ug/L		0.15	0.057	0.061	0.058	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.015	0.012	0.011 U	--	--	--	--	--
Chrysene	ug/L		0.15	0.040	0.050 U	0.044	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.021	0.010 U	--	--	--	--	0.013	0.011	0.011 U	--	--	--	--	--
Benzo(b)fluoranthene	ug/L		0.093	0.010 U	0.010 U	0.018	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.012 U	0.010	0.011 U	--	--	--	--	--
Benzo(k)fluoranthene	ug/L		0.083	0.010 U	0.010 U	0.014	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.012 U	0.011	0.011 U	--	--	--	--	--
Benzo(a)pyrene	ug/L	0.1	0.092	0.010 U	0.010 U	0.017	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.012 U	0.012	0.011 U	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L		0.041	0.010 U	0.010 U	0.010 U	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.012 U	0.0099	0.011 U	--	--	--	--	--
Dibenz(a,h)anthracene	ug/L		0.013	0.010 U	0.010 U	0.010 U	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.011 U	0.010 U	--	--	--	--	0.012 U	0.0095 U	0.011 U	--	--	--	--	--
Benzo[g,h,i]perylene	ug/L		0.053	--	--	0.010 U	--	0.011 U	--	--	--	--	0.010 U	--	--	--	0.11 U	0.010 U	--	--	--	--	0.12 U	0.013	0.011 U	--	--	--	--	--
GENERAL CHEMISTRY																														
Alkalinity	mg/L		1,300	1,400	1,600	1,500	--	20 U	450	710	20 U	--	200	420	870	250	160	170	200	190	120	--	180	150	140	1,400	1,500	--	2,000	--
Nitrate (as Nitrogen)	mg/L		0.050 U	0.050 U	0.050 U	0.050 U	--	0.087	0.25 U	0.050 U	0.050 U	--	0.16	0.050 U	0.050 U	0.35	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	0.050 U	0.050 U	0.050 U	0.050 U	0.057	--	0.27	--
Sulfate	mg/L		460	460	560	280	--	5.9	5.0 U	5.0 U	5.0 U	--	26	7.8	5.0 U	7.4	5.0 U	10 U	5.0 U	5.0 U	5.0 U	--	5.0 U	5.0 U	230	170	120	--	110	--
Chloride	mg/L		710	670	750	420	--	4.2	8.3	8.4	8.7	--	3.7	4.3	14	2.4	3.4	4.7	2.5	3.1	2.0 U	--	11	28	140	120	110	--	100	--
Dissolved Methane	ug/L		280	580	680	290	--	0.83	3,100	590	4.1	--	420	2,100	5,400	4300	--	32	44	350	61	--	--	--	5,700	4,200	4,800	--	3,200	--
BOD5	mg/L		4.47	2.2	5.1	--	--	2.00 U	1.0 U	12 U	--	--	2.52	8.1	12 U	--	--	4.20	1.1	2.9	--	--	--	--	17	8.4	16.2	--	--	--
FIELD PARAMETERS																														
Turbidity	NTU		366	275.3	106	>1000	>1000	86.3	2565	>1000	704	704	58.1	16.7	221	28.6	NC	340	319	32.7	>1000		NC	168	303	8.9	384	384	52.2	52.2
pH	--		6.96	6.81	6.89	6.99	6.99	6.16	6.53	6.87	6.37	6.37	6.03	6.49	6.61	6.51	6.00	6.40	6.68	6.34	6.41		6.56	6.39	6.56	6.83	7.00	7.00	7.06	7.06
Specific Conductance	mS/cm		57.3	4.53	55.2	438	438	4.9	64.9	1.38	18.6	18.6	51.6	58.0	2.20	90	34.5	48.2	38.0	CAL	82.1		79.1	44.4	33.3	2.50	4.47	4.47	430	430
Dissolved Oxygen	mg/L		7.56	3.07	0.0	4.82	4.82	10.09	2.32	6.27	14.10	14.10	2.79	1.29	0.0	3.39	0.0	3.00	5.05	0.01	4.10	--	0.0	0.0	0.00	4.92	0.0	0.0	1.80	1.80
ORP	mV		-13	-96.3	-146	-103	-103	290	-20.3	-38	147	147	143	-2.1	-156	-27	-35	1	-49.8	-84	4	--	-44	15	-107	-140.0	-162	-162	-160	-160

Notes:

1 Sample collected from original well decommissioned during 2009 Interim Action.

* Duplicate collected.

CAL = Value out of calibration range.

J = Analyte was detected. Reported concentration should be considered an estimate.

M = Hydrocarbons in the gasoline range are impacting the diesel range result.

mg/L= Milligrams per liter.

mS/cm= Millisiemens per centimeter.

mV = Millivolts.

NC = Parameter not collected due to malfunctioning equipment.

NTU = Nephalometric turbidity units.

O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

ORP = Oxidation reduction potential.

R = Replacement well.

µg/L = Micrograms per liter.

U = Analyte not detected above practical quantitation limit given.

U1 = The practical quantitation limit is elevated due to interferences present in the sample.

Z = Sample collected was unpreserved and allowed to settle prior to analysis. Results provided to assess affects of suspended sediment in the samples.

Exceeds MTCA A cleanup level.

Table 3 Groundwater Results Summary, RI and 1st through 4th Monitoring Events (February, May, and August 2010, and April 2011)
Former Chevron Property RI/FS

		Monitoring Well No.	MW-22R					MW-23	MW-25						MW-26R					MW-27
PARAMETERS	Units	Sample Date	3/17/08[1]	1/20/10	5/26/10	8/12/10	4/6/11	3/12/08	3/18/08	3/18/08	1/21/10	5/27/10	8/12/10	4/6/11	3/18/08[1]	1/20/10	5/26/10	8/11/10	4/6/11	4/7/11
		MTCA A																		
VOLATILE ORGANICS (BTEX)																				
Benzene	ug/L	5	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.1	4.0 U	4.0	10 J	4.0 U	1.3	4.0 U	17	4.0 U	17	3.9	1.0 U	1.0 U
Toluene	ug/L	1,000	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	4.0	7.2 J	4.0 U	2.1	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	ug/L	700	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	56	56	74 J	4.0 U	6.1	5.3	4.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U
m,p-Xylene	ug/L	1,000	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.2	4.1	140 J	4.0 U	5.0 U	8.4	4.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	ug/L	1,000	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U	1.0 U	4.0 U	4.0	200 U1	4.0 U	1.0 U	4.0 U	4.0 U	4.0 U	4.0 U	1.0 U	1.0 U	1.0 U
TOTAL PETROLEUM HYDROCARBONS																				
Gasoline	ug/L	800	400 U	400 U	100 U	100 U	100 U	530	1,600	1,700	2,000 U	1,400	1,300 O	1,500	1,300	400 U	530	240	100 U	100 U
Diesel	mg/L	0.5	0.26 U	0.26 U	0.27 U	0.25 U	0.27 U	0.26 U	1.2	1	0.49	0.92	2 M	7.0	1.3	0.27 U	0.26 U	0.31 U	0.27 U	0.26 U
Lube Oil	mg/L	0.5	0.41 U	0.41 U	0.43 U	0.41 U	0.43 U	0.42 U	0.48 U	0.46 U	0.42 U	0.42 U	0.41 U	0.42 U	0.40 U	0.43 U	0.41 U	0.40 U	0.43 U	0.41 U
METALS																				
Total Lead	ug/L	15	1.1 U	1.3	--	--	--	--	1.2	1.3	1.1 U	--	--	--	3.3	1.1 U	--	--	--	--
Dissolved Lead	ug/L	15	1.0 U	1.0 U	--	--	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U	--	--	--	--
Dissolved Iron	ug/L		--	220	--	--	--	--	--	--	2,000	--	--	--	--	56 U	--	--	--	--
Total Ferrous Iron	mg/L		--	--	0.295	1.29	0.043	--	--	--	--	0.352	3.78	1.39	--	--	0.758	0.8	0.059	27.6
Dissolved Manganese	ug/L		--	1,400	890	3,200	840	--	--	--	120	220	130	170	--	11 U	66	560	10 U	3,900
PAHs																				
Naphthalene	ug/L		0.098 U	0.10 U	--	--	--	--	1.2	1.4	0.27	--	--	--	0.80	0.10 U	--	--	--	--
2-Methylnaphthalene	ug/L		0.098 U	0.10 U	--	--	--	--	0.11 U	0.11 U	0.10 U	--	--	--	0.10 U	0.10 U	--	--	--	--
1-Methylnappthalene	ug/L		0.098 U	0.10 U	--	--	--	--	22	25	0.67	--	--	--	69	0.10 U	--	--	--	--
Acenaphthylene	ug/L		0.098 U	0.10 U	--	--	--	--	0.17	0.17	0.10 U	--	--	--	0.45	0.15 U	--	--	--	--
Acenaphthene	ug/L		0.52	0.10 U	--	--	--	--	0.98	0.96	0.15	--	--	--	23	0.17 U	--	--	--	--
Flourene	ug/L		0.098 U	0.10 U	--	--	--	--	1.6	1.7	0.18	--	--	--	4.8	0.10 U	--	--	--	--
Phenanthrene	ug/L		0.098 U	0.10 U	--	--	--	--	0.11 U	0.11 U	0.10 U	--	--	--	10	0.10 U	--	--	--	--
Anthracene	ug/L		0.098 U	0.10 U	--	--	--	--	0.11 U	0.11 U	0.10 U	--	--	--	2.4	0.17 U	--	--	--	--
Fluoranthene	ug/L		0.098 U	0.10 U	--	--	--	--	0.11 U	0.11 U	0.10 U	--	--	--	0.88	0.10 U	--	--	--	--
Pyrene	ug/L		0.098 U	0.10 U	--	--	--	--	0.11 U	0.11 U	0.10 U	--	--	--	1.2	0.10 U	--	--	--	--
Benzo(a)anthracene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.10	0.016 U	--	--	--	--
Chrysene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.098	0.010 U	--	--	--	--
Benzo(b)fluoranthene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.022	0.010 U	--	--	--	--
Benzo(k)fluoranthene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.027	0.010 U	--	--	--	--
Benzo(a)pyrene	ug/L	0.1	0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.051	0.010 U	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.017	0.010 U	--	--	--	--
Dibenz(a,h)anthracene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.011 U	0.010 U	--	--	--	0.010 U	0.010 U	--	--	--	--
Benzo[g,h,i]perylene	ug/L		0.0098 U	0.010 U	--	--	--	--	0.011 U	0.11 U	0.010 U	--	--	--	0.020	0.010 U	--	--	--	--
GENERAL CHEMISTRY																				
Alkalinity	mg/L		340	160	320	240	310	230	420	410	140	190	260	200	190	180	270	210	300	310
Nitrate (as Nitrogen)	mg/L		0.050 U	0.50	0.050 U	0.17	0.41	0.051	0.052	0.050 U	3.4	0.73	0.050 U	1.4	0.050 U	1.0	0.16	0.050 U	0.050 U	0.050 U
Sulfate	mg/L		22	1,200	75	200	39	5.0 U	36	36	13	8.0	26	5.0 U	1,400	1,200	1,400	2,200	1,300	25 U
Chloride	mg/L		370	9,100	390	1,600	97	3.0	980	910	38	31	610	24	9,400	9,100	10,000	20,000	8,400	9.8
Dissolved Methane	ug/L		--	6.3	21	10	6.8	--	--	--	220	190	330	190	--	3.0	68	5.0	29	8,600
BOD5	mg/L		--	2.00 U	1.0 U	1.2 U	--	--	--	--	2.00 U	1.9	4.3	--	--	2.00 U	1.7	1.5	--	--
FIELD PARAMETERS																				
Turbidity	NTU		212	56.3	4.1	132	0.8	29	120	120	164	4.8	32.6	65.5	85.7	70.2	3.8	38.0	0.1	49.2
pH	--		6.62	6.32	6.82	6.69	7.03	6.49	6.31	6.31	5.81	6.28	6.96	6.20	6.24	6.19	6.31	6.53	6.88	6.58
Specific Conductance	mS/cm		19.6	17.9	1.37	CAL	128	52.4	19.8	19.8	31.8	28.9	5.13	90	3.25	16.6	22.42	CAL	CAL	92
Dissolved Oxygen	mg/L		0.0	7.55	4.90	0.01	1.75	0.0	0.0	0.0	4.96	1.10	0.0	0.57	0.0	6.75	5.52	0.01	0.36	0.27
ORP	mV		148	54	62.0	-36	32	19	-56	-56	-14	85.6	-120	-30	48	58	-64.5	-98	-84	-88

Notes:

1 Sample collected from original well decommissioned during 2009 Interim Action.
* Duplicate collected.
CAL = Value out of calibration range.
J = Analyte was detected. Reported concentration should be considered an estimate.
M = Hydrocarbons in the gasoline range are impacting the diesel range result.
mg/L= Milligrams per liter.
mS/cm= Millisiemens per centimeter.
mV = Millivolts.
NC = Parameter not collected due to malfunctioning equipment.
NTU = Nephalometric turbidity units.
O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
ORP = Oxidation reduction potential.
R = Replacement well.
µg/L = Micrograms per liter.
U = Analyte not detected above practical quantitation limit given.
U1 = The practical quantitation limit is elevated due to interferences present in the sample.
Z = Sample collected was unpreserved and allowed to settle prior to analysis. Results provided to assess affects of suspended sediment in the samples.
Exceeds MTCA A cleanup level.

Table 4. Cleanup levels

	Medium	
	Soil	Groundwater
Hazardous Substance	MTCA A (mg/kg)	MTCA A (ug/L)
Benzene	0.030	5
Diesel	2,000	500
Motor Oil	2,000	500
Gasoline	30/100[1.]	800/1,000[2]
Lead	250	15
Benzo(a) pyrene	0.1	0.1

[1]100 if no benzene and gas <1% TEX; 30 for other mixtures.

[2]1 if no benzene; 0.8 if benzene.

ug/L-Micrograms per liter.

Table 5. Potential Applicable or Relevant and Appropriate Requirements (ARARs)

ARAR	Description	Applicability
Soil		
Model Toxics Control Act (WAC 173-340-740, -747)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for soil, including derivation of soil concentrations protective of groundwater.	MTCA cleanup levels are applicable to site soil.
Groundwater		
Safe Drinking Water Act, Primary Drinking Water Regulations (40 Code of Federal Regulations [CFR] 141.50 and 141.61[a])	These regulations protect the quality of public drinking water supplies through regulation of chemical parameters and constituent concentrations as maximum concentration limits (MCLs).	MCLs are potentially relevant and appropriate where groundwater is a potential source of drinking water.
Model Toxics Control Act (WAC 173-340-720)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for groundwater.	MTCA cleanup levels are applicable to site groundwater.
Surface Water		
Clean Water Act, Section 304, National Recommended Water Quality Criteria, EPA Office of Science and Technology (4304T, 2004).	Establishes ambient water quality criteria for surface water.	Surface water quality criteria are potentially applicable to site surface water.
Clean Water Act's National Toxics Rule (NTR) (40 CFR 131.36)	Establishes ambient water quality criteria for surface water.	Surface water quality criteria are potentially applicable to site surface water.
Washington State Water Quality Standards for Surface Waters (WAC 173-201A)	Establishes ambient water quality criteria for surface water.	Surface water quality criteria are potentially applicable to site surface water.
Model Toxics Control Act (WAC 173-340-730)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for surface water.	MTCA cleanup levels may be applicable to the site.
Air		
National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 261)	Establishes specific emissions levels allowed for toxic air pollutants.	Applicable to treatment alternatives that may emit toxic pollutants to the air.
Model Toxics Control Act (WAC 173-340-750)	MTCA regulates the investigation and cleanup of releases to the environment that may pose a threat to human health or the environment. Establishes cleanup levels for air.	MTCA cleanup levels may be applicable to the site.
Miscellaneous		
State Environmental Policy Act (SEPA) Chapter 43.21C RCW.	The SEPA requires all governmental agencies to consider the environmental effects of a proposal (such as a remedial action) before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse effects on the quality of the environment.	At minimum, a SEPA checklist is required for site act activities requiring a grading permit.
Native American Graves Protection and Repatriation Act (43 CFR Part 10)	Native American Graves Protection and Repatriation Act regulations protect Native American burials from desecration through the removal and trafficking of human remains and "cultural items," including funerary and sacred objects.	This Act is potentially applicable to remedial actions at the site because it is possible that the disturbance of Native American materials could occur as a result of excavation activities.
Washington Hazardous Waste Management Act (WAC 173-303)	Establishes standards for the generation, transport, treatment, storage, or disposal of designated dangerous waste in the state.	This regulation is potentially applicable to alternatives that would involve handling of contaminated media at the site. The area of contamination policy allows contaminated media to be consolidated within the same area of a site without triggering Resource Conservation and Recovery Act or Washington dangerous waste regulations.
Department of Transportation Hazardous Wastes Rules (49 CFR 105–180)	Establishes specific U.S. Department of Transportation rules and technical guidelines for the off-site transport of hazardous materials.	Applicable to remedial activities that involve the off-site transportation of hazardous waste.
Washington Solid Waste Handling Standards (WAC 173-350)	Establishes standards for handling and disposal of solid non-hazardous waste in Washington.	These regulations are potentially applicable to solid nonhazardous wastes and are potentially relevant and appropriate to on-site remedial actions governing contaminated media management.
Washington Water Well Construction Act Regulations (WAC 173-160)	Provides requirements for water well construction.	These regulations are potentially applicable to the installation, operation, or closure of monitoring and treatment wells at the Site.

APPENDIX A

RI/FS and Interim Action Work Plan

Work Plan for Remedial Investigation/Feasibility Study, Interim Action, and Shoreline Restoration
Former Chevron Property
Bremerton, Washington

Prepared for

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September 2007 | 255-1896-063 (04/1301)

CERTIFICATION

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned.

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APPENDICES

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B SEPA Environmental Checklist
C Test Pit and Boring Logs
D Letter – Ryan Inc. 2002 Report Excerpt
E Parametrix 2006 Technical Memorandum
F Field Forms
G Standard Operating Procedures
H Project Schedule

KEY TERMS

µg/L	Micrograms per liter
ARARs	Applicable or Relevant and Appropriate Requirements
ASTs	above-ground fuel storage tanks
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
cm/s	centimeters per second
COCs	contaminants of concern
COD	chemical oxygen demand
cPAHs	Carcinogenic PAHs
CSLs	Screening Cleanup Levels
DQIs	data quality indicators
DQOs	Data Quality Objectives
Ecology	Washington State Department of Ecology
EIM	Environmental Information Management
EPH	extractable petroleum hydrocarbons
FID	flame ionization detector
FS	feasibility study
gpm	gallon per minute
HAZWOPER	Hazardous Waste Operation
I.D.	internal diameter
IDW	Investigation derived waste
mg/kg	Milligrams per kilogram
mg/L	milligrams per liter
MHHW	mean higher high water
MTBE	methyl tertiary-butyl ether
MTCA	Model Toxics Control Act
NTUs	nephelometric turbidity units
O.D.	outside diameter
ORP	Oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PDF	portable document format
PID	photoionization detector

KEY TERMS (CONTINUED)

PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
RI/FS	remedial investigation/feasibility study
RPD	relative percent difference
SEPA	State Environmental Policy Act
SOPs	standard operating procedures
SPT	split-spoon
SQSs	sediment quality standards
SVE	soil vapor extraction
TM	technical memorandum
TOC	total organic carbon
TPH	total petroleum hydrocarbons
USCS	Unified Soil Classification System
UV	ultra-violet
VOCs	volatile organic compounds
VPH	volatile petroleum hydrocarbons

1. INTRODUCTION AND BACKGROUND INFORMATION

This document presents a work plan for conducting a remedial investigation/feasibility study (RI/FS), interim action, and shoreline restoration at the Former Chevron Property located at 1310 Highland Avenue in Bremerton, Washington (Figure 1-1). The site, which formerly contained a bulk fuel distribution facility, was purchased by the City of Bremerton in 2005 for development as an addition to the adjacent Evergreen Park.

The RI/FS is to be performed to aid in the development of cleanup actions for addressing residual petroleum contamination at the site. Residual petroleum contamination exists in soil and groundwater as a result of past fuel releases. Cleanup actions developed during the RI/FS to treat residual contamination will be implemented at the site as an interim action. Following the interim action, shoreline restoration will be implemented to restore the intertidal environment as habitat for important species such as forage fish and salmon.

This work plan was developed in cooperation with the Washington State Department of Ecology (Ecology) under an Agreed Order. Work is to be done in an expedited manner under the Governor's Puget Sound Initiative. The initiative focuses on cleaning up contamination as well as restoring Puget Sound. Ecology recognizes that site cleanups can be designed and implemented in a manner that improves habitat values and provides for shoreline restoration in conjunction with remedial actions. While planning the cleanup, and making cleanup decisions, Ecology and the City will evaluate opportunities to perform remedial actions in a fashion that coincidentally enhances habitat. Elements of the remedial action will be evaluated for restoration opportunities in consultation with Ecology as plans for cleanup are developed.

Conceptual cleanup actions have been developed based on existing environmental data and are presented here as a proposed interim action. Stakeholder approval will be obtained prior to the implementation of the interim action selected based on the RI/FS. Shoreline restoration actions are described briefly. Detailed restoration plans will be developed as part of the design package for construction of the Evergreen Park addition.

This RI/FS work plan includes two companion documents required under an Agreed Order. A public participation plan is included in Appendix A. A State Environmental Policy Act (SEPA) environmental checklist is included in Appendix B.

1.1 SITE DESCRIPTION AND HISTORY

The Former Chevron Property is a 1.4 acre waterfront property located on the Port Washington Narrows (Figure 1-1). The site formerly contained a bulk fuel distribution facility, which operated from prior to 1946 until circa 1988. Existing and former site features are shown on Figures 1-2 through 1-4. In 1946, the northern boundary of the site was defined by the wooden bulkhead shown in Figure 1-4. Based on aerial photographs, the facility was expanded northward to its present boundaries between 1946 and 1963 (Hart Crowser 1989a).

Products handled at the former bulk fuel distribution facility consisted primarily of diesel and gasoline (Hart Crowser 1989a). The site is divided into two operations areas known as the "upper yard" and "lower yard" (Figure 1-4). The lower yard was the former location of fuel loading and offloading operations. Fuel was offloaded from barges at a fueling pier in the Port Washington Narrows and pumped through above-ground piping to twelve ASTs located in the upper yard. Fuel was loaded from the ASTs to tanker trucks at four loading

racks in the lower yard through above-ground piping. An exception is piping south of the former garage (shown in Figure 1-4), which extended underground beneath the driveway to supply fuel to the southwestern loading rack. All above-ground structures were removed by the end of 1988. It is not known whether the underground piping in the vicinity of the former garage was removed.

Soils in the upper yard consist of glacial till underlain by interbedded dense silts and silty sands (outwash). This soil unit was consolidated during the most recent glaciation and, as a result, is typically very dense and relatively impermeable. The lower yard is underlain by silty sand fill, which was used to extend the lower yard into Port Washington Narrows. The fill is underlain by silty sand outwash at a depth of approximately 20 feet below ground surface (bgs). The results of slug testing performed by Hart Crowser (1989b) indicate that the hydraulic conductivity of the fill soils is 5x10-5 centimeters per second (cm/s).

Groundwater occurs at depths of approximately 8 to 10 feet bgs in the lower yard and 15 to 17 feet bgs in the upper yard. Previous site explorations investigated the possible presence of separate upper and lower water bearing units in the upper yard. However, study results indicate that the potential lower water bearing unit did not likely consist of a distinct, second water bearing zone (PEG 1994).

1.2 SHORELINE RESTORATION AND FUTURE SITE USES

After the interim action has been successfully implemented, the shoreline will be restored. Restoration will be designed to return the majority of the site's shoreline to a natural beach profile. All bulkheads and existing fill soils along the site's southern shoreline will be removed. The new beach will be sloped to match existing natural beaches in the area and will be surfaced with sands and gravels appropriate for forage fish spawning (beach nourishment). The sands and gravels will be sized to be both conducive for spawning and to resist erosive tidal forces. To the north of this new beach, a pocket beach will be constructed which will also be surfaced with beach nourishment.

The interim action will address contaminated soil at the site, including soil near the shoreline. However, it is estimated that up to 2,500 cubic yards of residual potentially-contaminated soil may be removed from the shoreline as fill soils are excavated to create the new beaches. Following excavation, the new beach surfaces will be formed by placing beach nourishment to grade.

In addition to the bulkhead removal and beach construction, all existing creosote piling, the derelict pier, and concrete rubble along the shoreline will be removed. A native riparian buffer consisting of native trees, shrubs, and grasses will be planted at the transition zones between the constructed beaches and the uplands. The purpose of the buffer is to provide shading, leaf litter, and stabilization against slope erosion. Upland portions of the site will be landscaped with grass, trees, and paths. A representation of the completed park concept is provided in Figure 1-5.

Under the current schedule, the interim action will be implemented in 2008 and shoreline restoration will occur during the open fish window (approximately July through October) in 2009/2010 (see Section 6 for a proposed schedule). Shoreline restoration will occur not earlier than one year following the interim action in order to allow the enhanced bioremediation step (see Section 3 for a description) time to reduce subsurface contamination. The goal of the bioremediation is to reduce contamination to below cleanup

levels. This will reduce the level of effort required to manage any residual contaminated soils as they are excavated for beach construction.

1.3 EXISTING ENVIRONMENTAL DATA

1.3.1 Initial Assessments

Environmental work at the site began in 1988 following demolition of the bulk fuel facility (GeoEngineers 1988). Initial site work consisted of the installation and sampling of nine monitoring wells (MW-4 through MW-12) and seven test pits (TP-1 through TP-7). Soil and groundwater samples were analyzed for contaminants of concern (COCs) consisting of total petroleum hydrocarbons (TPH), gasoline, diesel, and benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on the discovery of gasoline and diesel contamination in soils and groundwater, an additional nine test pits (TP-8 through TP-16) were excavated and soil samples from each pit were collected and analyzed (Hart Crowser 1989b). Test pits were located throughout the site, including at former tank, piping, and loading rack locations (Figure 1-4). Monitoring wells were located across the site to provide an assessment of site-wide groundwater conditions. Test pit and monitoring well logs are provided in Appendix C.

During these explorations, soil samples were collected from the monitoring well borings and test pits at regular intervals for field screening using visual/olfactory methods and a flame ionization detector (FID). Samples were generally selected from locations indicating the potential for hydrocarbon contamination based on the field screening. The greatest soil impacts were found in the lower yard, with gasoline concentrations as high as 25,000 milligrams per kilogram (mg/kg) and diesel concentrations as high as 17,000 mg/kg. Reported concentrations were generally lower in upper yard soils, with gasoline concentrations of up to 250 mg/kg and diesel concentrations of up to 1,400 mg/kg. Historical soil sampling results are shown on Figure 1-6.

As shown in Figure 1-6, highly-impacted soils were generally confined to the area behind the buried wooden bulkhead where the fuel loading racks were located. Impacted soils generally occur in a "smear zone" located above the groundwater table. Historical groundwater depth measurements at the site suggest that the smear zone is approximately 3 to 5 feet thick. Near-surface contaminated soils were discovered in only one location, Test Pit TP-9, beginning at a depth of 2 feet bgs and extending to the groundwater table.

Historical groundwater sample results are shown on Figure 1-7. As shown, groundwater contamination has been detected in the majority of the monitoring wells, with TPH concentrations as high as 1,742 milligrams per liter (mg/L). In addition, floating free product was measured in some of the wells at thickness of up to 4 feet. The locations of wells where free product has been measured historically are shown on Figure 1-7.

1.3.2 Soil Vapor Extraction

Chevron installed a soil vapor extraction (SVE) system at the site in 1990 to address floating product and soil contamination. The system consisted of a series of eleven shallow extraction wells connected via a piping manifold to a blower and thermal oxidizer. An additional three monitoring wells (MW-13 through MW-15) were installed to increase the available monitoring network. The SVE system was operated from 1990 until 1994 when it was shut down due to diminishing returns. It was estimated that a total of approximately 195,000 pounds of hydrocarbons were removed during system operation (Emcon 1995).

1.3.3 Post-SVE Assessment

An additional nine monitoring wells (MW-16 through MW-24) were installed at the site in 1993 to expand the available monitoring network (PEG 1994). Soil samples were collected from the borings at regular intervals and field screened using visual/olfactory methods and a photoionization detector (PID). Thirteen soil samples selected from the borings were analyzed for gasoline, diesel, heavy oil, BTEX, lead, and polycyclic aromatic hydrocarbons (PAHs). Gasoline and diesel concentrations exceeding Model Toxics Control Act (MTCA) Method A criteria were detected in only four of the nine wells (MW-19 through MW-22). Benzene exceeded MTCA A criteria in two of these wells. Heavy oil and lead concentrations (where detected) did not exceed MTCA A criteria in any sample. No carcinogenic PAHs were detected. Non-carcinogenic PAHs at concentrations exceeding MTCA A criteria were only detected in one sample which also contained a high concentration of diesel.

Groundwater samples were collected from all site wells (including new and existing wells) with the exception of those that were dry or that contained floating product (floating product was measured in four of the wells ranging from 0.01 to 0.39 feet thick). Twelve groundwater samples were collected and analyzed for the same constituents as the soil samples. Wells located in the lower yard generally showed the highest impacts, with gasoline concentrations exceeding MTCA A criteria in four wells. Diesel concentrations did not exceed MTCA A criteria. The upper yard wells did not contain gasoline or diesel at concentrations exceeding MTCA A criteria. An exception is MW-23, which slightly exceeded the gasoline criteria. BTEX compounds exceeded MTCA A criteria in five wells. Total lead exceeded the MTCA A criteria in six wells. Carcinogenic PAHs (cPAHs) concentrations exceeded MTCA A criteria in three wells (MW-13, MW-14, and MW-22).

1.3.4 Historical Groundwater Monitoring

Periodic groundwater monitoring was conducted at the site quarterly from 1994 to 1997 and semi-annually from 1998 to 2003. All site wells were included in the monitoring program during at least one sampling event. Groundwater samples were analyzed for gasoline, diesel, BTEX, heavy oil, and total lead. The second-to-last groundwater monitoring report (GRI 2002) is excerpted in Appendix D. Table 1-1 of this report provides a summary of all monitoring data for all wells. As shown, floating product thicknesses decreased with time, particularly through the period of SVE system operation. Gasoline, diesel, and BTEX concentrations have also generally decreased over time. An exception is in wells MW-16 and MW-18, where gasoline and diesel concentrations have fluctuated with no discernable pattern. Lead, where sampled, has declined below the MTCA A criteria. Exceptions are MW-4 and MW-9. The detected concentrations of gasoline and diesel from the latest sampling event in each well are included on Figure 1-7.

1.3.5 Current Assessments

1.3.5.1 Sediment

The following discussion presents the results of a sediment characterization study conducted at the site by the City. The discussion also presents the City's position regarding the adequacy of the study for the purpose of characterizing impacts to the sediments. The City acknowledges that Ecology is currently conducting a sediment investigation at the site and will develop an independent opinion regarding sediment impacts and the possible need for sediment remediation.

Sediment Testing

Prior to purchasing the property in 2005, the City conducted sediment sampling on the beach adjacent to the site (Parametrix 2006). The scope of the sampling was developed in coordination with Ecology NW Region staff. The purpose of the sampling was to provide an assessment of site sediments to support both the decision to purchase the property and a future aquatic land lease from the Washington Department of Natural Resources (for the future Bremerton Boardwalk project). Sampling was conducted according to the requirements of the Washington State Sediment Management Standards (173-204 WAC) to determine compliance with applicable marine sediment quality standards (SQSs).

Sediment sample locations are shown on Figure 1-4. Sediment samples were collected from 12 locations within intertidal and subtidal areas. Surface sediment grab samples were collected at all 12 locations from the top 10 centimeters. Intertidal samples were collected during low tide events using hand scoops. Subtidal samples were collected from a boat using a Van Veen sampler. At five of the intertidal sample locations, subsurface grab samples were collected from a depth of 2 feet using a shovel and hand scoops. These samples are indicated on Figure 1-4 by the presence of an "S" in the sample number.

The majority of the shoreline at the site has been armored with concrete rubble. Intertidal samples were collected near the toe of the concrete rubble from sediments exposed during low tide. The sediment substrate consisted of sand-, gravel-, and cobble-sized particles. A photograph showing the location of sediment sample C-6 is provided in Figure 1-8. Fifteen sediment samples (14 field samples and one duplicate) were analyzed for the marine SQSs chemical criteria list, diesel, and motor oil. An exception is the intertidal samples, which were not analyzed for polychlorinated biphenyls (PCBs) since this contaminant has not been identified as a potential COC at the site. Subtidal samples were analyzed for PCBs for the purposes of the future aquatic lease. Sediment sample results were compared to SQSs, which were exceeded for PAHs in one intertidal surface sediment sample (C-8).

To further assess the presence of PAHs at the site, three additional surface sediment samples were collected (C-11, C-12, and C-13) and analyzed for PAHs. The SQSs for PAHs were not exceeded on any of the three samples.

In accordance with the Sediment Management Standards, an additional sediment sample was collected from the location of sample C-8 for the purpose of a bioassay test to "confirm" whether or not the sediment complied with the applicable SQSs biological criteria. The results of the bioassay test demonstrated that there was no statistically significant difference between the test sediment and reference sediment and that the sediment passed both the SQSs and less stringent sediment Cleanup Screening Levels (CSLs) evaluation criteria. CSLs are used as cleanup levels for sediment cleanups while SQSs are a regulatory and management goal for the quality of sediment throughout the state.

Although the bioassay test was performed according to 173-204-WAC, the test did not include exposure of the test specimens to ultra-violet (UV) radiation as is recommended in Sub-appendix D to the Ecology guidance document for preparing sediment sampling plans (Ecology 2003). UV radiation exposure is recommended for sediments in intertidal and shallow subtidal areas that contain PAHs. Certain PAHs are photo-reactive and may exhibit higher toxicity when exposed to UV light. Although UV exposure was not

performed, it is observed that the bioassay test results met the SQSs criteria, which are more stringent than the CSLs. To fail both the SQSs and CSLs criteria would require a large increase in effects due to UV radiation. A technical memo reporting the sediment sampling results is excerpted in Appendix E (Parametrix 2006).

Conceptual Model and Adequacy of Sediment Testing

A cross section of the site (Section A) is depicted on Figure 1-9. The location and depths of sediment samples C-6 (surface) and C-6-S (2 feet bgs) are shown on the section. The conceptual location of sediments that would potentially be most impacted (or "smeared") by floating product is also shown. According to the conceptual model, sample C-6 was collected from the location most likely impacted by historical floating product (if present), which is the near-surface sediments. Thus, the near-surface sediments are representative of worst-case conditions at the site. This observation would not be valid if the exposed intertidal beach sediments consisted of recent deposits (deposited following the removal of the majority of floating hydrocarbons from the site by the soil vapor extraction (SVE) system. However, the absence of fines and the presence of large gravel and cobbles in the beach sediments indicate that the beach is being eroded rather than gaining sediments by deposition.

The above discussion supports the selection of near-surface sediment samples as appropriate for the site. The purpose for sampling sediments at greater depths would be to delineate the potential vertical extent of contamination to aid in evaluating cleanup options. Since surface sediments are in compliance with SQSs, no sediment cleanup is anticipated for the site.

Evaluation of Concern

The 18 sediment samples collected constitute a "station cluster" (WAC 173-204-510 [2]) in that they are "spatially and chemically similar." According to the Sediment Cleanup Standards (WAC 173-204-510 to 590), station clusters "of potential concern" are identified by grouping three stations with the "highest concentration of each chemical contaminant identified in WAC 1873-204-520, cleanup screening levels criteria." The three stations are then evaluated by comparing the average concentrations for the three stations to the CSLs. If the average contaminant concentrations exceed the CSLs, the station cluster is defined as "of potential concern". Sediment results are compared to CSLs in Table 2 of the technical memorandum excerpt in Appendix E. As shown in the table, none of the sediment sample chemical results exceeds the CSLs, which categorizes the station cluster as being of "low concern".

In addition to the chemical evaluation, the three stations within the cluster with the highest level of biological effects, determined by the biological testing requirements, are to be identified (if available). If the biological effects at each of the three stations exceed the CSLs biological criteria, the station cluster is defined as "of potential concern". However, since only a single bioassay test was required to "confirm" the sediments from station C-8, only one set of biological test data is available, and an evaluation of biological effects for three stations within the cluster cannot be made. Note that the results of the single biological test did not exceed the SQSs biological effects criteria, supporting the "of low concern" designation.

1.3.5.2 Monitoring Well Survey

A survey of all existing groundwater monitoring wells at the site was conducted on October 24, 2006. Sixteen existing wells were located, as indicated on Figure 1-4. Depths to groundwater and thickness of floating product (if present) were measured in each well using and electronic oil/water interface probe. Floating product was measured in only two of the wells (MW-16 and MW-18) located in the upper yard. The thickness of product measured was 0.03 feet (approximately 3/8 inch) in each of the two wells. The horizontal location and top of casing vertical elevation for each well were measured by survey on November 16, 2006. Groundwater elevations presented on Figure 1-7 are based on the survey. General groundwater flow directions indicated on the figure are based on the measured elevations.

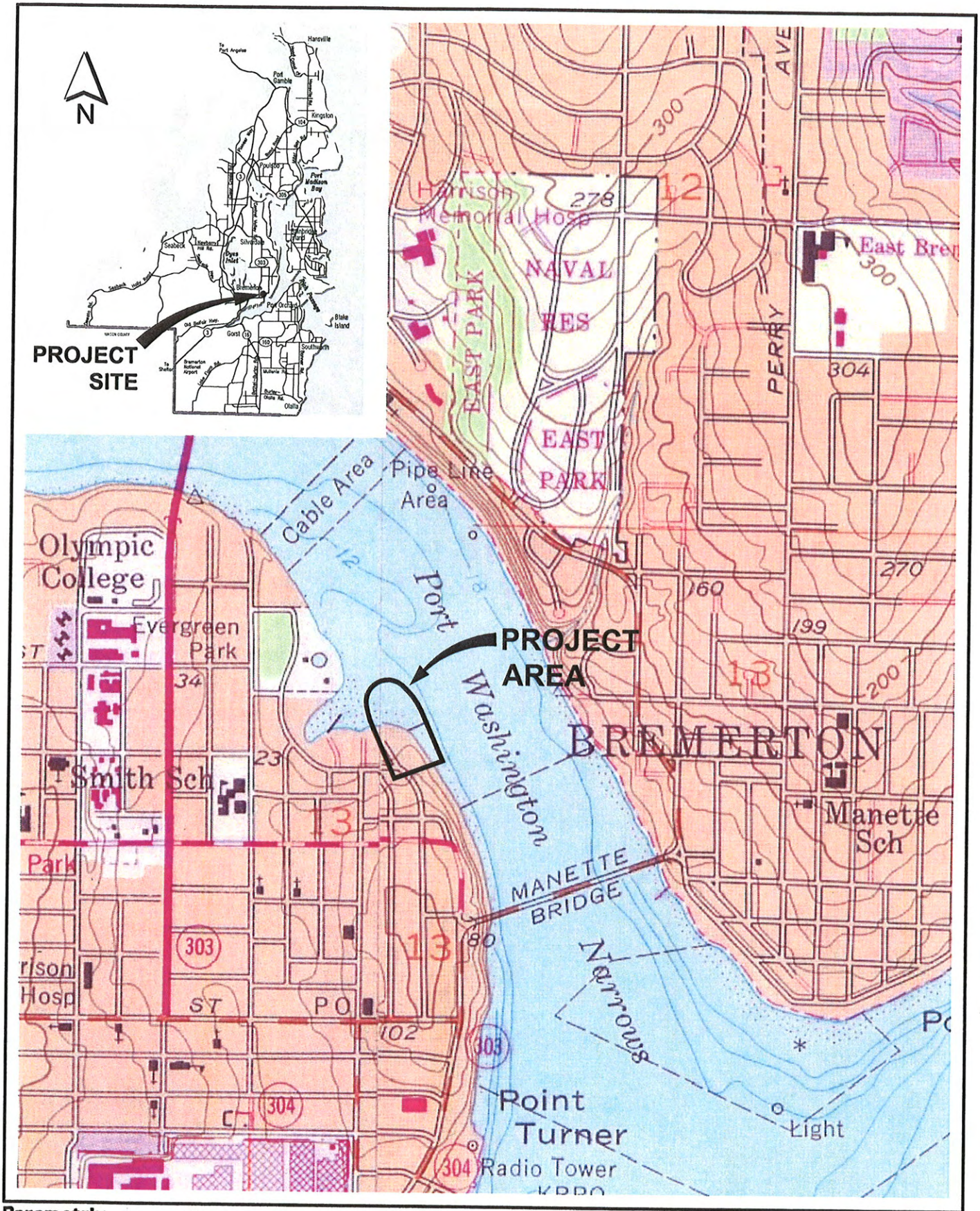


Figure 1-1
Former Chevron Property
Project Vicinity



Parametrix DATE: Jan 22, 2007 FILE: BR1896063P04T1301F-05

0 N

NO SCALE

Figure 1-2
Former Chevron Property
CIRCA 2005 Aerial Photograph



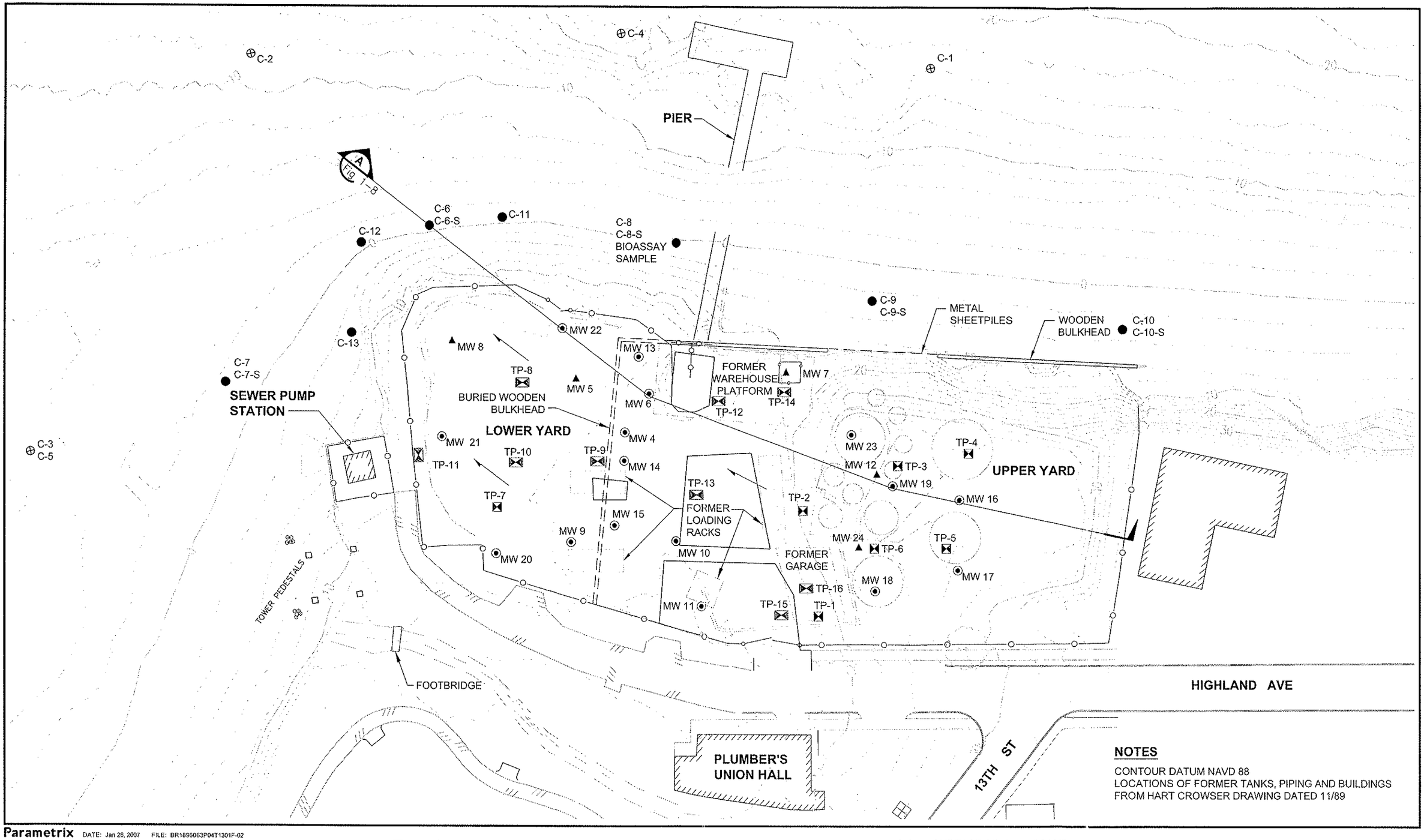
Parametrix DATE: Jan 22, 2007 FILE: BR1896063P04T1301F-05

N

0

NO SCALE

Figure 1-3
Former Chevron Property
1963 Aerial Photograph



NOTES

CONTOUR DATUM NAVD 88
LOCATIONS OF FORMER TANKS, PIPING AND BUILDINGS FROM HART CROWSER DRAWING DATED 11/89

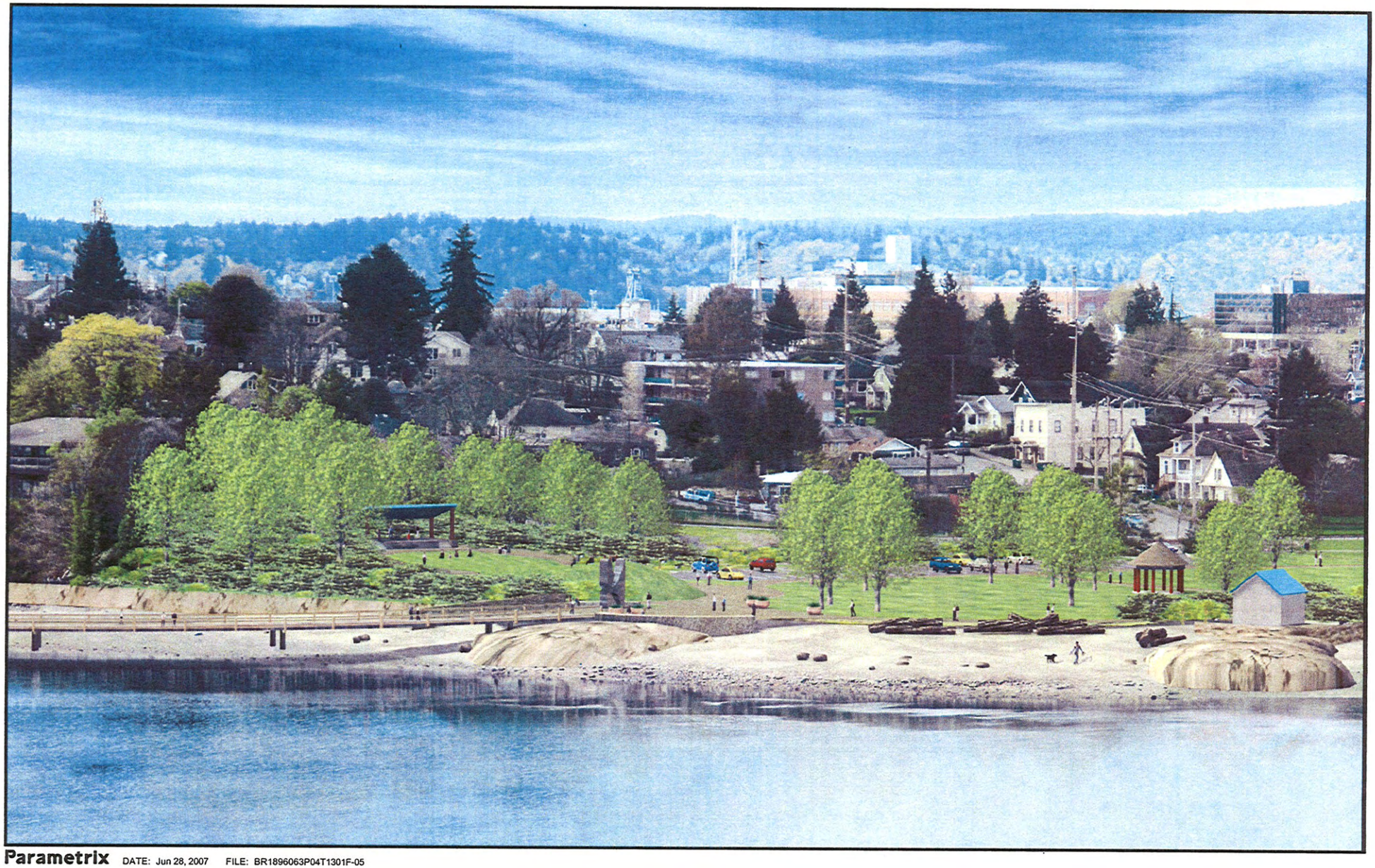
Parametrix DATE: Jan 26, 2007 FILE: BR1895063P04T1301F-02

N
0 50
SCALE IN FEET

LEGEND

- INTERTIDAL SEDIMENT SAMPLE
- SUBTIDAL SEDIMENT SAMPLE
- EXISTING MONITORING WELL
- TEST PIT , GEO ENGINEERS 1988
- TEST PIT, HART CROWSER 1989
- DESTROYED MONITORING WELL
- EXISTING CONCRETE PAD
- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- FORMER PIPING/BUILDING/ LOADING RACK
- C-6 SURFACE SEDIMENT SAMPLE
- C-6-S SEDIMENT SAMPLE COLLECTED AT 2 FT DEPTH
- FORMER ABOVEBROUND STORAGE TANK
- GENERAL GROUNDWATER FLOW DIRECTION

Figure 1-4
Former Chevron Property
Historical Sample Locations



Parametrix DATE: Jun 28, 2007 FILE: BR1896063P04T1301F-05

Figure 1-5
Former Chevron Property
Completed Park Concept

PIER

METAL SHEETPILES

WOODEN BULKHEAD

SEWER PUMP STATION

LOWER YARD

UPPER YARD

BURIED WOODEN BULKHEAD

FORMER WAREHOUSE PLATFORM

FORMER LOADING RACKS

FORMER GARAGE

MW 8 (8') *900/200 (1988)*

MW 22 (10') *1,300/11,000 (1994)*

MW 13

TP-8 (7') *17,000/ND (1989)*

MW 5 (8') *4,300/17,000 (1988)*

MW 6 (8') *230/71 (1988)*

TP-12 (7') *ND/210 (1989)*

MW 7 (13') *ND/ND (1988)*

TP-14 (9') *ND/ND (1989)*

MW 21 (10') *12/170 (1994)*

MW 4 (8') *630/100 (1988)*

TP-9 (7') *25,000/ND (1989)*

MW 14

TP-11 (7') *330/1,100 (1989)*

TP-10 (7') *400/ND (1989)*

TP-13 (7') *757/ND (1989)*

TP-7 (8') *280/47 (1988)*

MW 9 (8') *ND/ND (1988)*

MW 15

MW 10 (13') *ND/ND (1988)*

MW 20 (11') *69/34 (1994)*

MW 23 (25') *ND/ND (1994)*

TP-4 (6') *ND/ND (1988)*

TP-3 (4') *81/250 (1988)*

MW 12 (13') *224/210 (1988)*

MW 19 (13') *420/630 (1994)*

MW 16 (20') *ND/ND (1994)*

TP-2 (9') *31/74 (1988)*

MW 24 (21') *ND/44 (1994)*

TP-5 (8') *ND/ND (1988)*

TP-6 (7') *4/82 (1988)*

MW 17 (27') *ND/13 (1994)*

MW 11 (8') *3/480 (1988)*

TP-15 (5') *1900 TPH (1989)*

TP-16 (3') *1300 TPH (1989)*

TP-1 (7') *250/1400 (1988)*

MW 18 (15') *ND/ND (1988)*

TOWER PEDESTALS

FOOTBRIDGE

HIGHLAND AVE

PLUMBER'S UNION HALL

13TH ST

NOTES

CONTOUR DATUM NAVD 88

SOIL VAPOR EXTRACTION SYSTEM OPERATED IN LOWER YARD FROM 1990 TO 1994

Parametrix DATE: Jun 21, 2007 FILE: 8R1896063P04T1301F-03

N

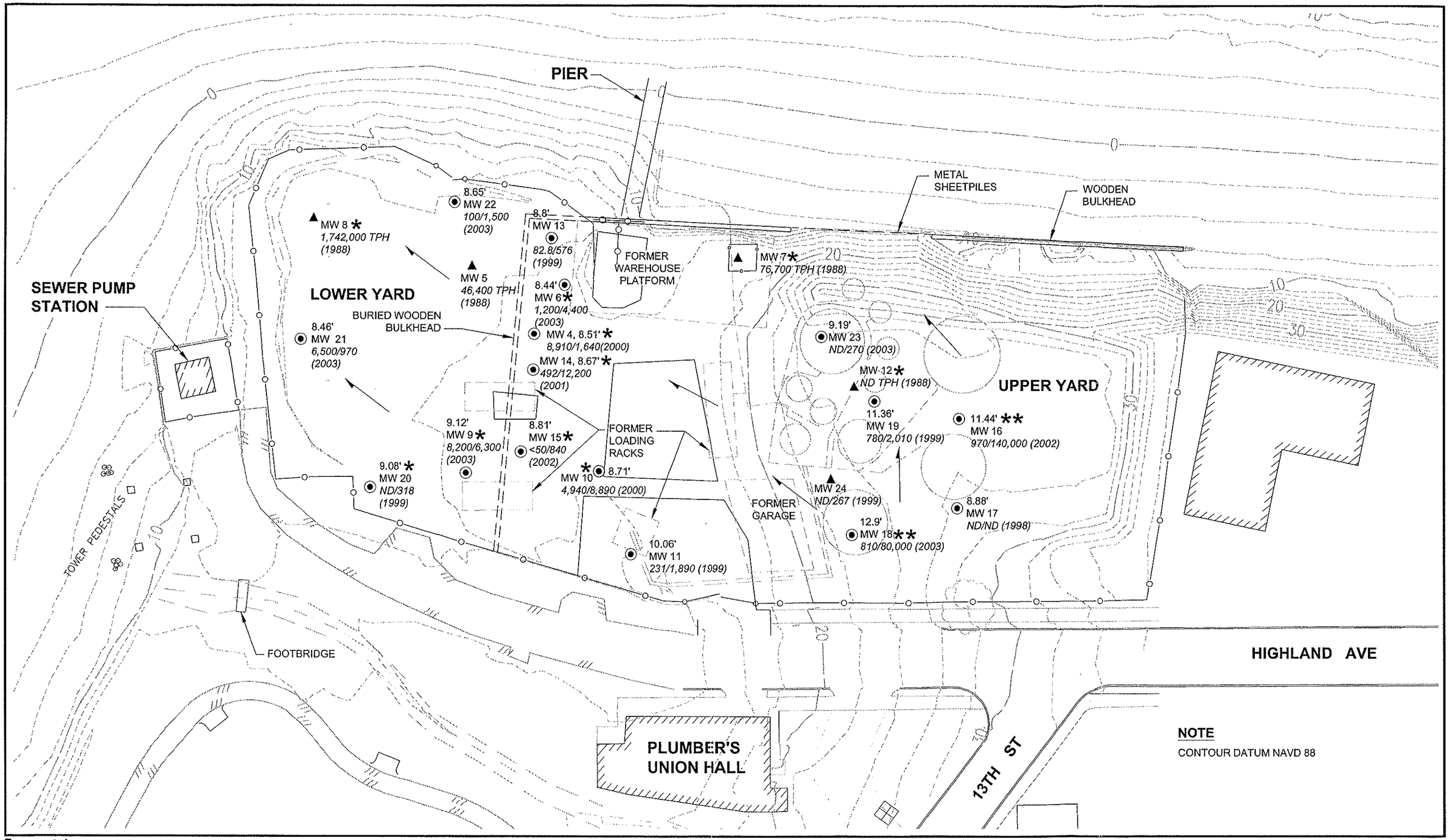
0 40

SCALE IN FEET

LEGEND

900/200 (1988)	SOIL RESULTS FOR GASOLINE/ DIESEL IN MG/KG (YEAR SAMPLED)	▲	DESTROYED MONITORING WELL		EXISTING BUILDING		TEST PIT , GEO ENGINEERS 1988
TPH	TOTAL PETROLEUM HYDROCARBONS		EXISTING CONCRETE PAD		CHAIN LINK FENCE		TEST PIT, HART CROWSER 1989
(8')	DEPTH OF SAMPLE		FORMER ABOVEGROUND STORAGE TANK		DRAINAGE DITCH	⊙	EXISTING MONITORING WELL
		→	GENERAL GROUNDWATER FLOW DIRECTION		FORMER PIPING/BUILDING/LOADING RACK		

Figure 1-6
Former Chevron Property
Historical Soil Results



NOTE

CONTOUR DATUM NAVD 88

Parametrix DATE: Jun 21, 2007 FILE: BR1696063P04T1301F-03

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- GENERAL GROUNDWATER FLOW DIRECTION
- ** CURRENT FLOATING PRODUCT IN WELL
- * HISTORICAL FLOATING PRODUCT IN WELL
- EXISTING MONITORING WELL
- DESTROYED MONITORING WELL

ND NOT DETECTED

TPH TOTAL PETROLEUM HYDROCARBONS

6,500/970 (2003) MOST RECENT GROUNDWATER SAMPLE RESULTS FOR GASOLINE/DIESEL IN ug/L (YEAR SAMPLED)

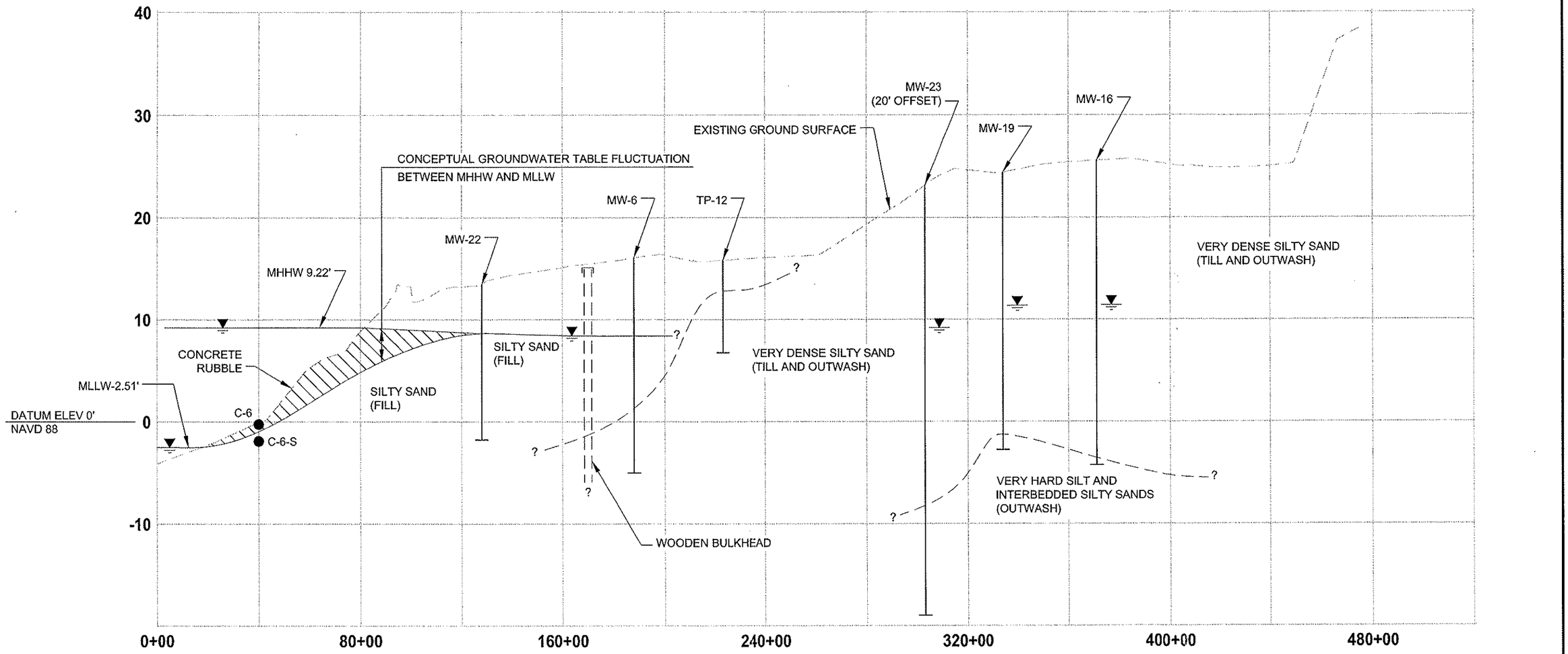
10.06' GROUNDWATER ELEVATION MEASURED IN WELL OCTOBER 2006

Figure 1-7
Former Chevron Property
Historical Groundwater Results



Parametrix DATE: Jun 21, 2007 FILE: BR1896063P04T1301F-05

Figure 1-8
Former Chevron Property
Location of Sediment Sample C-6



SECTION A

HORIZ: 1"=40'
VERT: 1"=10'

Parametrix DATE: Jun 21, 2007 FILE: BR1856063P04T1301F-06

NOTES:

MEAN HIGHER HIGH WATER (MHHW) AND MEAN LOWER LOW WATER (MLLW) ELEVATIONS OBTAINED FROM NOAA RECORDS FOR TIDAL STATION BREMERTON, WA, ID NO. 9445958

LEGEND

- GROUNDWATER TABLE ELEVATION MEASURED 10/24/06
- SEDIMENT SAMPLES
- SEDIMENTS AND BANK SOIL MOST LIKELY IMPACTED BY FLOATING PRODUCT (IF PRESENT) OR DISSOLVED CONTITUENTS

Figure 1-9
Former Chevron Property
Section A

2. PROJECT ORGANIZATION AND MANAGEMENT

2.1 PROJECT ORGANIZATION

Specific project roles and responsibilities for oversight and sampling are described in Table 2-1.

Table 2-1. Project Roles and Responsibilities

Personnel	Responsibilities
Bill Webb Parametrix Project Manager (360) 850-5303 bwebb@parametrix.com	Oversees technical team performance to ensure successful accomplishment of the project objectives.
David Dinkuhn Parametrix Task Manager (360) 850 -5319 ddinkuhn@parametrix.com	Reports directly to the Project Manager. Scopes and coordinates field effort; oversees day to day project activities; coordinates site access with property owners; insures all field sampling and handling procedures are followed and documented, and that field QA objectives are met. Reports to the Project Manager any deviations from the work plan.
Lily Isenhart Parametrix Field Sampler/Field Health and Safety Officer (360) 850-5333 lisenhart@parametrix.com	Reports directly to the Task Manager. Ensures all project health and safety requirements are followed; conducts field sampling activities; coordinates sample deliveries to lab; reports to the Task Manager any deviations from the work plan.
Stuart Currie Parametrix Project Chemist/Data QA Manager (425) 458-6273 scurrie@parametrix.com	Reports directly to Task Manager and works directly with laboratory QA manager. Reviews laboratory data; ensures chemical data quality; performs QA evaluations of data.
Katie Downie Laboratory QA Manager Severn Trent Laboratories (253) 922-2310	Works with Data QA Manager and Project Manager to ensure that all laboratory QA objectives are met and data package QA/QC deliverables from the laboratory are correctly documented and reported.

The Field Sampler will be responsible for the initial coordination of sampling and analysis activities with the selected analytical laboratory. The Project Chemist may review laboratory procedures to establish that protocols for chemical analysis, quality assurance/quality control (QA/QC), and reporting are acceptable. He will also act as the primary point of contact with the laboratory for any analysis or QA/QC issues arising during project completion.

The Field Sampler will be responsible for coordinating daily sampling and analysis activities with the project laboratory and for notifying the laboratory of sample delivery, assuring samples are packaged properly for transportation, and delivering samples to the laboratory.

The Data QA Manager will assess data quality by conducting data review/verification, and validation, as needed.

2.2 DATA QUALITY OBJECTIVES

Data Quality Objectives (DQOs) were developed according to EPA's DQOs Process (EPA 2000). The DQO process is a seven-step planning approach to develop sampling designs for data collection activities that support decision-making. It provides a systematic procedure for defining the criteria that a data collection design should satisfy. The DQOs for the project are shown in Table 2-2.

Table 2-2. Design Characterization Sampling DQOs

DQO	Description
State the Problem	What is the nature and extent of soil and groundwater contamination at the site, both initially and following the interim action?
Identify the Decisions	Is the collected chemical data adequate to identify and delineate the extent of the contamination for the purposes of designing the interim action and developing an appropriate final action?
Identify the Inputs to the Decisions	Analytical results (what are the detected concentrations? are they above cleanup levels? was QA/QC criteria met?). Actual sample locations (correct location and depth?).
Define the Study Boundaries	The site property boundary and off-site migration areas (where warranted).
Develop a Decision Rule	Results will be compared to the cleanup levels established for the site. Determination of whether the collected data is adequate will be generally be based on overall investigation results and professional judgment.
If/Then Statement	If the extent of contamination cannot be adequately evaluated, then additional sampling may be required.
Specify Tolerable Limits on Decision Errors	The extent of contamination will be determined based on the sampling results and established cleanup levels. Tolerable limits of uncertainty regarding the sampling results will be developed by stakeholders based on professional judgment.
Optimize the Design	Sampling strategies may be adjusted in the field based on visual observations made during characterization activities. This may include collection of additional samples, moving planned sampling locations, and adding analyses to better characterize the site. Second phase sampling events may be employed if, based on first phase sampling results, contaminant delineation is insufficient for the purposes of the interim action or for selecting an appropriate final action.

2.3 DATA QUALITY INDICATORS

Data quality and usability are evaluated in terms of performance criteria. Performance and acceptance criteria are expressed in terms of data quality indicators (DQIs). The principal indicators of data quality are precision, accuracy, bias, sensitivity, completeness, comparability, and representativeness. Table 2-3 provides a description of project DQIs.

Table 2-3. General Description of DQIs

DQI	Description
Precision:	A measure of agreement among repeated measurements of the same property under identical conditions. Usually assessed as a relative percent difference (RPD) between duplicate measurements. RPD guidelines for laboratory duplicate analyses are contained in the standard operating procedures (SOPs) for each analytical method and will be obtained from the laboratory for validation purposes.
Accuracy:	A measure of the overall agreement of a measurement to a known value. Analytical accuracy is assessed as percent recovery from matrix spike or reference material measurements. Percent recovery guidelines are contained in laboratory SOPs for each analytical method.
Bias:	The systematic or persistent distortion of a measurement process that causes error in one direction. Usually assessed with reference material or matrix spike measurements. Bias as reported by the laboratory will be used to assess data validity.
Sensitivity:	The capability of a method or instrument to meet prescribed reporting limits. Assessed by comparison with risk-based reporting limits, method reporting limits, instrument reporting limits, or laboratory quantitation limits, as appropriate. In general, reporting limits for the analytical methods used will be at or below cleanup levels.
Completeness:	A measurement of the amount of valid data needed to be obtained for a task. Assessed by comparing the amount of valid results to the total results set. Project requirements for completeness are 90%.
Comparability:	A qualitative term that expresses the measure of confidence that one data set can be compared to another. Assessed by comparing sample collection and handling methods, sample preparation and analytical procedures, holding times, reporting units, and other QA protocols. To ensure comparability of data collected for the site, standard collection and measurement techniques will be used.
Representativeness:	A qualitative term that expresses the degree to which data accurately and precisely represent a characteristic of a population, parameter variation at a sample point, or environmental condition. To ensure representativeness, the sampling design will incorporate sufficient samples so that contamination is detected, if present. Additionally, all sampling procedures detailed in this QAPP will be followed.

2.4 SPECIAL TRAINING AND CERTIFICATION

All personnel conducting sampling activities on the project site must be 40-hour Hazardous Waste Operation (HAZWOPER) trained per 29CFR 1910.120 and be current with their annual 8-hour refresher course.

All personnel working at the project site will be briefed on potential site hazards, health and safety procedures, and sampling procedures. Following completion of this training, all personnel will be required to sign an acknowledgement form verifying that they have completed the task-specific training.

2.5 SAMPLING DOCUMENTATION AND RECORDS

The sampling records provided in Table 2-4 will be maintained for the project.

Table 2-4. Sampling and Sample Handling Records

Record	Use	Responsibility/Requirements
Field Notebook	Record significant events and observations.	Maintained by field sampler/geologist; must be bound; all entries must be factual, detailed, objective; entries must be signed and dated.
Sampling Field Data Sheet	Provide a record of each sample collected (Appendix F).	Completed, dated, and signed by sampler; maintained in project file.
Sample Label	Accompanies sample; contains specific sample identification information.	Completed and attached to sample container by sampler.
Chain-of-Custody Form	Documents chain-of-custody for sample handling (Appendix F).	Documented by sample number. Original accompanies sample.
Chain-of-Custody Seal	Seals sample shipment container (e.g., cooler) to prevent tampering or sample transference.	Completed, signed, and applied by sampler at time samples are transported.
Sampling and Analysis Request	Provides a record of each sample number, date of collection/transport, sample matrix, analytical parameters for which samples are to be analyzed.	Completed by sampler at time of sampling/transport; copies distributed to laboratory project file.

2.5.1 Field Notebook and Field Data Sheets

A bound field notebook and/or field data sheets will be maintained to provide daily records of significant events and observations that occur during field investigations. All entries are to be made in waterproof ink, signed, and dated. Pages of the field notebook are not to be removed, destroyed, or thrown away. Corrections will be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction will be initialed and dated. Most corrected errors will require a footnote explaining the correction.

If an error made on a document is assigned to one person, that individual may make corrections simply by crossing out the error and entering the correct information. The erroneous information should not be obliterated. Any error discovered on a document should be corrected by the person who made the entry.

All field logs and forms will be retained in the project files.

2.5.2 Photographs

All photographs taken of field activities will be documented with the following information noted in the field notebook:

- Date, time, and location of photograph taken
- Description of photograph taken
- Reasons photograph was taken
- Viewing direction

Digital photographs will be reviewed in the field to assess quality and need to re-shoot the photograph. For non-digital photographs, the photographer will review the photographs or slides when they return from developing, and compare them to the log, to assure that the log and the photographs match.

2.6 REPORTING

Parametrix will provide a report at the completion of the RI/FS and interims action implementation. In addition, two technical memoranda will be provided at intermediate stages to report investigation and feasibility study results and to aid in the decision making process. The first technical memorandum will summarize the results of the RI sampling and will present a proposed pilot test plan for verifying the selected in-situ treatment technology (see Section 3). The second technical memorandum will describe the results of the pilot study and propose a production-scale treatment plan. The memoranda will contain tables and figures as appropriate to present the data and proposed plans.

At the completion of the RI/FS and interim action implementation, Parametrix will prepare a draft and final RI/FS report containing:

- A summary of field activities completed.
- Figures showing sampling locations.
- A description and discussion of the nature and extent of contamination found. Figures diagramming contamination extent will be included.
- A description of the soil excavations, pilot test, and full scale treatment performed, including diagrams and confirmation test results.
- The results of the confirmation groundwater sampling including an assessment of groundwater contaminant levels trends.
- Recommendations for a final cleanup action.
- A summary of laboratory analytical results and a comparison to cleanup levels.
- A terrestrial ecological evaluation.
- All boring logs and sampling forms.
- Laboratory data sheets and the results of data review/validation.
- An electronic laboratory data submittal consistent with the requirements of Ecology's Environmental Information Management (EIM) System.

The draft and final deliverables will be submitted to all parties on the distribution list as two hard copies and one electronic copy (portable document format [PDF]).

3. RI/FS ACTIVITIES AND INTERIM ACTION

3.1 REMEDIAL INVESTIGATION

3.1.1 GROUNDWATER SAMPLING

3.1.1.1 Approach

In order to determine current groundwater conditions, eight existing and two newly-installed wells will be sampled. The data collected will be used to refine the design of the interim action proposed in this plan. Wells to be sampled during the RI are shown on Figure 3-1. Wells were selected at the downgradient boundary and at interior site locations designed to provide a concentration gradient across the lower yard. In the upper yard, wells with historical elevated concentrations were selected. However, wells MW-16 and MW-18 were not selected because they currently contain 0.03 feet of floating product and it is assumed that groundwater in these wells is impacted similar to the last sampling events in 2002 and 2003. Upgradient well MW-17 has historically been clean and was not selected.

A new well (MW-25) will be installed to replace MW-7, which was found to contain floating product up to 0.95 feet-thick. MW-7 was apparently destroyed in 1989. Note that MW-7 was located directly over the historical piping location. Well MW-25 will be configured the same as MW-7 and will be installed to a depth of 20 feet with a 15-foot long screen. A second new well (MW-26) will be installed to replace MW-8 near the shoreline. Well MW-26 will be configured the same as MW-7 and will be installed to a depth of 20 feet with a 15-foot long screen.

Soils from the monitoring well borings will be collected at the surface and at 2.5-foot intervals for field screening using a PID and visual/olfactory observations. The soil sample with the highest potential to contain contamination from each boring (based on field screening) will be submitted for laboratory analysis. In the absence of indications of contamination, the soil sample from the vadose zone-groundwater surface interface will be submitted for analysis. Soil sample analysis is discussed in Section 3.1.3 below.

3.1.1.2 Sample Analysis and Cleanup Levels

All groundwater samples will be analyzed for gasoline, BTEX, diesel, heavy oil, lead scavengers (1,2-dibromomethane [EDB] and 1,2-dichloroethane [EDC]), and the antiknock agent/oxygenate methyl tertiary-butyl ether (MTBE) to establish a baseline of existing groundwater conditions. Groundwater samples from the five wells located at the downgradient boundary of the site (MW-20, MW-21, MW-22, MW-25, and MW-26) and two interior wells (MW-4 and MW-19) will also be analyzed for cPAHs and lead. If the turbidity of the collected samples is greater than 10 nephelometric turbidity units (NTUs), dissolved lead samples will also be collected.

To provide a baseline for assessing whether natural attenuation is occurring at the site, all groundwater samples will be analyzed for nitrate, sulfate, and alkalinity. The additional geochemical indicators dissolved oxygen and redox potential will be measured in the field during well sampling. All groundwater samples will also be analyzed for chemical oxygen demand (COD) for remedial design purposes, and salinity to assess tidal influences.

To account for tidal influence and possible dilution of the fresh water in the wells, contaminant concentrations will be corrected using chloride concentrations detected in the wells and from a marine surface water sample collected from the shoreline during the same sampling event as the groundwater samples. Two groundwater samples will be analyzed for total dissolved solids to determine whether the groundwater is potable under MTCA.

Groundwater results for individual constituents will be compared to Applicable or Relevant and Appropriate Requirements (ARARs) that are protective of surface water. Specific ARARs consist of the Water Quality Standards for Surface Waters of the State of Washington (WAC 173-201A) and the National Toxics Rule (40 CFR 131). Surface water ARARs obtained from the Ecology online searchable database are provided in Table 3-1 (page 3-3). Note that the human health ARARs in the appendix are for ingestion of aquatic organisms only. TPH groundwater cleanup levels will consist of MTCA Method A groundwater cleanup levels.

3.1.2 SURFACE SOIL SAMPLING

3.1.2.1 Approach

Historically, surface soil at the site has been investigated at the test pit and monitoring well locations through field screening techniques. During these explorations, both surface and subsurface soils were observed for the presence of contamination; samples were generally selected from depths where contamination was most likely to exist. No surface samples were selected and analyzed during the historical investigations, indicating that contaminated soils generally occurred at depth.

During the RI, surface soils will be investigated to further assess potential surface soil impacts at the site. Surface soils will be collected from a depth of 0 to 6 inches at locations where potential surface spills may have occurred such as former ASTs, fuel loading racks, and the former warehouse platform. Approximately 25 samples will be collected and field screened using a PID, sheen test, and visual/olfactory methods.

3.1.2.2 Sample Analysis and Cleanup Levels

Samples containing apparent contamination based on the field screening will be submitted for laboratory analysis for gasoline, BTEX, diesel, heavy oil, and lead. A maximum of ten surface soil samples with the highest apparent contaminant levels will be analyzed. To meet the requirements of Table 830-1 of the MTCA regulation, the two samples showing the highest overall potential contaminant levels will also be analyzed for fuel additives (EDB, EDC, and MTBE) and cPAHs. If no apparent contamination is observed, a minimum of four samples will selected and submitted for analysis. Surface soil sample results will be compared to MTCA A cleanup levels.

Table 3-1. Soil and Groundwater MTCA Method A Cleanup Levels and Surface Water ARARS

Analyte	Ground Water, Method A, Table Value (µg/L)	Soil, Method A, Unrestricted Land Use, Table Value (mg/kg)	Surface Water ARAR – Aquatic Life – Marine/Acute – Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Acute – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic –Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Human Health – Marine – National Toxics Rule, 40 CFR 131 (µg/L)
acetone	–	–	–	–	–	–	–
acrylonitrile	–	–	–	–	–	–	6.6e-01
allyl chloride	–	–	–	–	–	–	–
benzene	5e+00	3e–02	–	–	–	–	7.1e+01
benzo[a]anthracene	–	–	–	–	–	–	3.1e-02
benzo[a]pyrene	1e–01	1e–01	–	–	–	–	3.1e-02
benzo[b]fluoranthene	–	–	–	–	–	–	3.1e-02
benzo[k]fluoranthene	–	–	–	–	–	–	3.1e-02
bromodichloromethane	–	–	–	–	–	–	2.2e+01
bromoform	–	–	–	–	–	–	3.6e+02
bromomethane	–	–	–	–	–	–	4e+03
carbon disulfide	–	–	–	–	–	–	–
carbon tetrachloride	–	–	–	–	–	–	4.4e+00
chlorobenzene	–	–	–	–	–	–	2.1e+04
chlorobutane;1-	–	–	–	–	–	–	–
chloroform	–	–	–	–	–	–	4.7e+02
chloromethane	–	–	–	–	–	–	–
chlorotoluene;o-	–	–	–	–	–	–	–

(Table Continues)

Table 3-1. Soil and Groundwater MTCA Method A Cleanup Levels and Surface Water ARARS (Continued)

Analyte	Ground Water, Method A, Table Value (µg/L)	Soil, Method A, Unrestricted Land Use, Table Value (mg/kg)	Surface Water ARAR – Aquatic Life – Marine/Acute – Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Acute – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic –Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Human Health – Marine – National Toxics Rule, 40 CFR 131 (µg/L)
chrysene	–	–	–	–	–	–	3.1e-02
cPAHs*	1e–01	1e–01	–	–	–	–	–
cumene	–	–	–	–	–	–	–
dibenzo[a,h]anthracene	–	–	–	–	–	–	3.1e-02
dibromo-3-chloropropane;1,2-	–	–	–	–	–	–	–
dibromochloromethane	–	–	–	–	–	–	3.4e+01
dichlorobenzene;1,2-	–	–	–	–	–	–	1.7e+04
dichlorobenzene;1,3-	–	–	–	–	–	–	2.6e+03
dichlorobenzene;1,4-	–	–	–	–	–	–	2.6e+03
dichlorodifluoromethane	–	–	–	–	–	–	–
dichloroethane;1,1-	–	–	–	–	–	–	–
dichloroethane;1,2-	5e+00	–	–	–	–	–	9.9e+01
dichloropropane;1,2-	–	–	–	–	–	–	–
ethyl chloride	–	–	–	–	–	–	–
ethyl ether	–	–	–	–	–	–	–
ethyl methacrylate	–	–	–	–	–	–	–
ethylbenzene	7e+02	6e+00	–	–	–	–	2.9e+04

(Table Continues)

Table 3-1. Soil and Groundwater MTCA Method A Cleanup Levels and Surface Water ARARS (Continued)

Analyte	Ground Water, Method A, Table Value (µg/L)	Soil, Method A, Unrestricted Land Use, Table Value (mg/kg)	Surface Water ARAR – Aquatic Life – Marine/Acute – Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Acute – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic –Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Human Health – Marine – National Toxics Rule, 40 CFR 131 (µg/L)
ethylene dibromide (EDB)	1e–02	5e–03	–	–	–	–	–
hexachlorobutadiene	–	–	–	–	–	–	5e+01
hexachloroethane	–	–	–	–	–	–	8.9e+00
indeno[1,2,3-cd]pyrene	–	–	–	–	–	–	3.1e-02
lead	1.5e+01	2.5e+02	2.1e+02	2.1e+02	8.1e+00	8.1e+00	–
methyl acrylate	–	–	–	–	–	–	–
methyl methacrylate	–	–	–	–	–	–	–
methyl tert–butyl ether	2e+01	1e–01	–	–	–	–	–
methylene bromide	–	–	–	–	–	–	–
methylene chloride	5e+00	2e–02	–	–	–	–	1.6e+03
naphthalene	1.6e+02	5e+00	–	–	–	–	–
nitropropane;2-	–	–	–	–	–	–	–
styrene	–	–	–	–	–	–	–
tetrachloroethane;1,1,1,2-	–	–	–	–	–	–	–
tetrachloroethane;1,1,2,2-	–	–	–	–	–	–	1.1e+01
tetrachloroethylene	5e+00	5e–02	–	–	–	–	8.9e+00
toluene	1e+03	7e+00	–	–	–	–	2e+05
tph, diesel range organics	5e+02	2e+03	–	–	–	–	–

(Table Continues)

Table 3-1. Soil and Groundwater MTCA Method A Cleanup Levels and Surface Water ARARS (Continued)

Analyte	Ground Water, Method A, Table Value (µg/L)	Soil, Method A, Unrestricted Land Use, Table Value (mg/kg)	Surface Water ARAR – Aquatic Life – Marine/Acute – Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Acute – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic –Ch. 173–201A WAC (µg/L)	Surface Water ARAR – Aquatic Life – Marine/Chronic – National Toxics Rule, 40 CFR 131 (µg/L)	Surface Water ARAR – Human Health – Marine – National Toxics Rule, 40 CFR 131 (µg/L)
tph, heavy oils	5e+02	2e+03	–	–	–	–	–
tph: gasoline range organics, benzene present	8e+02	3e+01	–	–	–	–	–
tph: gasoline range organics, no detectable benzene	1e+03	1e+02	–	–	–	–	–
tribromobenzene;1,2,4-	–	–	–	–	–	–	–
trichloroethane;1,1,1-	2e+02	2e+00	–	–	–	–	–
trichloroethane;1,1,2-	–	–	–	–	–	–	4.2e+01
trichloroethylene	5e+00	3e–02	–	–	–	–	8.1e+01
trichloropropane;1,2,3-	–	–	–	–	–	–	–
vinyl chloride	2e–01	–	–	–	–	–	5.3e+02
xylene;m–	–	–	–	–	–	–	–
xylene;o-	–	–	–	–	–	–	–

Notes:

ARARs: Applicable or Relevant and Appropriate Requirements.

(mg/kg): Milligrams per kilogram.

tph: Total petroleum hydrocarbons.

(µg/L): Micrograms per liter.

–: Not available.

*: Total carcinogenic PAHs using toxicity equivalency method.

3.1.3 SUBSURFACE SOIL SAMPLING

3.1.3.1 Approach

Subsurface soil samples will be collected to characterize existing soil conditions and to aid in remedial design. Proposed sampling locations are shown on Figure 3-2. Note that subsurface soil samples include samples to be collected from new wells MW-25 and MW-26 as discussed in Section 3.1.1.1. Up to 21 subsurface soil samples will be collected for analysis. Sample clusters are proposed at existing wells MW-16 and MW-18 to investigate the extent of contaminated soil at these wells, which currently contain floating product. Another cluster of sample locations is proposed at historical test pit TP-9, where contaminated soil was found between 2 feet bgs and the groundwater table. A fourth cluster is proposed around new well MW-25 as optional samples to investigate the potential extent of soil contamination (if found) at the former location of MW-7. Note that destroyed well MW-7 contained floating product when last measured in 1989.

Subsurface soil samples in the upper yard (at MW-16 and MW-18, and MW-25) will be collected from borings installed using an auger drill rig. An auger rig will be used due to the presence of till and outwash soils, which cannot be penetrated using a push-probe rig. Soils from the borings will be collected at the surface and at 2.5-foot intervals to the depth of the borings. All samples will be field screened using a PID, sheen test, and visual/olfactory methods. Note that the field screening includes the sample collected from the surface at the boring locations. The borings will be extended to 3 feet below the groundwater table as measured in the adjacent wells. It is anticipated the borings will be extended to 15 to 20 feet bgs. The soil sample with the highest potential to contain contamination from each boring (based on field screening) will be submitted for laboratory analysis. In the absence of indications of contamination, the soil sample from the groundwater table will be submitted for analysis.

Subsurface samples in the lower yard will be collected using a push-probe rig. Soil will be sampled continuously from the ground surface to 2 feet below the groundwater table as measured in the adjacent existing monitoring wells. It is anticipated that the probes will be extended to approximately 12 feet bgs. The entire sampled soil column, including soil from the ground surface at the probe locations, will be field screened using a PID, sheen test, and visual/olfactory methods. The sample with the highest potential to contain contamination (based on the field screening) will be submitted for laboratory analysis.

3.1.3.2 Sample Analysis and Cleanup Levels

All subsurface soil samples submitted to the laboratory will be analyzed for gasoline, BTEX, diesel, heavy oil, and lead. The four samples showing the highest overall potential contaminant levels will be analyzed for cPAHs and total organic carbon (TOC). The six samples showing the highest overall contaminant levels will be analyzed for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH). Results for these analyses will provide a baseline for remedial design purposes. The samples will not be analyzed for fuel additives (EDB, EDC, and MTBE) since it is assumed that these compounds (if present) will be treated during the interim action implemented to address the petroleum contamination. Following the interim action, selected soil samples will be analyzed for these compounds to confirm that remedial goals were met. An exception is the fuel additives; if these compounds are not detected in the groundwater samples collected during the RI, they will not be analyzed for in the confirmation samples (in accordance with MTCA Table 830-1). Subsurface soil sample results will be compared to MTCA A cleanup levels.

3.2 FEASIBILITY STUDY

The purpose of a feasibility study (FS) is to develop and evaluate cleanup action alternatives. A FS should include the evaluation of a reasonable number of cleanup action alternatives that protect human health and the environment. An initial alternatives analysis was performed for the site by the City prior to purchase of the property (Parametrix 2005). Alternatives involving soil capping, installation of a cutoff wall, and complete removal by excavation were evaluated. Two alternatives, soil capping and installation of a cutoff wall, were identified as appropriate for the site and preferred. Since that time, further analysis has been conducted to meet current cleanup goals for the site, which are as follows:

- Meet the requirements of MTCA for the protection of human health and the environment.
- Use permanent solutions where possible. MTCA rules state that cleanup action shall use permanent solutions "to the maximum extent practicable" and provide for a "reasonable restoration time frame."

The cleanup action proposed here as an interim action has been selected to meet the stated goals. They were developed based on historical data and, as such, are conceptual. Proposed cleanup actions will be further evaluated based on the information derived during the RI and a pilot study (see Section 3.3.1.2 below).

3.3 INTERIM ACTION

The proposed interim action described here are intended to meet MTCA requirements for a cleanup action. Once the interim action is completed, compliance monitoring will be conducted to confirm that interim action goals are met. The interim action will consist of:

- Source reduction using a combination of in-situ chemical oxidation and excavation and,
- In-situ enhanced bioremediation of dissolved and adsorbed hydrocarbons in the contaminated plume using oxygen releasing compounds.

3.3.1 Source Reduction

The major historical source at the site, the floating product layer in the lower yard, was removed by the SVE system. Secondary sources that are still present consist of residual hydrocarbons in smear zone soils, contaminated soil in the vadose zone (such as at test pit TP-9), and contaminated soil/product associated with the thin layer of floating product (<3/8-inch) in the vicinity of wells MW-16 and MW-18. The proposed methods for source reduction at the site are a combination of in-situ chemical oxidation and soil excavation. In-situ chemical oxidation has been demonstrated to be effective at reducing petroleum contamination at sites similar to the subject property. If the technology is shown to be ineffective during the pilot test proposed here, alternative treatments will be proposed and evaluated. Such alternative treatments may consist of a more aggressive application of oxygen leasing compounds to treat the smear zone or alternative soil treatment solutions such as Greenmarket Solutions Land Reclaimer™. This technology uses a proprietary process that wakens the bonds holding petroleum to soils and making them more bioavailable. Indigenous bacteria can also be added to the process.

3.3.1.1 Soil Excavation

Source soils near MW-16 and MW-18, where floating product was observed in November 2006, will be excavated and removed. Excavation will be conducted during the dry summer season and will target the removal of petroleum saturated soils and free product. Excavations will generally extend to the groundwater table. In addition to the excavations at MW-16 and MW-18, if other concentrated, near-surface zones of contaminated soil are discovered during the RI, their removal by excavation will be implemented.

Excavations will be observed full time by an archaeologist to screen for the presence of cultural resources. Cultural resources are not anticipated in the upper yard but are potentially present in the lower yard. If cultural resources are observed, excavation will be halted in the area. At this time, alternative remedial measures will be evaluated. One potential alternative would be to treat the area with chemical oxidant as described in Section 3.3.1.2 below. Any other potential alternatives will be evaluated at a later date as appropriate.

The excavation plan will be refined following the RI. At that time, a technical memorandum will be submitted that will summarize the results of the RI and present proposed excavation locations and a confirmation sampling scheme.

3.3.1.2 In-Situ Chemical Oxidation

Soils at locations in the lower yard where floating product has historically been observed are assumed to contain high concentrations of petroleum in the vadose zone. These soils will be treated using in-situ chemical oxidation. This treatment involves introducing a chemical oxidant in slurry form into the zone of impacted media. The slurry is typically injected using push-probe or drilling equipment with injections spaced on 7 to 10-foot centers. The oxidant destroys the hydrocarbons on contact, producing primarily carbon dioxide and water as by products. Two to three injection events spaced at one-month intervals are typically recommended. An alternative method is to mechanically mix the soil in place while injecting the oxidant slurry. Commercially-available chemical oxidants include RegenOx™, Fenton's Reagent, and permanganate. Selection of the preferred chemical oxidant will be based on an analysis of cost and effectiveness that will be performed following the RI. At this time, a technical memorandum will be submitted that will present the preferred oxidant and a pilot study and confirmation sampling plan to prove the effectiveness of the oxidant. This technical memorandum will be combined with the excavation plan technical memorandum. A preliminary pilot test plan is described below.

Pilot Test Plan

To demonstrate the effectiveness of the selected chemical oxidation treatment, a pilot-scale test will be performed prior to production-scale treatment. The pilot scale location selected will be representative of the highest soil concentrations at the site. Nine injection locations on 10-foot centers will be treated with oxidant. The test injections will be centered around a soil sampling location with known concentrations to provide "before" soil concentrations. Two injection events spaced one month apart will occur. One month following the second event, four confirmation push-probes will be installed centered around the original sample location to provide an "after" measurement of soil concentrations. The four push-probes will each be spaced 5 feet horizontally from the original sample location. Two soil samples will be collected from each probe for a total of eight samples. Sample elevations will be selected so that three samples are collected from an elevation 1 foot above the original sample elevation, three samples will be collected from 1 foot below and two samples will

be collected from the same elevation. The confirmation samples will be analyzed for the same constituents as the "before" sample. A third injection event may be implemented based on the results of the confirmation sampling.

If proved effective, the chemical oxidation treatment will be applied at all source locations. Injection volumes, spacing, and treatment depths will be selected based on the results of the RI sampling and the pilot test. A production-scale treatment plan will be provided for approval in a technical memorandum following the pilot test.

An approximate outline of the source treatment area is shown on Figure 3-3. The number of injection events will be determined based on the pilot test. Confirmation sampling will be conducted at least one month following the final injection event. Confirmation sample locations will be collected at the same locations as the subsurface samples that were collected during the RI. This will provide "before" soil concentrations for comparison to the confirmation samples. All confirmation samples will be analyzed for gasoline, BTEX, diesel, heavy oil and cPAHs. The samples will also be analyzed fuel additives (EDB, EDC, and MTBE) if these compounds are detected in the groundwater samples collected during the RI sampling.

3.3.2 Residual Soil and Groundwater Remediation

Residual soil and groundwater contamination will be treated using in-situ enhanced bioremediation following the source reduction interim action. The specific in-situ enhanced bioremediation technology selected for the site involves injecting an oxygen releasing compound in slurry form into the aquifer. Oxygen is provided to enhance the activity of naturally-occurring aerobic bacteria, which feed on or "respirate" the hydrocarbons. Oxygen is typically the limiting factor for bioremediation at contaminated sites. Similar to the chemical oxidant injections, the slurry is injected into the zone of impacted media using push-probe or drilling equipment with injections spaced on approximately 10-foot centers. The effective treatment period is on the order of one year. Selection of design criteria such as the preferred oxygen-releasing compound, compound volumes, injection spacings, and treatment depths will be based on a cost evaluation and the results of the RI.

Confirmation sampling will consist of groundwater monitoring conducted in selected wells. The initial evaluation monitoring period will consist of three sampling events conducted at 6-, 9-, and 12-months following the injection event. A future long-term monitoring program will be developed based on the initial monitoring period results.

A proposed treatment plan and confirmation groundwater monitoring plan will be presented in a technical memorandum following the RI and pilot test. The technical memorandum will be combined with the production-scale in-situ chemical oxidation plan technical memorandum.

3.4 TERRESTRIAL ECOLOGICAL EVALUATION

At the completion of the RI, a terrestrial ecological evaluation will be performed to evaluate threats to terrestrial plants and animals at the site and to identify cleanup action alternatives and cleanup levels protective of terrestrial receptors (if appropriate). Terrestrial receptors identified in the SEPA environmental checklist developed for the site include hawks, herons, bald eagles, songbirds, waterfowl, otter, raccoons and other small mammals. No endangered or threatened terrestrial species were identified with the exception of the bald eagle (threatened).

The majority of contaminated soil at the site is expected to be located at depth (5 feet to 10 feet bgs) in the smear zone near the groundwater table. Source soil in the vadose zone above the groundwater table will be targeted for removal during the remedial actions.

Actual appropriate approaches will be evaluated based on the RI results. The approaches and cleanup levels (if appropriate) will be proposed in the excavation plan developed following the RI and prior to the excavation activities.

PIER

METAL SHEETPILES

WOODEN BULKHEAD

SEWER PUMP STATION

LOWER YARD

BURIED WOODEN BULKHEAD

UPPER YARD

FORMER WAREHOUSE PLATFORM

FORMER LOADING RACKS

FORMER GARAGE

TOWER PEDESTALS

FOOTBRIDGE

PLUMBER'S UNION HALL

HIGHLAND AVE

13TH ST

MW 26

MW 8 *
1,742,000 TPH (1988)

MW 22
100/1,500 (2003)

MW 13
82.8/576 (1999)

MW 5
46,400 TPH (1988)

MW 6 *
1,200/4,400 (2003)

MW 25

MW 7 *
76,700 TPH (1988)

MW 21
6,500/970 (2003)

MW 4 *
8,910/1,640 (2000)

MW 14 *
492/12,200 (2001)

MW 23
ND/270 (2003)

MW 12 *
ND TPH (1988)

MW 19
780/2,010 (1999)

MW 16 **
970/140,000 (2002)

MW 15 *
<50/840 (2002)

MW 9 *
8,200/6,300 (2003)

MW 10 *
4,940/8,890 (2000)

MW 20 *
ND/318 (1999)

MW 24
ND/267 (1999)

MW 17
ND/ND (1998)

MW 11
231/1,890 (1999)

MW 18 **
810/80,000 (2003)

NOTE
CONTOUR DATUM NAVD 88

Parametrix DATE: Apr 12, 2007 FILE: BR1896063P04T1301F-03

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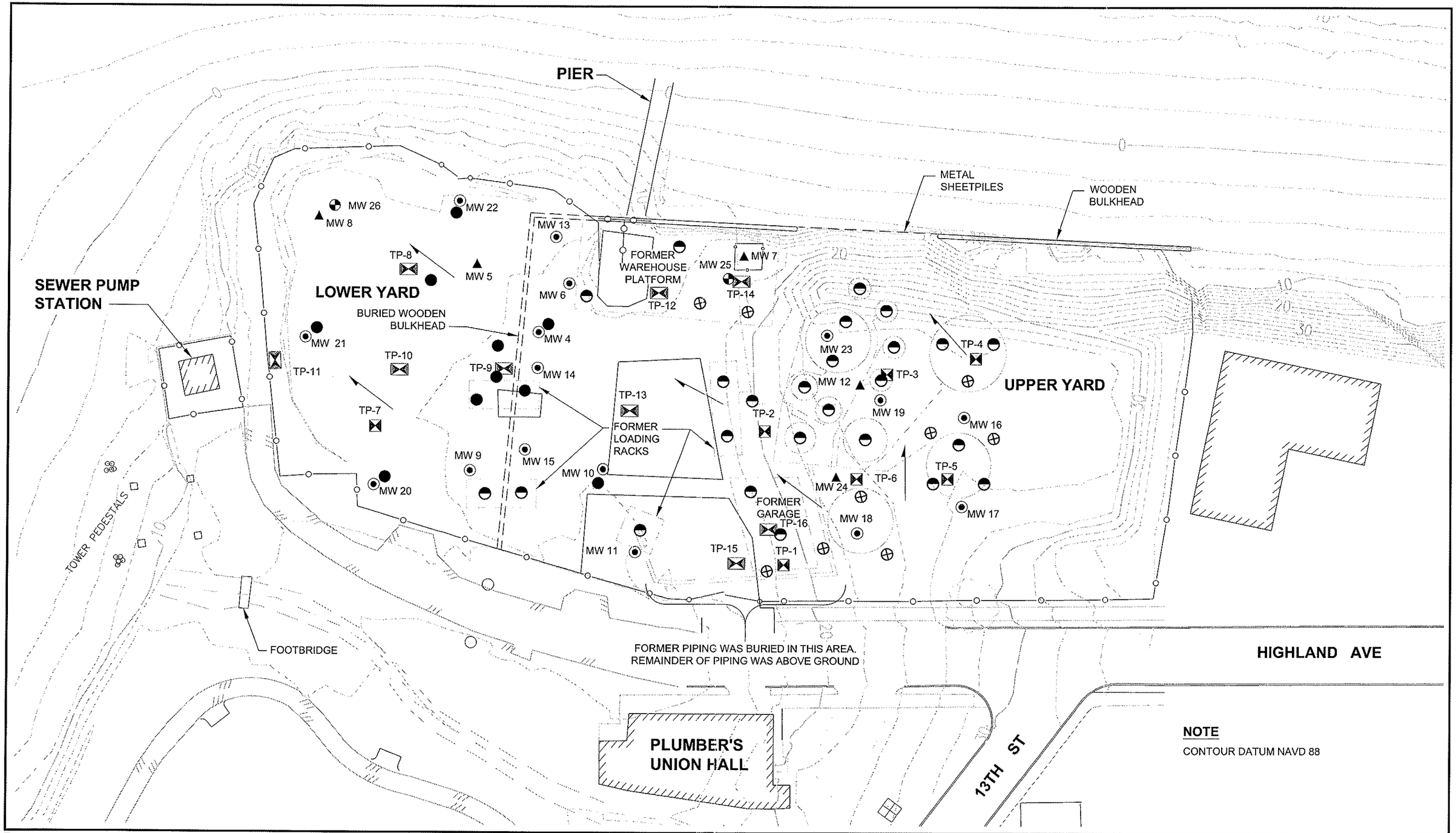
0 40

SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- GENERAL GROUNDWATER FLOW DIRECTION
- NEW MONITORING WELL
- DESTROYED MONITORING WELL
- EXISTING MONITORING WELL
- WELL TO BE SAMPLED
- ** CURRENT FLOATING PRODUCT IN WELL
- * HISTORICAL FLOATING PRODUCT IN WELL
- *6,500/970 (2003)* MOST RECENT GROUNDWATER SAMPLE RESULTS FOR GASOLINE/DIESEL IN ug/L (YEAR SAMPLED)

Figure 3-1
Former Chevron Property
Wells To Be Sampled



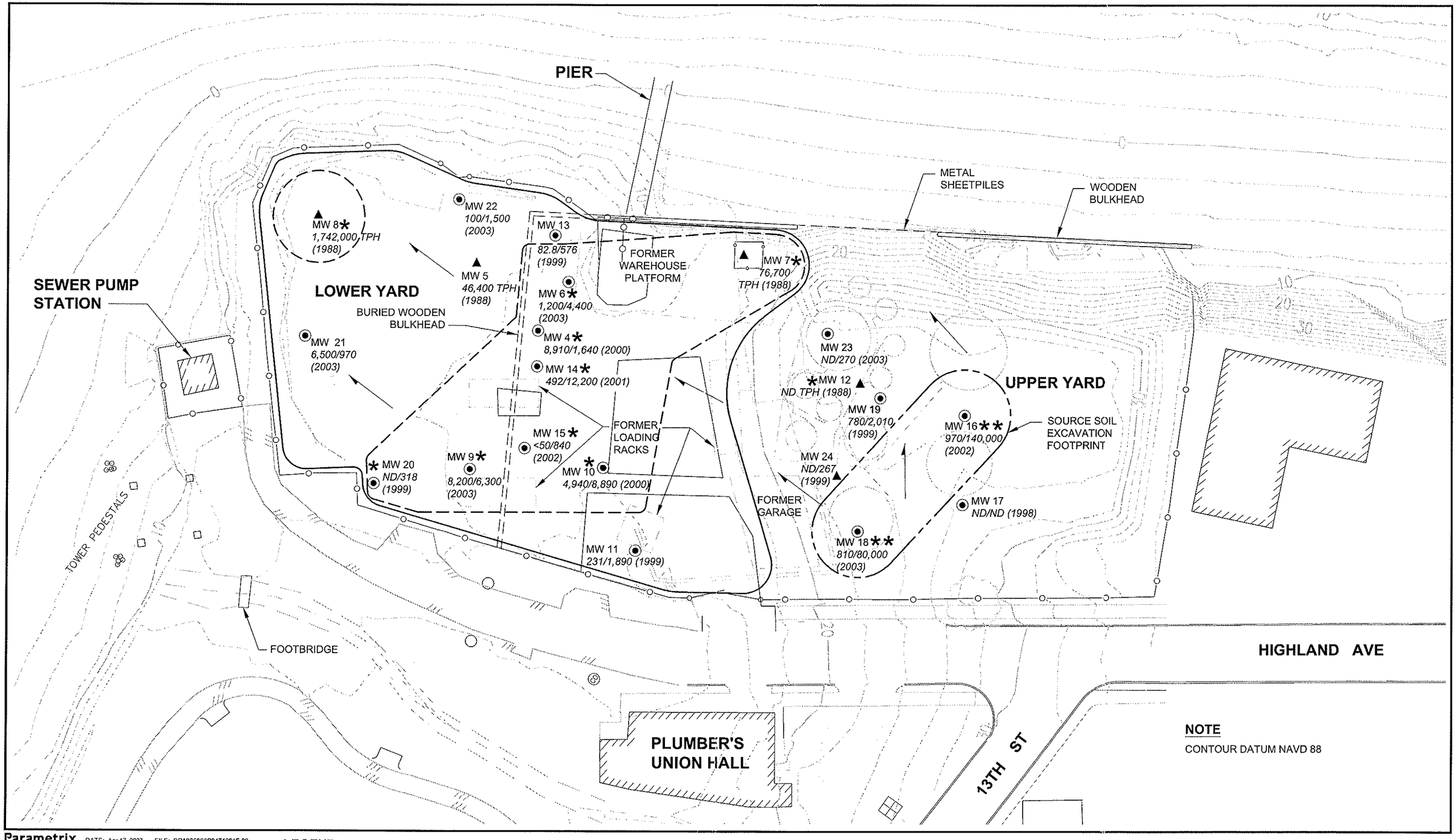
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0 N 40
SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- SURFACE SOIL SCREENING SAMPLE LOCATION
- DESTROYED MONITORING WELL
- EXISTING MONITORING WELL
- NEW PUSH PROBE
- TEST PIT , GEO ENGINEERS 1988
- TEST PIT, HART CROWSER 1989
- NEW SOIL BORING
- NEW MONITORING WELL

Figure 3-2
Former Chevron Property
Soil Sampling Locations



Parametrix DATE: Apr 17, 2007 FILE: BR1895063P04T1301F-03

0 N 40
SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- AREA TO BE TREATED USING IN-SITU CHEMICAL OXIDATION
- AREA TO BE TREATED USING IN-SITU ENHANCED BIOREMEDIATION
- SOIL EXCAVATION AREA

** CURRENT FLOATING PRODUCT IN WELL
* HISTORICAL FLOATING PRODUCT IN WELL
EXISTING MONITORING WELL
▲ DESTROYED MONITORING WELL
ND NOT DETECTED
TPH TOTAL PETROLEUM HYDROCARBONS
6,500/970 (2003) MOST RECENT GROUNDWATER SAMPLE RESULTS FOR GASOLINE/DIESEL ug/L (YEAR SAMPLED)

Figure 3-3
Former Chevron Property
Preliminary Interim Actions Plan

4. FIELD AND LABORATORY METHODS

Descriptions of the specific sampling and laboratory methods for the project are presented in this section. The methods described are intended to supplement the standard operating procedures (SOPs) provided in Appendix G. Sampling field forms are provided in Appendix F.

4.1 SAMPLING METHODS AND PROCEDURES

4.1.1 General Sampling Procedures

All soil samples will be placed into the appropriate sample containers using dedicated, disposable polyethylene scoops. All sample containers will be provided by the analytical laboratory. Bowls used during sample collection will be dedicated, disposable, and constructed of polyethylene. Samples for BTEX, EDB, EDC, MTBE, and gasoline analyses were collected according to EPA Method 5035A as described in the soil sampling SOP in Appendix G. These samples will not be homogenized in the field. Samples for non-volatiles analysis will be thoroughly homogenized before being placed in sample containers. Soil samples will be logged by a qualified scientist using the Unified Soil Classification System (USCS). Following sampling collection, the location of all samples will be tied to existing site features and sketched in the field logbook. Sample locations and new monitoring wells will be located by survey in state plane coordinates.

4.1.2 Field Screening

During sample collection, soil samples will be field screened using a PID and visual/olfactory methods. A portion of each sample will be placed in a re-sealable plastic bag for headspace screening using the PID. The headspace sample will be allowed to heat in the sun for approximately 10 minutes and will then be shaken vigorously. A headspace vapor measurement will be then be collected and recorded on the field sampling form. During sampling, observations will also be made for signs of contamination such as odors, staining, or a sheen on saturated samples from below the water table. Such observations will also be recorded on the field sampling form. Field screening information will be used to aid in the selection of samples for laboratory analysis.

4.1.3 Surface Soil Grab Sampling

At locations where only surface soil samples are to be collected, samples will be collected from between 0 and 6 inches bgs using dedicated, disposable equipment.

4.1.4 Push-Probe Sampling (Soil)

A Geoprobe® or equivalent push-probe rig will be used to collect surface and subsurface soil samples. For soil sampling, the stainless steel core sampler will be fitted with a new disposable acetate sleeve for each sample run. Soil samples will generally be collected continuously from the ground surface to the depth of the borings. Probes will be extended to the groundwater table at a minimum.

Once the sampling depth is reached for each sample run, the coring device will be retracted and the acetate sleeve will be cut length-wise and opened to allow for observation of the soil core. The soil core will be logged and selected sections will be placed into the appropriate sample containers.

4.1.5 Soil Sampling using a Hollow-Stem Auger Rig

When difficult drilling conditions preclude the use of a push probe rig, subsurface soil sampling may be conducted using a hollow-stem auger rig. Soil samples will be collected from the auger borings using a decontaminated 2.5-inch internal diameter (I.D.) split-spoon (SPT) sampler. Soil samples will generally be collected at 2.5 feet intervals to the planned depth of the borings. The borings will be extended to the groundwater table at a minimum.

Once the sampling depth is reached for each sample, the SPT sampler will be driven 1 foot into the undisturbed soil at the base of the boring. The sampler will then be retrieved and opened for sample logging and field screening. Selected soil samples will be placed into the appropriate sample containers.

4.1.6 Monitoring Well Installation, Development, and Sampling

The two planned monitoring wells will be installed by a licensed driller according to applicable Ecology regulations (Chapter 173-160 WAC). The monitoring wells will be constructed using 2-inch I.D. polyvinyl chloride (PVC) casings fitted with 15-foot screens (with 0.01-inch or 0.02-inch slots) installed to depths of 20-feet bgs each (to match the former wells being replaced). Completed well monuments will be flush-mounted; a 2-foot square concrete pad will be constructed around the monument as a surface seal.

Completed monitoring wells will be allowed to set for at least 24 hours before development to allow grout or bentonite chip seals to set. Development will be achieved by over-pumping at a flow rate of up to 1 gallon per minute (gpm) using an 5/8-inch outside diameter (O.D.) inertial lift pump fitted with a surge block. New polyethylene tubing shall be used for developing each well. Water quality parameters (specific conductance, pH, temperature, and turbidity) will be measured during development. Development will be continued until the parameters stabilize as determined by the lack of appreciable change in measurement over several 3-minute monitoring periods or if a turbidity reading of 10 NTUs or less is attained. The 10 NTU criteria is based on EPA sampling guidelines (EPA 2002).

Groundwater sampling will be conducted no earlier than 24 hours following development to allow undisturbed water to enter the well column. Groundwater samples for volatile organic compounds (VOCs) or gasoline analysis will be collected using a decontaminated, positive-displacement down-hole pump. Non-volatiles samples may be collected using a peristaltic pump. New, disposable polyethylene tubing will be used at each sample location. For samples collected near the groundwater table, the sample pump will be lowered to 2-feet below the water surface. For deeper samples, the pump will be lowered to the mid-point of the well screen.

Groundwater will be purged and sampled from the wells using low flow techniques. The measured purging and sampling flow rate shall be 0.5 liters per minute or less. Water quality parameters will be measured during sampling; purging shall be considered complete when the criteria shown in Table 4-1 are met over at least three 3-minute monitoring periods.

Table 4-1. Purging Stabilization Criteria

Parameter	Stabilization Criteria
pH	+\- 0.1 unit
Specific conductance	+\- 3%
Oxidation-reduction potential (ORP)	+\- 10 millivolts
Turbidity	+\- 10% (when greater that 10 NTUs)
Dissolved Oxygen	+\- 0.3 milligrams per liter

If a turbidity of 10 NTUs or less is not attained during purging, both filtered and non-filtered metals samples will be collected. Filtered samples will be collected using a 0.45 micron filter placed in line with the sample tubing.

4.1.7 Decontamination Procedures

Decontamination of all non-disposable tools and equipment (such as split-spoon soil samplers) will be conducted prior to each sampling event and between each sampling location. The following steps will be taken during decontamination of sampling equipment used during field investigations:

- Scrub with non-phosphate detergent (i.e., Alconox or similar)
- Rinse with tap water
- Rinse thoroughly with deionized water
- Allow to air dry and place in a new plastic bag for storage

For decontamination of larger tools and equipment, such as push-probe rods, a high-pressure, hot water washer or similar device will be used. Loose soil materials will be removed from equipment using a "dry" decontamination technique consisting of the removal of loose soil using a shovel or brush.

4.1.8 Investigation-Derived Waste

Investigation derived waste (IDW) from sampling activities will be containerized onsite in 55-gallon drums. Composite samples will be collected for waste characterization. Disposal options for the IDW will be based on the analytical results. Disposal shall be managed by Parametrix using a licensed waste disposal contractor.

All drums will be labeled indicating date filled, content, location, company, and a unique identification number. All drums and containers will be tracked on a waste-tracking log.

All disposable sampling materials and personal protective equipment, such as disposable coveralls, gloves, and paper towels used in sample processing will be placed inside polyethylene bags or other appropriate containers. Disposable materials will be placed in a refuse container and disposed of as solid waste.

4.2 SAMPLE HANDLING AND CUSTODY

4.2.1 Sample Identification and Labeling

Prior to the field investigation, each sample location will be assigned a unique code. Each sample collected at that location will be pre-assigned an identification code using the sampling site followed by other specific information describing the sample. The sample numbering protocol is shown in Table 4-2.

Table 4-2. Sample Numbering Protocol

Site	CHEV = Chevron Property
Matrix	SO = Soil GW = Groundwater WT = Rinsate/trip blank water
Sampling Station	SS01 = Surface Soil Station 01 SB01 = Soil Boring No. 1 PP01 = Push Probe No. 1 MW25 = Monitoring Well No. 25 (for continuity with past work, monitoring well numbering will begin with 25)
Sample Type/Sample Depth	0000 = Field sample collected at a depth of 0.0 feet 1010 = Field duplicate collected at a depth of 1.0 feet 2000 = Trip blank 4050 = Rinsate Blank collected following the collection of a sample at a depth of 5.0 feet.

Example:

CHEV-SO-MW25-0150 = Soil sample collected from the soil boring installed for MW-25 at a depth of 15.0 feet.

4.2.2 Sample Storage, Packaging and Transportation

Samples will be placed in a cooler following collection and chilled to approximately 4ºC. Following completion of each days sampling, all samples will be transported and/or shipped to the analytical laboratory, as appropriate. Samples which are routinely delivered to the laboratory on the same day as collection may not have sufficient time to chill to 4ºC.

4.2.3 Sample Custody

The chain-of-custody procedures used for this project will provide an accurate written or computerized record that can be used to trace the possession of each sample from the time each is collected until the completion of all required analyses. A sample is in custody if it is in any of the following places:

- In someone's physical possession
- In someone's view
- In a secured container
- In a designated secure area

The following information will be provided on the chain-of-custody form:

- Sample identification numbers
- Matrix type for each sample
- Analytical methods to be performed for each sample
- Number of containers for each sample
- Sampling date and time for each sample
- Names of all sampling personnel
- Signature and dates indicating the transfer of sample custody

All samples will be maintained in custody until formally transferred to the laboratory under a written chain-of-custody. Samples will be kept in sight of the sampling crew or in a secure, locked vehicle at all times. Samples that leave the custody of field personnel will be sealed by placing a signed and dated Custody Seal across the seam of the shipping container.

4.3 ANALYTICAL METHODS

All samples will be submitted to a commercial analytical laboratory certified by Ecology to perform the required analyses. The selected laboratory for the project is Severn Trent Laboratory of Fife, Washington. Analytical methods are listed in Table 4-5. Laboratory reporting limits will be verified prior to analyses to ensure that, at a minimum, reporting limits for each analyte are equal to or lower than MTCA Method A cleanup levels for soil and groundwater. Matrix interferences may make it impossible to achieve the desired reporting limits and associated QC criteria. In such instances, the laboratory shall report the reason for noncompliance with QC criteria or elevated detection limits.

4.4 QUALITY ASSURANCE/QUALITY CONTROL

QA/QC checks consist of measurements performed in the field and laboratory.

4.4.1 Field Methods

Guidelines for minimum samples for field QA/QC sampling are summarized in Table 4-3.

Table 4-3. Guidelines for Minimum QA/QC Samples for Field Sampling

	Field		
Media	**Field Duplicate**	**Trip Blank**	**Equipment Blank**
Soil and Groundwater	1 per 20 samples per analysis	1 per cooler containing water VOCs samples	1 per 20 samples (per non-disposable equipment type)

4.4.1.1 Field Duplicates

A minimum of one blind field duplicate will be analyzed per 20 samples. Field duplicates will be collected following field samples. Soil duplicates samples for non-volatiles analysis will be homogenized and split. Duplicate samples will be coded so the laboratory cannot discern which samples are field duplicates.

4.4.1.2 Trip Blanks

A trip blank shall accompany each cooler containing groundwater samples for VOCs analysis. The trip blank shall be obtained from the laboratory or will be made by filling the appropriate sample containers with certified analyte-free deionized water. Trip blanks will be analyzed for VOCs with the field samples.

4.4.1.3 Equipment Blanks

One equipment blank will be collected per 20 samples when non-disposable equipment is used for sampling. Equipment blanks will be collected by capturing deionized water rinsed over (or through) sampling equipment after decontamination. Equipment blanks will be analyzed for the same constituents as the field samples.

4.4.2 Laboratory QA/QC Methods

Specific procedures and frequencies for laboratory QA procedures and QC analyses are detailed in the laboratory's QA Plan and SOPs for each method. QC analyses will be performed by the laboratory according to their Ecology-approved SOPs.

4.4.3 Summary of Sample Media, Numbers, and Analyses

Total numbers of samples to be collected are summarized by medium in Table 4-4.

Table 4-4. Summary of Sample Types, Analyses, and Number

Sample Medium	Analysis	No. Field Samples	No. Duplicate Samples	No. Equipment Blanks	No. Trip Blanks	Total No.
Groundwater	Gas	10	1	1	-	12
	Diesel/Heavy Oil	10	1	1	-	12
	VOCs (incl. BTEX, EDB, EDC, MTBE)	10	1	1	1	13
	Lead (total)	7	1	1	-	12
	Lead* (dis.)	7	1	-	-	11
	cPAHs	7	1	1	-	7
	Alkalinity	10	-	-	-	10
	Nitrate	10	-	-	-	10
	Sulfate	10	-	-	-	10
	COD	10	-	-	-	10
	Chloride	10	-	-	-	10
	TDS	2	-	-	-	2
Surface Water	Chloride	1	-	-	-	1
Surface Soil	Gas/BTEX	10	1	-	-	11
	Diesel/Heavy Oil	10	1	-	-	11
	Lead (total)	10	1	-	-	11
	VOCs (EDB, EDC, MTBE)	2	1	-	-	3
	cPAHs	2	1	-	-	3
Subsurface Soil	Gas/BTEX	21	1	1**	-	23
	Diesel/Heavy Oil	21	1	1**	-	23
	Lead (total)	21	1	1**	-	23
	cPAHs	4	-	1**	-	5
	TOC	4	-	-	-	4
	EPH	6	-	-	-	6
	VPH	6	-	-	-	6

Notes:
BTEX: Benzene, toluene, ethylbenzene, and xylenes.
cPAHs: Carcinogenic polycyclic aromatic hydrocarbons.
COD: Chemical oxygen demand.
EDB: 1,2-Dibromoethane.
EDC: 1,2-Dichloroethane.
EPH: Extractable Petroleum Hydrocarbons.
MTBE: Methyl tertiary-butyl ether.
TDS: Total Dissolved Solids.
TOC: Total organic carbon.
VPH: Volatile Petroleum Hydrocarbons.
* If sample turbidity is greater than 10 nephelometric turbidity units (NTUs), a dissolved sample will also be collected using a 0.45 micron filter.
** Equipment blanks will be collected from decontaminated split spoon samplers only.

4.4.4 Sample Containers, Preservation, and Holding Times

Analytical methods, sample containers, preservation, and holding times are summarized in Table 4-5.

Table 4-5. Sample Containers, Preservation, and Holding Times

Analysis	Method	Matrix	Container	Preservation	Holding Time
Gasoline (w/BTEX optional)	NWTPH-Gx	Soil – 10g	En Core sampler	Cool 4°C	14 days
		Groundwater	2 – 40 mL vials	HCl pH < 2, cool 4°C	14 days
Diesel and Heavy Oil	NWTPH-Dx	Soil	8 oz cwm	Cool 4°C	14 days
		Groundwater	1 liter amber	HCl pH < 2, cool 4°C	7 days ext, 40 days
VOCs (includes BTEX, EDB, EDC, and MTBE)	8260B	Soil – 10g	En Core sampler	Cool 4°C	48 hrs preservation 14 days
		Groundwater	2 – 40 mL vials	HCl pH < 2, Cool 4°C	14 days
cPAHs	8270C (SIM for soil)	Soil	8 oz cwm	Cool 4°C	14 days ext, 40 days
		Groundwater	1 liter amber	Cool 4°C	7 days ext, 40 days
EPH	NWTPH-EPH	Soil	4 oz cwm	Cool 4°C	6 months
VPH	NWTPH-VPH	Soil	En Core sampler	Cool 4°C	48 hrs preservation 14 days
Lead and Iron	6010	Soil	4 oz cwm	Cool 4°C	6 months
		Groundwater	500 mL HDPE	HNO_3 < pH 2, Cool 4°C	6 months
COD	410.1	Groundwater	250 mL HDPE	H_2SO_4 < pH 2, Cool 4°C	28 days
Alkalinity	310.1	Groundwater	250 mL HDPE	Cool 4°C	14 days
Sulfate	300.0	Groundwater	125 mL HDPE	Cool 4°C	28 days
Nitrate	300.0	Groundwater	125 mL HDPE	Cool 4°C	48 hours
Chloride	300.0	Groundwater	125 mL HDPE	Cool 4°C	28 days
TDS	160.1	Groundwater	1 L HDPE	Cool 4°C	7 days
TOC	9060	Soil	4 oz cwm	Cool 4°C	28 days

Notes:
cPAHs: Carcinogenic polycyclic aromatic hydrocarbons.
COD: Chemical Oxygen Demand.
cwm: Clear, wide-mouth jar.
EDB: 1,2-Dibromoethane.
EDC: 1,2-Dichloroethane.
EPH: Extractable Petroleum Hydrocarbons.
HCl: Hydrochloric acid.
HDPE: High-density polyethylene.
HNO_3: Nitric acid.
H_2SO_4: Sulfuric acid.
mL: Milliliter.
MTBE: Methyl tertiary-butyl ether.
NWTPH: Northwest total petroleum hydrocarbons.
oz: Ounce.
TDS: Total Dissolved Solids.
VOCs: Volatile organic compounds.
VPH: Volatile Petroleum hydrocarbons.

4.5 FIELD INSTRUMENT/EQUIPMENT CALIBRATION, INSPECTION, AND MAINTENANCE

The types of field instruments and equipment that are anticipated to be used during sampling include, but are not limited to:

- PIDs

Equipment maintenance will be performed according to manufacturers' specifications by the equipment supplier. Field personnel will be responsible for inspection and calibration of field equipment. An equipment users manual will be provided to all field personnel working with the equipment. All equipment will be inspected and calibrated prior to use. The results of calibration, as well as any problems encountered and corrective actions, will be documented in the activity field notebook.

4.6 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Field supplies such as sample containers and trip/rinsate blank water shall be obtained from reputable suppliers and shall be certified analyte free. Records of certification shall be kept by the laboratory (for laboratory-supplied supplies) or by Parametrix in the project file. Sampling spoons and bowls shall be food-grade and shall be purchased new.

4.7 DATA MANAGEMENT

The objectives of data management are to assure that large volumes of information and data are technically complete, accessible, and efficiently handled.

4.7.1 Field Data

The original hard (paper) copies of all field notes and laboratory reports will be stored in the project file. Photocopies of these documents should be prepared for working copies as needed.

Field data should be recorded in bound notebooks or individual sampling sheets. The field team members should review the field data for completeness prior to placing it in the files.

4.7.2 Laboratory Data

The laboratory data reports will be archived in the project files. The electronic data will be incorporated into Excel spreadsheets and archived on electronic media and placed in the project file. An electronic laboratory data submittal consistent with the requirements of Ecology's EIM will be submitted with the RI/FS report and archived in the project file.

5. DATA VERIFICATION AND VALIDATION

Techniques for data verification and validation will be in accordance with the Guidance on Environmental Data Validation and Verification (EPA 2001).

5.1 DATA REVIEW, VERIFICATION AND VALIDATION

Analytical data will be reviewed by the Laboratory QA Officer to assure that the method-specific QC objectives have been met. These reviews will identify the occurrence of deficiencies in time to take corrective action. If the required QC objectives are not met after the corrective action is performed, the Task Manager will be notified by the laboratory before data submittal. The Task Manager and Data QA Manager will determine if additional corrective action should be taken, such as re-analysis, if applicable. All data packages provided by the laboratory will provide a summary of QC results adequate to enable reviewers to determine the quality of the data.

The Data QA Manager is responsible for conducting checks for internal consistency, transmittal errors, and for adherence to the field and laboratory QC elements. The Data QA Manager will review the data package submitted by the laboratory to ensure that documentation has been provided, appropriate QC checks have been performed, that appropriate corrective actions have been taken, and that the data is valid and useable. The Data QA Manager will also determine the potential effects of any deviations or corrective actions on the suitability of the data.

5.2 VERIFICATION AND VALIDATION METHODS

The Data QA Manager will review the following:

- Chain-of-custody documentation
- Holding times
- Equipment/trip blank results
- Field Duplicate results
- Method blank results
- Compliance with project DQIs

A limited review (minimum 20 percent) of the following laboratory QC data results will be conducted:

- Laboratory MS/MSD and/or matrix duplicate results
- Laboratory surrogate recoveries
- Laboratory check samples

If, based on this limited review the QC data results indicate potential data quality problems, further evaluations will be conducted.

5.3 RECONCILIATION AND USER REQUIREMENTS

The Data QA Manager will prepare a technical memorandum for each data package describing the results of the data review and describing any qualifiers that were added to the data. The technical memorandum will include recommendations on whether additional actions such as re-sampling are necessary. The technical memorandum will be submitted with the technical report.

6. SCHEDULE

A project schedule is presented graphically in Appendix H.

Upon notice to proceed, the remedial investigation would be initiated within approximately six weeks. This includes the public comment period for the SEPA checklist prepared for the Agreed Order. Field work would be accomplished within two weeks. A draft pilot test design and technical memorandum (TM) would be provided within six weeks following completion of field work. Once the pilot test TM is approved, the pilot test will be implemented; assuming all three treatment events are implemented, the pilot test will require approximately four months to complete. A full scale design TM will be provided within 4 weeks of the completion of the pilot test. Duration for the RI/FS and pilot test tasks is expected to be on the order of eight months. It is anticipated the task will begin in September 2007 and be completed by May 2008.

Implementation of the in-situ treatment interim action may require five months (assuming three chemical oxidation treatment events). Confirmation soil and groundwater sampling will be completed within 1 year following completion of treatment. A draft RI/FS report will be provided within four weeks of completion of confirmation sampling. Assuming a two week review period, a final RI/FS report will be provided within four weeks of the draft submittal. Draft and final cleanup action plans will be submitted within the 4 week period following submittal of the final RI/FS report. Total duration for the interim action implementation, RI/FS reporting, and cleanup action planning tasks is anticipated to be nineteen months, with completion in late-2009.

Shoreline restoration will occur during the open fish windows (approximately July through January) in 2009/2010. Note that confirmation sampling can be conducted concurrent with shoreline restoration.

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APPENDIX A

Public Participation Plan

Public Participation Plan
Remedial Investigation/Feasibility Study and Interim Actions
Former Chevron Property
Bremerton, Washington

Prepared for

City of Bremerton
3027 Olympus Drive
Bremerton, Washington 98310

Prepared by

Parametrix
4660 Kitsap Way, Suite A
Bremerton, WA 98312-2357
360-377-0014
www.parametrix.com

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Remedial Investigation/Feasibility Study and
Interim Actions
Former Chevron Property
Bremerton, Washington. Prepared by Parametrix,
Bremerton, Washington. August 2007.

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APPENDIX

A ADDRESSES OF RESIDENTS WITHIN ¼ MILE OF THE PROJECT SITE

ACRONYMS

BAC	Boardwalk Advisory Committee
Ecology	Washington State Department of Ecology
MTCA	Model Toxics Control Act
RI/FS	Remedial Investigation/Feasibility Study
BKAT	Kitsap Access Television

1. PROJECT OVERVIEW

The City of Bremerton is conducting a Remedial Investigation/Feasibility Study (RI/FS) and Interim Actions at the property known as the Former Chevron Property, which is located at 1310 Highland Avenue in Bremerton, Washington. The RI/FS is being performed under an Agreed Order with the Washington State Department of Ecology (Ecology). This plan is intended to satisfy the requirements for a Public Participation Plan under the Model Toxics Control Act (MTCA). Prior to the implementation of the RI/FS, this plan will be made available during a 30-day public comment period. If, during the public comment period, ten or more persons request a public meeting, a meeting will be scheduled. If there are substantial changes to the proposed RI/FS and Interim Actions during the public comment period, an additional 30-day public comment period will be held.

The RI/FS is being performed to address petroleum contamination at the property resulting from the property's former use by a commercial bulk fuel distributor. The RI/FS will involve studying the site to develop a cleanup approach and then performing cleanup through "interim actions." Finally, the success of the cleanup will be verified through long-term monitoring of the site's groundwater. The long term monitoring will be performed under a cleanup action plan to be developed in the future.

At the successful completion of the interim actions, the property will be developed into an addition to Evergreen Rotary Park. The property will also be developed concurrently as the terminus of the to-be-constructed Bremerton Boardwalk. Public outreach for the RI/FS is being coordinated with the Bremerton Boardwalk project.

1.1 WHAT WILL BE ACCOMPLISHED?

The Former Chevron Property will be investigated and cleaned up so that it may be redeveloped as an expansion of the Evergreen Rotary Park.

1.2 WHAT GOT US TO THIS POINT?

The Former Chevron Property was developed in 1946 and expanded until 1963. It operated as a bulk fuel terminal until it was decommissioned in 1988. All buildings and major facilities were then removed with the exception of the fuel pier and some of the concrete slabs and asphalt paving. Environmental investigations performed in 1988 discovered that significant petroleum releases had occurred and that the site's soil and groundwater was contaminated. Remedial actions completed to date include active product removal and operation of a soil vapor extraction system at the site. These remedial activities have removed fuels floating on the ground water surface and have reduced the overall soil contamination. However, subsequent groundwater and soil sampling events have revealed that the site still contains petroleum concentrations that exceed MTCA Method A cleanup levels. The site is listed on Ecology's Hazardous Sites List as Facility No. 2618.

The City has developed an RI/FS work plan and is currently coordinating with Ecology to cleanup the site under an Agreed Order (pursuant to WAC 173-340-530). Ecology regulations require actions at a facility where there has been a release or threatened release of hazardous substances. The Agreed Order establishes an agreement to conduct an RI/FS, which will be used to develop a final cleanup action plan for the site. The City has also agreed to conduct appropriate interim actions to address site contamination.

1.3 WHAT'S HAPPENING NOW?

1.3.1 Cleanup Design and Schedule

The cleanup project is currently in the design stage and cleanup approaches are in negotiation with Ecology. Current plans include cleanup of the majority of the contaminated soils on site using chemical treatments injected into contaminated areas underground. These treatments will break down petroleum and also stimulate bacteria in the ground. Bacteria will remove any remaining petroleum by using it as a food source. Some concentrated areas of contaminated soil will be excavated and removed as well.

The cleanup design will be refined based on the results of the RI/FS, which will be completed by April 2008. Interim actions are scheduled for completion by September 2008. The long term-monitoring to confirm the effectiveness of the cleanup is scheduled for completion by fall 2009.

1.3.2 Communication

Information on the cleanup project is currently provided on the Bremerton Boardwalk website at www.bremertonboardwalk.net. The website provides a forum for public comment.

Project information will also be included with a Bremerton Boardwalk exhibit at the upcoming Armed Forces Day celebration in May 2007 and the Blackberry Festival in September 2007. City representatives will be available for public questions and comments.

2. INTRODUCTION

2.1 MISSION STATEMENT

Cleanup of the Former Chevron Property will protect human health and the environment and will allow for the successful redevelopment of a former brownfields property into a park.

2.2 GOALS

The goals of this Public Participation Plan include:

- Keep the public informed of the project in a timely manner.
- Offer convenient mechanisms for the public to provide input and receive project information as the project progresses.
- Identify issues or concerns of interested parties and ensure they are addressed as appropriate.

2.3 APPROACH

The City will continue to solicit public participation and provide project communications through public meetings, press releases, exhibits, meetings with the Boardwalk Advisory Committee (BAC), which includes five citizen representatives, and information repositories. As the project progresses, the approach may be modified to best serve the public, support the project team and meet public participation goals. These elements are described in detail in Section 3.

2.4 PUBLIC PARTICIPATION TIMELINE

The following activities will provide opportunity for public involvement in the project.

2.4.1 Public Meetings

To date, the following public meetings have been held for the RI/FS and Bremerton Boardwalk projects:

- Public Meeting in October 2005
- Design Charette in October 2006
- Parks Commission presentation in January 2007
- City Council presentations in April and December 2006
- Presentation to the Suquamish Tribal Council in December 2006
- City Council District 5 meeting in January 2007
- Bremerton Arts Commission meeting in February 2007

- Parks Commission meeting March 2007. Park alternative review performed and preferred park alternative selected for further development.
- Future public meetings may occur in 2007. Meeting dates are to be announced.

2.4.2 Boardwalk Advisory Committee

- A BAC meeting, including citizen representatives, will be held summer 2007. Meeting date is to be announced.
- Follow-on BAC meeting dates to be announced.

2.4.3 Exhibitions

- Booth at the Armed Forces Day celebration in May 2007.
- Booth at the Blackberry Festival in September 2007.

2.4.4 Bremerton Boardwalk Website www.bremertonboardwalk.net

- The current Bremerton Boardwalk website provides project information and solicits input and comment on the cleanup project. The website will be maintained throughout the project.

2.5 COMMUNITY PROFILE

2.5.1 The City of Bremerton

Bremerton is nationally renowned as one of America's most livable cities and one of the top five places to raise a family. Bremerton offers affordable, quality living in a spectacular water and mountain setting. Located in Kitsap County in Washington State, the City of Bremerton lies east of the Olympic Mountains directly across Puget Sound from Seattle.

The town was spurred in 1891 when William Bremer, a German immigrant and shrewd businessman, encouraged the U.S. Navy to buy 190 acres of his land for a shipyard. Over a century later, Bremerton's Puget Sound Naval Shipyard continues to service U.S. Navy ships and its yard employs 8,000 civilians and as many active duty military work aboard ships or for the yard's attendant commands.

Bremerton's downtown core is undergoing a comprehensive revitalization. A sense of optimism resonates among its residents and small business owners. The ferry terminal and Bremerton Transportation Center at the foot of downtown lead visitors into a growing arts community of galleries, theaters and shops. Restaurants, museums and cafes contribute to the eclectic ambiance. And there's much more to come. City officials and business leaders are bringing a new era to Bremerton with plans for mixed-use waterfront development and a new government center adjacent to the ferry terminal.

Bremerton's 36,000 people live in East and West Bremerton, divided by the waters of Port Washington Narrows and connected by the Manette and Warren Avenue bridges. Many distinct neighborhoods comprise the city, such as Manette, with its Bohemian appeal in East Bremerton; Charleston, a quaint section of the city filled with bungalows, and Rocky Point with its rows of charming waterfront homes hugging the shoreline.

2.5.2 Kitsap County Community Interviews and Contacts

Kitsap County has not been involved with this project to date.

2.5.3 Key Community Concerns

2.5.3.1 A Blighted and Contaminated Property

The Former Chevron Property is a former industrial property containing petroleum contamination, a derelict pier, creosote-covered pilings and broken concrete. This property is a blight nestled between the existing Evergreen Park and adjacent neighborhood. Site cleanup and redevelopment will enhance the neighborhood and the experience of visitors to the park.

2.5.3.2 The Eroding Shoreline

The existing shoreline is eroding and, if allowed to continue, will deposit contaminated material into the Port Washington Narrows. Previous stabilization efforts at the site which are failing have included installation of large concrete debris and wood and steel bulkheads. These types of interim measures are not environmentally friendly, are unsightly, and are a detriment to the near shore habitat. Proposed stabilization solutions are being designed which will enhance the environmental processes, increase and improve habitat for fish, and provide additional recreational opportunities at this site.

2.6 STAKEHOLDERS

The following stakeholders have been identified for the project:

- Mayor, City Council and all other Residents of Bremerton
- Property Owners along Washington Avenue, and adjacent to the Former Chevron Property.
- City of Bremerton Public Works and Utilities
- City of Bremerton Parks and Recreation
- City of Bremerton Department of Community Development
- Suquamish Tribe
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Army Corps of Engineers
- Washington State Department of Natural Resources
- National Marine Fisheries Service
- United States Fish and Wildlife Service

3. COMMUNICATION AND PUBLIC INPUT

3.1 OVERVIEW

The following methods of communication will be used at various times throughout the project. These methods will be used to provide accurate information to the public and stakeholders in a timely manner. Input from the public will be solicited during BAC meetings, public exhibits, and the Bremerton Boardwalk website.

3.2 BOARDWALK ADVISORY COMMITTEE (BAC)

The Boardwalk Advisory Committee (BAC) is informed and updated on the cleanup project and makes recommendations as appropriate on major decisions affecting the cleanup. As shown below, the BAC includes five citizen representatives. Input from these representatives is solicited on the cleanup project during committee meetings.

The Boardwalk Advisory Committee consists of the following participants:

- Phil Williams – Chair
- Wendy Priest, City Council Representative
- Ken Atterbery/Steve Slaton - Port of Bremerton Representative
- Alison O'Sullivan - Suquamish Tribe Representative
- Stephan Kalinowski - Regulatory Agency Representatives (WDFW)
- Linda Streissguth - Planning Commission
- Tom Wolfe - Police Representative
- Gary Tussberg - Kitsap County Consolidated Housing Authority Representative
- Geoff Hosea, Citizen at Large - Design
- Mark Goldberg – Citizen at Large – Property Owners
- Amy Burnett – Citizen, Citizen at Large – Arts
- Brad Rucker – Citizen, Citizen at Large
- Stephanie Vail—Citizen at large
- Cindi Wiedenhoft – ADA Representative

3.3 PUBLIC MEETINGS

As discussed in section 2.4.1, several public meetings have been held to date. Future public meetings may be held to collect comments on the project and to share information. The meetings will be structured to allow interaction between project staff and the public. Future meetings may be held associated with project milestones or as needed to communicate project information.

Notification of these meetings will be made by the most cost efficient methods that reach the greatest number of interested people. Notification of meetings will use a combination of a contact list (mail), a Boardwalk project web site, flyers posted at various public places in Bremerton, and press releases.

Notification will be made a minimum of one week prior to the meeting and will include location, time, and topics for discussion.

3.4 WEB SITE

www.bremertonboardwalk.net

The project web site will be maintained throughout project duration. The web site includes project information, contact information for questions or comments and notification of upcoming public and BAC meetings. Web content is updated as needed to communicate project information.

3.5 FACT SHEETS/FLYERS

If future public meetings are held, printed flyers will be developed to advertise each meeting, including time, place and issues discussed. Printed fact sheets will be developed to provide information on a particular topic or issue.

Printed versions of flyers and fact sheets will be distributed on a limited basis to downtown businesses and public locations such as libraries, Norm Dicks Government Center, the existing boardwalk, the Bremerton transit station and Ferry Terminal, Public Works Building, Parks Building, Parks and Recreation Centers.

3.6 CONTACT LIST

A mainstay for meeting notification will be a contact list of residents living within ¼ mile of the project site. The contact list will be maintained by Parametrix staff. A copy of the list is included in Appendix A.

3.7 PRESS RELEASES

A press release will be issued in advance of each public meeting to the Kitsap Sun and the Kitsap Newspaper Group announcing the meeting time and place, special topic(s) to be discussed at the meeting and, for those who can not attend the meeting, alternative ways to participate in the design process.

3.8 INFORMATION BOOTH

A stand-alone display booth is used at selected community events and other public gatherings. The booth contains information explaining the overall project and timeline, upcoming meetings or events, and how to participate in the process. When not in use, the information booth is displayed at the Bremerton Government Center (since October 2006).

3.9 PROJECT SIGNS

"There's a park in you future", or other signs to that effect will be displayed at the site to signal the beginning of the project. The sign will also advertise the project website for further information and upcoming meetings and include a phone number or other method to contact project staff.

3.10 INFORMATION REPOSITORY

A complete library of all project documents will be maintained by Parametrix. Hard copies of significant project documents will be available to the public for viewing at the following locations;

City of Bremerton Public Works and Utilities Offices (360) 473-5318
3027 Olympus Drive, Bremerton WA 98310

Washington Department of Ecology - Headquarters Office

Carol Dorn contact by appointment only 360-407-7224

300 Desmond Drive, Lacey, WA 98503

PDF versions of significant project documents will be available at the City offices on CD-Rom upon request.

4. GLOSSARY OF RELATED TERMS

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document that selects the cleanup action and specifies cleanup standards and other requirements for a particular site. The cleanup action plan, which follows the remedial investigation/feasibility study report, is subject to a public comment period. After completion of a comment period on the cleanup action plan, Ecology finalizes the cleanup action plan.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Feasibility Study: Provides identification and analysis of site cleanup alternatives and is usually completed within a year. The entire Remedial Investigation/Feasibility Study process takes about two years and is followed by the cleanup action plan. Remedial action evaluating sufficient site information to enable the selection of a cleanup action plan.

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel. In aquifers, ground water occurs in sufficient quantities that it can be used for drinking water, irrigation, and other purposes.

Hazardous Site List: A list of ranked sites that require further remedial action. These sites are published in the Site Register.

Interim Action: Any remedial action that partially addresses the cleanup of a site. It is an action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance at a facility; an action that corrects a problem that may become substantially worse or cost substantially more to address if the action is delayed; an action needed to provide for completion of a site hazard assessment, state remedial investigation/feasibility study, or design of a cleanup action.

Model Toxics Control Act: Refers to RCW 70.105D. Voters approved it in November 1988. The implementing regulation is WAC 173-340 and was amended in 2001.

Monitoring Wells: Special wells drilled at specific locations on or off a hazardous waste site where ground water can be sampled at selected depths and studied to determine the direction of ground water flow and the types and amounts of contaminants present.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and the opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance, and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health.

Remedial Investigation: Any remedial action that provides information on the extent and magnitude of contamination at a site. This usually takes 12 to 18 months and is followed by the feasibility study. The purpose of the Remedial Investigation/Feasibility Study is to collect and develop sufficient site information to enable the selection of a cleanup action

APPENDIX A

Addresses of Residents Within ¼ Mile of The Project Site

FORMER CHEVRON PROPERTY, 1310 HIGHLAND AVENUE
RESIDENT ADDRESSES WITHIN 1/4 MILE

	Street Address	City	State	Zip Code
Dear Resident	110 11TH ST	BREMERTON	WA	98310
Dear Resident	1102 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1102 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1103 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1104 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1106 PARK AVE	BREMERTON	WA	98310
Dear Resident	1106 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1107 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1107 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1107 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1108 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1108 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1108 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1108 PARK AVE	BREMERTON	WA	98310
Dear Resident	1109 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1109 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1109 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1109 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1110 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1110 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1111 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1111 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1112 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1112 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1113 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1113 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1113 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1113 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1114 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1114 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1116 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1116 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1116 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1117 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1117 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1118 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1119 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1119 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1119 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1120 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1120 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1121 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1121 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1121 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1122 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1123 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1124 MCKENZIE AVE	BREMERTON	WA	98310

Dear Resident	1125 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1126 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1127 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1127 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1129 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1129 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	1131 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1134 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	114 11TH ST	BREMERTON	WA	98310
Dear Resident	1202 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1202 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1203 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1204 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1204 PARK AVE	BREMERTON	WA	98310
Dear Resident	1205 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1206 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1206 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1206 PARK AVE	BREMERTON	WA	98310
Dear Resident	1208 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	1209 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1209 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1210 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1210 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1210 PARK AVE	BREMERTON	WA	98310
Dear Resident	1211 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1214 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1214 PARK AVE	BREMERTON	WA	98310
Dear Resident	1215 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1217 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1217 SHELDON BLVD	BREMERTON	WA	98310
Dear Resident	1218 PARK AVE	BREMERTON	WA	98310
Dear Resident	1218 PARK AVE	BREMERTON	WA	98310
Dear Resident	1221 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1223 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	1301 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	1302 PARK AVE	BREMERTON	WA	98310
Dear Resident	1303 PARK AVE	BREMERTON	WA	98310
Dear Resident	1306 PARK AVE	BREMERTON	WA	98310
Dear Resident	1307 PARK AVE	BREMERTON	WA	98310
Dear Resident	1309 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	1310 PARK AVE	BREMERTON	WA	98310
Dear Resident	1311 PARK AVE	BREMERTON	WA	98310
Dear Resident	1312 PARK AVE	BREMERTON	WA	98310
Dear Resident	13161 PARK AVE	BREMERTON	WA	98310
Dear Resident	1319 PARK AVE	BREMERTON	WA	98310
Dear Resident	1323 PARK AVE	BREMERTON	WA	98310
Dear Resident	1325 PARK AVE	BREMERTON	WA	98310
Dear Resident	1329 PARK AVE	BREMERTON	WA	98310
Dear Resident	1332 SHELDON BLVD	BREMERTON	WA	98310
Dear Resident	1335 PARK AVE	BREMERTON	WA	98310
Dear Resident	1403 PARK AVE	BREMERTON	WA	98310
Dear Resident	1407 PARK AVE	BREMERTON	WA	98310

Dear Resident	914 PLEASANT ST	BREMERTON	WA	98310
Dear Resident	915 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	915 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	915 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	916 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	916 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	916 PLEASANT ST	BREMERTON	WA	98310
Dear Resident	917 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	918 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	919 COGEAN AVE	BREMERTON	WA	98310
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Dear Resident	919 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	920 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	920 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	920 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	920 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	920 PLEASANT ST	BREMERTON	WA	98310
Dear Resident	921 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	922 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	922 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	922 MCKENZIE AVE	BREMERTON	WA	98310
Dear Resident	922 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	923 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	923 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	923 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	924 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	924 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	925 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	925 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	926 COGEAN AVE	BREMERTON	WA	98310
Dear Resident	926 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	926 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	926 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	927 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	927 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	928 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	928 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	929 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	929 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	930 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	930 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	931 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	932 PACIFIC AVE	BREMERTON	WA	98310
Dear Resident	933 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	933 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	934 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	934 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	935 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	935 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	936 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	937 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	938 PLEASANT AVE	BREMERTON	WA	98310

Dear Resident	939 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	940 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	941 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	941 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	944 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	946 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	949 WASHINGTON AVE	BREMERTON	WA	98310
Dear Resident	951 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	951 PLEASANT AVE	BREMERTON	WA	98310
Dear Resident	952 HIGHLAND AVE	BREMERTON	WA	98310
Dear Resident	955 HIGHLAND AVE	BREMERTON	WA	98310
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Dear Resident	959 WASHINGTON AVE	BREMERTON	WA	98310

APPENDIX B

SEPA Environmental Checklist

City of Bremerton
Department of Community Development
345 - 6th Street, Suite 600
Bremerton, WA 98337-1873
Phone: (360) 473-5275
Fax: (360) 473-5278

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

A. BACKGROUND

1. Name of proposed project, if applicable:
   Remedial Investigations and Interim Actions at the Former Chevron Property
2. Name of applicant:
   City of Bremerton
3. Address and phone number of applicant and contact person:

   APPLICANT
   Tom Knuckey, P.E.
   Managing Engineer
   City of Bremerton, Public Works and Utilities
   3027 Olympus Drive
   Bremerton, Washington 98310
   (360) 473-2376

   CONTACT PERSON
   Bill Webb, Parametrix, Inc.
   4660 Kitsap Way, Suite A
   Bremerton, WA 98312
   (360)-850-5303
4. Date checklist prepared:
   April 17, 2007
5. Agency requesting checklist:
   Washington State Department of Ecology.

6. Proposed timing or schedule (including phasing, if applicable):
   The proposed remedial work is scheduled to commence following receipt of all necessary permits, projected to be as early as by May 21, 2007. Initial sampling and remedial work will be conducted at commencement of work, and long term monitoring sampling will follow at 6-, 9-, and 12-months following completion of remedial work. All work will be completed within 2 years, projected to be by August of 2009.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
   The Former Chevron Property was purchased by the City of Bremerton in 2005 for development as an addition to Evergreen Park. Following clean-up of the site, the area will be developed as a park, with planted grass, trees, and beachfront access.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
   - Chevron Property Sediment Characterization Study, Parametrix, 2005
   - NEPA assessment for SR 303 Manette Bridge Bremerton Vicinity – Bridge Replacement is underway by the Washington State Department of Transportation.
   - Work Plan for Remedial Investigation/Feasibility Study (RI/FS) and Interim Actions, Former Chevron Property, Bremerton, Washington, Parametrix 2007 (attached).

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
   None known.

10. List any government approvals or permits that will be needed for your proposal, if known.
    Grading permit, City of Bremerton
    Shoreline Permit, City of Bremerton

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
    Remedial investigation activities are to be performed to aid in the development of a cleanup strategy for addressing residual petroleum contamination within an approximate area of 160 feet by 400 feet at the Former Chevron Property site. Residual petroleum contamination exists in soil and groundwater as a result of past fuel releases. Conceptual cleanup strategies have been developed based on existing environmental data and are proposed as interim actions (described below in this response). Before the proposed interim actions are implemented, they will be refined based on data provided by the remedial investigation (described below in this response).

PROPOSED REMEDIAL INVESTIGATIONS

Groundwater Sampling

In order to determine current groundwater conditions, eight existing and two newly-installed wells will be sampled. The data collected will be used to refine the design of the interim actions proposed in this plan. Wells to be sampled for the remedial investigation are shown on Figure 3-1 of the *Work Plan for RI/FS and Interim Actions, Former Chevron Property, Bremerton, Washington* (attached). A new well (MW-25) will be installed to replace MW-7, which was found to contain floating product up to 0.95 feet-thick. Well MW-25 will be installed to an approximate depth of 20 feet with a 15-foot screen. MW-7 was apparently destroyed in 1989. A second new well (MW-26) will be installed to replace MW-8 near the shoreline. Well MW-26 will be installed to an approximate depth of 20 feet with a 15-foot screen. A description of well installation methods is provided at the end of this response.

Surface Soil Sampling

During the remedial investigation, surface soils will be investigated to further assess potential surface soil impacts at the site. Surface soils will be collected from a depth of 0 to 6 inches at locations where potential surface spills may have occurred such as former ASTs, fuel loading racks, and the former warehouse platform. Approximately 25 samples will be collected.

Subsurface Soil Sampling

Subsurface soil samples will be collected to characterize existing soil conditions and to aid in remedial design. Proposed sampling locations are shown on Figure 3-2 of the attached RI/FS Work Plan. Up to 21 subsurface soil samples will be collected for analysis. Sample clusters are proposed at existing wells MW-16 and MW-18 to investigate the extent of contaminated soil at these wells, which currently contain floating product. Another cluster of sample locations is proposed at historical test pit TP-9, where contaminated soil was found between 2 feet below ground surface (bgs) and the groundwater table. A fourth cluster is proposed around new well MW-25 as optional samples to investigate the potential extent of soil contamination (if found) at the former location of MW-7.

Subsurface soil samples in the upper yard (at MW-16 and MW-18, and MW-25) will be collected from borings installed using an auger drill rig. An auger rig will be used due to the presence of till and outwash soils, which cannot be penetrated using a push-probe rig. Soils from the borings will be collected at the surface and at 2.5-foot intervals to the depth of the borings. The borings will be extended to 3 feet below the groundwater table as measured in the adjacent wells.

Subsurface samples in the lower yard will be collected using a push-probe rig. Soil will be sampled continuously from the ground surface to 2 feet below the groundwater table as measured in the adjacent existing monitoring wells. It is anticipated that the probes will be extended to approximately 12 feet bgs.

PROPOSED INTERIM ACTIONS

The interim actions described here are based on existing data. They will be refined using the information gathered during the remedial investigation activities. The primary goal of the interim actions is to meet the requirements of the Model Toxics Control Act (MTCA) for the protection of human health and the environment. MTCA rules state that cleanup action shall use permanent solutions "to the maximum extent practicable" and provide for a "reasonable restoration time frame." The interim actions are intended to meet MTCA requirements for a cleanup action. Once the interim actions are completed, compliance monitoring will be conducted to confirm that interim action goals are met. Interim actions consist of 1) source reduction and 2) in-situ enhanced bioremediation of dissolved and adsorbed hydrocarbons in the contaminated plume at the site.

Source Reduction

The major historical source at the site, the floating product layer in the lower yard, was removed by the soil vapor extraction (SVE) system that was operated on the site between 1990 and 1994. Secondary sources that are still present consist of residual hydrocarbons in smear zone soils, contaminated soil in the vadose zone (such as at test pit TP-9), and contaminated soil/product associated with the thin layer of floating product (<3/8-inch) in the vicinity of wells MW-16 and MW-18.

The proposed method for remediating the source soils and floating product will be in-situ chemical oxidation. An exception is contaminated soils near MW-16 and MW-18, which will be excavated and removed. It is anticipated removal by excavation will be limited to approximately 800 cubic yards. All excavated soil will be disposed of off-site at an approved disposal site.

In-situ chemical oxidation involves introducing a chemical oxidant in slurry form into the zone of impacted media. The slurry is typically injected using push-probe or drilling equipment with injections spaced on 7- to 10-foot centers. The oxidant destroys the hydrocarbons on contact, producing primarily carbon dioxide and water as by products. Two to three injection events spaced at one-month intervals are typically recommended. Commercially-available chemical oxidants include RegenOxTM, Fenton's Reagent, and permanganate. Selection of the preferred chemical oxidant will be based on an analysis of cost and effectiveness that will be performed following the remedial investigation activities.

To demonstrate the effectiveness of the selected chemical oxidation treatment, a pilot-scale test will be performed prior to production-scale treatment. The pilot scale location selected will be representative of the highest soil concentrations at the site. Location selection will be made following the remedial investigation activities. Injection locations will be treated with oxidant, centered around a soil sampling location with known concentrations to provide "before" soil concentrations. Two injection events spaced one month apart will occur. One month following the second event, soil samples will be collected at the location of the original sample to provide an "after" measurement of soil concentrations. A third injection event may be implemented based on the results of the confirmation sampling.

Chemical oxidation treatment will be applied at source locations. Injection volumes, spacing, and treatment depths will be selected based on the results of the remedial investigation sampling and the pilot test. An approximate outline of the source treatment area is shown on Figure 3-3 of the attached RI/FS Work Plan. The number of injection events will be determined based on the pilot test. Confirmation sampling will be conducted at least one month following the final injection event. Confirmation sample locations will be collected at the same locations as the subsurface samples that were collected during the remedial investigation activities. This will provide "before" soil concentrations for comparison to the confirmation samples.

Residual Soil and Groundwater Remediation

Residual soil and groundwater contamination will be treated using in-situ enhanced bioremediation following the source reduction interim action. The specific in-situ enhanced bioremediation technology selected for the site involves injecting an oxygen releasing compound in slurry form into the aquifer. Oxygen is provided to enhance the activity of naturally-occurring aerobic bacteria, which feed on or "respirate" the hydrocarbons. Oxygen is typically the limiting factor for bioremediation at contaminated sites. Similar to the chemical oxidant injections, the slurry is injected into the zone of impacted media using push-probe or drilling equipment with injections spaced on approximately 10-foot centers. The effective treatment period is on the order of one year. Selection of design criteria such as the preferred oxygen-releasing compound, compound volumes, injection spacings, and treatment depths will be based on a cost evaluation and the results of the remedial investigation activities.

Confirmation sampling will consist of groundwater monitoring conducted in selected wells. The initial evaluation monitoring period will consist of three sampling events conducted at 6-, 9-, and 12-months following the injection event. A future long-term monitoring program will be developed based on the initial monitoring period results.

MONITORING WELL INSTALLATION

Monitoring wells will be installed by a licensed driller according to applicable Ecology regulations. Monitoring wells will be constructed using 2-inch I.D. polyvinyl chloride (PVC) casings fitted with 15-foot screens (with 0.01-inch or 0.02-inch slots). Completed well monuments will be flush-mounted; a 2-foot square concrete pad will be constructed around the monument as a surface seal. All soil removed for purposes of constructing the new wells will be disposed of off-site at an approved disposal site.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.
The Former Chevron Property is located on the Port Washington Narrows, at 1310 Highland Avenue in Bremerton, Washington. The site, which formerly contained a bulk fuel distribution facility, was purchased by the City of Bremerton in 2005 for development as an addition to the adjacent Evergreen Park. The project vicinity is shown in Figure 1-1 of the attached RI/FS Work Plan.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other_. . . . . .
Topography at the site is shown on the Figures included with the attached RI/FS Work Plan.

b. What is the steepest slope on the site (approximate percent slope)?
67% at the shoreline bluff.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.
According to the Soil Survey of Kitsap County, the project site contains three soil types: Alderwood very gravelly, sandy loam, 15 to 30 percent slopes; Dystric Xerorthents, 45-70% slopes; and Urban Land Alderwood Complex 0 to 8 percent slopes.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.
There are no surface indications or history of unstable soils in this area.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
It is anticipated removal by excavation will be limited to approximately 800 cubic yards in the vicinity of wells MW-16 and MW-18. The excavated material will be disposed of off-site at an approved disposal site. The excavated areas will be backfilled with clean excavated soils and clean material from an approved vendor.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
No erosion is expected to occur as a result of the sampling or remedial work.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
N/A

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:
N/A

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
Dust from excavation activities will be controlled with water spray, so emissions are not anticipated.

Diesel and gasoline exhaust emissions would be produced by the push-probe or hollow-stem auger rig that will be used for collecting the soil samples, by the drilling rig used for installation the additional monitoring wells, and by excavating equipment. The amount of exhaust produced is expected to be inconsequential.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
No off-site sources of emissions or odor will affect this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
No measures are proposed outside of controlling dust with water spray.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
The project borders the Port Washington Narrows, which flows into Sinclair Inlet and the Puget Sound.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
All of the soil sample locations will be within 200 feet of the Port Washington Narrows.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
No fill or dredge material will be placed in or removed from surface water or wetlands.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
The proposal does not lie within a 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
No waste materials will be discharged to surface waters.

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.
No ground water will be withdrawn, and no water will be discharged to ground water.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.
No waste materials will be discharged from any source as a result of this proposal.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.
The only source of runoff at the project site is rainwater. The proposed project will not result in any changes to existing conditions with regard to flow of rainwater.

2) Could waste materials enter ground or surface waters? If so, generally describe.
No. The approximately 800 cubic yards of soil that potentially could be removed through excavation in the vicinity of wells MW-16 and MW-18 will be stockpiled for approximately 2 weeks for testing. The stockpiles will be placed on and covered by plastic sheeting to prevent erosion. After testing, soils will be either removed to an off-site, approved location, or backfilled into the excavation (if clean). Therefore, the project will not change existing conditions with regard to rainwater runoff, and concern of contamination entering the Port Washington Narrows. The proposed remedial work will improve groundwater and soil quality.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
Stockpiled soils will be covered with plastic sheeting. Best management practices (BMPs) will be employed to prevent erosion and sediment runoff from leaving the excavation area and entering surface waters.

4. Plants

a. Check or circle types of vegetation found on the site:

- ☒ deciduous tree: alder, maple, aspen, other
- ☒ evergreen tree: fir, cedar, pine, other
- ☒ shrubs
- ☒ grass
- ☐ pasture
- ☐ crop or grain
- ☐ wet soil plants: cattail, buttercup, Chinook, skunk cabbage, other
- ☐ water plants: water lily, eelgrass, milfoil, other
- ☐ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?
No vegetation will be removed from the site; and no vegetation will be altered at the site with the exception of the grass cover at the excavation area.

c. List threatened or endangered species known to be on or near the site.
No threatened or endangered plant species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
All disturbed areas will be revegetated during construction of the new park expansion.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:
birds: hawk, heron, eagle, songbirds, waterfowl
mammals: deer, otter, raccoon, other small mammals
fish: salmon, trout, shellfish

b. List any threatened or endangered species known to be on or near the site.
Eight federally listed species and one species proposed for listing are known to occur, or could potentially occur, on or near the site:

- Chinook salmon (*Oncorhynchus tshawytscha*) Puget Sound ESU (Threatened)
- Bull trout (*Salvelinus confluentus*)Coastal/Puget Sound DPS (Threatened)
- Chum salmon (*O. keta*) Hood Canal Summer-run ESU (Threatened)
- Steelhead trout (*Oncorhynchus mykiss*) Puget Sound ESU (*Proposed Threatened*)
- Bald eagle (*Haliaeetus leucocephalus*) (Threatened)
- Marbled murrelet (*Brachyramphus marmoratus*) (Threatened)
- Killer whale (*Orcinus orca*) Southern Resident DPS (Endangered)
- Steller sea lion (*Eumetopias jubatus*) (Threatened)
- Humpback whale (*Megaptera novaeangliae*) (Endangered)
- Leatherback sea turtle (*Dermochelys coriacea*) (Endangered)

c. Is the site part of a migration route? If so, explain.
The site is part of the larger Pacific Flyway and various waterfowl and other birds migrate through the general region.

d. Proposed measures to preserve or enhance wildlife, if any:
No measures are proposed for preserving or enhancing wildlife at the site, as no negative impacts to wildlife are expected to result from the sampling and remedial actions.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
The completed project will not require any energy.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.
This project will not affect the potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
No energy conservation features are proposed.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.
Risk of environmental health hazards is limited to potential exposure of the remedial team members to the contaminated soil.

1) Describe special emergency services that might be required.
No special emergency services will be required.

2) Proposed measures to reduce or control environmental health hazards, if any:
All personnel conducting sampling activities on the project site must be 40-hour Hazardous Waste Operation (HAZWOPER) trained per 29 CFR 1910.120 and be current with their annual 8-hour refresher course. All personnel working at the project site will be briefed on potential site hazards, health and safety procedures, and sampling procedures. Following completion of this training, all personnel will be required to sign an acknowledgement form verifying that they have completed the task-specific training.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
Noise in the area is mainly produced by road and boat traffic. Noise in the area will not affect this project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
Noise will be produced by engines running the probing and drilling rigs. Noise can be expected between 7:00 a.m. and 7:00 p.m. Monday through Saturday.

3) Proposed measures to reduce or control noise impacts, if any:
No measures are proposed.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?
The site, which formerly contained a bulk fuel distribution facility, was purchased by the City of Bremerton in 2005 for development as an addition to the adjacent Evergreen Park, following completion of the proposed remediation work. Port Washington Narrows is used for recreation by boats. Residences and some scattered commercial land uses are located adjacent to the Narrows.

b. Has the site been used for agriculture? If so, describe.
The site has not been used for agriculture.

c. Describe any structures on the site.
All structures have been removed from the site with the exception of a derelict pier. A sewer pump station, and the Plumber's Union Hall are located near the site. The Project actions will not affect any structures.

d. Will any structures be demolished? If so, what?
This project will not result in demolition of any structures.

e. What is the current zoning classification of the site?
The site is currently zoned R-10 Low Density Residential.

f. What is the current comprehensive plan designation of the site?
The Comprehensive Plan Land Use designation of the site is Downtown Regional Center. The Comprehensive Plan Parks and Recreation designation of the site is Urban Trail and Park.

g. If applicable, what is the current shoreline master program designation of the site?
The Shoreline Master Plan designation of the site is Urban Conservancy.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
No.

i. Approximately how many people would reside or work in the completed project?
No people would reside or work at the completed project.

j. Approximately how many people would the completed project displace?
No people would be displaced by the completed project.

k. Proposed measures to avoid or reduce displacement impacts, if any:
N/A

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
The proposal will not result in any change to existing or projected land uses.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
This project will not create any housing units.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
This project will not eliminate any housing units.

c. Proposed measures to reduce or control housing impacts, if any:
This project will not impact housing in the area, therefore no measures are proposed.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
No structures will be built as part of this proposal.

b. What views in the immediate vicinity would be altered or obstructed?
This proposal will not alter any views.

c. Proposed measures to reduce or control aesthetic impacts, if any:
No measures are proposed, as no views will be affected.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Work lights will not be needed for the sampling or remedial work, as work will not occur after 7:00 p.m.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
The project will not result in any significant amount of light or glare.

c. What existing off-site sources of light or glare may affect your proposal?
No off-site sources of light or glare will affect this proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:
No measures are proposed to reduce or control light and glare.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
The project area is bounded by recreation opportunities located at Evergreen Rotary Park. Port Washington Narrows is also used for recreation including boating and fishing.

b. Would the proposed project displace any existing recreational uses? If so, describe.
The project will not displace any recreational use of the area.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
No measures are proposed.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
According to the Washington State Department of Archaeology and Historic Preservation, there are no historic or cultural places or objects listed on or proposed for national, state, or local preservation registers on or immediately adjacent to the site.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
There are no visible landmarks or evidence of historic, archaeological or scientific significance. However, the waters and shorelines of Puget Sound were extensively used by Native Indians and Port Washington Narrows is the usual and accustomed fishing place for tribal members such as the Suquamish. Thus, there is some cultural importance to this area, and there is potential for undocumented cultural/archaeological resources.

c. Proposed measures to reduce or control impacts, if any:
The sampling and remedial action team will monitor the soil to be excavated for the purpose of constructing the two new wells and from the upper yard at MW 16 and MW 18. In the unlikely event of an inadvertent discovery of archaeological materials, work will be stopped immediately and the Washington Department of Archaeology and Historic Preservation (WDAHP) will be contacted. Work will not commence until WDAHP consults with the Suquamish Tribe.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
The site is accessed by Highland Avenue, just north of 13th Street.

b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
The Bremerton Transportation Center, which serves as a Kitsap Transit bus transfer center, as well as the Washington State Ferries terminal, is located just to the south of the project site. Five Kitsap Transit bus routes serve the site. On weekdays only, the #22 and #15 run from approximately 4:30 a.m. until 7:00 a.m., and in the afternoons from approximately 4:00 p.m. until 9:00 p.m. Daily service is available on the #11 Crosstown route from 4:45 a.m. until 9:30 p.m., and weekends 9:15 a.m. until 6:45 p.m. The #21 and #25 also run daily from approximately 6:00 a.m. until 9:00 p.m., and weekends from approximately 9:00 a.m. until 6:00 p.m.

c. How many parking spaces would the completed project have? How many would the project eliminate?
This project will not create or eliminate any parking spaces.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
This project will not require any road improvements or new roads.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
The project is not located in the vicinity of rail or air transportation. The Washington State Ferries terminal is located south of the project site.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
No vehicular trips will be generated by the completed project.

g. Proposed measures to reduce or control transportation impacts, if any:
The project will have no long-term impacts on transportation. Truck traffic necessary for hauling away the approximately 800 cubic yards of material possibly excavated from the vicinity of wells MW-16 and MW-18 is not expected to be significant. Therefore, no measures to reduce or control transportation impacts are proposed.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
No additional public services will be required as a result of this proposal.

b. Proposed measures to reduce or control direct impacts on public services, if any.
This project will not impact public services, therefore no measures are proposed.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
All utilities that were present at the site have been capped, and are no longer in use.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
This project will not require construction of any utilities.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: .....

Date Submitted: 8/2/07

APPENDIX C

Test Pit and Boring Logs

LOG OF TEST PIT

DEPTH BELOW GROUND SURFACE (FEET)	GROUP SOIL CLASSIFICATION SYMBOL	DESCRIPTION
		TEST PIT 1
0 - 2.5	SM	BROWN SILTY FINE SAND WITH OCCASIONAL FINE TO MEDIUM GRAVEL, WOOD FRAGMENTS, METAL, AND BLOCKS OF CONCRETE (LOOSE, MOIST) (FILL)
2.5 - 5.5	SM	BROWN TO GRAY SILTY FINE SAND WITH FINE GRAVEL (DENSE TO VERY DENSE, MOIST)
		SLIGHT PETROLEUM ODOR DETECTED AT 3.0 FEET
5.5 - 9.5	SM	GRAY SILTY FINE SAND WITH FINE GRAVEL (VERY DENSE, MOIST) (TILL)
		SLIGHT PETROLEUM ODOR DETECTED; BECOMES MODERATE PETROLEUM ODOR AT 7.0 FEET
		OCCASIONAL COBBLES AT 8.0 FEET
		SLIGHT PETROLEUM ODOR DETECTED AT 9.0 FEET
		SAMPLE OBTAINED AT 7.0 FEET
		TEST PIT COMPLETED AT 9.5 FEET ON 9/28/88
		TEST PIT 2
0 - 1.5	SM	BROWN SILTY FINE SAND WITH OCCASIONAL FINE TO MEDIUM GRAVEL, CONCRETE, WIRE AND WOOD FRAGMENTS (MEDIUM DENSE, MOIST) (FILL)
1.5 - 3.0	SM	BROWN TO GRAY SILTY FINE SAND WITH FINE GRAVEL (DENSE, MOIST) (WEATHERED TILL)
		MODERATE ORGANIC ODOR AT 2.0 FEET
3.0 - 9.0	SM	BLUE-GRAY SILTY FINE SAND WITH FINE GRAVEL AND OCCASIONAL COBBLES (VERY DENSE, MOIST) (FILL)
		MODERATE PETROLEUM ODOR DETECTED AT 4.0 FEET
		SAMPLES OBTAINED AT 2.5 AND 9.0 FEET
		TEST PIT COMPLETED AT 9.0 FEET ON 9/28/88
		TEST PIT 3
0 - 1.2	SM	BROWN SILTY FINE SAND WITH OCCASIONAL FINE TO MEDIUM GRAVEL, WOOD AND METAL FRAGMENTS (MEDIUM DENSE, MOIST) (FILL)
		SLIGHT PETROLEUM ODOR DETECTED
1.2 - 2.0	SM	BROWN TO GRAY SILTY FINE SAND WITH FINE GRAVEL (DENSE, MOIST) (WEATHERED TILL)
		SLIGHT TO MODERATE PETROLEUM ODOR DETECTED AT 1.5 FEET
2.0 - 8.5	SM	BLUE-GRAY SILTY FINE SAND WITH FINE GRAVEL AND OCCASIONAL COBBLES (VERY DENSE, MOIST) (TILL)
		MODERATE TO STRONG PETROLEUM ODOR DETECTED AT 4.0 FEET
		SAMPLE OBTAINED AT 4.0 FEET
		TEST PIT COMPLETED AT 8.5 FEET ON 9/28/88

THE DEPTHS ON THE TEST PIT LOGS, ALTHOUGH SHOWN TO 0.1 FEET, ARE BASED ON AN AVERAGE OF MEASUREMENTS ACROSS THE TEST PIT AND SHOULD BE CONSIDERED ACCURATE TO 0.5 FEET.

GEI 68-88

0372-34-4 KRF:DHA:cs 11/4/88

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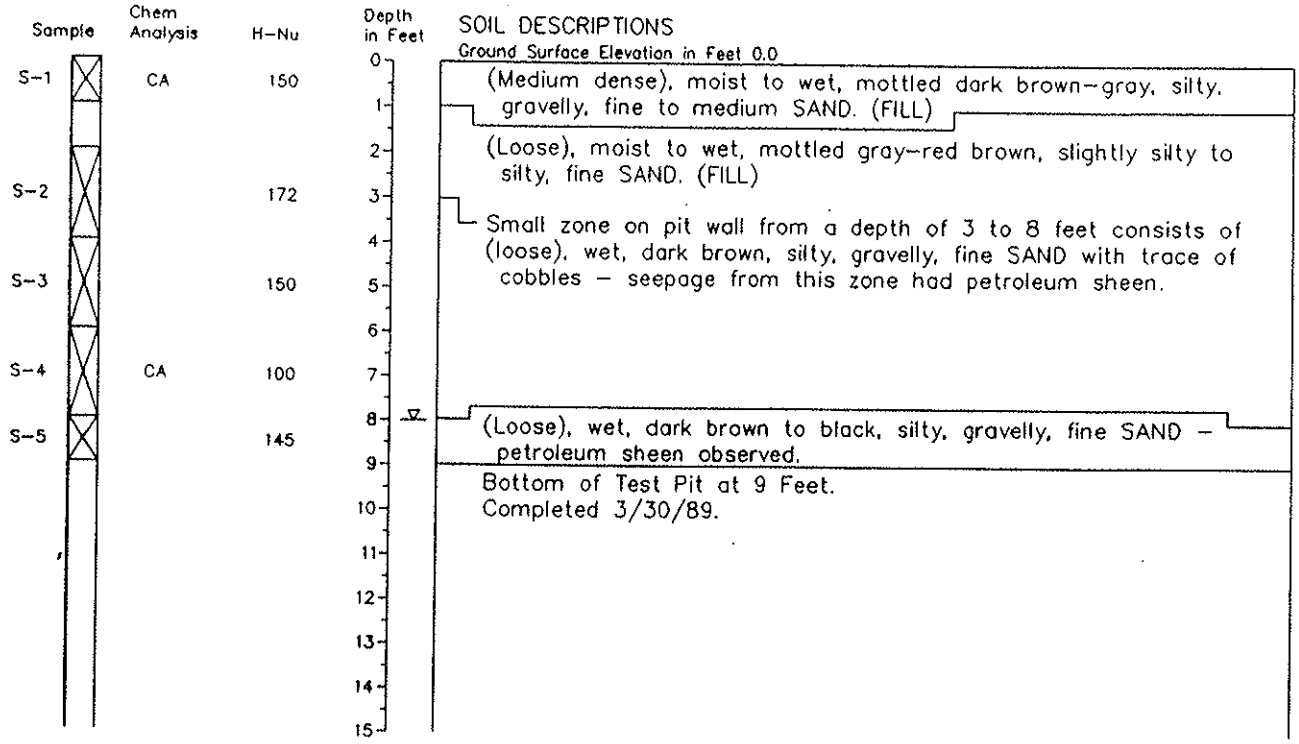
LOG OF TEST PIT

FIGURE A-15

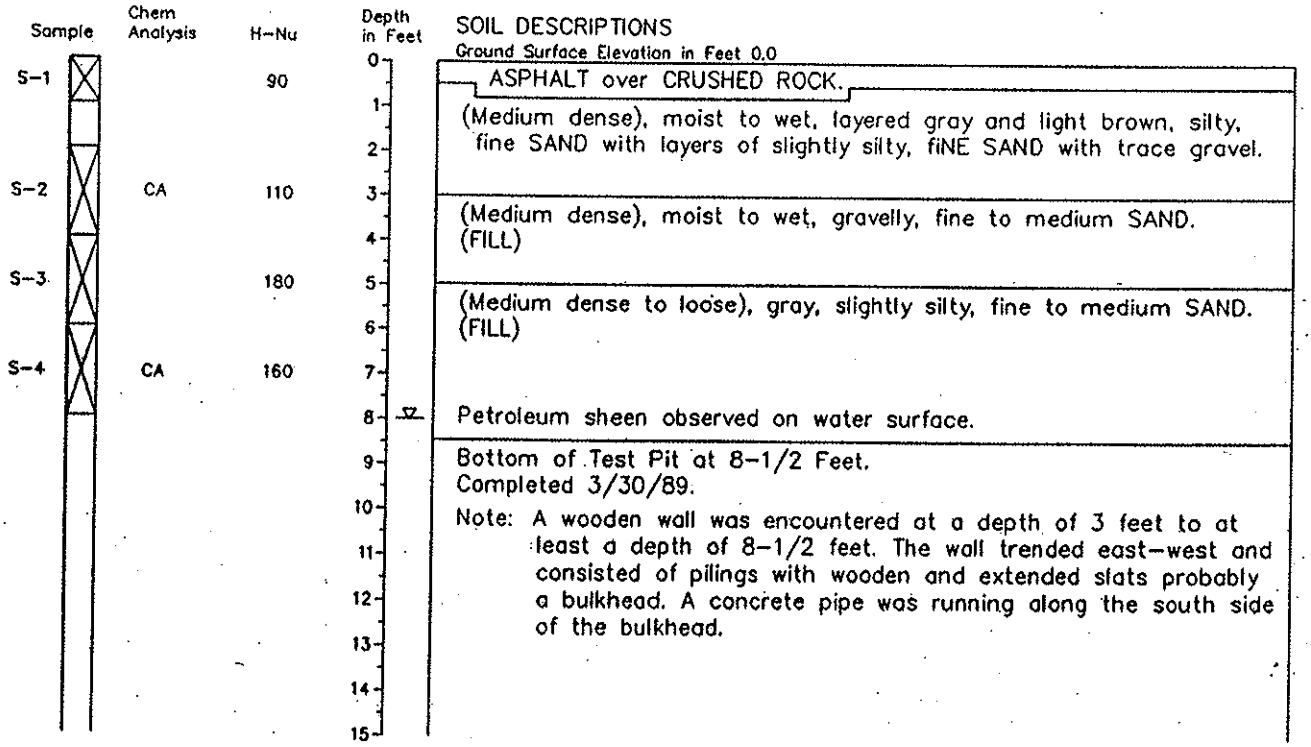
LOG OF TEST PIT

DEPTH BELOW GROUND SURFACE (FEET)	GROUP SOIL CLASSIFICATION SYMBOL	DESCRIPTION
		TEST PIT 4
0 - 1.2	SP	GRAY TO BROWN FINE TO MEDIUM SAND WITH FINE GRAVEL AND A TRACE OF SILT (LOOSE, MOIST) (FILL)
1.2 - 7.0	SM	GRAY SILTY FINE SAND WITH FINE GRAVEL AND OCCASIONAL COBBLES (VERY DENSE, MOIST) (FILL)
		NO PETROLEUM ODOR DETECTED
		SAMPLE OBTAINED AT 6.0 FEET
		TEST PIT COMPLETED AT 7.0 FEET ON 9/28/88
		TEST PIT 5
0 - 1.5	SM	BROWNISH-GRAY SILTY FINE SAND WITH OCCASIONAL FINE TO MEDIUM GRAVEL AND WOOD FRAGMENTS (MEDIUM DENSE, MOIST) (FILL)
1.5 - 8.0	SM	GRAY SILTY FINE SAND WITH FINE GRAVEL AND OCCASIONAL COBBLES (VERY DENSE, MOIST) (TILL)
		NO PETROLEUM ODOR DETECTED
		SAMPLE OBTAINED AT 8.0 FEET
		TEST PIT COMPLETED AT 8.0 FEET ON 9/28/88
		TEST PIT 6
0 - 0.5	SM	BROWN TO GRAY SILTY FINE SAND WITH OCCASIONAL FINE GRAVEL, ROOTS AND CONCRETE (MEDIUM DENSE, MOIST) (FILL)
		SLIGHT PETROLEUM ODOR DETECTED AT 0.5 FEET
0.5 - 8.0	SM	GRAY TO BLUE-GRAY SILTY FINE SAND WITH FINE GRAVEL AND OCCASIONAL COBBLES (VERY DENSE, MOIST)
		MODERATE PETROLEUM ODOR DETECTED AT 7.0 FEET
		SAMPLE OBTAINED AT 7.5 FEET
		TEST PIT COMPLETED AT 8.0 FEET ON 9/28/88
		TEST PIT 7
0 - 0.2		ASPHALT CONCRETE
0.2 - 2.5	SM	BROWN SILTY FINE TO MEDIUM SAND WITH FINE GRAVEL (LOOSE, MOIST) (FILL)
2.5 - 9.0	SP-SM	GRAY FINE TO MEDIUM SAND WITH SILT AND OCCASIONAL FINE TO MEDIUM GRAVEL (MEDIUM DENSE, MOIST) (FILL)
		MODERATE PETROLEUM ODOR DETECTED AT 3.0 FEET; STRONG PETROLEUM ODOR DETECTED AT 8.5 FEET
		SAMPLE OBTAINED AT 8.0 FEET
		SOIL BECOMES WET AT 9.0 FEET
		TEST PIT COMPLETED AT 9.0 FEET ON 9/28/88

Test Pit Log TP-8

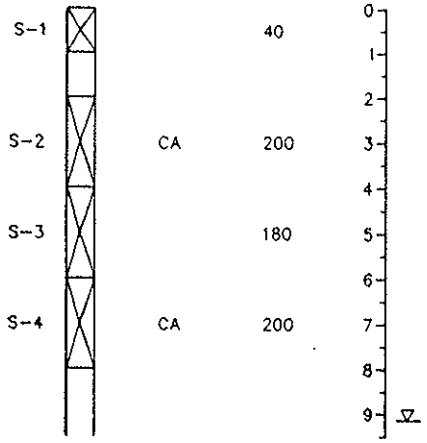


Test Pit Log TP-9



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater conditions, if indicated, are at time of excavation. Conditions may vary with time.

Test Pit Log TP-10



SOIL DESCRIPTIONS

Ground Surface Elevation in Feet 0.0

3 inches ASPHALT PAVEMENT over (dense), moist, red-brown, silty, fine SAND with trace gravel.

(Dense), moist, red-brown, slightly silty, very gravelly SAND.

(Dense), moist, gray, silty, gravelly, fine SAND.

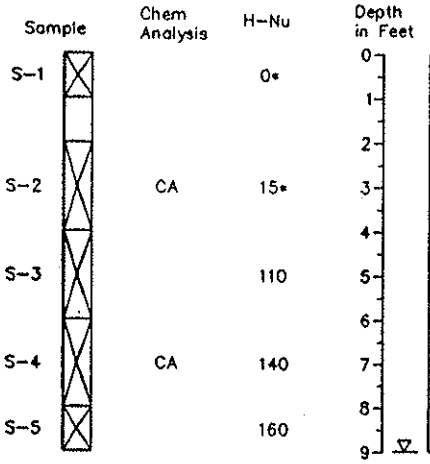
(Medium dense), moist, light brown, slightly gravelly to gravelly, medium to fine SAND.

Becomes loose.

Rapid caving cannot keep test pit open.

Bottom of Test Pit at 9-1/2 Feet.
Completed 3/30/89.

Test Pit Log TP-11



SOIL DESCRIPTIONS

Ground Surface Elevation in Feet 0.0

(Medium dense), moist, dark brown, silty, gravelly, fine SAND.

(Medium dense), moist, red brown, slightly silty to silty, gravelly, fine SAND.

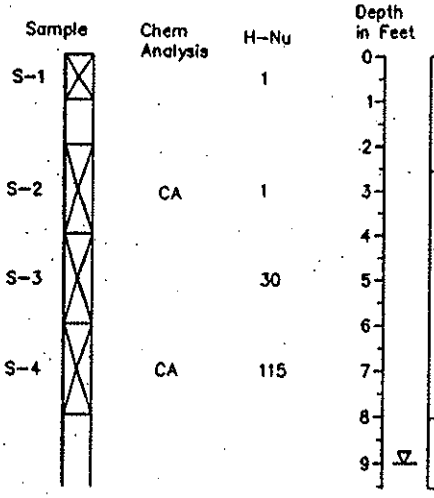
(Medium dense), moist, gray, slightly silty, gravelly, fine to medium SAND grading to coarse SAND with depth.

(Loose), moist to wet, gray, gravelly SAND.

Becomes wet.

Bottom of Test Pit at 9 Feet.
Completed 3/30/89.
*Problem with H-Nu lost volatiles from samples during repairtime.

Test Pit Log TP-12



SOIL DESCRIPTIONS

Ground Surface Elevation in Feet 0.0

3 inch CONCRETE SLAB over (medium dense), moist, light brown, silty, gravelly, medium to fine SAND. (FILL?)

West end test pit – (dense), moist, light brown, gravelly, silty, fine to medium SAND. (WEATHERED TILL or FILL)

East end test pit – (very dense), wet, gray, gravelly, silty, fine to medium SAND. (TILL)

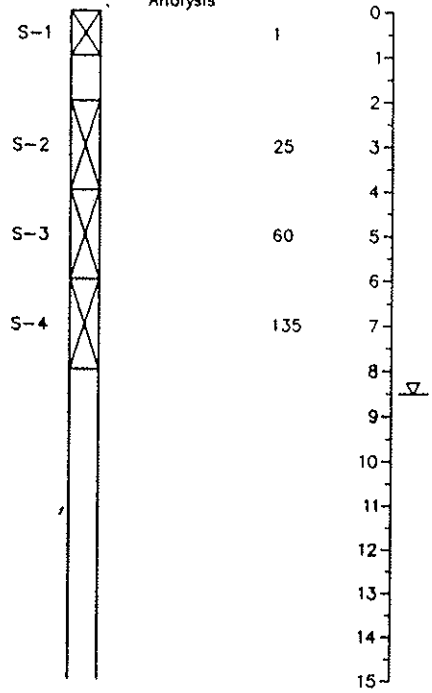
Contact between two soil types slopes west to east with till underlying weathered till or fill.

(Very dense), wet, gray, silty, gravelly SAND (some seepage).

Bottom of Test Pit at 9-1/5 Feet.
Completed 3/30/89.

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater conditions, if indicated, are at time of excavation. Conditions may vary with time.

Test Pit Log TP-13



SOIL DESCRIPTIONS

Ground Surface Elevation in Feet 0.0

6 inch CONCRETE SLAB over 4 inches of CRUSHED ROCK over (medium dense), moist to wet, red brown to light brown, slightly gravelly to gravelly, silty, medium to fine SAND. (FILL)

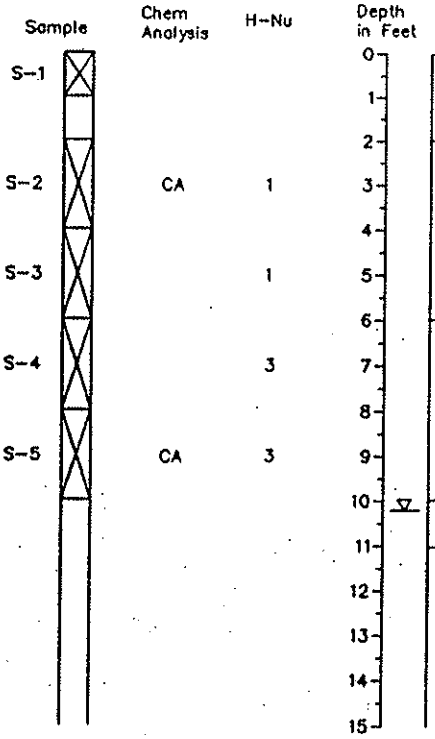
Dark brown to black soil zone (old asphalt?).

(Dense), wet, gray, gravelly, silty, medium to fine SAND. (TILL)

Bottom of Test Pit at 8-1/2 Feet.
Completed 3/30/89.

Note: Test pit against concrete wall, wall trends east-west and is in the north side of the test pit. The concrete wall was encountered at the surface and is present to a depth of at least 8 feet.

Test Pit Log TP-14



SOIL DESCRIPTIONS

Ground Surface Elevation in Feet 0.0

(Medium dense), moist, light brown, silty, gravelly, medium to fine SAND. (WEATHERED TILL)

(Dense), moist, light brown, silty, gravelly, medium to fine SAND.

(Very dense), moist to wet, gray, silty, gravelly, medium to fine SAND.

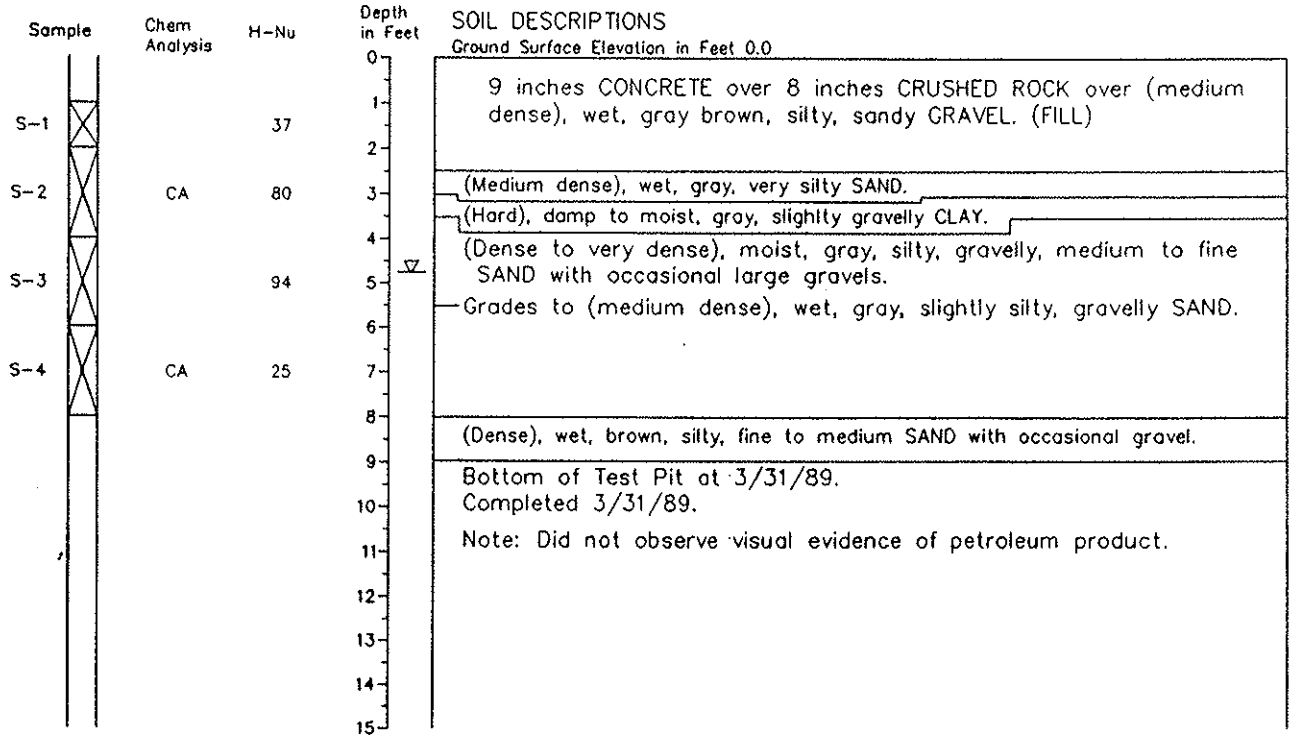
(Very dense), wet, gray, silty, gravelly to very gravelly SAND grading to gravelly SAND.

Bottom of Test Pit at 11 Feet.
Completed 3/30/89.

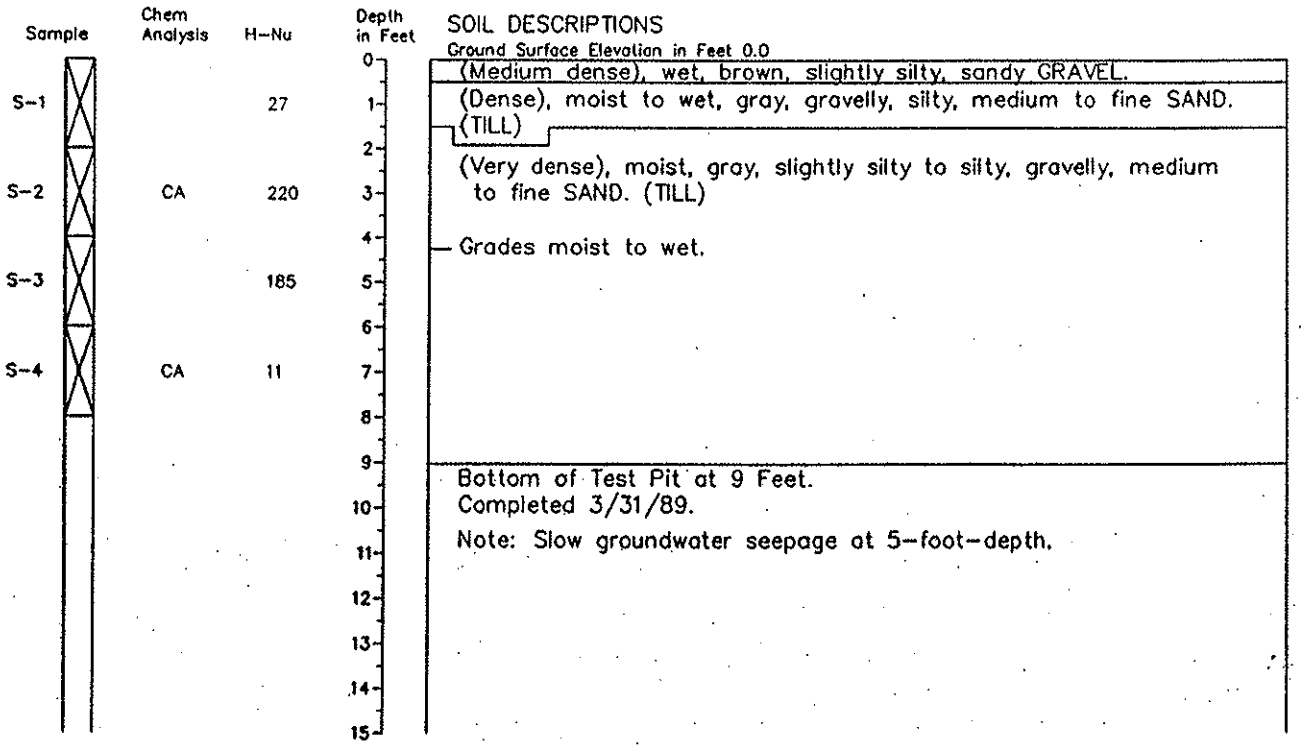
Note: Petroleum sheen observed on water surface.

1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater conditions, if indicated, are at time of excavation. Conditions may vary with time.

Test Pit Log TP-15



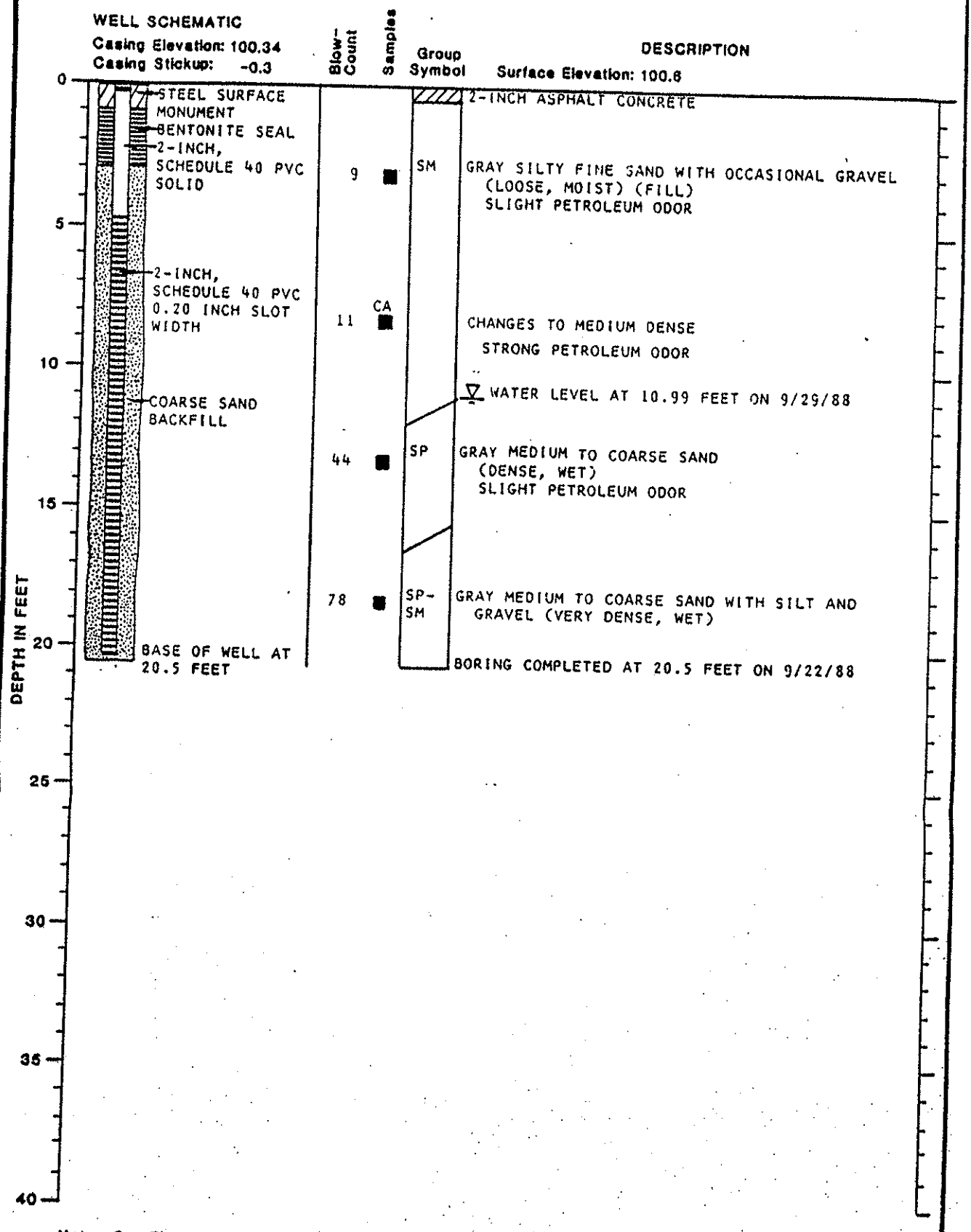
Test Pit Log TP-16



1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Groundwater conditions, if indicated, are at time of excavation. Conditions may vary with time.

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Figure A-6

MONITOR WELL NO. MW-4



Note: See Figure A-2 for Explanation of Symbols

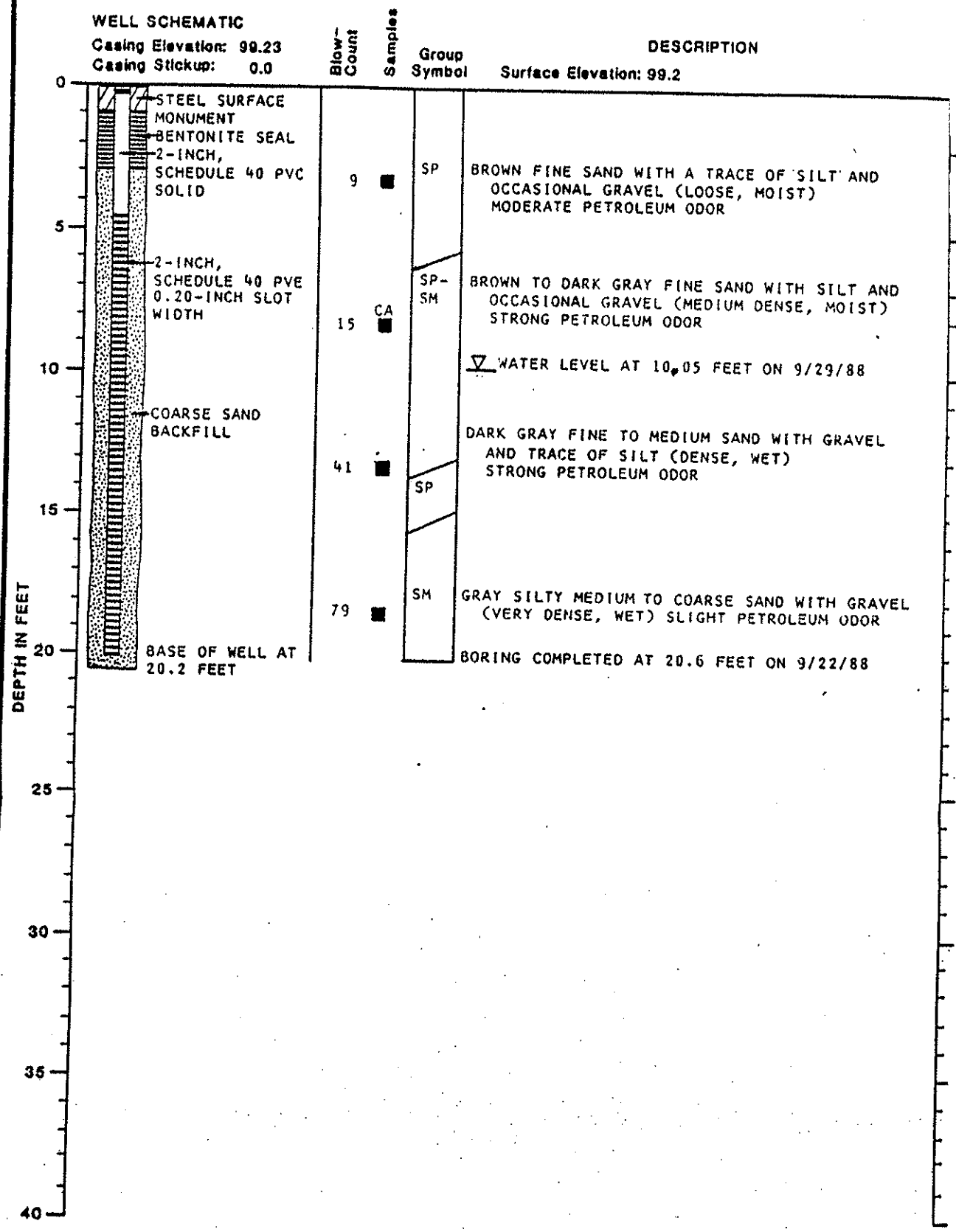
Geo Engineers

LOG OF MONITOR WELL

FIGURE A-6

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MONITOR WELL NO. MW-5



Note: See Figure A-2 for Explanation of Symbols

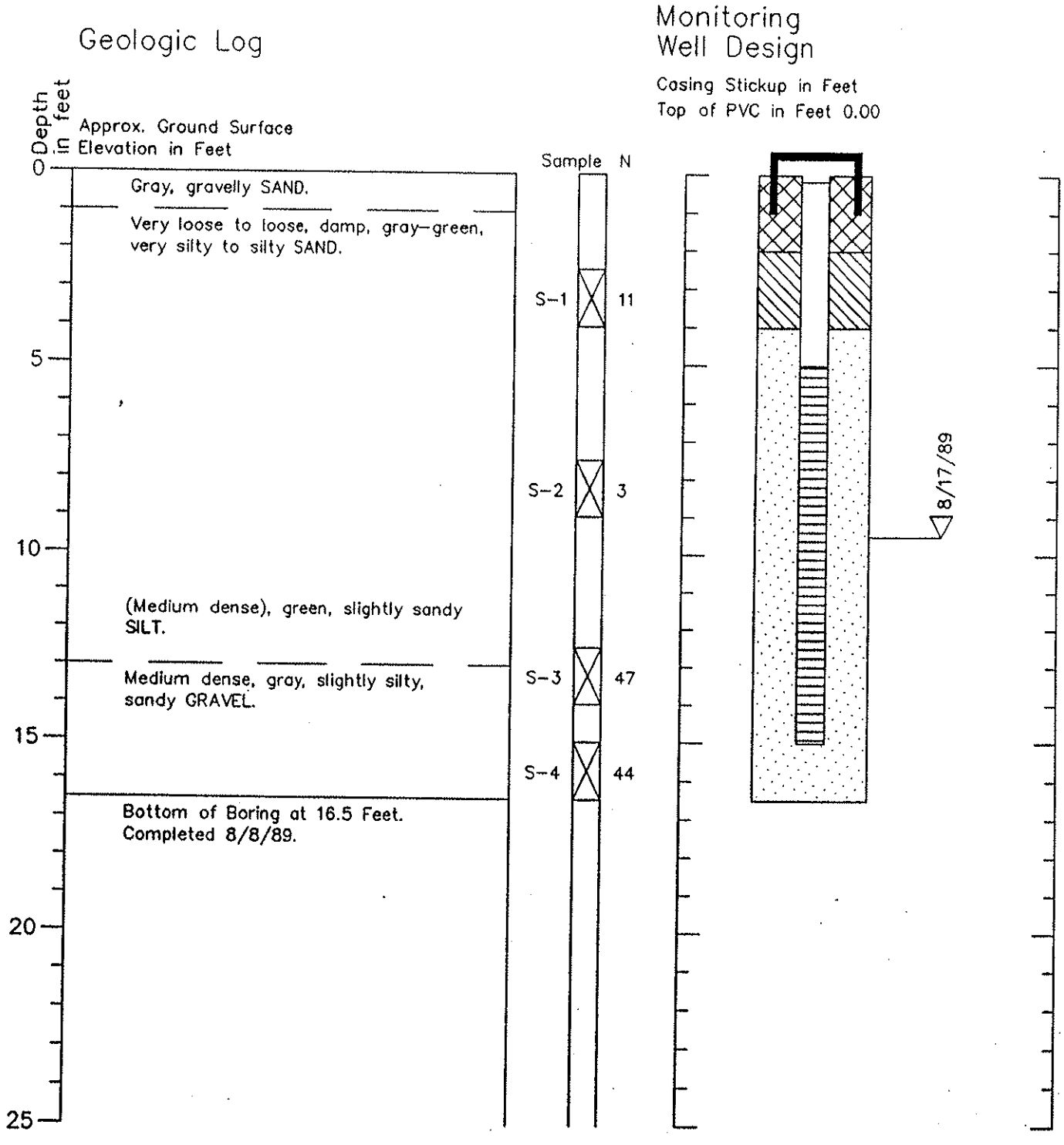
0372-34-4 KRF:DWA:GD 10/12/88

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LOG OF MONITOR WELL

FIGURE A-7

Boring Log and Construction Data for Monitoring Well MW-5A



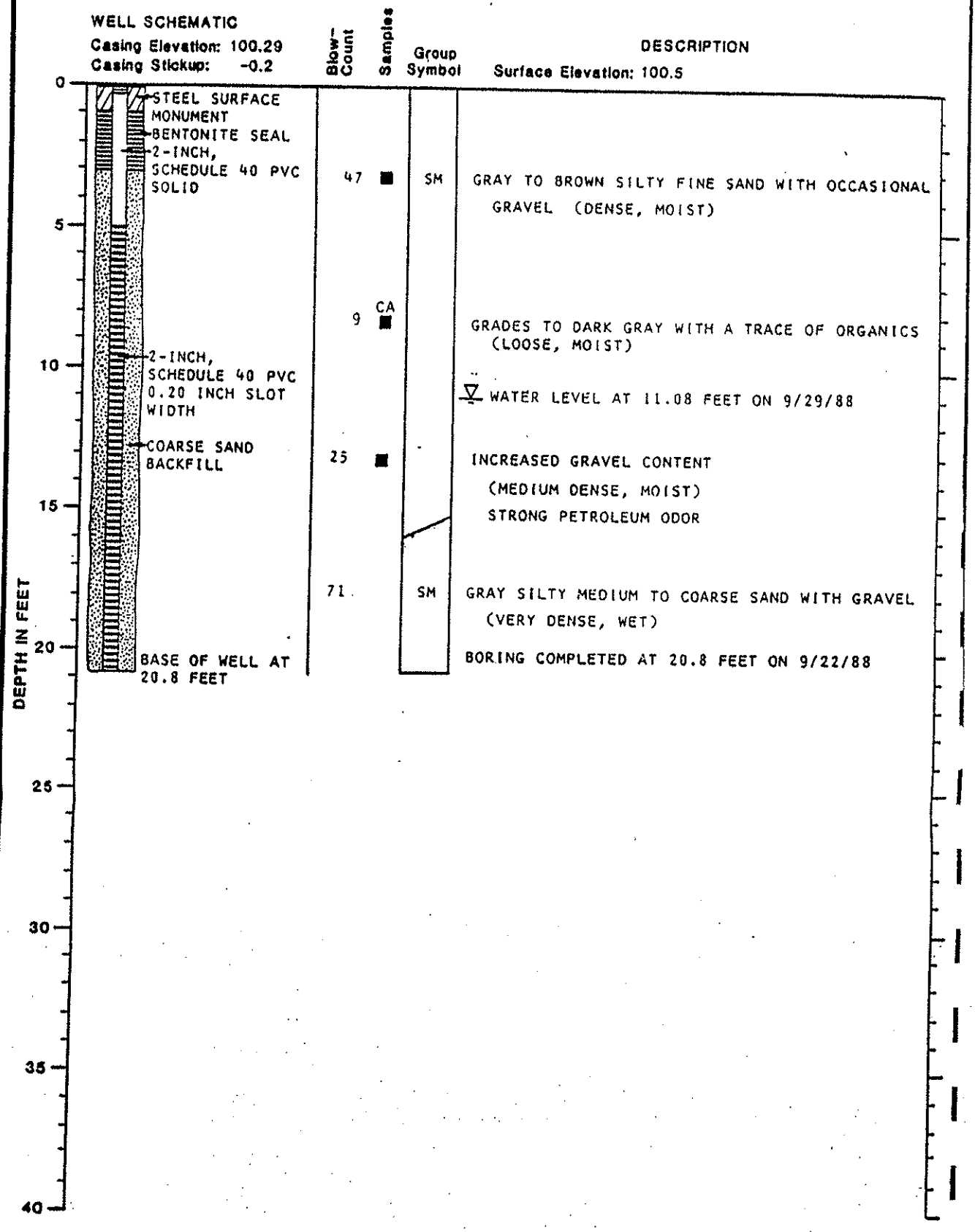
1. Refer to Figure A–1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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Figure A–2

MONITOR WELL NO. MW-6



Note: See Figure A-2 for Explanation of Symbols

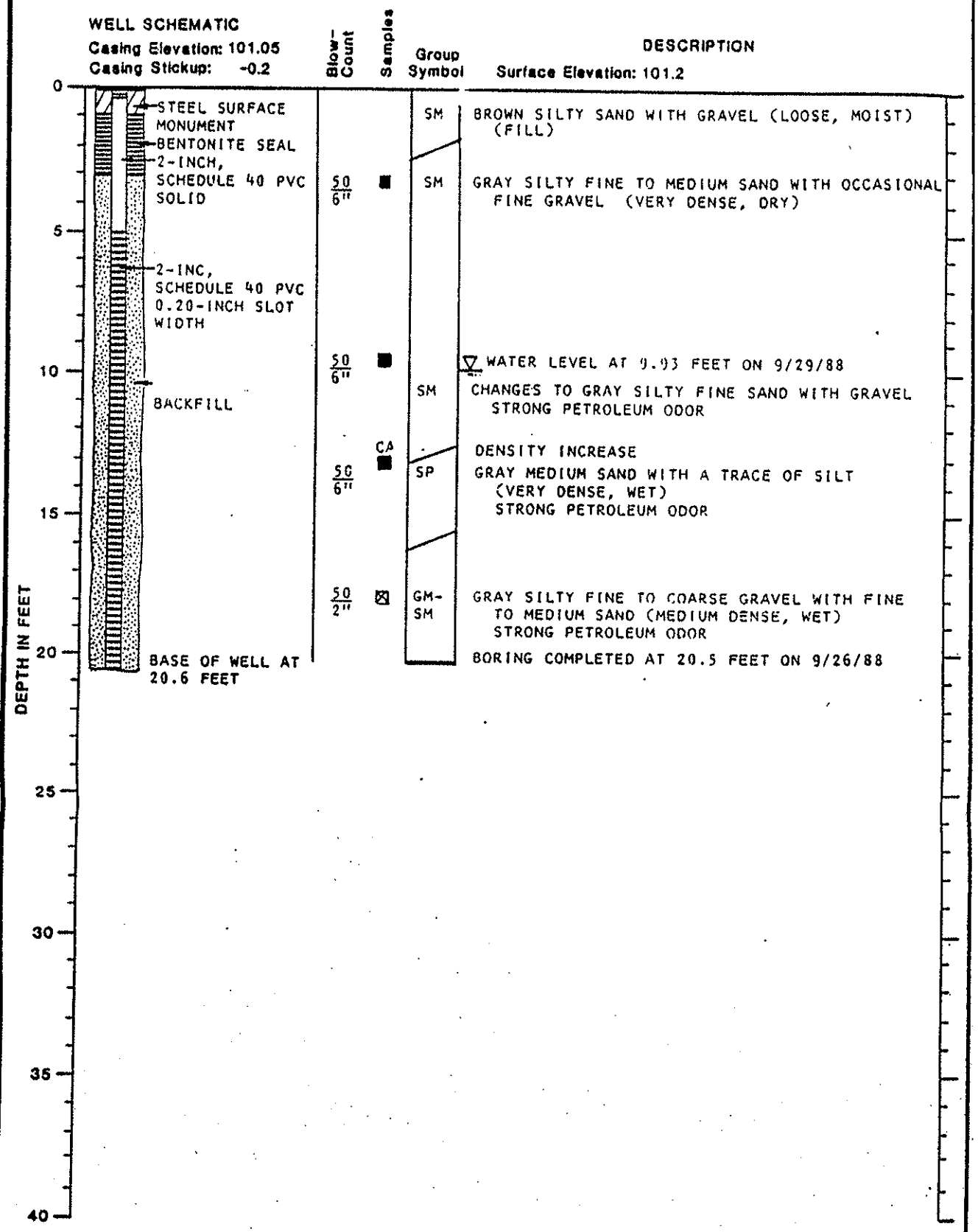
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LOG OF MONITOR WELL

FIGURE A-8

MONITOR WELL NO. MW-7



Note: See Figure A-2 for Explanation of Symbols

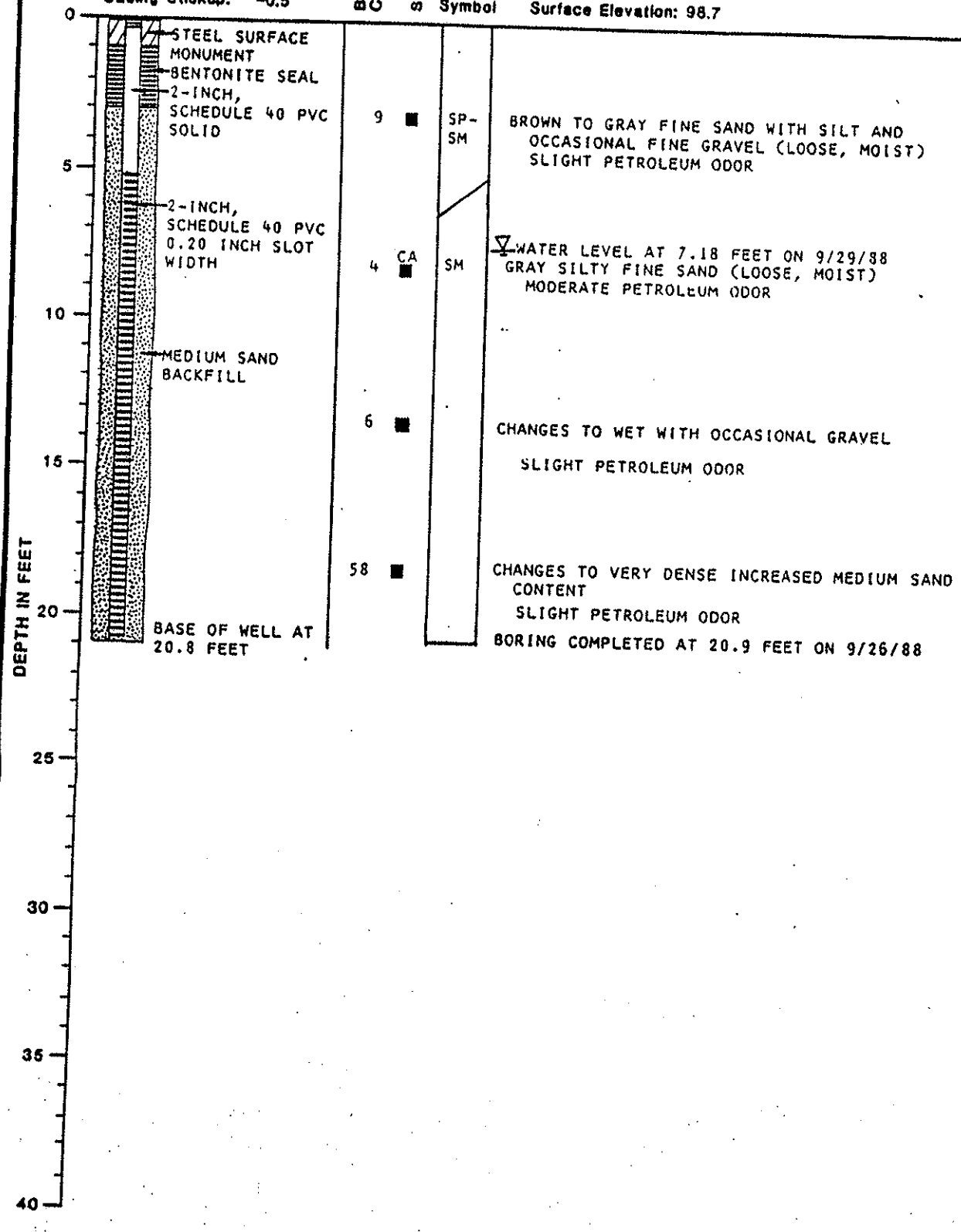
0372-34-4 KRF:DWA:GD 10/12/88

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LOG OF MONITOR WELL

FIGURE A-9

MONITOR WELL NO. MW-8



Note: See Figure A-2 for Explanation of Symbols

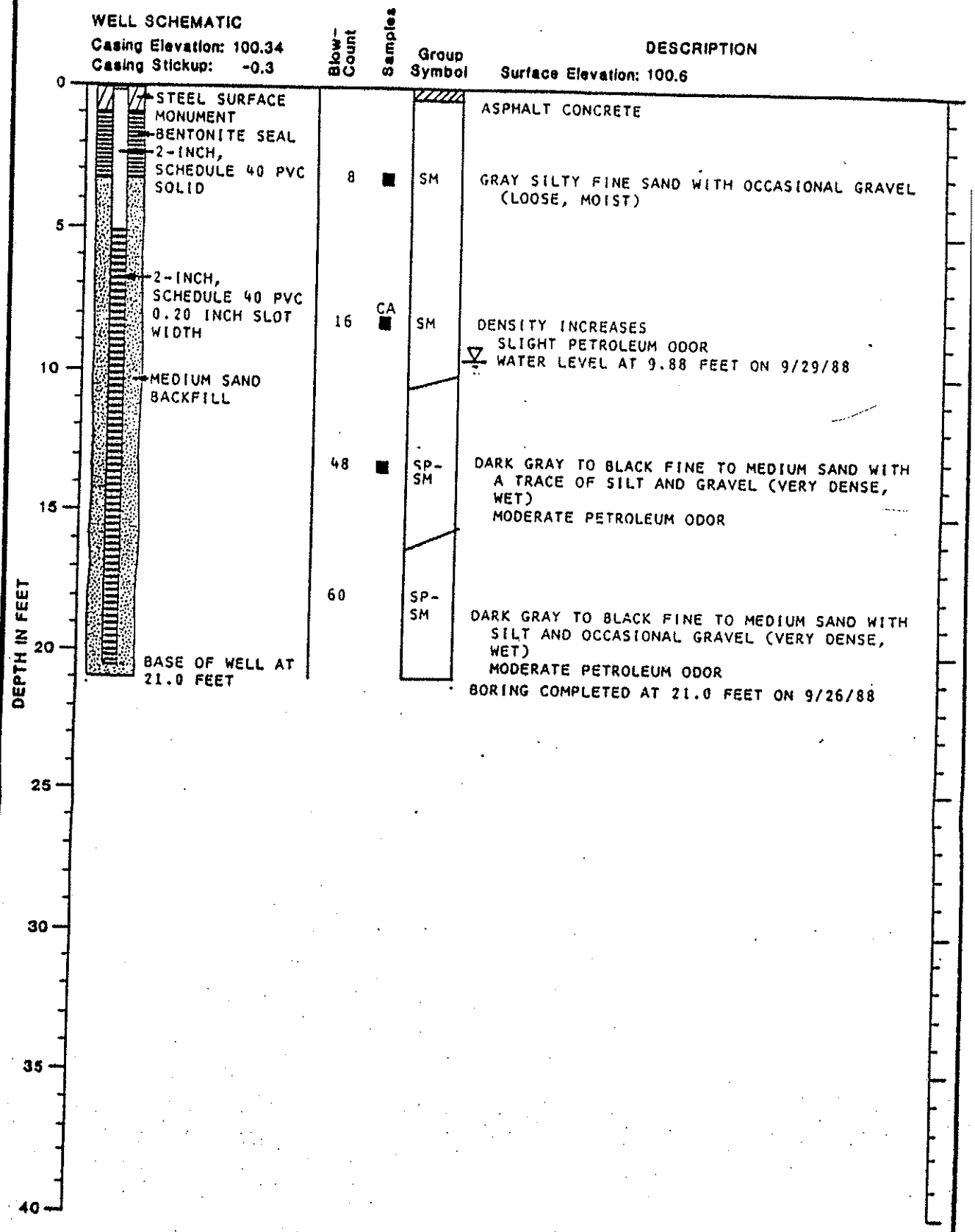
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LOG OF MONITOR WELL

FIGURE A-10

MONITOR WELL NO. MW-9



Note: See Figure A-2 for Explanation of Symbols

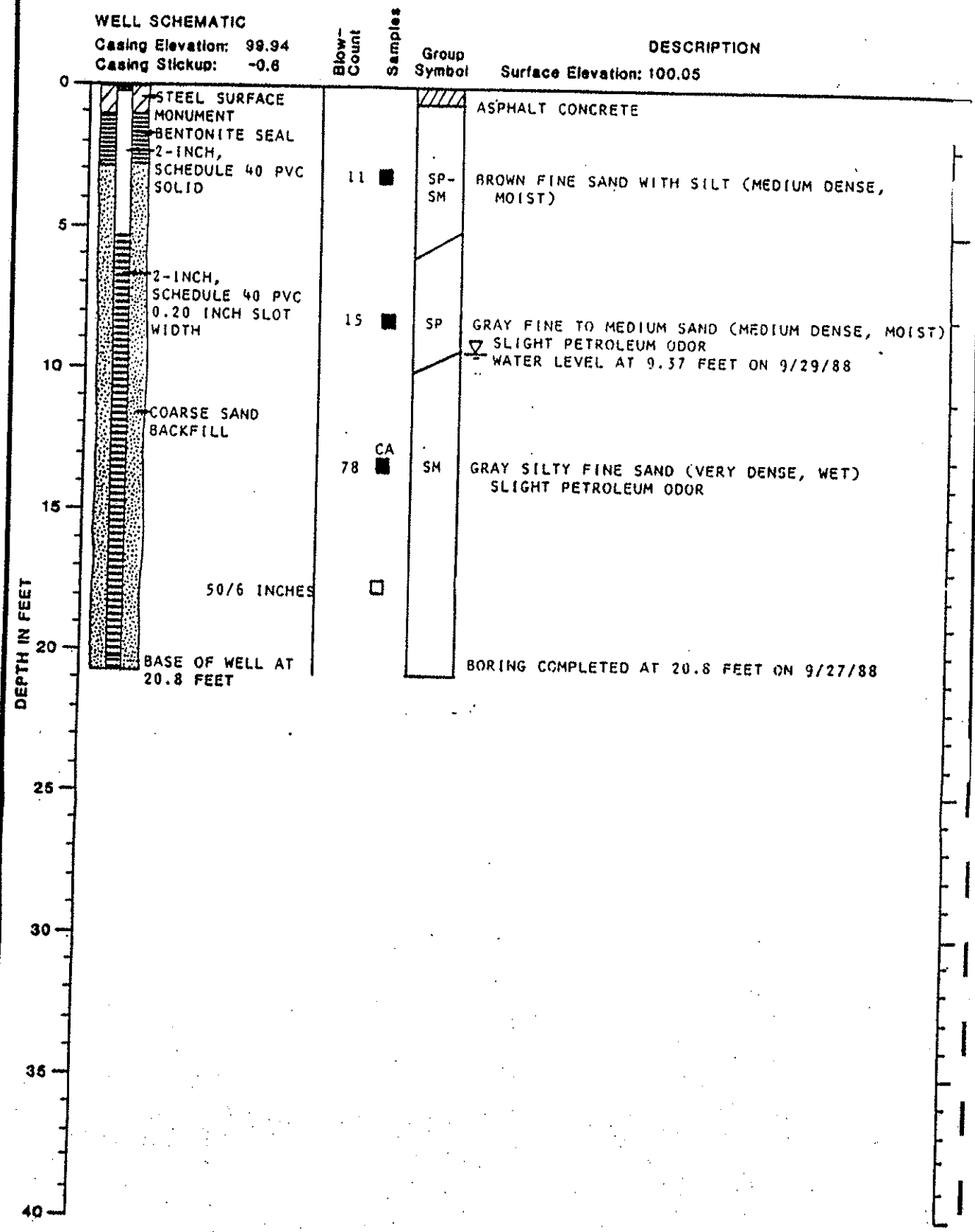
0372-34-4 KRF:DHA:GD 10/12/88

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LOG OF MONITOR WELL

FIGURE A-11

MONITOR WELL NO. MW-10



Note: See Figure A-2 for Explanation of Symbols

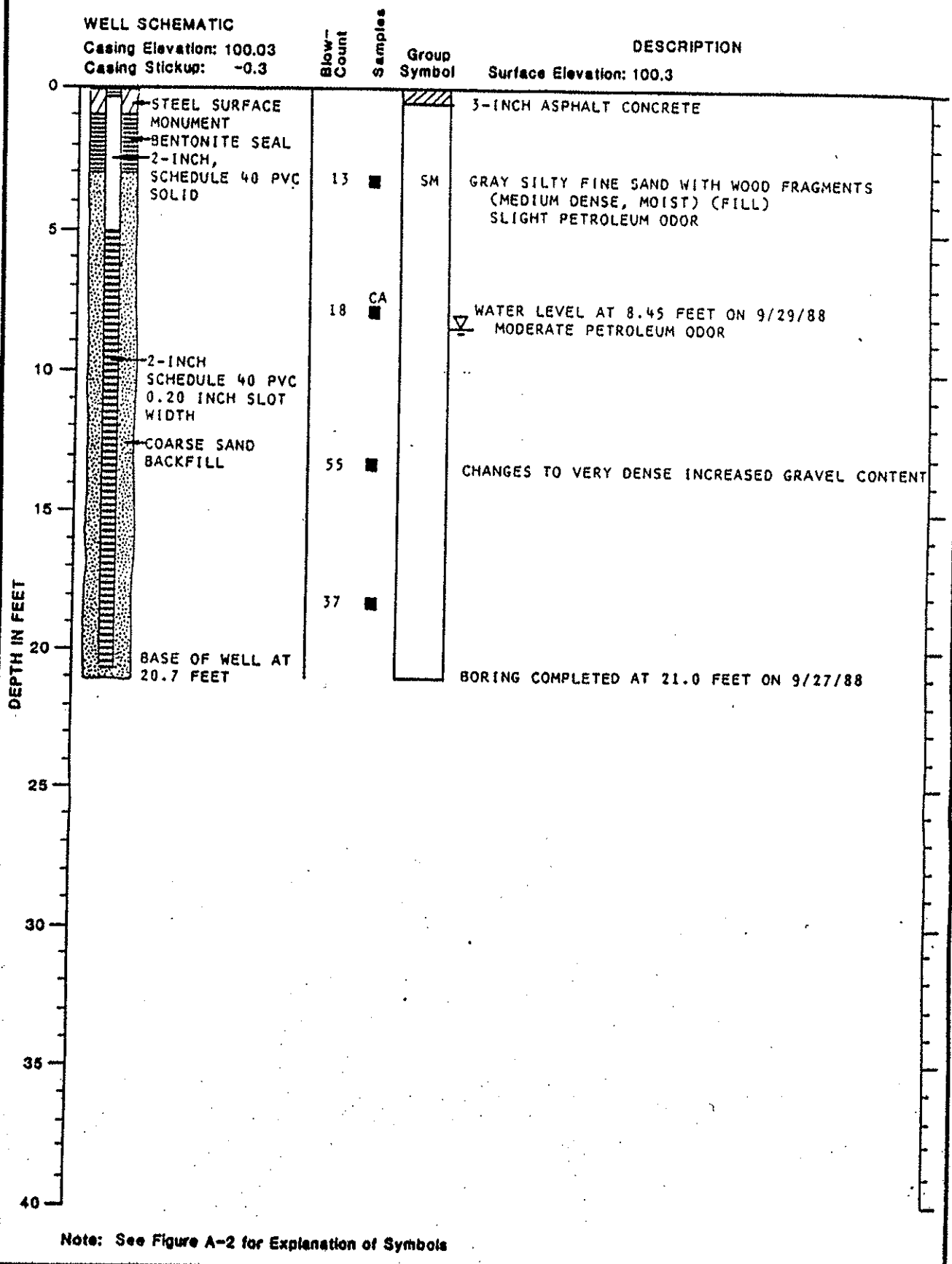
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LOG OF MONITOR WELL

FIGURE A-12

MONITOR WELL NO. MW-11



Note: See Figure A-2 for Explanation of Symbols

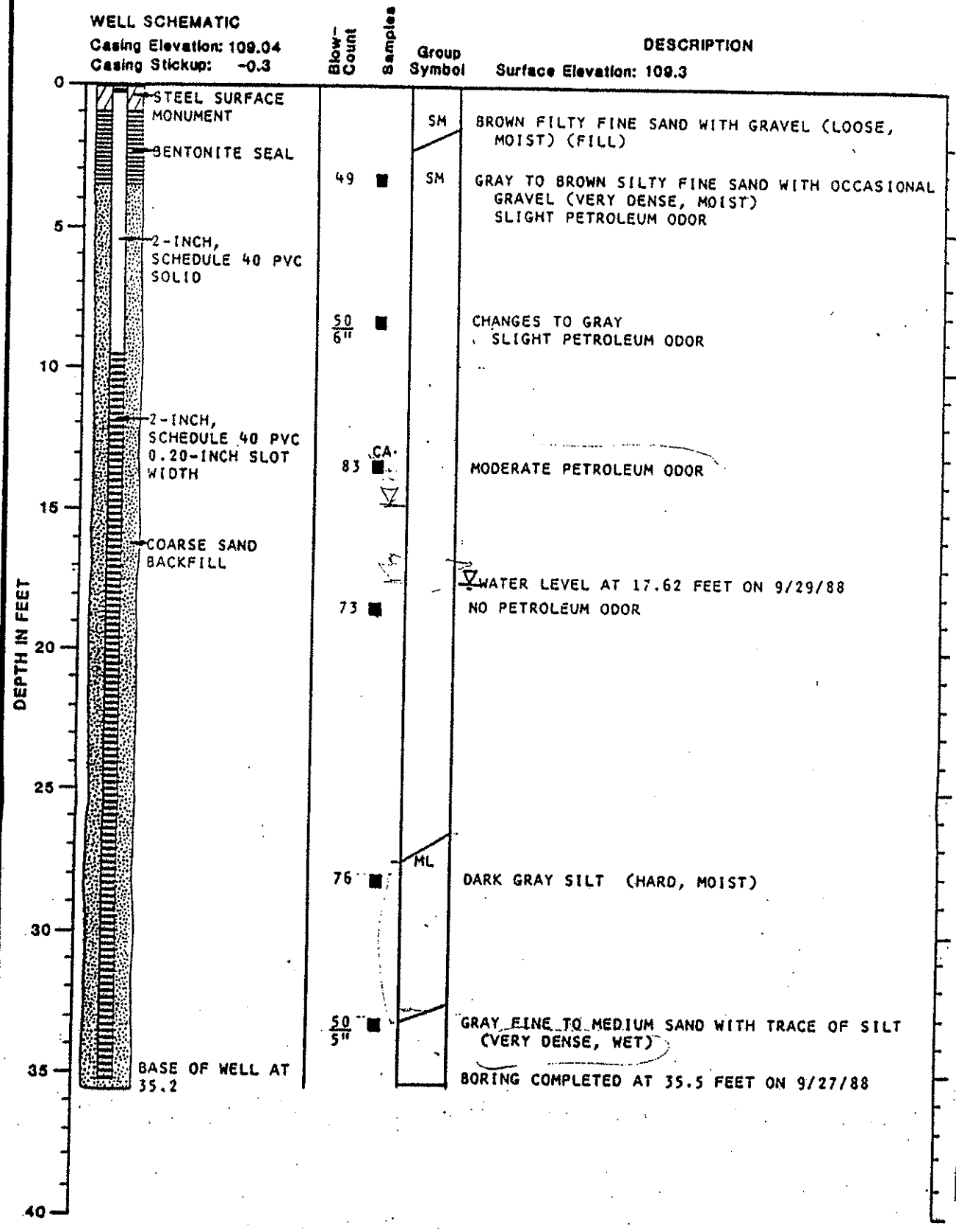
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LOG OF MONITOR WELL

FIGURE A-13

0372-34-4 KRF:DWA:GD 10/12/88

MONITOR WELL NO. MW-12



Note: See Figure A-2 for Explanation of Symbols

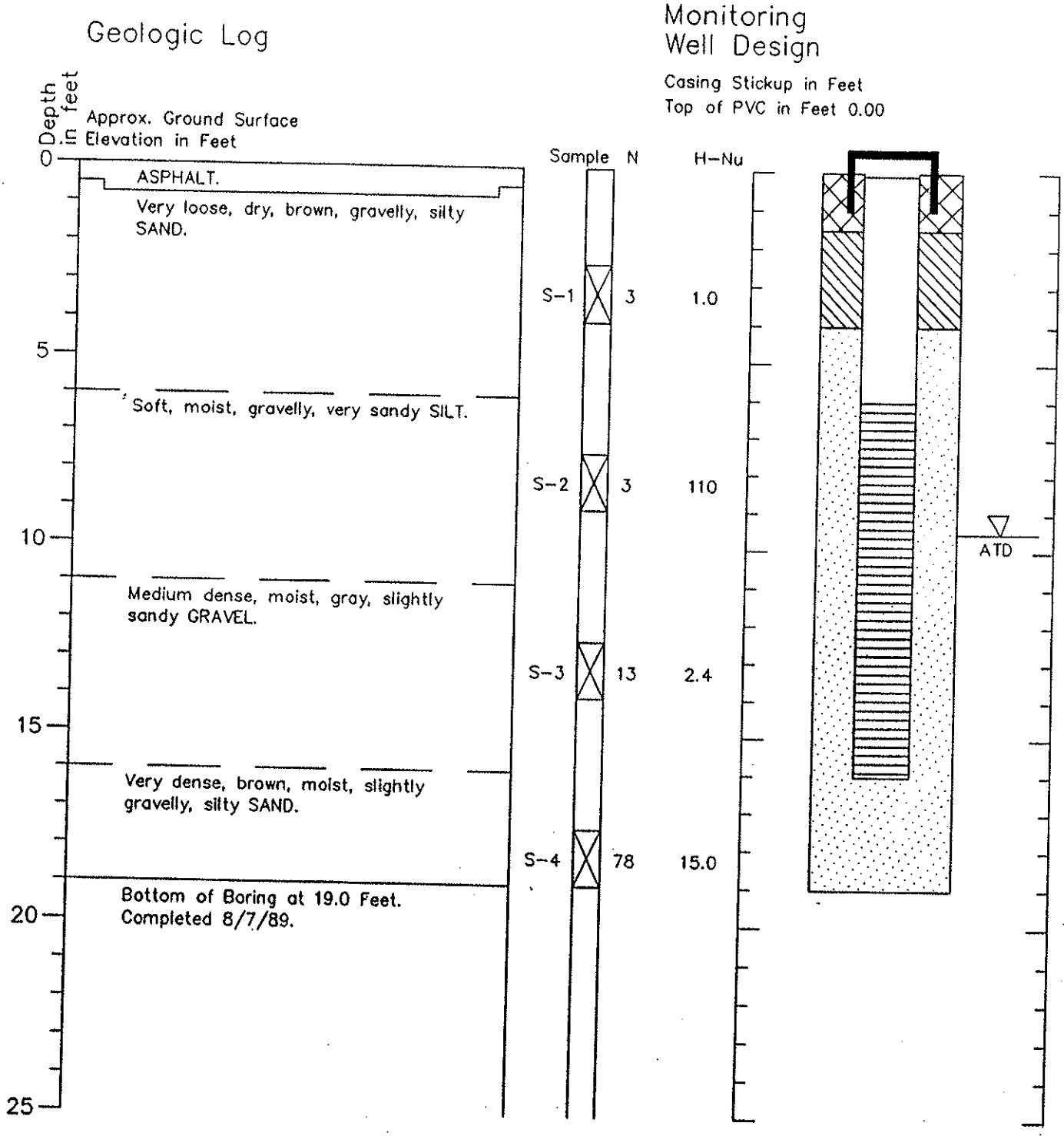
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LOG OF MONITOR WELL

FIGURE A-14

Boring Log and Construction Data for Monitoring Well MW-13



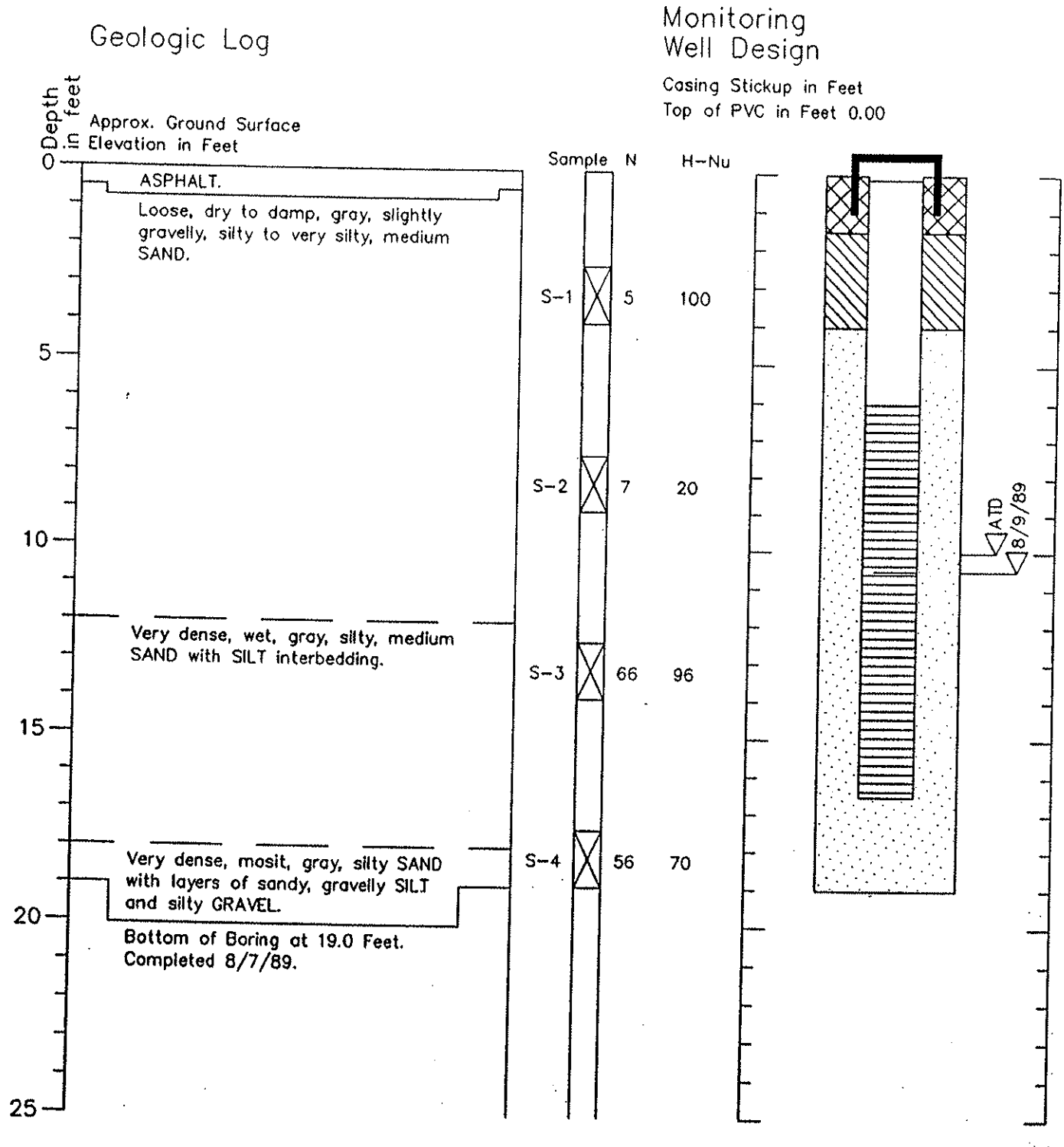
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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Figure A-3

Boring Log and Construction Data for Monitoring Well MW-14



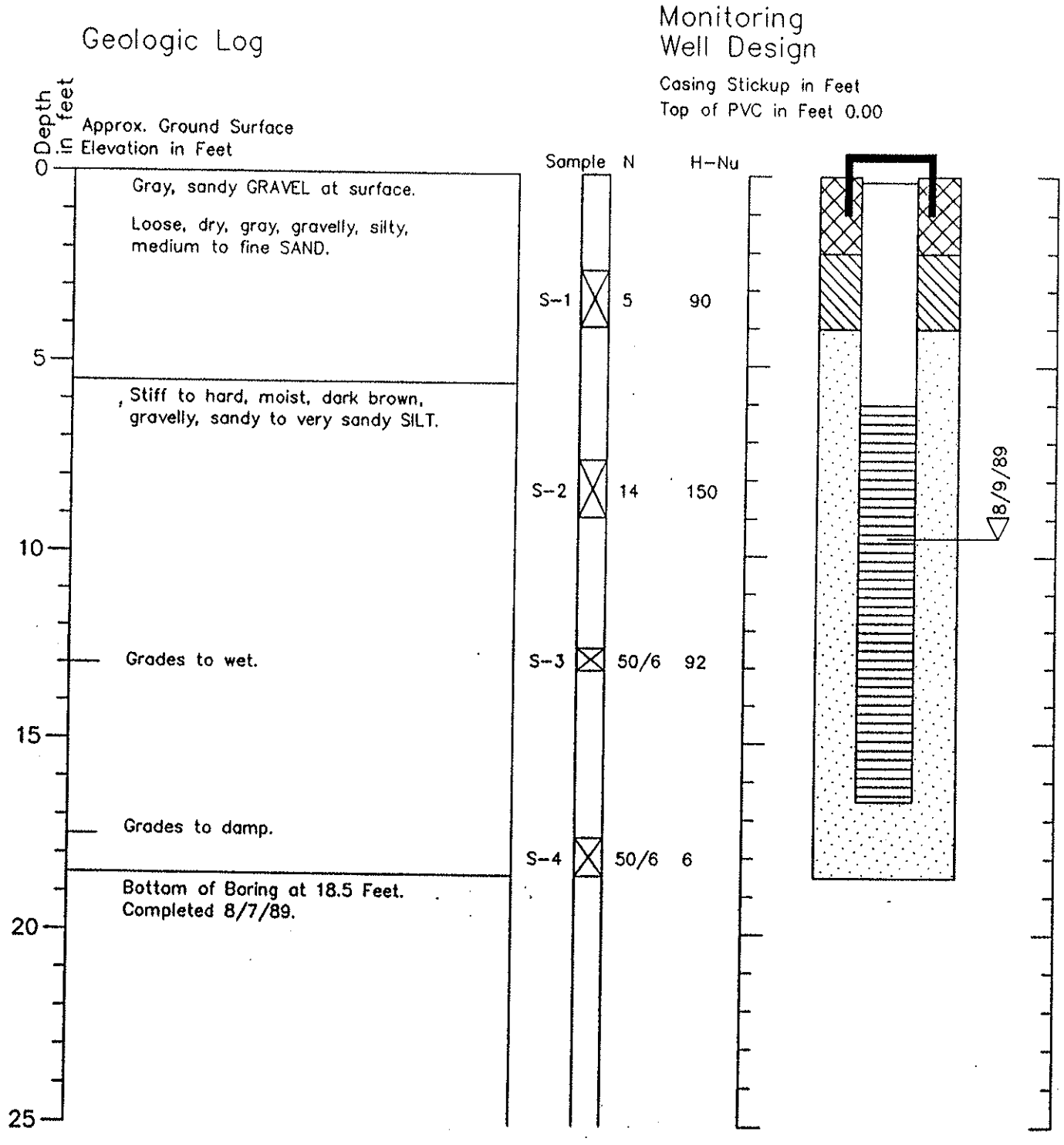
1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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Figure A-4

Boring Log and Construction Data for Monitoring Well MW-15

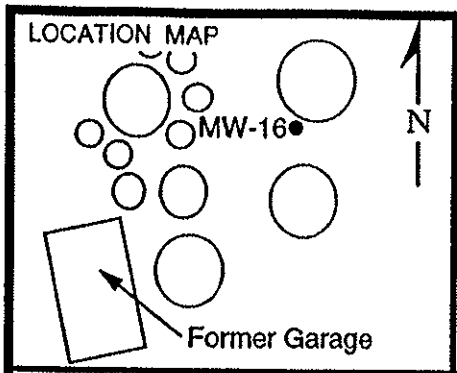


1. Refer to Figure A-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.

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Figure A-5



PACIFIC ENVIRONMENTAL GROUP, INC.

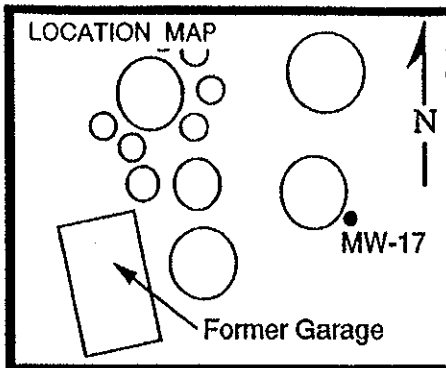
WELL NO. MW-16
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-23-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 29.5'
WELL DIAMETER: 2"
WELL DEPTH: 28.5'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				0			SM	SILTY SAND: gravelly; surface cover (fill).
	Dp	0	67	4				SILTY SAND: gray; 20-30% fines; very fine to fine sand; 20-30% fine to medium sand; trace gravel; very dense; no hydrocarbon odor.
	Dp	0	62	8				
				10				@10': slight hydrocarbon odor; minimal sample recovery.
	Dp	8	89	14				@15': moderate hydrocarbon odor; minimal sample recovery.
BENTONITE				16				@16-18': a very soft layer was noted by the driller; subsequent cuttings revealed a very silty medium grained sand.
SAND	Mst	1	96	* 20				@20': as above.
	Mst	2	73	24				
	Wet	2	97	26				@25': decreasing hydrocarbon odor. @26.5': as above.
	Wet	0	64	28			ML	SILT: very dark gray; low plasticity; very hard; no hydrocarbon odor.
				30				BOTTOM OF BORING AT 29.5'
				32				
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

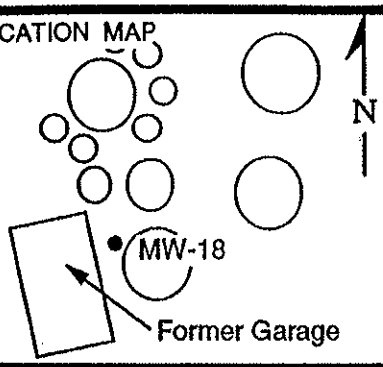
WELL NO. MW-17
PAGE 1 OF 2

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-24 and 26-93
LOCATION: Bremerton
HOLE DIAMETER: 12" to 34/7" to 46
HOLE DEPTH: 46.5'
WELL DIAMETER: 2"
WELL DEPTH: 44'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				2			SM	SILTY SAND: gravelly; hydrocarbon odor and staining noted at 1.5; surface cover (fill).
12" CONDUCTOR CASING	Dp	4	72	4				SILTY SAND: gray; 30-40% fines; very fine to fine sand; 10-20% medium sand; very dense; slight hydrocarbon odor.
	Dp	2	65	6				
				8				
				10				@10': trace coarse sand; trace gravel.
				12				
	Mst	0	39	14				@15.5': dense.
	Mst	0	40	16				@17': as above.
▼			85	18				@18.5': no sample recovery
				20				
				22				
				24				
	Mst	0	73				ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
▽	Wet	0	44	* 26				SILTY SAND: dark gray; 20-30% silt; very fine to fine sand; trace medium sand; dense; no hydrocarbon odor.
	Mst	1	39	28			SM	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
	Wet	1	53	* 30			ML	SILTY SAND: dark gray; 20-30 % silt; very fine to fine sand; very dense; no hydrocarbon odor.
	Mst	0	84				SM	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
	Mst	0	84	32			ML	@32.5': dark gray; low plasticity; 20-30% very fine sand; very hard; no hydrocarbon odor.
	Mst	0	62	34				@34': dark gray; low plasticity; very hard; no hydrocarbon odor.
	Mst	0	73	36				@35.5': dark gray; low plasticity; 20-30% very fine to fine sand; very hard; no hydrocarbon odor; minimal sample recovery.
				38				@40': dark grayish brown; high plasticity; 10-20% fine gravel and coarse sand; very hard; no hydrocarbon odor.
SAND	Mst	0	75	40				
BENTONITE				42				
				44				

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

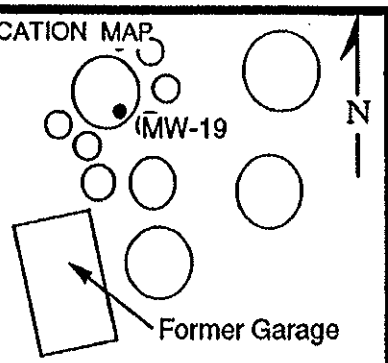
WELL NO. MW-18
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-25-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 25'
WELL DIAMETER: 2"
WELL DEPTH: 24'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT								SM	SILTY SAND: gravelly; surface cover (fill).
	Dp	0	26	4					@3.5': dark grayish brown; 20-30% fines; 20-30% very fine to fine sand; medium sand; trace coarse sand; medium density; no hydrocarbon odor; minimal sample recovery.
	Dp	1	86	8					
BENTONITE				12					@12': gray; 20-30% fines; very fine to fine sand; very dense; no hydrocarbon odor.
	Mst	0	99	* 14					@15.5': gray; 20-30% fines; 10-15% very fine to fine sand; medium sand; trace coarse sand and gravel; very dense; hydrocarbon odor.
SAND	Mst	1	72	20					@19.5': as above.
	Wet	0	58	24					@23.5': gravelly; dark gray; 10-20% fines; trace to10% very fine to fine sand; medium to coarse sand; 10-20% gravel; dense; hydrocarbon odor.
	Mst	1						ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
									BOTTOM OF BORING AT 25'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

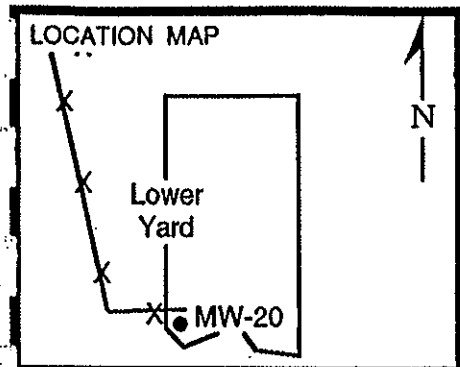
WELL NO. MW-19
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-25-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 26.5'
WELL DIAMETER: 2"
WELL DEPTH: 24'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT				2	SM	SILTY SAND: gravelly; surface cover (fill).
				4		
	Mst	28	60	6		@5': gray; 30-40% fines; trace to 10% very fine sand; fine to medium sand; trace coarse sand; very dense; hydrocarbon odor and staining.
				8		
BENTONITE				10		
	Mst	517	81	* 12		
				14		@13.5': decreasing fines; increasing coarse sand; very dense; strong hydrocarbon staining and odor (resembles diesel).
	Wet	24	97	16		@16.5': increasing fines.
SAND				18		
	Wet	45	77	20		@20.5': increasing fines; minimal sample recovery.
				22		
				24		
	Mst	3	49	26	ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
				28		BOTTOM OF BORING AT 26.5'
				30		
				32		
				34		
				36		
				38		
				40		
				42		
				44		

RECOVERY
SAMPLE INTERVAL
GRAPHIC



PACIFIC ENVIRONMENTAL GROUP, INC.

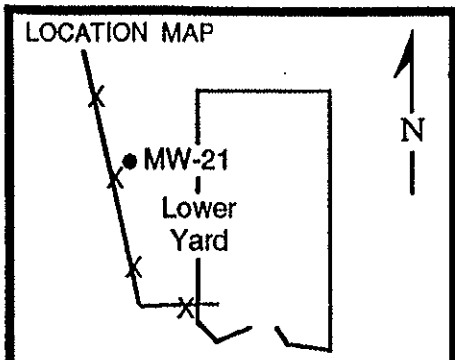
WELL NO. MW-20
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-25-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 15.5'
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT, SAND, BENTONITE	Dp	43	15	2–4				SM	SILTY SAND: 3" surface cover; 2" asphalt: gravelly (fill); hydrocarbon odor.
				4–6					@4.5': gravelly; gray; 10-20% fines; 10-20% very fine to fine sand; medium sand; trace coarse sand and gravel; medium density; hydrocarbon odor and staining.
				6–8					
				8–10					@8.5': no recovery - move down.
	Wet	109	9	10–12 *					@11.5': very dark grayish brown; 30-40% fines; very fine to fine sand; trace to10% medium to coarse sand; loose; strong hydrocarbon odor; (resembles diesel).
	Wet	3	6	14–16					@15.5': 20-30% medium to coarse sand; hydrocarbon odor.
				16–18					
				18–20					BOTTOM OF BORING AT 15.5'
				20–22					
				22–24					
				24–26					
				26–28					
				28–30					
				30–32					
				32–34					
				34–36					
				36–38					
				38–40					
				40–42					
				42–44					

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

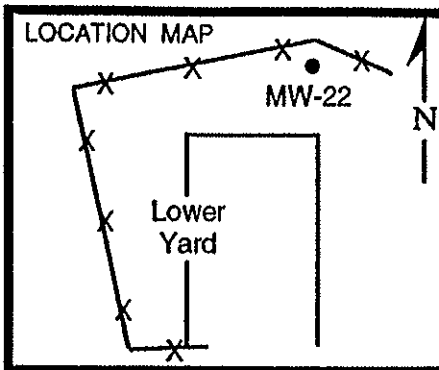
WELL NO. MW-21
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-26-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 15'
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT / BENTONITE / SAND	Dp	15	19	4			SM	SILTY SAND: gravelly; hydrocarbon odor; surface cover (fill).
								@4.5': gravelly (fill); olive gray; trace to 10% fines; med. sand; 10-20% gravel; medium density; hydrocarbon odor; minimal sample recovery.
	Wet	280	7	* 10				@10': 10-20% very fine to fine sand; no gravel; loose; strong hydrocarbon odor (resembles diesel).
	Wet	30	6	14				@15': very loose; minimal sample recovery.
								BOTTOM OF BORING AT 15'

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44



PACIFIC ENVIRONMENTAL GROUP, INC.

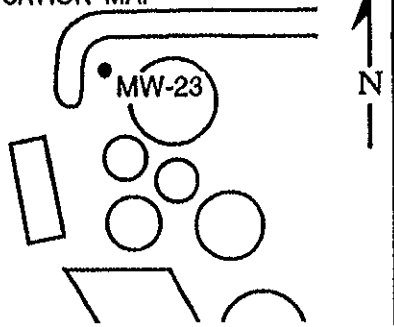
WELL NO. MW-22
PAGE 1 OF 1

PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 8-26-93
LOCATION: Bremerton
HOLE DIAMETER: 7"
HOLE DEPTH: 15'
WELL DIAMETER: 2"
WELL DEPTH: 15'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT / SAND / BENTONITE	Mst	0	14	2–4			SM	SILTY SAND: gravelly; surface cover (fill).
	Wet	468	9	* 10				@4.5': gravelly (fill); very dark grayish brown; 20-30% fines; 10-20% very fine to medium sand; coarse sand; 20-30% gravel; medium density; no hydrocarbon odor; minimal sample recovery.
	Wet	116	36	14				@10': black; trace to10% fines; fine to medium sand; loose; strong hydrocarbon odor (resembles diesel).
				16–44				@15': olive gray; 10-20% fines; 10-20% very fine to fine sand; medium to coarse sand; dense; strong hydrocarbon odor.
								BOTTOM OF BORING AT 15'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-23
PAGE 1 OF 1

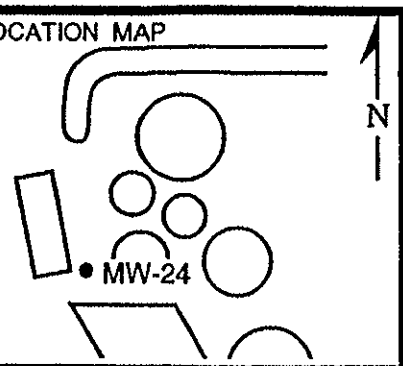
PROJECT NO. 520-41.01
LOGGED BY: LB
DRILLER: HAYES
DRILLING METHOD: HSA
SAMPLING METHOD: SS
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.010"
GRAVEL PACK: 10 x 20 SAND

CLIENT: CHEVRON
DATE DRILLED: 9-13-93 & 9-14-93
LOCATION: Bremerton
HOLE DIAMETER: 11.5" to 34'; 7.5' to 41'
HOLE DEPTH: 42.5'
WELL DIAMETER: 2"
WELL DEPTH: 41'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0			SM	SILTY SAND: (fill) surface cover.
	Dp	0	110	4				@4.5': light brown; 20-30% fines; very fine to fine sand; trace to 5% medium to coarse sand; very dense; no hydrocarbon odor.
	Mst	0	94	10				@10.5': gray; increasing medium sand; trace gravel; slight hydrocarbon odor.
	Wet	0	110	14				@15.5': as above.
	Wet	0	67	20				@20.5': as above.
	Wet	20	84	* 24				@25.5': increasing hydrocarbon odor.
	Dp	5	54	30			ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
	Wet	0	33	32			SM	SILTY SAND: dark gray; trace 10% fines; fine to medium sand; dense; slight hydrocarbon odor.
	Dp						ML	SILT: as above.
	Wet	0	39	* 34			SM	SILTY SAND: increasing fines; as above.
	Wet			36			ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
	Dp	5	117	38			SM	SILTY SAND: as above; minimal sample recovery.
	Wet			40				@41.5': gravelly; gray; 20-30% fines; 10-20% fine to medium sand; coarse sand; 30% gravel; very dense; hydrocarbon odor.
	Wet	0	81	* 42			ML	SILT: low plasticity; very hard; no hydrocarbon odor.
	Mst	0		44				BOTTOM OF BORING AT 42.5'

CEMENT
10" CONDUCTOR CASING
BENTONITE
SAND

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-24
PAGE 1 OF 1

PROJECT NO. 520-41.01	CLIENT: CHEVRON
LOGGED BY: LB	DATE DRILLED: 9-13-93 & 9-14-93
DRILLER: HAYES	LOCATION: Bremerton
DRILLING METHOD: HSA	HOLE DIAMETER: 11.5" to 28'; 7.5' to 35'
SAMPLING METHOD: SS	HOLE DEPTH: 35'
CASING TYPE: Sch 40 PVC	WELL DIAMETER: 2"
SLOT SIZE: 0.010"	WELL DEPTH: 35'
GRAVEL PACK: 10 x 20 SAND	CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
CEMENT; 10" CONDUCTOR CASING				2			SM	SILTY SAND: (fill) surface cover; gravelly; hydrocarbon odor noted at 2.5'.
	Mst	2	54	4 6				@5': light olive gray; 20-30% fines; fine sand; 10% med. to coarse sand; trace gravel; very dense; hydrocarbon odor.
	Mst	0	66	8 10				@11.5': light brown; no hydrocarbon odor.
	Wet	0	80	12 14 16				@16.5': as above.
	Dp	2	49	18 20 *			ML	SILT: dark gray; low plasticity; hard; no hydrocarbon odor.
	Dp	0	87	22			SM	SILTY SAND: dark gray; 30-40% fines; very fine to fine sand; hydrocarbon odor.
				24			ML	SILT: dark gray; low plasticity; very hard; no hydrocarbon odor.
	Dp	0	135	26			SM ML	SILTY SAND: dark gray; 20-30% fines; 10-20% very fine to fine sand; medium sand; no hydrocarbon odor.
	Dp	0	109	28				SILT: dark gray; low plasticity; very hard; no hydrocarbon odor. @28': as above.
SAND; BENTONITE				30			SM	SILTY SAND: dark gray; trace to 10% fines; 10-20% medium sand; coarse sand; very dense; no hydrocarbon odor.
	Wet	0	103	32 * 34				
				36 38 40 42 44				BOTTOM OF BORING AT 35'

APPENDIX D

Letter- Ryan Inc. 2002 Report Excerpt

(24)

GETTLER-RYAN INC.

TRANSMITTAL

November 14, 2002
G-R #386607

FACILITY NUMBER 100-1351
GENERAL CORR. ☐
SERVICE REQS./PROPOSALS ☐
PERMITS/BONDS ☐
DRAWINGS/PHOTOS/NOTES ☐
SPILL & LEAK REPORTS ☐
LEGAL/EASEMENTS/LIC. ☐
REPORTS ☒

TO: Mr. Matt Miller
Delta Environmental Consultants, Inc.
1200-112th Avenue N.E., Suite C-146,
Bellevue, Washington 98004-3769

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Former Chevron Bulk Terminal
#1001351
1310 Highland Avenue
Bremerton, Washington

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	November 4, 2002	Groundwater Monitoring and Sampling Report **Event of September 30, 2002**

COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***November 29, 2002***, at which time the final report will be distributed to the following:

cc: Mr. Gerald O'Regan, Chevron Products Company, P.O. Box 6004, San Ramon, CA 94583
Mr. John Wietfeld, WDOE, Northwest Region, 3190 160th Avenue, SE, Bellevue, WA 98008-5452

☐ Current Site Check List included.

Enclosure

trans/100-1351-gor

GETTLER-RYAN INC.

November 4, 2002
Job #386607

Mr. Gerald O'Regan
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

RE: Event of September 30, 2002
Groundwater Monitoring & Sampling Report
Former Chevron Bulk Terminal #1001351
1310 Highland Avenue
Bremerton, Washington

Dear Mr. Hunter:

This report documents the groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure – Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in two wells (MW-14 and MW-15). Static water level data and groundwater elevations are presented in Table 1. A Vicinity Map is included as Figure 1 and a Potentiometric Map is included as Figure 2.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. Purge water was treated by filtration through granular activated carbon and was subsequently discharged. A Concentration Map is included as Figure 3. The chain of custody document and laboratory analytical reports are attached.

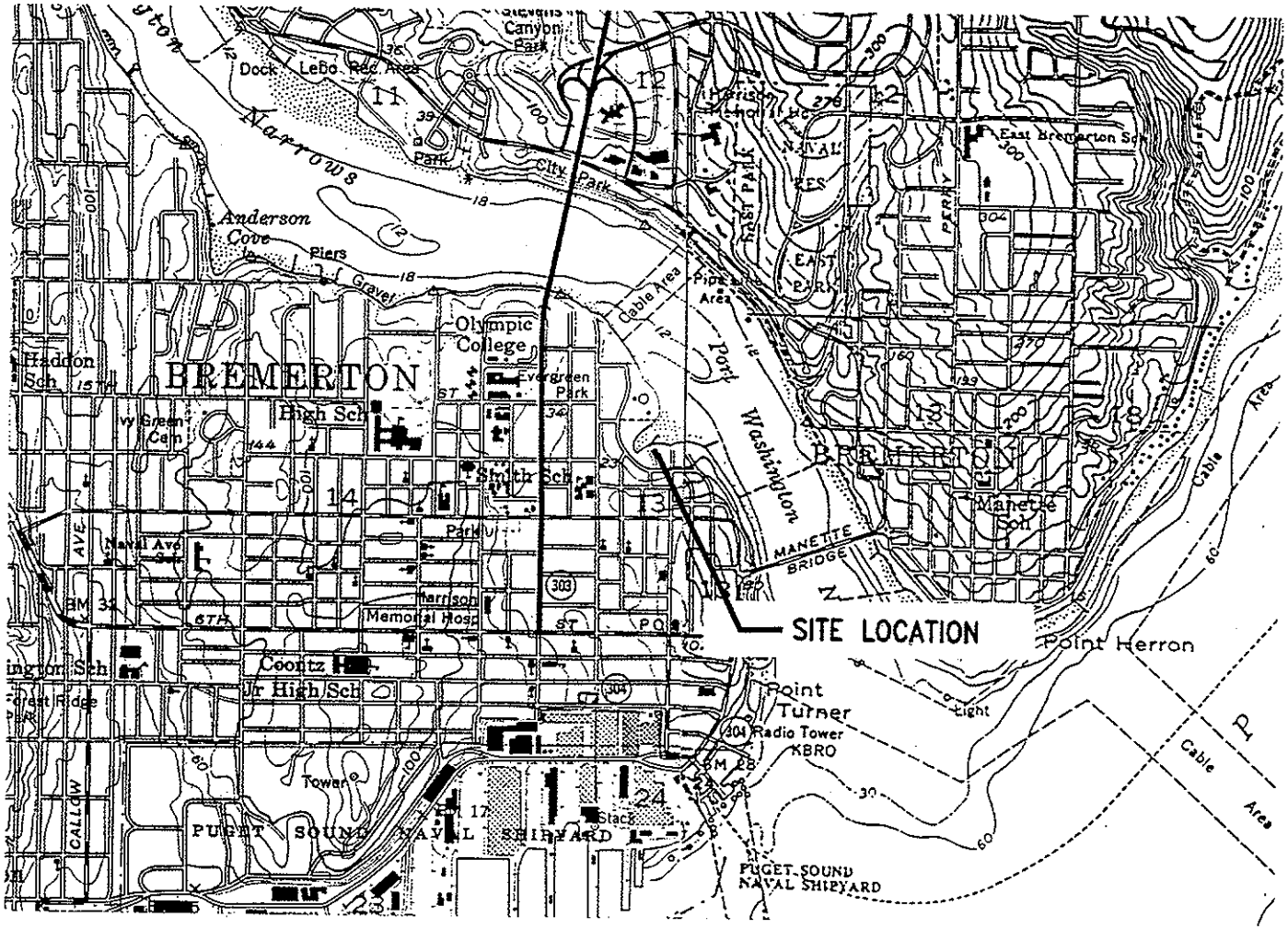
Please call if you have any questions or comments regarding this report.

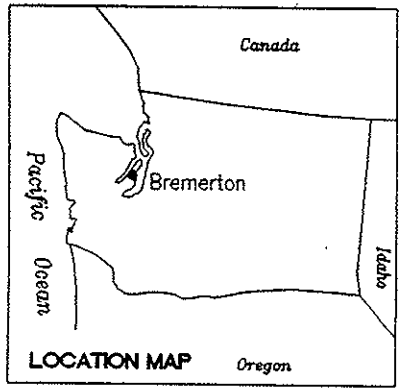
Sincerely,

Deanna L. Harding
Project Coordinator

Robert C. Mallory
Registered Geologist

Figure 1:	Vicinity Map
Figure 2:	Potentiometric Map
Figure 3:	Concentration Map
Table 1:	Groundwater Monitoring Data and Analytical Results
Attachments:	Standard Operating Procedure - Groundwater Sampling
	Field Data Sheets
	Chain of Custody Document and Laboratory Analytical Reports





N

0 2000

Scale in Feet

Base Map: USGS Topographic Map

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

VICINITY MAP
Former Chevron Bulk Terminal #1001351
1310 Highland Avenue
Bremerton, Washington

FIGURE
1

JOB NUMBER
386607

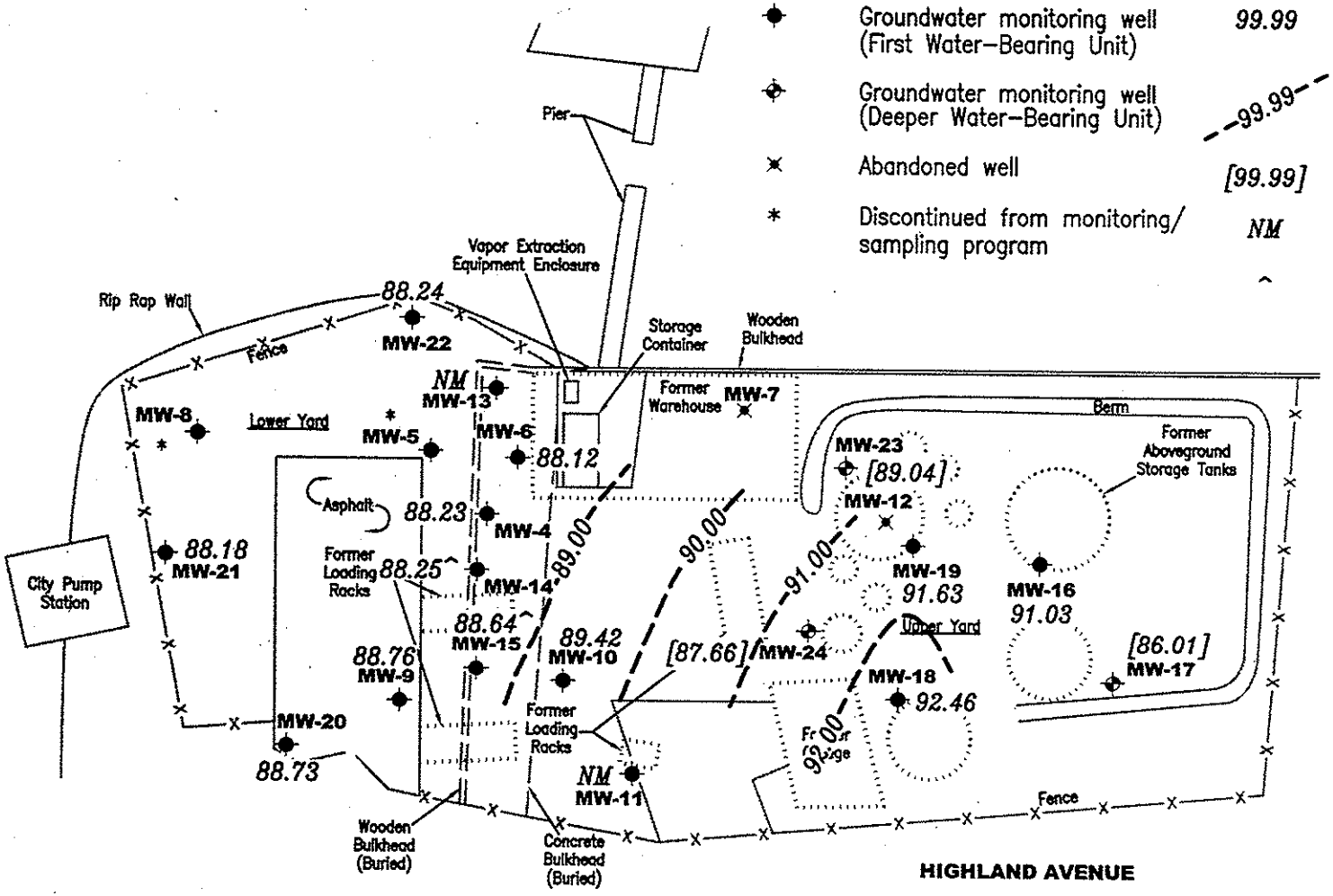
REVIEWED BY

DATE
January, 1999

REVISED DATE

EXPLANATION

Groundwater monitoring well (First Water-Bearing Unit)	*99.99*	Groundwater elevation in feet referenced to arbitrary datum
Groundwater monitoring well (Deeper Water-Bearing Unit)	-99.99-	Groundwater elevation contour, dashed where inferred
Abandoned well	*[99.99]*	Not used in contouring
Discontinued from monitoring/ sampling program	*NM*	Not Monitored
	^	Groundwater elevation corrected for the presence of separate-phase hydrocarbons



Approximate groundwater flow direction at a gradient of 0.03 Ft./Ft.

N

0 60

Scale in Feet

Source: Figure modified from drawing provided by Pacific Environmental Group, Inc.

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6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

POTENTIOMETRIC MAP
Former Chevron Bulk Terminal #1001351
1310 Highland Avenue
Bremerton, Washington

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386607		September 30, 2002	

FILE NAME: P:\ENVIRO\CHEVRON\1001351\Q02-100-1351.DWG | Layout Tab: Pot3

EXPLANATION

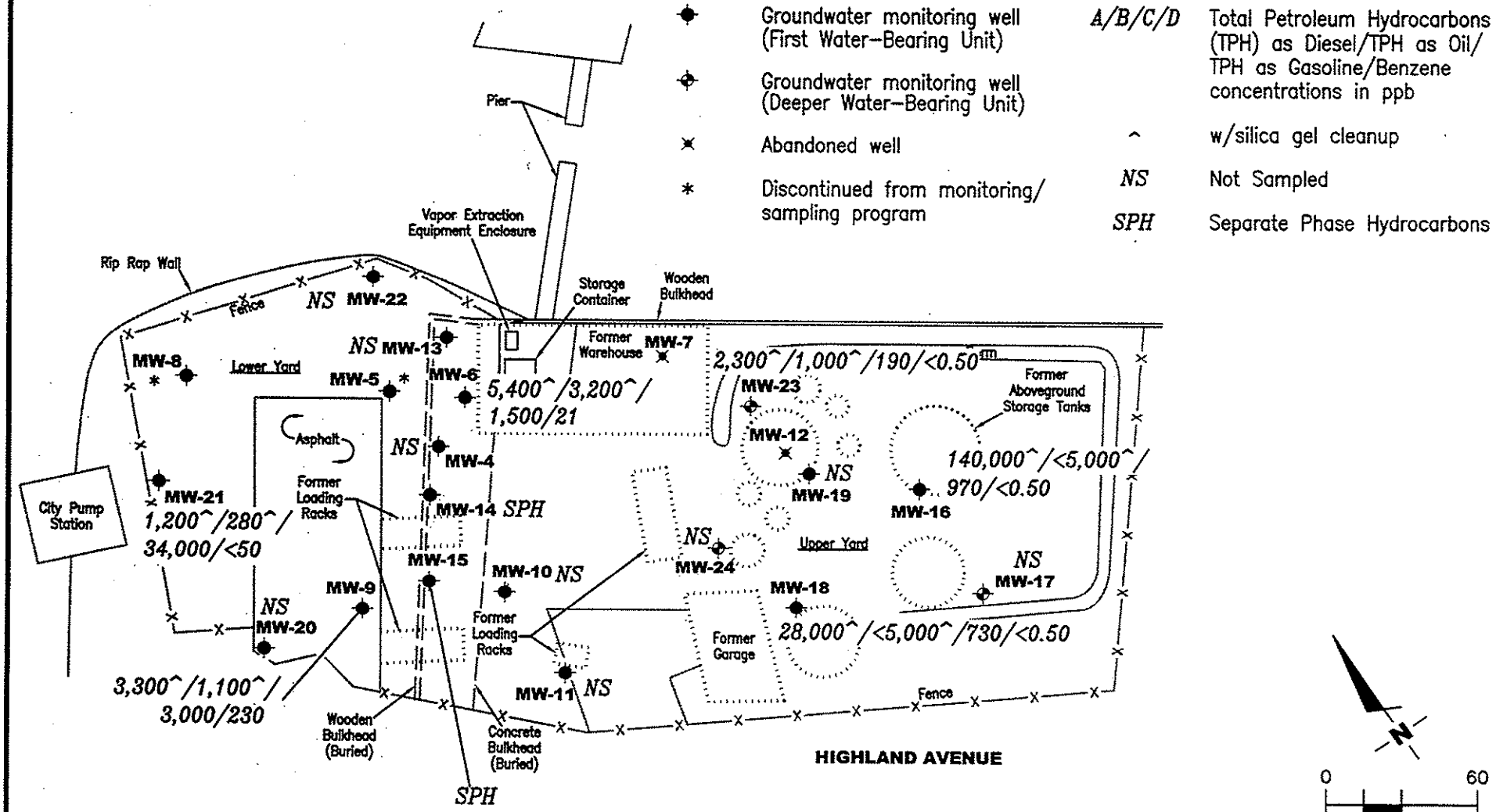
- Groundwater monitoring well (First Water-Bearing Unit)
- Groundwater monitoring well (Deeper Water-Bearing Unit)
- Abandoned well
- Discontinued from monitoring/ sampling program

A/B/C/D — Total Petroleum Hydrocarbons (TPH) as Diesel/TPH as Oil/ TPH as Gasoline/Benzene concentrations in ppb

^ — w/silica gel cleanup

NS — Not Sampled

SPH — Separate Phase Hydrocarbons



Source: Figure modified from drawing provided by Pacific Environmental Group, Inc.

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

CONCENTRATION MAP
Former Chevron Bulk Terminal #1001351
1310 Highland Avenue
Bremerton, Washington

FIGURE 3

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386607		September 30, 2002	

FILE NAME: P:\ENVIRO\CHEVRON\1001351\Q02-100-1351.DWG | Layout Tab: Con3

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton,Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-4												
100.34	09/10/88	10.99	90.43**	1.35	--	--	--	ND	ND	3,600	23,000	--
	03/09-10/89	12.76	90.74**	3.95	--	--	--	--	--	--	--	--
	04/04/89	12.56	91.00**	4.02	--	--	--	--	--	--	--	--
	08/07/89	11.74	89.86**	1.57	--	--	--	--	--	--	--	--
	09/21/89	11.71	89.77**	1.42	--	--	--	--	--	--	--	--
	05/21/93	9.29	91.07**	0.02	--	--	--	--	--	--	--	--
98.46	09/20/93	10.36	89.98	--	--	--	--	--	--	--	--	--
	12/23/93	10.68	89.68**	0.02	--	--	--	--	--	--	--	--
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	8.33	92.01	--	190,000	31,000	5,400	13	ND[10]	8.1	79	18
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	7.98	90.48	--	130,000	ND[10]	580,000	3,200	630	1,900	4,800	45
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	9.10	89.36	--	2,400,000	270,000	96,000	1,000	110	470	1,300	--
	09/11/95	10.30	88.16	--	--	--	--	--	--	--	--	--
	12/06/95	6.22	92.24	--	6,000	ND[10]	32,000	ND[10]	ND[10]	ND[10]	ND[10]	--
	03/14/96	8.38	90.08	--	--	--	--	--	--	--	--	--
	06/05/96	9.33	89.13	--	--	--	--	--	--	--	--	--
	09/04/96	DRY	--	--	--	--	--	--	--	--	--	--
	12/23/96	9.10	89.36	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	9.90	88.56	--	76,100	ND[10]	12,700	973	30	99.5	217	--
	12/29/97	7.12	91.34	--	--	--	--	--	--	--	--	--
	03/18/98	6.98	91.48	--	--	--	--	--	--	--	--	--
	06/23/98	9.63	88.83	Sheen	--	--	--	--	--	--	--	--
	03/24/99	6.47	91.99	0.00	68,500	6,390	746	36.8	ND[10]	12	35.8	--
	08/31/99[12]	10.23	88.23	Sheen	--	--	--	--	--	--	--	--
	03/17-18/00	7.05	91.41	Sheen	1,640	ND	8,910	170	ND[10]	222	504	--
	10/06/00	10.34	88.12	0.00	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-4	04/01/01	7.96	90.50	0.00	--	--	--	--	--	--	--	--
(cont)	09/27/01	10.81	87.65	0.00	--	--	--	--	--	--	--	--
	03/28/02	8.48	89.98	0.00	--	--	--	--	--	--	--	--
	09/30/02	**10.23**	**88.23**	**0.00**	--	--	--	--	--	--	--	--
MW-5												
99.23	09/10/88[1]	10.05	89.18	--	--	--	--	1,900	360	290	1,900	--
	03/9-10/89	8.56	90.67	--	--	--	--	5,400	11,000	1,400	7,000	--
	04/04/89	8.22	91.01	--	--	--	--	--	--	--	--	--
	08/07/89	--	--	--	--	--	--	--	--	--	--	--
	09/21/89	--	--	--	--	--	--	--	--	--	--	--
	05/21/93	--[8]	--	--	--	--	--	--	--	--	--	--
	09/20/93	--[8]	--	--	--	--	--	--	--	--	--	--
95.96	12/23/93	--[8]	--	--	--	--	--	--	--	--	--	--
	03/25/94	--[8]	--	--	--	--	--	--	--	--	--	--
	05/04/94	--[8]	--	--	--	--	--	--	--	--	--	--
	09/28/94	--[8]	--	--	--	--	--	--	--	--	--	--
	12/09/94	5.78	90.18	--	--	--	--	--	--	--	--	--
	03/15/95	--[8]	--	--	--	--	--	--	--	--	--	--
	06/22/95	--[8]	--	--	--	--	--	--	--	--	--	--
	09/11/95	--[8]	--	--	--	--	--	--	--	--	--	--
	12/06/95	--[8]	--	--	--	--	--	--	--	--	--	--
	03/14/96	5.37	90.59	--	--	--	--	--	--	--	--	--
	06/05/96	--[8]	--	--	--	--	--	--	--	--	--	--
	09/04/96	--[8]	--	--	--	--	--	--	--	--	--	--
	12/23/96	--[8]	--	--	--	--	--	--	--	--	--	--
	04/15/97	--[8]	--	--	--	--	--	--	--	--	--	--
	09/15/97	--[8]	--	--	--	--	--	--	--	--	--	--
	12/29/97	--[8]	--	--	--	--	--	--	--	--	--	--
	03/18/98	--[8]	--	--	--	--	--	--	--	--	--	--
	06/23/98	--[8]	--	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-5	03/24/99	--[8]	--	--	--	--	--	--	--	--	--	--
(cont)	08/31/99	--[8]	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	--[8]	--	--	--	--	--	--	--	--	--	--
	10/06/00	--[8]	--	--	--	--	--	--	--	--	--	--
	04/01/01	--[8]	--	--	--	--	--	--	--	--	--	--
	NOT MONITORED/SAMPLED											
MW-6												
100.29	09/10/88[2]	11.08	89.21	--	--	--	--	2,000	1,500	150	4,300	--
	03/09-10/89	12.76	90.96**	4.29	--	--	--	--	--	--	--	--
	04/04/89	12.21	91.13**	3.81	--	--	--	--	--	--	--	--
	08/07/89	10.44	89.85	Trace	--	--	--	--	--	--	--	--
	09/21/89	--	--	--	--	--	--	--	--	--	--	--
	05/20/93	9.11	91.18	--	14,000	--	40,000	820	1,600	640	5,600	--
98.40	09/20/93	9.99	88.41	--	--	--	--	--	--	--	--	--
	12/23/93	10.96	87.44	--	26,000	14,000	27,000	1,400	2,300	560	5,000	26
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	11.31	87.09	--	20,000	16,000	21,000	720	1,100	450	2,500	ND
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	8.92	89.48	--	18,000	12,000	8,800	58	60	30	1,300	8.2
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	11.31	87.09	--	9,800	5,800	16,000	110	76	240	2,100	--
	09/11/95	10.65	87.75	--	--	--	--	--	--	--	--	--
	12/06/95	6.76	91.64	--	750	ND	7,500	12	17	20	500	--
	03/14/96	8.20	90.20	--	--	--	--	--	--	--	--	--
	06/05/96	8.95	89.45	--	26,700	20,400	9,780	41.8	22.3	135	1,070	--
	09/04/96	10.50	87.90	--	--	--	--	--	--	--	--	--
	12/23/96	7.65	90.75	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	9.83	88.57	--	3,710	908	10,800	19.6	12.5	126	810	--
	12/29/97	7.76	90.64	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-6	03/18/98	7.53	90.87	--	--	--	--	--	--	--	--	--
(cont)	06/23/98	9.65	88.75	--	2,500	ND	11,000	39.2	12.8	235	1,270	--
	03/24/99	7.00	91.40	0.00	2,200	2,030	216	3.95	2.94	3.79	13.4	--
	08/31/99	10.28	88.12	0.00	9,490	5,890	4,040	25.8	ND[10]	62.7	131	--
	03/17-18/00	7.85	90.55	Sheen	2,850	1,750	1,960	21.6	ND[10]	22.9	84.4	--
	10/06/00	11.08	87.32	0.00	4,600[14]	ND[10]	6,020	13.5	24.7	39.1	118	--
	04/01/01	8.69	89.71	0.00	5,970	3,720	4,530	56.6	6.84	128	281	--
	09/27/01	10.84	87.56	0.00	7,410	5,090	4,110	25.7	5.01	35.0	55.6	--
	03/28/02	8.50	89.90	0.00	3,300[20]	3,300[20]	1,400	23	<5.0	20	32	--
	09/30/02	**10.28**	**88.12**	**0.00**	**5,400[20]**	**3,200[20]**	**1,500**	**21**	**1.8**	**12**	**7.9**	**--**
MW-7												
101.25	09/10/88[3]	9.93	91.32	--	--	--	--	ND	ND	62	21	--
	03/09-10/89	8.36	93.31**	0.53	--	--	--	--	--	--	--	--
	04/04/89	7.64	93.86**	0.31	--	--	--	--	--	--	--	--
	08/07/89	10.98	91.03**	0.95	--	--	--	--	--	--	--	--
	09/21/89	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	05/21/93	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	09/20/93	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	12/23/93	UNABLE TO LOCATE - PRESUMED DESTROYED				--	--	--	--	--	--	--
	03/24/99	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	08/31/99	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	03/17-18/00	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
	ABANDONED											
MW-8												
98.17	09/10/88[4]	7.18	91.01**	0.02	--	--	--	3,900	19,000	2,900	18,000	--
	03/09-10/89	8.28	90.48**	0.74	--	--	--	--	--	--	--	--
	04/04/89	13.33	85.40**	0.70	--	--	--	--	--	--	--	--
	08/07/89	8.39	90.07**	0.36	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-8	09/21/89	--	--	--	--	--	--	--	--	--	--	--
(cont)	05/21/93	--	--	--	--	--	--	--	--	--	--	--
	09/20/93	--	--	--	--	--	--	--	--	--	--	--
95.18	12/23/93	--	--	--	--	--	--	--	--	--	--	--
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	--	--	--	--	--	--	--	--	--	--	--
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	--	--	--	--	--	--	--	--	--	--	--
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	--	--	--	--	--	--	--	--	--	--	--
	09/11/95	--	--	--	--	--	--	--	--	--	--	--
	12/06/95	--	--	--	--	--	--	--	--	--	--	--
	03/14/96	--[9]	--	--	--	--	--	--	--	--	--	--
	06/05/96	--[9]	--	--	--	--	--	--	--	--	--	--
	09/04/96	--[9]	--	--	--	--	--	--	--	--	--	--
	12/23/96	--[9]	--	--	--	--	--	--	--	--	--	--
	04/15/97	--[9]	--	--	--	--	--	--	--	--	--	--
	09/15/97	--[9]	--	--	--	--	--	--	--	--	--	--
	12/29/97	--[9]	--	--	--	--	--	--	--	--	--	--
	03/18/98	--[9]	--	--	--	--	--	--	--	--	--	--
	06/23/98	--[9]	--	--	--	--	--	--	--	--	--	--
	03/24/99	--[9]	--	--	--	--	--	--	--	--	--	--
	08/31/99	--[9]	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	--[9]	--	--	--	--	--	--	--	--	--	--
	10/06/00	--[9]	--	--	--	--	--	--	--	--	--	--
	04/01/01	--[9]	--	--	--	--	--	--	--	--	--	--
	NOT MONITORED/SAMPLED											
MW-9												
100.34	09/10/88[5]	9.88	90.46	--	--	--	--	6,100	11,000	1,400	9,800	--
	03/09-10/89	8.34	93.13**	1.41	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-9	04/04/89	8.74	92.80**	1.50	--	--	--	--	--	--	--	--
(cont)	08/07/89	12.58	90.03**	2.84	--	--	--	--	--	--	--	--
	09/21/89	--	--	--	--	--	--	--	--	--	--	--
	05/21/93	--	--	--	--	--	--	--	--	--	--	--
98.50	09/20/93	10.15	88.36**	0.01	--	--	--	--	--	--	--	--
	12/23/93	7.99	90.51	--	17,000	5,000	4,300	370	510	110	980	120
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	8.43	90.07	--	19,000	5,000	4,200	1,000	1,000	110	750	13
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	7.81	90.69	--	8,900	3,100	2,000	140	73	65	180	67
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	9.46	89.04	--	13,000	6,000	4,600	230	84	170	390	--
	09/11/95	10.15	88.35	--	--	--	--	--	--	--	--	--
	12/07/95	6.20	92.30	--	8,500	1,500	2,700	390	110	94	360	--
	03/14/96	7.39	91.11	--	--	--	--	--	--	--	--	--
	06/05/96	8.40	90.10	--	12,100	ND	7,960	1,140	1,500	124	812	--
	09/04/96	10.15	88.35	--	--	--	--	--	--	--	--	--
	12/23/96	6.75	91.75	--	--	--	--	--	--	--	--	--
	04/15/97	7.40	91.10	--	4,210	1,050	3,370	449	547	111	652	--
	09/15/97	9.95	88.55	--	5,470	1,490	7,700	943	23.6	545	515	--
	12/29/97	6.72	91.78	--	4,620	1,220	306	14.9	4.47	10.2	69.7	--
	03/18/98	6.90	91.60	--	2,290	ND	10,900	541	252	293	2,190	--
	06/23/98	9.63	88.87	--	4,290	796	12,600	980	108	513	2,790	--
	03/24/99	6.15	92.35	0.00	5,910	2,020	8,850	627	97.7	246	1,310	--
	08/31/99	9.92	88.58	0.00	3,560	939	2,160	333	ND[10]	62.3	73.5	--
	03/17-18/00	6.69	91.81	Sheen	3,860	ND[10]	16,600	819	186	741	3,760	--
	10/06/00	11.45	87.05	0.00	3,600	752[14]	3,990	437	21.1	75.6	90.1	--
	04/01/01	7.70	90.80	0.00	11,900	3,310	13,300	621	96.3	666	2,790	--
	09/27/01	9.63	88.87	0.00	13,400	4,510	4,860	419	19.6	82.3	70.2	--
	03/28/02	7.50	91.00	0.00	4,800[20]	1,800[20]	8,500	480	38	610	1,600	--
	09/30/02	**9.74**	**88.76**	**0.00**	**3,300[20]**	**1,100[20]**	**3,000**	**230**	**9.5**	**47**	**28**	**--**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-10												
99.94	09/10/88[6]	9.37	90.57	--	--	--	--	ND	ND	350	110	--
	03/09-10/89	6.54	93.40	--	--	--	--	150	6.8	ND	2.8	--
	04/04/89	6.51	93.43	--	--	--	--	--	--	--	--	--
	08/07/89	9.39	90.55	--	--	--	--	--	--	--	--	--
	09/21/89	--	--	--	--	--	--	--	--	--	--	--
	05/20/93	7.64	92.30	--	180,000	--	1,900	64	1.9	3.9	3.6	--
98.45	09/20/93	9.97	88.57**	0.11	--	--	--	--	--	--	--	--
	12/23/93	7.31	91.14	--	350,000	ND	4,800	23	6.2	26	130	5.4
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	7.98	90.47	--	220,000	38,000	3,600	71	ND	7.1	8.2	8.5
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	7.86	90.59	--	60,000	ND	6,700	ND	4.9	11	21	8.0
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	9.41	89.04	--	11,000	940	4,300	2.6	5.9	1.8	8.8	--
	09/11/95	10.12	88.33	--	--	--	--	--	--	--	--	--
	12/06/95	6.43	92.10**	0.10	780,000	26,000	4,100,000	100	960	1,200	2,300	--
	03/14/96	7.52	90.93	--	--	--	--	--	--	--	--	--
	06/05/96	8.80	89.65	--	9,890	27,600	1,610,000	ND[10]	ND[10]	ND[10]	1,170	--
	09/04/96	10.20	88.25	--	--	--	--	--	--	--	--	--
	12/23/96	7.13	91.32	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	9.83	88.65**	0.04	--	--	--	--	--	--	--	--
	12/29/97	--	--	0.06	--	--	--	--	--	--	--	--
	03/18/98	--	--	0.04	--	--	--	--	--	--	--	--
	06/23/98	9.22	89.33**	0.12	--	--	--	--	--	--	--	--
	03/24/99	6.11	92.34	Sheen	104,000	ND[10]	21,300	2.50	3.14	20.0	43.5	--
	08/31/99[12]	8.43	90.02	0.00	--	--	--	--	--	--	--	--
	03/17-18/00	6.47	91.98	Sheen	8,890	1,180	4,940	ND[10]	ND[10]	ND[10]	ND[10]	--
	10/06/00	10.52	87.93	0.00	--	--	--	--	--	--	--	--
	04/01/01	7.16	91.29	0.00	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-10	09/27/01	10.19	88.26	0.00	--	--	--	--	--	--	--	--
(cont)	03/28/02	6.78	91.67	0.00	--	--	--	--	--	--	--	--
	09/30/02	**9.03**	**89.42**	**0.00**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-11												
100.03	09/10/88[7]	8.45	91.58	--	ND	--	--	ND	ND	ND	ND	--
	03/09-10/89	6.03	94.00	--	--	--	--	ND[10]	0.6	0.8	5.2	--
	04/04/89	6.47	93.56	--	--	--	--	--	--	--	--	--
	08/07/89	8.65	91.38	--	--	--	--	--	--	--	--	--
	09/21/89	--	--	--	--	--	--	--	--	--	--	--
	05/20/93	7.11	92.92	--	73,000	--	320	ND	0.7	0.7	1.0	--
98.11	09/20/93	8.62	89.49	--	20,000	4,000	600	ND	0.7	ND	2.7	ND
	12/23/93	6.69	91.42	--	25,000	6,900	250	ND	ND	ND	1.1	ND
100.03	03/25/94	5.84	94.19	--	13,000	2,900	120	ND[10]	ND[10]	ND[10]	ND[10]	ND[10]
	05/04/94	7.35	92.68	--	16,000	4,300	350	ND	ND	ND	ND	ND
	09/28/94	9.51	90.52	--	7,900	2,200	730	ND	0.9	0.9	1.3	ND
	12/09/94	6.41	93.62	--	15,000	3,500	460	ND[10]	ND[10]	ND[10]	ND[10]	ND[10]
	03/15/95	3.97	96.06	--	11,000	3,000	140	0.72	0.73	ND	ND	--
	06/22/95	8.22	91.81	--	11,000	5,000	240	ND	ND	ND	ND	--
	09/11/95	8.67	91.36	--	13,000	5,500	3,600	ND[10]	ND[10]	ND[10]	ND[10]	--
	12/06/95	4.99	95.04	--	7,300	1,800	160	ND	ND	ND	ND	--
	03/14/96	6.17	93.86	--	17,000	5,500	2,300	ND[10]	ND[10]	ND[10]	ND[10]	--
	06/05/96	7.23	92.80	--	--	--	--	--	--	--	--	--
	09/04/96	8.45	91.58	--	--	--	--	--	--	--	--	--
	12/23/96	5.48	94.55	--	--	--	--	--	--	--	--	--
	04/15/97	6.55	93.48	--	--	--	--	--	--	--	--	--
	09/15/97	8.23	91.80	--	2,170	1,010	679	ND	ND	ND	ND	--
	12/29/97	5.83	94.20	--	--	--	--	--	--	--	--	--
	03/18/98	5.95	94.08	--	--	--	--	--	--	--	--	--
	06/23/98	8.00	92.03	Sheen	--	--	--	--	--	--	--	--
	03/24/99	5.16	94.87	Sheen	1,890	837	231	ND	ND	ND	2.20	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-11	08/31/99	--	--	--	--	--	--	--	--	--	--	--
(cont)	03/17-18/00	5.34	94.69	0.00	--	--	--	--	--	--	--	--
	10//06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	6.28	93.75	0.00	--	--	--	--	--	--	--	--
	09/27/01	9.04	90.99	0.00	--	--	--	--	--	--	--	--
	03/28/02	6.41	93.62	0.00	--	--	--	--	--	--	--	--
	09/30/02	**MONITORED ANNUALLY**			--	--	--	--	--	--	--	--
MW-13												
97.11	09/10/88	--	--	--	--	--	--	--	--	--	--	--
	03/09-10/89	--	--	--	--	--	--	--	--	--	--	--
	04/04/89	--	--	--	--	--	--	--	--	--	--	--
	08/07/89	--	--	--	--	--	--	--	--	--	--	--
	09/21/89	9.80	87.31	--	--	--	--	--	--	--	--	--
	05/20/93	7.55	89.56	--	11,000	--	9,000	84	22	250	440	--
	09/20/93	8.13	88.98	--	22,000	8,200	2,800	33	6.4	58	95	100
	12/23/93	7.65	89.46	--	6,700	1,700	1,800	140	27	34	49	ND
	03/25/94	6.81	90.30	--	11,000	4,600	4,600	22	7.0	180	280	ND
	05/04/94	8.19	88.92	--	20,000	7,500	5,000	15	1.6	67	120	3.1
	09/28/94	9.71	87.40	--	72,000	28,000	17,000	48	13	250	570	20
	12/09/94	7.55	89.56	--	5,800	2,800	360	0.9	ND	6.1	7.8	7.9
	03/15/95	5.40	91.71	--	3,800	1,400	5,800	2.6	0.97	39	76	--
	06/22/95	8.69	88.42	--	3,800	3,300	3,400	13	5.2	240	160	--
	09/11/95	8.89	88.22	--	9,200	8,700	7,500	10	2.8	120	35	--
	12/06/95	6.00	91.11	--	390	470	ND	ND	ND	ND	ND	--
	03/14/96	7.50	89.61	--	2,000	2,200	110	1.2	ND	1.2	14	--
	06/05/96	8.30	88.81	--	58,900	24,500	6,990	13.9	5.44	374	160	--
	09/04/96	8.90	88.21	--	6,630	3,380	9,160	11.3	11.8	266	61.6	--
	12/23/96	6.72	90.39	--	1,730	1,850	ND	ND	ND	ND	ND	--
	04/15/97	7.75	89.36	--	742	ND	105	ND	ND	9.53	11.2	--
	09/15/97	8.42	88.69	--	1,060	ND[10]	775	4.42	ND[10]	45.4	ND[10]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-13	12/29/97	6.60	90.51	--	791	ND	ND	ND	0.695	ND	ND	--
(cont)	03/18/98	7.40	89.71	--	--	--	--	--	--	--	--	--
	06/23/98	8.37	88.74	--	675	ND	1,080	7.70	2.54	209	24.5	--
	03/24/99	6.07	91.04	0.00	576	ND	82.8	1.92	ND	9.83	3.74	--
	08/31/99	--	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	6.70	90.41	0.00	--	--	--	--	--	--	--	--
	10/06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	7.55	89.56	0.00	--	--	--	--	--	--	--	--
	09/27/01	9.67	87.44	0.00	--	--	--	--	--	--	--	--
	03/28/02	7.49	89.62	0.00	--	--	--	--	--	--	--	--
	09/30/02	MONITORED ANNUALLY			--	--	--	--	--	--	--	--
MW-14												
97.58	09/10/88	--	--	--	--	--	--	--	--	--	--	--
	03/09-10/89	--	--	--	--	--	--	--	--	--	--	--
	04/04/89	--	--	--	--	--	--	--	--	--	--	--
	08/07/89	--	--	--	--	--	--	--	--	--	--	--
	09/21/89	10.00	87.58	--	--	--	--	--	--	--	--	--
	05/20/93	7.34	90.24	--	34,000	--	2,600	75	180	58	250	--
	09/20/93	8.85	88.73	--	27,000	2,700	8,700	330	570	350	1,000	46
	12/23/93	7.26	90.32	--	13,000	4,100	280	2.1	0.8	1.5	9.8	12
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	--	--	--	--	--	--	--	--	--	--	--
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	--	--	--	--	--	--	--	--	--	--	--
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	--	--	--	--	--	--	--	--	--	--	--
	09/11/95	--	--	--	--	--	--	--	--	--	--	--
	12/06/95	--	--	--	--	--	--	--	--	--	--	--
	03/14/96	6.98	90.60	--	6,200	2,400	ND	1.1	ND	1.1	ND	--
	06/05/96	8.20	89.38	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-14	09/04/96	10.16	87.42	--	--	--	--	--	--	--	--	--
(cont)	12/23/96	6.00	91.58	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	9.00	88.58	--	7,330	1,610	1,380	5.94	2.22	5.36	2.70	--
	12/29/97	6.25	91.33	--	--	--	--	--	--	--	--	--
	03/18/98	6.31	91.27	--	--	--	--	--	--	--	--	--
	06/23/98	9.00	88.58	Sheen	--	--	--	--	--	--	--	--
	03/24/99	5.58	92.00	0.00	1,250	ND	51.0	1.17	ND	ND	1.02	--
	08/31/99	9.38	88.20	0.00	68,500	ND[10]	119	8.06	ND[10]	2.69	ND[10]	--
	03/17-18/00	5.94	91.64	Sheen	3,510	ND	237	6.97	7.56	5.70	15.5	--
	10/06/00	10.15	87.43	0.00	8,570	1,790[15]	494	9.85	3.54	23.5	32.9	--
	04/01/01	7.04	90.54	0.00	5,920	1,880	<50.0	1.43	<0.500	<0.500	<1.00	--
	09/27/01	9.93	87.65	0.00	12,200	<2,500	492	8.52	2.84	11.9	12.5	--
	03/28/02	6.80	90.80**	0.03	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--	--	--
	09/30/02	**9.35**	**88.25****	**0.03**	**NOT SAMPLED DUE TO THE PRESENCE OF SPH**				**--**	**--**	**--**	**--**
MW-15												
97.46	09/10/88	--	--	--	--	--	--	--	--	--	--	--
	03/09-10/89	--	--	--	--	--	--	--	--	--	--	--
	04/04/89	--	--	--	--	--	--	--	--	--	--	--
	08/07/89	--	--	--	--	--	--	--	--	--	--	--
	09/21/89	9.90	87.56	--	--	--	--	--	--	--	--	--
	05/20/93	6.91	90.55	--	--	--	4,600	63	31	420	280	--
	09/20/93	9.22	88.24	--	7,000	ND	4,600	67	24	360	77	14
	12/23/93	6.61	90.85	--	2,400	760	190	2.7	0.5	4.1	4.9	9.8
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	7.44	90.02	--	1,500	ND	450	3.5	ND	2.0	3.4	4.9
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	6.40	91.06	--	4,300	ND	350	2.2	ND	2.2	2.3	6.7
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	8.48	88.98	--	4,600	1,200	96	1.5	ND	1.6	1.9	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-15	09/11/95	9.34	88.12	--	--	--	--	--	--	--	--	--
(cont)	12/06/95	5.15	92.31	--	640	ND	72	1.3	ND	ND	ND	--
	03/11/96	6.35	91.11	--	--	--	--	--	--	--	--	--
	06/05/96	7.50	89.96	--	4,160	ND	233	1.54	ND	0.769	ND	--
	09/04/96	9.25	88.21	--	--	--	--	--	--	--	--	--
	12/23/96	5.78	91.68	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	9.00	88.46	--	1,510	ND	266	1.24	ND	ND	ND	--
	12/29/97	7.79	89.67	--	--	--	--	--	--	--	--	--
	03/18/98	7.65	89.81	--	--	--	--	--	--	--	--	--
	06/23/98	8.58	88.88	--	582	ND	120	3.91	0.522	ND	1.11	--
	03/24/99	5.20	92.26	0.00	894	ND	ND	3.16	ND	ND	1.48	--
	08/31/99	9.12	88.34	0.00	2,640	823	143	ND[10]	0.681	ND	1.27	--
	03/17-18/00	5.62	91.84	0.00	846	ND	269	1.22	ND[10]	ND	ND[10]	--
	10/06/00	9.78	87.68	0.00	2,000[14]	ND[10]	358	ND	3.14	0.606	1.07	--
	04/01/01	6.39	91.07	0.00	445	<750	210	2.90	<0.500	<0.500	1.66	--
	09/27/01	9.35	88.11	0.00	2,930	730	653	5.96	1.73	<1.00	4.42	--
	03/28/02	6.51	90.95	0.00	840[20]	<750[20]	<50	<0.50	<0.50	<0.50	<1.5	--
	09/30/02	**8.84**	**88.64****	**0.03**	**NOT SAMPLED DUE TO THE PRESENCE OF SPH**				--	--	--	--
MW-16												
108.03	09/20/93	16.23	91.80	--	6,200	1,400	670	ND	1.1	1.7	4.1	3.7
	12/23/93	12.26	95.77	--	8,400	1,100	1,300	6.9	1.8	2.2	7.0	ND
	03/25/94	9.23	99.10**	0.37	--	--	--	--	--	--	--	--
	05/04/94	12.92	95.44**	0.41	--	--	--	--	--	--	--	--
	09/28/94	17.29	90.92**	0.22	--	--	--	--	--	--	--	--
	12/09/94	12.49	95.54	--	39,000	ND[10]	1,800	2.0	2.1	4.3	6.3	ND[10]
	03/15/95	8.35	99.68	--	3,900	ND	1,500	2.2	ND	1.3	1.9	--
	06/22/95	14.20	93.83	--	--	--	--	--	--	--	--	--
	09/11/95	16.42	91.61	--	220,000	14,000	170,000	ND[10]	ND[10]	ND[10]	ND[10]	--
	12/06/95	9.23	98.80	--	5,800	ND[10]	210,000	ND[10]	ND[10]	ND[10]	43	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-16	03/14/96	9.11	98.92	--	110,000	3,800	590,000	ND[10]	ND[10]	100	240	--
(cont)	06/05/96	--	--	--	--	--	--	--	--	--	--	--
	09/04/96	15.90	92.13	--	--	--	--	--	--	--	--	--
	12/23/96	--	--	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	--	--	--	--	--	--	--	--	--	--	--
	12/29/97	--	--	--	--	--	--	--	--	--	--	--
	03/18/98	--	--	--	--	--	--	--	--	--	--	--
	06/23/98	14.90	93.13	Sheen	--	--	--	--	--	--	--	--
	08/31/99	16.10	91.93	Sheen	8,820	ND	2,830[11]	ND[10]	ND[10]	ND[10]	ND[10]	--
	03/17-18/00[13]	9.01	99.02	0.00	2,010	ND	1,870	ND[10]	ND[10]	ND	ND[10]	--
	10/06/00	16.25	91.78	0.00	2,880[16]	ND	2,030	ND	2.44	4.11	6.40	--
	04/01/01[19]	12.37	95.66	0.00	168,000	<7,880	2,550	1.44	1.25	2.39	9.90	--
	09/27/01	16.86	91.17	0.00	32,700	<5,500	2,340	6.51	<10.0	<10.0	<15.0	--
	03/28/02	9.60	98.43	0.00	46,000[20]	<10,000[20]	1,800	<1.0	<1.0	<5.0	7.6	--
	09/30/02	**17.00**	**91.03**	**0.00**	**140,000[20]**	**<5,000[20]**	**970**	**<0.50**	**<0.50**	**0.59**	**1.9**	**--**
MW-17												
108.97	09/20/93	19.38	89.59	--	280	ND	ND	ND	ND	ND	ND	16
	12/23/93	17.92	91.05	--	ND	ND	ND	ND	ND	ND	ND	ND
	03/25/94	21.12	87.85	--	ND	ND	ND	ND	ND	ND	ND	ND
	05/04/94	20.33	88.64	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/28/94	22.96	86.01	--	ND	ND	ND	ND	ND	ND	ND	ND
	12/09/94	18.34	90.63	--	ND	ND	ND	ND	ND	ND	ND	ND
	03/15/95	18.87	90.10	--	ND	ND	ND	ND	ND	ND	ND	--
	06/22/95	21.84	87.13	--	ND	910	ND	ND	ND	ND	ND	--
	09/11/95	21.90	87.07	--	ND	ND	ND	ND	ND	ND	ND	--
	12/06/95	20.00	88.97	--	ND	ND	ND	ND	ND	ND	ND	--
	03/14/96	18.73	90.24	--	ND	ND	ND	ND	ND	ND	ND	--
	06/05/96	--	--	--	--	--	--	--	--	--	--	--
	09/04/96	20.80	88.17	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton,Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-17	12/23/96	--	--	--	--	--	--	--	--	--	--	--
(cont)	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	--	--	--	--	--	--	--	--	--	--	--
	12/29/97	--	--	--	--	--	--	--	--	--	--	--
	03/18/98	--	--	--	--	--	--	--	--	--	--	--
	06/23/98	24.77	84.20	--	ND	ND	ND	ND	ND	ND	ND	--
	08/31/99	--	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	18.53	90.44	0.00	--	--	--	--	--	--	--	--
	10/06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	19.49	89.48	0.00	--	--	--	--	--	--	--	--
	09/27/01	17.01	91.96	0.00	--	--	--	--	--	--	--	--
	03/28/02	19.25	89.72	0.00	--	--	--	--	--	--	--	--
	09/30/02	**22.96**	**86.01**	**0.00**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-18												
104.88	09/20/93	11.67	93.21	--	3.0	ND	ND	ND	ND	ND	1.2	46
	12/23/93	8.38	96.50	--	8,300	1,700	1,300	6.3	1.3	4.3	3.8	ND
	03/25/94	5.91	98.97	--	4,600	ND	760	4.2	1.0	4.1	6.4	ND
	05/04/94	8.15	96.73	--	9,500	ND	1,100	ND	0.9	2.2	2.6	ND
	09/28/94	12.18	92.70	--	3,500	760	460	ND	1.1	1.2	1.4	ND
	12/09/94	10.15	94.73	--	31,000	ND	ND	ND	ND	ND	ND	ND
	03/15/95	5.02	99.86	--	2,800	1,100	1,300	3.0	1.3	2.3	2.9	--
	06/22/95	9.92	94.96	--	15,000	1,500	870	0.57	ND	0.56	2.0	--
	09/11/95	11.60	93.28	--	5,500	2,700	1,200	ND	0.58	ND	3.3	--
	12/06/95	7.00	97.88	--	3,400	ND	1,800	0.96	0.72	1.2	3.0	--
	03/14/96	6.55	98.33	Sheen	4,600	790	11,000	ND[10]	ND[10]	ND[10]	ND[10]	--
	06/05/96	7.70	97.18	--	--	--	--	--	--	--	--	--
	09/04/96	10.85	94.03	--	--	--	--	--	--	--	--	--
	12/23/96	10.85	94.03	--	--	--	--	--	--	--	--	--
	04/15/97	7.48	97.40	--	--	--	--	--	--	--	--	--
	09/15/97	11.10	93.78	--	14,800	1,360	641	ND[10]	ND[10]	ND[10]	ND[10]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton,Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-18	12/29/97	--	--	--	--	--	--	--	--	--	--	--
(cont)	03/18/98	--	--	--	--	--	--	--	--	--	--	--
	06/23/98	10.18	94.70	Sheen	--	--	--	--	--	--	--	--
	03/24/99	5.89	98.99	0.00	2,490	ND	647	0.943	ND	0.792	4.21	--
	08/31/99	19.59	85.29	0.00	ND	ND	ND	ND	ND	ND	ND	--
	03/17-18/00	6.54	98.34	Sheen	3,000	ND	999	ND[10]	ND[10]	ND	ND[10]	--
	10/06/00	12.07	92.81	0.00	1,850[17]	539[14]	462	ND	0.601	0.727	1.42	--
	04/01/01	8.46	96.42	0.00	121,000	<30,800	1,390	0.791	<0.500	0.806	3.90	--
	09/27/01	12.29	92.59	0.00	5,610	856	494	1.06	<1.00	<1.00	3.08	--
	03/28/02	8.60	96.28	0.00	68,000[20]	<10,000[20]	1,300	<1.0	<1.0	<1.0	5.3	--
	09/30/02	**12.42**	**92.46**	**0.00**	**28,000[20]**	**<5,000[20]**	**730**	**<0.50**	**<0.50**	**<0.50**	**<1.5**	**--**
MW-19												
107.39	09/20/93	15.73	91.66	--	4,900	1,200	400	4.1	1.0	1.3	3.1	ND
	12/23/93	10.31	97.08	--	6,700	1,700	1,600	25	3.8	9.7	10	ND
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	10.95	96.44	--	45,000	ND	3,500	41	3.7	19	9.8	4.9
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	8.69	98.70	--	16,000	ND[10]	2,800	12	1.9	6.7	7.0	ND[10]
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	13.53	93.86	--	12,000	1,400	3,800	17	2.6	8.7	8.7	--
	09/11/95	15.73	91.66	--	--	--	--	--	--	--	--	--
	12/06/95	6.00	101.39	--	3,300	820	1,900	8.2	1.1	3.6	3.3	--
	03/14/96	7.13	100.26	--	--	--	--	--	--	--	--	--
	06/05/96	11.15	96.24	--	4,350	ND	1,700	12.5	1.58	6.75	4.40	--
	09/04/96	15.45	91.94	--	--	--	--	--	--	--	--	--
	12/23/96	7.85	99.54	--	--	--	--	--	--	--	--	--
	04/15/97	--	--	--	--	--	--	--	--	--	--	--
	09/15/97	15.35	92.04	--	8,510	1,280	3,260	3.51	2.12	2.54	5.74	--
	12/29/97	8.23	99.16	--	--	--	--	--	--	--	--	--
	03/18/98	7.50	99.89	--	2,580	ND[10]	1,250	ND[10]	ND[10]	ND[10]	ND[10]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton,Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-19	06/23/98	13.90	93.49	Sheen	--	--	--	--	--	--	--	--
(cont)	03/24/99	6.49	100.90	0.00	2,010	ND	780	ND[10]	ND[10]	ND[10]	ND[10]	--
	08/31/99	--	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	6.41	100.98	0.00	--	--	--	--	--	--	--	--
	10/06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	8.80	98.59	0.00	--	--	--	--	--	--	--	--
	09/27/01	16.12	91.27	0.00	--	--	--	--	--	--	--	--
	03/28/02	8.05	99.34	0.00	--	--	--	--	--	--	--	--
	09/30/02	**15.76**	**91.63**	**0.00**	--	--	--	--	--	--	--	--
MW-20												
97.25	09/20/93	8.86	88.47**	0.10	--	--	--	--	--	--	--	--
	12/23/93	7.91	89.34	--	590	760	ND	ND	ND	ND	ND	ND
	03/25/94	5.85	91.40	--	740	ND	ND	ND	ND	ND	ND	ND
	05/04/94	7.22	90.03	--	1,900	1,900	ND	ND	ND	ND	ND	ND
	09/28/94	9.29	87.96	--	780	910	ND	ND	1.5	ND	ND	ND
	12/09/94	6.63	90.62	--	490	ND	ND	ND	ND	ND	ND	ND
	03/15/95	4.32	92.93	--	580	ND	66	ND	ND	ND	ND	--
	06/22/95	8.14	89.11	--	700	ND	ND	ND	ND	ND	ND	--
	09/11/95	8.87	88.38	--	1,300	1,900	84	ND	ND	ND	ND	--
	12/07/95	5.27	91.98	--	ND	ND	83	ND	ND	ND	ND	--
	03/14/96	6.32	90.93	--	440	ND	66	ND	ND	ND	ND	--
	06/05/96	7.30	89.95	--	636	ND	752	ND	ND	ND	ND	--
	09/04/96	8.85	88.40	--	557	763	76.2	ND	ND	ND	ND	--
	12/23/96	5.82	91.43	--	1,140	865	63.1	ND	ND	ND	ND	--
	04/15/97	6.40	90.85	--	385	ND	56.8	ND	ND	ND	ND	--
	09/15/97	8.55	88.70	--	412	ND	178	ND	ND	ND	ND	--
	12/29/97	5.82	91.43	--	614	ND	56.7	ND	ND	ND	ND	--
	03/18/98	5.80	91.45	--	ND	ND	ND	ND	ND	ND	ND	--
	06/23/98	8.12	89.13	--	269	ND	58.1	ND	ND	ND	ND	--
	03/24/99	5.28	91.97	0.00	318	ND	ND	0.581	ND	ND	ND	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-20	08/31/99	--	--	--	--	--	--	--	--	--	--	--
(cont)	03/17-18/00	5.61	91.64	0.00	--	--	--	--	--	--	--	--
	10/06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	6.68	90.57	0.00	--	--	--	--	--	--	--	--
	09/27/01	7.93	89.32	0.00	--	--	--	--	--	--	--	--
	03/28/02	6.34	90.91	0.00	--	--	--	--	--	--	--	--
	09/30/02	**8.52**	**88.73**	**0.00**	--	--	--	--	--	--	--	--
MW-21												
97.27	09/20/93	9.10	88.17	--	2,200	ND[10]	45,000	470	8,300	890	6,500	49
	12/23/93	8.11	89.16	--	3,000	930	12,000	120	2,200	410	2,400	32
	03/25/94	7.92	89.35	--	2,800	ND[10]	12,000	89	1,400	450	1,900	11
	05/04/94	8.72	88.55	--	4,900	940	20,000	150	4,200	480	3,800	14
	09/28/94	9.73	87.54	--	2,600	ND	52,000	170	4,500	1,600	6,800	12
	12/09/94	8.08	89.19	--	1,700	ND[10]	40,000	120	2,100	910	3,800	13
	03/15/95	6.50	90.77	--	1,000	ND	19,000	71	1,400	670	2,800	--
	06/22/95	9.16	88.11	--	4,100	890	35,000	130	4,600	740	4,100	--
	09/11/95	9.25	88.02	--	3,600	11,000	40,000	92	3,100	1,200	5,800	--
	12/07/95	7.27	90.00	--	1,200	ND	960	2.3	50	30	150	--
	03/14/96	8.36	88.91	--	2,800	ND	25,000	110	1,200	1,600	4,000	--
	06/05/96	8.83	88.44	--	3,580	ND[10]	47,400	ND[10]	3,700	2,160	8,780	--
	09/04/96	9.25	88.02	--	3,460	815	42,500	71.6	2,570	1,780	7,780	--
	12/23/96	7.64	89.63	--	2,250	887	31,900	59.7	1,500	1,300	5,230	--
	04/15/97	8.40	88.87	--	404	ND	4,870	12.1	231	207	649	--
	09/15/97	9.10	88.17	--	1,800	ND[10]	65,300	ND[10]	2,130	2,160	10,200	--
	12/29/97	7.69	89.58	--	4,960	859	31,600	59	992	1,190	4,760	--
	03/18/98	8.00	89.27	--	275	ND	2,410	20.3	10.4	30.3	66.9	--
	06/23/98	9.10	88.17	--	756	ND	31,000	63.2	1,150	1,390	5,990	--
	03/24/99	7.16	90.11	0.00	774	ND	34,600	46.0	600	1,680	3,820	--
	08/31/99	9.29	87.98	0.00	547	ND	31,000	ND[10]	748	1,260	4,920	--
	03/17-18/00	7.88	89.39	0.00	732	ND[10]	24,200	47.5	503	1,530	4,500	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-21	10/06/00	9.84	87.43	0.00	1,150[18]	ND	34,800	56.5	588	1,500	6,050	--
(cont)	04/01/01	8.41	88.86	0.00	2,870	<750	41,100	191	633	1,890	7,570	--
	09/27/01	9.49	87.78	0.00	6,560	4,170	36,100	91.4	494	1,890	7,430	--
	03/28/02	8.30	88.97	0.00	700[20]	<750[20]	5,200	5.3	130	360	970	--
	09/30/02	**9.09**	**88.18**	**0.00**	**1,200[20]**	**280[20]**	**34,000**	**<50**	**360**	**1,500**	**6,200**	**--**
MW-22												
96.47	09/20/93	8.04	88.43	--	95,000	15,000	450	24	1.3	2.6	3.4	30
	12/23/93	7.38	89.09	--	14,000	ND	5,100	20	ND	ND	9.7	ND
	03/25/94	7.98	88.49	--	91,000	8,000	410	15	3.6	14	11	ND
	05/04/94	8.49	87.98	--	55,000	ND	2,500	3.0	ND	3.0	5.3	ND
	09/28/94	9.48	86.99	--	9,500	ND	280	0.5	1.3	1.2	1.3	ND
	12/09/94	8.11	88.36	--	43,000	ND[10]	210	ND[10]	0.7	ND[10]	0.8	ND[10]
	03/15/95	6.67	89.80	--	2,200	770	220	1.2	ND	11	2.0	--
	06/22/95	8.99	87.48	--	4,500	1,000	430	ND	1.4	ND	1.6	--
	09/11/95	8.59	87.88	--	9,300	4,600	570	1.1	1.8	ND	2.6	--
	12/07/95	7.12	89.35	--	3,100	ND	350	ND	ND	ND	ND	--
	03/14/96	7.25	89.22	--	4,700	780	670	ND[10]	ND[10]	ND[10]	ND[10]	--
	06/05/96	8.40	88.07	--	8,850	998	535	0.559	ND	ND	ND	--
	09/04/96	8.35	88.12	--	15,600	2,440	1,450	ND	ND	ND	ND	--
	12/23/96	7.00	89.47	--	19,100	2,790	1,350	ND	ND	ND	ND	--
	04/15/97	7.95	88.52	--	2,040	ND	63.8	0.876	ND	ND	ND	--
	09/15/97	8.50	87.97	--	2,200	ND	774	5.02	ND	ND	ND	--
	12/29/97	7.00	89.47	--	2,180	ND	202	1.47	ND	ND	ND	--
	03/18/98	7.97	88.50	--	870	ND	84.7	ND	ND	ND	ND	--
	06/23/98	8.75	87.72	--	1,010	ND	133	2.59	ND	ND	1.20	--
	03/24/99	6.12	90.35	0.00	1,150	ND	187	6.33	3.20	4.77	8.66	--
	08/31/99	8.26	88.21	0.00	966	ND	57.2	1.53	ND	ND	ND[10]	--
	03/17-18/00	7.49	88.98	0.00	797	ND	144	ND[10]	ND	ND	ND[10]	--
	10/06/00	9.50	86.97	0.00	1,110[14]	ND	216	0.619	1.09	0.611	2.36	--
	04/01/01	7.50	88.97	0.00	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-22	09/27/01	8.96	87.51	0.00	--	--	--	--	--	--	--	--
(cont)	03/28/02	8.05	88.42	0.00	5,600[20]	<1,100[20]	250	1.3	<0.50	<0.50	1.8	--
	09/30/02	**8.23**	**88.24**	**0.00**	--	--	--	--	--	--	--	--
MW-23												
108.07	09/20/93[7]	18.22	89.85	--	4,300	970	900	20	2.6	4.0	2.8	ND
	12/23/93	17.11	90.96	--	3,700	1,200	370	8.6	1.9	0.9	3.9	ND
	03/25/94	20.39	87.68	--	4,300	880	880	14	2.3	3.0	3.5	ND
	05/04/94	19.31	88.76	--	3,900	ND	1,000	12	1.9	2.1	1.3	ND
	09/28/94	21.54	86.53	--	2,500	ND	750	7.7	1.5	1.1	1.0	4.2
	12/09/94	17.25	90.82	--	3,400	ND	430	5.7	1.5	1.0	1.2	ND
	03/15/95	19.32	88.75	--	4,100	1,600	1,700	14	2.6	3.4	4.5	--
	06/22/95	20.77	87.30	--	5,100	2,100	850	7.8	1.4	1.1	2.4	--
	09/11/95	22.37	85.70	--	8,300	5,700	ND	0.57	ND	ND	ND	--
	12/06/95	18.95	89.12	--	2,100	ND	ND	ND	ND	ND	ND	--
	03/14/96	14.15	93.92	--	2,600	1,100	970	5.7	0.63	0.70	1.4	--
	06/05/96	20.45	87.62	--	--	--	--	--	--	--	--	--
	09/04/96	18.80	89.27	--	--	--	--	--	--	--	--	--
	12/23/96	17.81	90.26	--	5,660	2,500	378	2.23	0.626	ND	1.19	--
	04/15/97	18.55	89.52	--	2,910	914	1,260	9.22	1.50	1.61	3.15	--
	09/15/97	22.20	85.87	--	2,330	1,110	462	ND	ND	ND	ND	--
	12/29/97	19.15	88.92	--	2,710	890	155	0.728	ND	ND	ND	--
	03/18/98	21.60	86.47	--	2,570	ND[10]	1,460	ND[10]	ND[10]	ND[10]	ND[10]	--
	06/23/98	23.68	84.39	--	2,370	ND	784	2.02	0.774	ND	2.21	--
	03/24/99	15.65	92.42	0.00	2,150	ND	553	2.16	1.08	2.04	4.93	--
	08/31/99	18.88	89.19	0.00	1,220	ND	264	ND[10]	ND	ND[10]	ND[10]	--
	03/17-18/00	16.90	91.17	0.00	2,070	ND	1,240	1.57	ND[10]	ND[10]	ND[10]	--
	10/06/00	19.84	88.23	0.00	7,970[14]	2,560[14]	919	0.926	1.57	1.39	3.38	--
	04/01/01	20.40	87.67	0.00	1,400	<750	146	0.769	<0.500	<0.500	<1.00	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-23	09/27/01	17.76	90.31	0.00	5,050	1,040	1,030	10.2	1.74	4.22	13.1	--
(cont)	03/28/02	17.49	90.58	0.00	2,500[20]	<750[20]	1,100	<1.0	<1.0	1.7	<3.0	--
	09/30/02	**19.03**	**89.04**	**0.00**	**2,300[20]**	**1,000[20]**	**190**	**<0.50**	**<0.50**	**<0.50**	**<1.5**	**--**
MW-24												
100.65	09/20/93[7]	10.53	90.12	--	340	ND	ND	0.6	ND	ND	ND	5.0
	12/23/93	9.61	91.04	--	ND	ND	ND	ND	ND	ND	ND	ND
	03/25/94	--	--	--	--	--	--	--	--	--	--	--
	05/04/94	11.32	89.33	--	ND	ND	ND	ND	ND	ND	ND	ND
	09/28/94	--	--	--	--	--	--	--	--	--	--	--
	12/09/94	9.99	90.66	--	310	ND	ND	ND	ND	ND	ND	ND
	03/15/95	--	--	--	--	--	--	--	--	--	--	--
	06/22/95	12.96	87.69	--	2,000	ND	ND	ND	ND	ND	ND	--
	09/11/95	--	--	--	--	--	--	--	--	--	--	--
	12/06/95	10.68	89.97	--	ND	ND	ND	ND	ND	ND	ND	--
	03/14/96	10.25	90.40	--	ND	ND	ND	ND	ND	ND	ND	--
	06/05/96	12.20	88.45	--	--	--	--	--	--	--	--	--
	09/04/96	11.75	88.90	--	--	--	--	--	--	--	--	--
	12/23/96	10.60	90.05	--	--	--	--	--	--	--	--	--
	04/15/97	10.60	90.05	--	--	--	--	--	--	--	--	--
	09/15/97	14.34	86.31	--	504	ND	94.7	ND	ND	ND	ND	--
	12/29/97	9.95	90.70	--	--	--	--	--	--	--	--	--
	03/18/98	12.65	88.00	--	--	--	--	--	--	--	--	--
	06/23/98	15.15	85.50	--	ND	ND	ND	ND	ND	ND	ND	--
	03/24/99	8.11	92.54	0.00	267	ND	ND	ND	ND	ND	ND	--
	08/31/99	--	--	--	--	--	--	--	--	--	--	--
	03/17-18/00	9.92	90.73	0.00	--	--	--	--	--	--	--	--
	10/06/00	--	--	--	--	--	--	--	--	--	--	--
	04/01/01	13.91	86.74	0.00	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

WELL ID/ TOC*(ft.)	DATE	DTW (ft.)	GWE (ft.)	SPHT (ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	D. Lead (ppb)
MW-24	09/27/01	11.67	88.98	0.00	--	--	--	--	--	--	--	--
(cont)	03/28/02	11.04	89.61	0.00	--	--	--	--	--	--	--	--
	09/30/02	**12.99**	**87.66**	**0.00**	--	--	--	--	--	--	--	--
Trip Blank												
TB-LB	06/23/98	--	--	--	--	--	ND	ND	ND	ND	ND	--
	03/24/99	--	--	--	--	--	ND	ND	ND	ND	ND	--
	08/31/99	--	--	--	--	--	ND	ND	ND	ND	ND	--
	03/17-18/00	--	--	--	--	--	113	ND[10]	ND[10]	ND[10]	ND	--
	10/06/00	--	--	--	--	--	ND	ND	ND	ND	ND	--
	04/01/01	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	--
	09/27/01	--	--	--	--	--	<100	<0.500	<1.00	<1.00	<1.50	--
	03/28/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	--
QA	**09/30/02**	--	--	--	--	--	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.5**	--

	TPH-D	TPH-O	TPH-G	B	T	E	X	D. Lead
Standard Laboratory Reporting Limits:	250	250	50	0.50	0.50	0.50	1.5	--
MTCA Method A Cleanup Levels:	1,000	1,000	1,000	5.0	40	30	20	5.0
Current Method:	NWTPH-D + Extended		NWTPH-G and EPA 8021B					EPA 7421

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Bulk Terminal #1001351

1310 Highland Avenue

Bremerton, Washington

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to March 24, 1999, were compiled from reports prepared by Pacific Environmental Group, Inc.

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
SPHT = Separate Phase Hydrocarbon Thickness
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-O = Total Petroleum Hydrocarbons as Oil

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
(ppb) = Parts per billion
ND = Not Detected

-- = Not Measured/Not Analyzed
D. Lead = Dissolved Lead - Analysis by EPA Method 7421
QA = Quality Assurance
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 12/93]

* TOC in feet relative to an arbitrary datum.

** GWE has been corrected due to the presence of SPH; correction factor: [(TOC-DTW)+(SPHT x 0.80)].

1 Total Petroleum Hydrocarbons (TPH) Modified EPA Method 8015 was detected at 46,400 ppb.

2 TPH Modified EPA Method 8015 was detected at 36,700 ppb.

3 TPH Modified EPA Method 8015 was detected at 76,700 ppb.

4 TPH Modified EPA Method 8015 was detected at 1,742,000 ppb.

5 TPH Modified EPA Method 8015 was detected at 38,900 ppb.

6 TPH Modified EPA Method 8015 was detected at 150,000 ppb.

7 TPH Modified EPA Method 8015 was ND.

8 Well obstructed at approximately 5.2 feet.

9 Well obstructed at approximately 4.5 feet.

10 Detection limit raised. Refer to analytical reports.

11 Laboratory report indicates sample appears to contain extractable diesel range organics.

12 Absorbent sock installed in well.

13 Replaced absorbent sock.

14 Laboratory report indicates detected hydrocarbons have non-petroleum peaks or elution pattern that suggests the presence of biogenic interference.

15 Laboratory report indicates detected hydrocarbons in the heavy/oil range appear to be due to overlap of diesel range hydrocarbons.

16 Laboratory report indicates detected hydrocarbons appear to be due to biogenic interference as well as weathered diesel; cleanup recommended.

17 Laboratory report indicates hydrocarbon pattern and range have non-petroleum peaks or elution pattern that suggests the presence of biogenic interference, however, there is some heavily weathered diesel.

18 Laboratory report indicates detected hydrocarbons are mainly due to overlap from the gasoline range; however, there is some weathered diesel detected.

19 Absorbent sock present.

20 TPH-D and TPH-O with silica gel cleanup.

APPENDIX E

Parametrix 2006 Technical Memorandum

Parametrix ENGINEERING • PLANNING • ENVIRONMENTAL SCIENCES

TECHNICAL MEMORANDUM

Date:	February 15, 2006
To:	Phil Williams, City of Bremerton Public Works
From:	Bill Webb, Parametrix
Subject:	Chevron Property Sediment Characterization Study
cc:	Phil Struck, Parametrix
Project Number:	255-1896-063 (03/01)
Project Name:	Pt Narrows Beach Sewer Replacement

INTRODUCTION

The purpose of this Technical Memorandum is to describe the results of the sediment characterization study conducted in the Port Washington Narrows and Smith Cove located in Bremerton, Washington (Figure 1). This study was conducted in support of a potential aquatic land lease from the state Department of Natural Resources (DNR) and potential acquisition of the Chevron property. Each area will be considered separately for purposes of this report. The first area is called the "sewer line corridor", and the second area is called the "Chevron property". Data from both areas will be used to make decisions regarding future projects planned by the City of Bremerton.

This investigation consisted of collecting a total of 25 sediment samples which were submitted for physical, chemical and bioassay analysis and comparison to applicable Sediment Quality Standards (SQS) described in Washington State Sediment Management Standards (SMS).

On November 21, 2005, a total of 8 (including duplicate) surface sediment grab samples were collected via boat from the area including Smith Cove extending south to the USS Turner Joy (stations S-1, S-2, S-6, and C-1 through C-5 – see Figure 2 attached). Samples were collected from the top 10 cm of sediment. On November 29, 2005, a total of 13 additional sediment samples were collected in the intertidal zone during an extreme low tide on and in the vicinity of the Chevron property and along the sewer corridor (samples S-3, S-4, S-5, and C-6 through C-10). Five sediment samples were collected from the surface to a depth of 10 cm, and 5 subsurface samples were collected from approximately 2 feet below ground surface (bgs) at the same locations as the surface sediment samples and three surface sediment samples were collected along the sewer corridor. On December 14, 2005 a surface sediment sample was collected for bioassay analysis from station C-1. At the request of the Department of Ecology (Ecology), three additional surface sediment samples were collected on January 06, 2006.

Sample locations are shown in Figures 2, 3, and 4 (attached). All sampling was conducted in accordance with the Ecology guidelines and the Sampling and Analysis Plan (SAP) for the site (Parametrix 2005).

FIELD OBSERVATIONS

Substrate in the sampling area generally consisted of sand, gravel and cobble ranging in size from silt and sand to cobbles greater than 1-ft in diameter. Due to the large percentage of cobbles at several stations, samples were difficult to obtain and required multiple grabs that were composited and homogenized.

Debris on the beach offshore of the former Chevron property included metal pipes, bricks, concrete, and rip-rap. A petroleum and sulfur odor was noted along an approximately 50-100 ft segment of shoreline on the northeast side of the site near the fueling pier. An unidentified staining was observed approximately two inches below ground surface. This staining was located in the vicinity of sample stations C-6 and C-8.

SAMPLING AND ANALYSIS

Sediment samples were analyzed for of the following contaminants in accordance with the SAP:

- Petroleum hydrocarbons using NWTPH-Dx
- Metals using EPA Method 6010/7470
- Semi-volatile organic compounds (SVOCs) and poly-aromatic hydrocarbons (PAHs) using EPA Method 8270
- Sediment Management Standards (SMS) parameters (including metals and semi-volatile organics), as specified in WAC 173-204-320.

Table 1 lists all sample numbers and analytical parameters for each sampling location. Analytical results were compared to the Marine Sediment Quality Standards (SQS) – WAC 173-204-320, (See Table 2 - attached) to assess sediment quality. For organic chemicals whose numerical criteria are TOC-normalized, tables include both dry-weight and TOC-normalized concentration values. Analytical results are shown in spreadsheet form in attached Table 2.

Table 1. Sample Location and Analytes

Site	Sample ID	Analytes
Sewer Line Corridor	S-1 through S-6	All SMS Parameters
Chevron Property	C-1 through C-4	All SMS Parameters, TPH-Dx
	C-5 through C-10	Metals, SVOCs, PAHS, TPH-Dx, TOC
	C-5-S through C-10-S	Metals, SVOCs, PAHS, TPH-Dx, TOC
	C-11 through C-13	PAHS, TOC
	C-8	Bioassay

RESULTS

Sewer Line Corridor

Six samples were collected in this area (S-1 through S-6) and analyzed for SMS parameters. No Sediment Quality Standard (SQS) was exceeded in any sample (See Table 2). Sediment along the proposed sewer line corridor generally contained trace concentrations of metals, semi-volatile organic compounds (SVOCs), poly aromatic hydrocarbons (PAHs), and petroleum compounds.

Chevron Property

A total of five sediment samples were collected offshore of the Chevron property, and 13 samples were collected within the intertidal area for chemical analysis. One sample was collected from station C-8 for

bioassay analysis. Offshore samples (C-1 through C-5) were collected in both the Port Washington Narrows and Smith Cove at estimated elevations that ranged from –2 ft to –12.8 ft. MLLW. No chemicals detected in off-shore samples exceeded SQS.

In the intertidal area, sample location C-8 exceeded SQS for fluoranthene, chrysene, benzofluoranthenes, and Total HPAHs. No other samples exceeded applicable SQS levels. Table 2 (attached) shows results in comparison to SQS.

Sediment chemistry laboratory analysis results are provided in the Data Attachment.

BIOASSAY TESTING

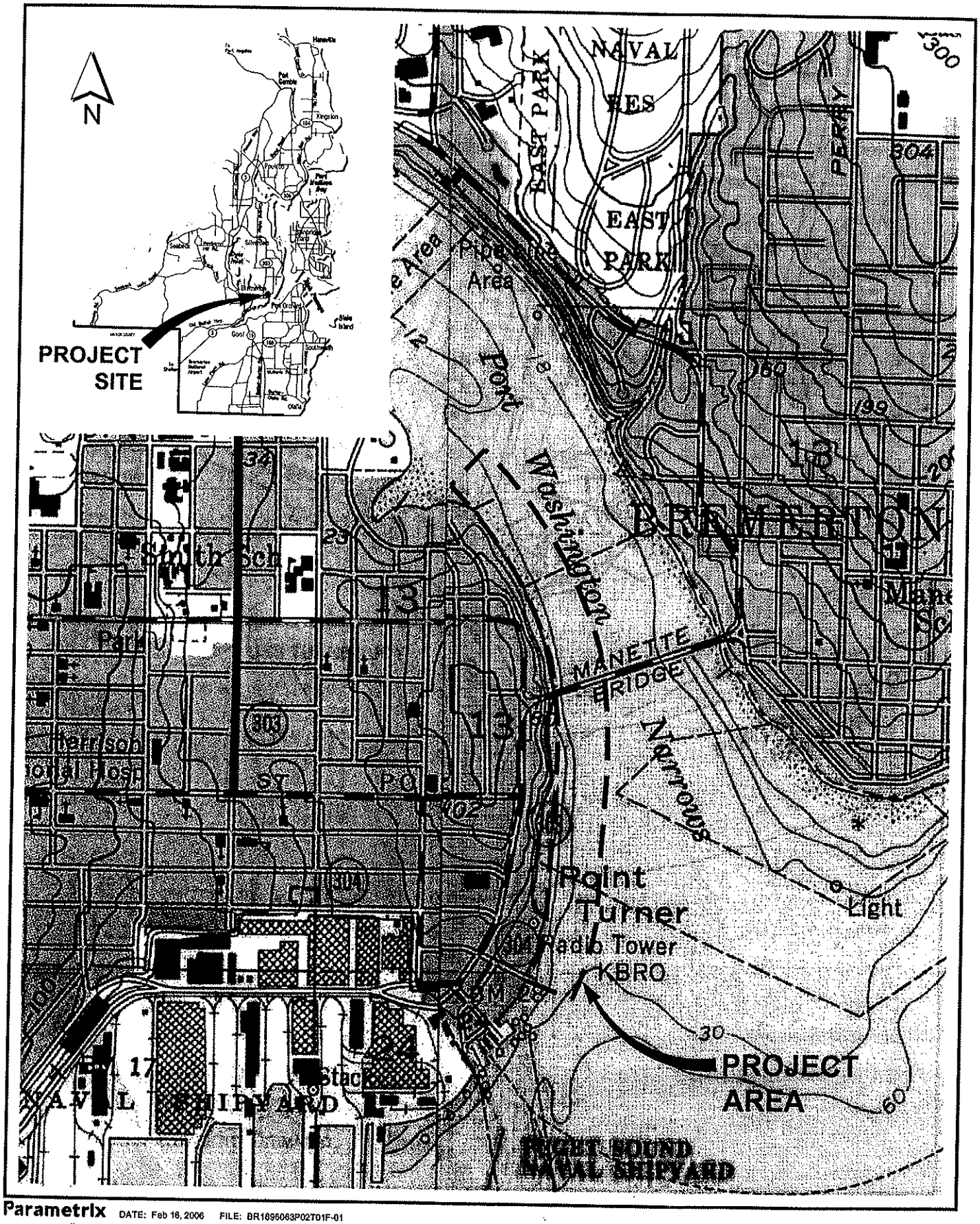
Based on chemistry sample results, no further action was necessary or warranted at any location except the surface sample from station C-8. Washington Administrative Code (WAC) 173-204-310 allows a confirmatory marine biological test (bioassay) to be performed (WAC 173-204-315) when one applicable chemical or human health criterion in WAC 173-204-320 through 173-204-340 is exceeded. Pursuant to this, an additional sample was collected from station C-8 and delivered on December 13, 2005 to Weston Environmental Laboratory in Port Gamble for bioassay analysis.

Bioassays were conducted pursuant to SMS requirements and consisted of the 48-hr larval Bay mussel (Mytilus galloprovincialis), the 10-day amphipod (*Eohaustoris estuaries*), and the 20-day juvenile polychaete worms (*Neanthes arenaceodentata*). Results were compared to both SQS and Cleanup Screening Levels. For all tests, there was no statistically significant difference between the test sediment from station C-8, and reference sediment. The confirmatory marine sediment bioassay tests demonstrate that sediment at the site pass SMS criteria. The complete bioassay report is provided in the Data Attachment.

CONCLUSIONS

Based on sampling results, sediments within both the sewer line corridor and adjacent to the former Chevron site meet applicable SMS requirements and no further sampling or cleanup action is necessary or warranted.

FIGURES



Parametrix DATE: Feb 16, 2006 FILE: BR1895063P02T01F-01

Figure 1
Pt Narrows Beach
Sediment Study
Project Vicinity

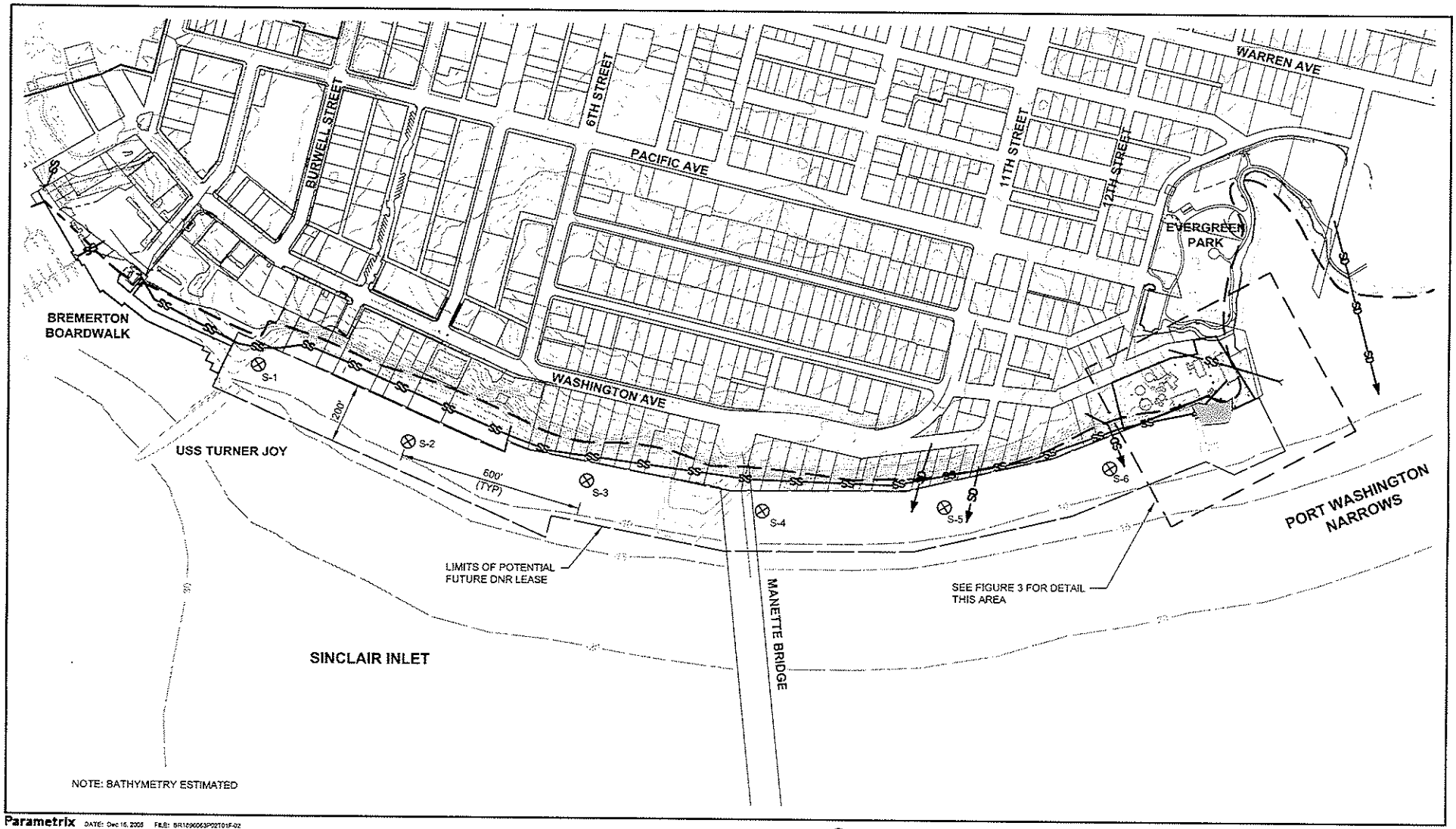
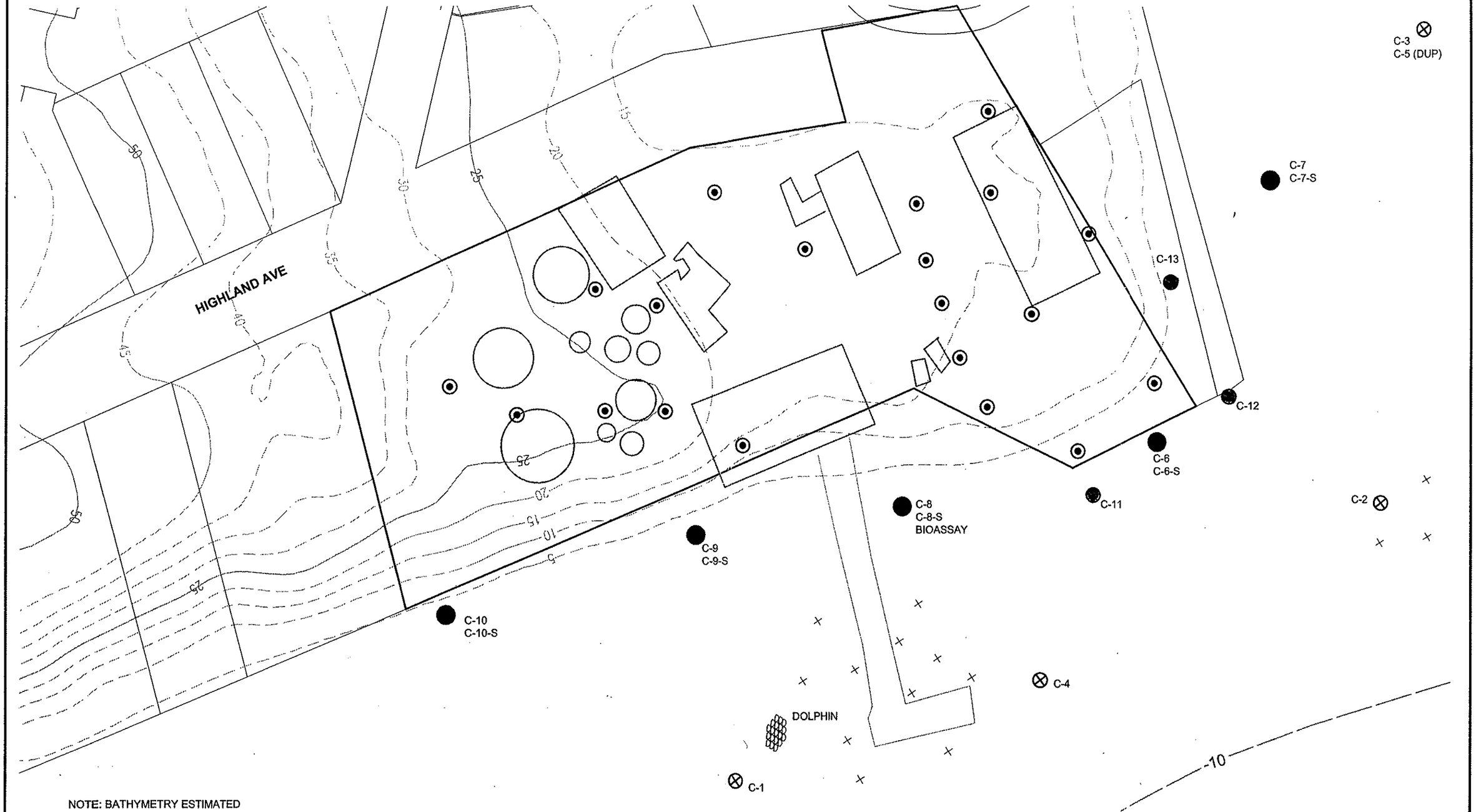


Figure 2
Pt Narrows Beach
Sewer Line Corridor
Sediment Sample Locations



Parametrix DATE: Feb 16, 2006 FILE: BR1696063P02T01F-02

N

0 50
SCALE IN FEET

- Surface Sediment Grab Sample Location (Dec. 2005)
- Intertidal Surface Grab and Subsurface (2-ft BGS) Sample (Dec. 2005)
- Monitoring Well
- × Failed Sampling Location Due to Large Cobble Substrate (Dec. 2005)
- Chevron Property

L & JAN 2006

Figure 3
Former Chevron Site,
Sample Locations



Parametrix DATE: Oct 19, 2006 FILE: BR1896063P02T01F-03

0 N

SCALE IN FEET

Figure 4
Pt Narrows Beach
Former Chevron Site
Sediment Sampling Locations

TABLE

Table 2. Summary of sediment sampling results, ormer Chevron Property and sewer line corridor, City of Bremerton, Washington. Samples collected December 2005 and January 2006.

ANALYTE	SQS	SIZM/ SCSL	UNITS	C-1	C-2	C-3	C-4	C-5	S-1	S-2	S-6	S-3	S-4	S-5	C-6	C-7	C-8	C-9	C-10	C-6-S	C-7-S	C-8-S	C-9-S	C-10-S	C-11	C-12	C-13
Total Solids			%	77	74.9	63.2	74.1	62.7	78.5	80.6	76.6	80.9	81	84.6											82.6	71.9	73.5
Preserved Total Solids			%	76.7	72.3	59.2	73.8	64.9	77.1	77.1	73.7	81.7	81.3	85.2													
Total Volatile Solids			%	1.23	2.15	2.86	1.59	3.13	1.6	1.75	1.26	1.81	1.42	1.38													
N-Ammonia			mg-N/kg	6.97	13	9.92	6.51	10.5	7.28	4.95	4.28	6.03	1.47	0.66													
Sulfide			mg/kg	0.91 UJ	6.5 J	580 J	17 J	500 J	11 J	4.9 J	1.3 UJ	29	1.5 U	1.5 U													
Total Organic Carbon			%	0.593	0.81	1.65	0.468	2.24	0.461	0.409	0.426	0.421	0.28	0.268	0.380	0.526	0.528	0.492	0.503	0.269	1.140	0.305	0.205	0.167	0.392	0.631	1.040
Antimony			mg/kg dw	6 UJ	6 UJ	7 UJ	7 UJ	8 UJ	6 UJ	6 UJ	6 UJ	10 UJ	6 UJ	6 UJ	6 UJ	6 UJ	10 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ			
Arsenic	57	93	mg/kg dw	6 U	6 U	7 U	7 U	8 U	6 U	6 U	6 U	10 U	6 U	6 U	6 U	6 U	10 U	6 U	6	6 U	6 U	6 U	6 U	6 U			
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3	0.5	0.3	0.5	0.3	0.2 U	0.2 U	0.6 U	0.3	0.2 U	0.3 U	0.2 U	0.6 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U			
Chromium	260	270	mg/kg dw	18.6	14.1	20.8	18.8	21.9	17.5	13.3	16.3	11 J	22.2 J	33.8 J	16.5 J	20 J	15 J	20.1 J	23.3 J	19.8 J	24.8 J	19.2 J	16.6 J	18.8 J			
Copper	390	390	mg/kg dw	15.4	15	19.6	18.7	19.8	16.3	8.6	15.1	9.9 J	29.1 J	32.7 J	15.3 J	11.6 J	15.8 J	19 J	20.8 J	17.2 J	10.7 J	19.5 J	14.8 J	16.1 J			
Lead	450	530	mg/kg dw	15	13	27	16	21	14	12	24	16	82	34	26	14	18	18	23	31	13	28	23	147			
Mercury	0.41	0.59	mg/kg dw	0.06 U	0.06 U	0.09	0.06 U	0.09	0.05 U	0.06	0.05 U	0.06 U	0.04	0.04 U	0.07 U	0.05 U	0.21	0.05 U	0.05 U	0.04 U	0.21	0.06	0.05 U	0.05 U			
Nickel			mg/kg dw	18	17	20	20	22	20	13	16	13	24	26	18	25	16	24	24	22	21	22	17	22			
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.3 U	0.4 U	0.8 U	0.4 U	0.4	0.4 U	0.4 U	0.9 U	0.3 U	0.4 U	0.3 U	0.3 U	0.4 U	0.4 U	0.3 U			
Zinc	410	960	mg/kg dw	45.7	40.1	49.8	47.4	48.3	36	27.1	46.4	38	65.1	120	57.6	51.2	44	49.5	63.1	72.4	37.2	60	45.7	111			
Naphthalene	99	170	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	3.91 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	5.17	7.06 U	1.75 U	4.26 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Acenaphthylene	66	66	mg/kg oc	3.37 U	1.85 J	2.06	2.99 J	1.83	4.34 U	4.65 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	7.01	4.07 U	3.78 U	7.06 U	1.23 J	3.93 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Acenaphthene	16	57	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Fluorene	23	79	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.94	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Phenanthrene	100	480	mg/kg oc	3.37 U	7.41	7.27	4.49	8.93	3.47 J	15.65	4.46 U	6.89	3.93 J	7.46 U	3.42 J	3.61 J	16.86	11.38	7.36	7.06 U	2.28	5.90 J	5.85 J	9.58 J	4.85 U	4.28	1.92
Anthracene	220	1200	mg/kg oc	3.37 U	2.35 J	3.39	4.27 U	5.80	4.34 U	2.93 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	6.44	4.07 U	3.78 U	7.06 U	2.46	7.21	4.68 J	11.38 U	4.85 U	3.01 U	1.92 U
Total LPAHs	370	780	mg/kg oc	3.37 U	11.60	12.73	7.48	17.50	3.47	27.14	4.46 U	6.89	3.93	7.46 U	3.42	3.61	30.30	11.38	12.52	3.05 U	5.96	21.31	10.54	9.58	4.85 U	4.28	1.92
2-Methylnaphthalene	38	64	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	5.90 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Fluoranthene	160	1200	mg/kg oc	2.87 J	13.58	29.70	14.96	25.45	8.68	24.45	3.99 J	14.01	5.71 J	7.46 U	28.95	7.03	587.12	9.15	9.15	7.06 J	13.16	52.46	21.46	59.88	5.10	14.74	6.15
Pyrene	1000	1400	mg/kg oc	2.87 J	11.23	23.03	12.39	21.43	5.64	19.80	2.58 J	9.98	4.29 J	7.46 U	13.16	5.13	208.33	7.32	4.77	9.67	11.40	42.62	15.61	31.14	4.85 U	12.52	5.77
Benzo(a)anthracene	110	270	mg/kg oc	3.37 U	5.43	10.91	10.68	8.93	2.82 J	9.05	4.46 U	5.70	6.79 U	7.46 U	5.00 J	2.66 J	54.92	3.86 J	2.78 J	4.46 J	5.44	19.67	8.78 J	7.78 J	4.85 U	6.66	2.69
Chrysene	110	460	mg/kg oc	2.53 J	8.64	15.76	12.39	12.05	3.69 J	11.00	3.05 J	6.89	3.57 J	7.46 U	7.89 J	3.80	**136.36**	4.07	3.18 J	7.06 U	6.58	21.64	11.71	16.77	6.38	8.08	3.75
Benzo(b)fluoranthene			*mg/kg oc*	*3.37 U*	*7.41*	*13.94*	*15.60*	*10.71*	*5.21*	*19.07*	*2.35 J*	*5.23*	*6.79 U*	*7.46 U*	*6.84*	*3.80*	*136.36*	*3.86 J*	*3.78*	*5.20 J*	*6.40*	*23.61*	*15.61*	*14.97*	*4.85 U*	*9.19*	*3.56*
Benzo(k)fluoranthene			*mg/kg oc*	*3.37 U*	*6.42*	*12.73*	*12.39*	*12.50*	*3.04 J*	*12.96*	*3.52 J*	*5.94*	*6.79 U*	*7.46 U*	*5.26*	*2.09 J*	*125.00*	*4.07*	*2.39 J*	*3.72 J*	*4.74*	*14.43*	*12.68*	*7.19 J*	*4.85 U*	*6.34*	*2.69*
Benzofluoranthenes	230	450	mg/kg oc	3.37 U	13.83	26.67	27.99	23.21	8.24	32.03	5.87	11.16	6.79 U	7.46 U	12.11	5.89	**255.68**	7.93	6.16	8.92	11.14	38.03	28.29	22.16	4.85 U	*15.53*	6.25
Benzo(a)pyrene	99	210	mg/kg oc	3.37 U	6.30	12.12	15.17	10.71	3.47 J	14.91	4.46 U	5.94	6.79 U	7.46 U	3.95 J	3.23 J	54.92	4.88	2.98 J	5.95 J	6.58	23.28	9.27	7.19 J	4.85 U	7.61	3.17
Indeno(1,2,3-cd)pyrene	34	88	mg/kg oc	3.37 U	1.60 J	2.55	3.63	2.46	4.34 U	3.67 J	4.46 U	3.33 J	6.79 U	7.46 U	5.26 U	3.80 U	16.29	4.07 U	3.78 U	7.06 U	1.58 J	5.25 J	9.27 U	11.38 U	4.85 U	3.80	1.92 U
Dibenz(a,h)anthracene	12	33	mg/kg oc	3.37 U	2.47 U	0.91 J	4.27 U	0.71 J	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	4.36	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Benzo(g,h,i)perylene	31	78	mg/kg oc	3.37 U	1.73 J	2.61	3.85 J	2.46	4.34 U	3.16 J	4.46 U	4.04 J	6.79 U	7.46 U	5.26 U	3.80 U	13.26	4.07 U	3.78 U	7.06 U	1.67 J	6.56	9.27 U	11.38 U	4.85 U	4.28	2.02
Total HPAHs	960	5300	mg/kg oc	8.26	62.35	124.24	101.07	107.41	32.54	118.09	15.49	61.05	13.57	7.46 U	71.05	27.76	**1331.25**	37.20	29.03	36.06	57.54	209.51	95.12	144.91	11.48	73.22	29.81
1,2-Dichlorobenzene	2.3	2.3	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
1,4-Dichlorobenzene	3.1	9	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Hexachlorobenzene	0.38	2.3	mg/kg oc	0.17 U	0.12 U	0.06 U	0.21 U	0.05 U	0.22 U	0.23 U	0.23 U	0.23 U	0.35 U	0.36 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Dimethylphthalate	53	53	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Diethylphthalate	61	110	mg/kg oc	3.37 U	2.35 J	0.91 J	4.27 U	0.45 J	4.34 U	3.91 J	2.82 J	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Di-n-butylphthalate	220	1700	mg/kg oc	3.20 J	2.96	2.12	4.49	1.16	5.21	5.38	5.63	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.81	1.75 U	6.23 U	9.27 U	11.38 U			
Butylbenzylphthalate	4.9	64	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Bis(2-ethylhexyl)phthalate	47	78	mg/kg oc	3.37 UB	3.46 UB	4.61 JB	4.27 UB	3.39 JB	6.07 UB	8.56 JB	4.46 UB	3.33 J	4.64 J	7.46 U	3.42 J	3.42 J	3.79 U	4.07 U	10.34	9.29	1.40 J	13.11	7.80 J	9.58 J			
Di-n-octylphthalate	58	4500	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	35.79	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Dibenzofuran	15	58	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Hexachlorobutadiene	3.9	6.2	mg/kg oc	0.17 U	0.12 U	0.06 U	0.21 U	0.05 U	0.22 U	0.23 U	0.23 U	0.23 U	0.35 U	0.36 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
N-Nitrosodiphenylamine	11	11	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Phenol	420	1200	ug/kg dw	72	340	19 U	16 J	20 U	20 U	14 J	22	38	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	130			
2-Methylphenol	63	63	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	17 J	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
4-Methylphenol	670	670	ug/kg dw	20 U	12 J	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
2,4-Dimethylphenol	29	29	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
Pentachlorophenol	360	690	ug/kg dw	99 U	99 U	96 U	97 U	98 U	98 U	98 U	97 U	95 U	95 U	99 U	98 U	98 U	97 U	99 U	95 U	97 U	98 U	96 U	96 U	96 U			
Benzyl Alcohol	57	73	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
Benzoic Acid	650	650	ug/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	190 U	190 U	190 U	200 U	200 U	200 U	200 U	200 U	190 U	190 U	200 U	190 U	190 U	190 U			
gamma-BHC (Lindane)			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--			
Heptachlor			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--			
Aldrin			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--			
Dieldrin			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--			
4,4'-DDE			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--			
4,4'-DDD			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--			
4,4'-DDT			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--			
gamma Chlordane			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--			
alpha Chlordane			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1016			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1221			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1232			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1242			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1248			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1254			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Aroclor 1260			mg/kg oc	3.37 U	2.47 U	4.24	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Total PCBs	12	65	mg/kg oc	3.37 U	2.47 U	4.24	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--			
Diesel			mg/kg dw	6 U	25	27	20	40	--	--	--	7.5	6 U	6 U	11	8.1	6.7	6.2 U	6 U	29	7.7	11	5.9 U	5.9 U			
Motor Oil			mg/kg dw	17	140	110	50	160	--	--	--	26	12 U	12 U	55	29	47	30	16	78	27	68	12 U	12 U			

111 Exceeds SQS

111 Not detected but TOC normalized result exceeds SQS.

Parametrix ENGINEERING • PLANNING • ENVIRONMENTAL SCIENCES

TECHNICAL MEMORANDUM

Date:	January 31, 2005
To:	Project File
From:	Stuart Currie
Subject:	Quality Assurance/Quality Control Review of Laboratory Data for the November 2005 and January 2006 Bremerton Sediment Sampling
cc:	Phil Struck Lara Linde
Project Number:	255-1896-063 (02/02)
Project Name:	Pt. Narrows Beach Sewer Replacement

This memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for sediment samples collected on November 21 and 29, 2005, and January 9, 2006. Twenty-four (24) surface grab sediment samples were collected and submitted to Analytical Resources, Inc. (ARI) in Tukwila, Washington for analysis for various Sediment Management Standards (SMS) parameters.

Final laboratory data (ARI Reports IU01, IU50, IV18, IV58, and IX82) were submitted to Parametrix via hardcopy Tier II data reports. All data were reviewed using laboratory quality criteria specified in the ARI (2006) Quality Assurance Plan (QAP)[1] and qualifiers were applied where judged appropriate. This review included evaluation of the following (where applicable):

- Preparation and analytical holding times;
- Laboratory method blanks;
- Laboratory control samples (LCS) and LCS duplicates (LCSD)[2];
- Laboratory replicates;
- Matrix spike (MS) and MS duplicates (MSD); and
- Surrogate compound recoveries.

All samples were analyzed within the required holding times and the appropriate methods were used. Analytical accuracy and precision were determined to be generally acceptable based on this review. Specific instances of out of control laboratory QC results were identified and data qualifiers were assigned based on results that exceeded laboratory QC criteria. Table 1 summarizes all qualified data. No data were rejected and all data reported should be considered valid, representative of the samples collected, and acceptable for further use.

[1] ARI. 2006. Quality Assurance Plan. Revision 12-006. Prepared by Analytical Resources, Inc., Tukwila, WA. January 16, 2006.
[2] LCS/LCSD may also be referred to as Blank Spike/Blank Spike Duplicate.

Table 1. Qualified Bremerton Sediment Data

Sample ID	Analyte	Result	Unit	Qualifier	Reason
C-1	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-10	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-10-S	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-2	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-3	Antimony	7	mg/kg dw	UJ	MS recovery was <75%.
C-4	Antimony	7	mg/kg dw	UJ	MS recovery was <75%.
C-5	Antimony	8	mg/kg dw	UJ	MS recovery was <75%.
C-6	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-6-S	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-7	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-7-S	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-8	Antimony	10	mg/kg dw	UJ	MS recovery was <75%.
C-8-S	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-9	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-9-S	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
S-1	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
S-2	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
S-3	Antimony	10	mg/kg dw	UJ	MS recovery was <75%.
S-4	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
S-5	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
S-6	Antimony	6	mg/kg dw	UJ	MS recovery was <75%.
C-1	bis(2-Ethylhexyl)phthalate	20	ug/kg dw	UB	Analyte detected in MB @ >MRL; sample result was ≤MRL.
C-2	bis(2-Ethylhexyl)phthalate	28	ug/kg dw	UB	Analyte detected in MB @ >MRL; sample result was ≤MB conc.
C-3	bis(2-Ethylhexyl)phthalate	76	ug/kg dw	JB	Analyte detected in MB @ >MRL; sample result was ≤5X MB conc.
C-4	bis(2-Ethylhexyl)phthalate	20	ug/kg dw	UB	Analyte detected in MB @ >MRL; sample result was ≤MRL.
C-5	bis(2-Ethylhexyl)phthalate	76	ug/kg dw	JB	Analyte detected in MB @ >MRL; sample result was ≤5X MB conc.
S-1	bis(2-Ethylhexyl)phthalate	28	ug/kg dw	UB	Analyte detected in MB @ >MRL; sample result was ≤MB conc.
S-2	bis(2-Ethylhexyl)phthalate	35	ug/kg dw	JB	Analyte detected in MB @ >MRL; sample result was ≤5X MB conc.
S-6	bis(2-Ethylhexyl)phthalate	19	ug/kg dw	UB	Analyte detected in MB @ >MRL; sample result was ≤MRL.
C-10	Chromium	23.3	mg/kg dw	J	MS recovery was >125%.
C-10-S	Chromium	18.8	mg/kg dw	J	MS recovery was >125%.
C-6	Chromium	16.5	mg/kg dw	J	MS recovery was >125%.
C-6-S	Chromium	19.8	mg/kg dw	J	MS recovery was >125%.
C-7	Chromium	20	mg/kg dw	J	MS recovery was >125%.
C-7-S	Chromium	24.8	mg/kg dw	J	MS recovery was >125%.
C-8	Chromium	15	mg/kg dw	J	MS recovery was >125%.
C-8-S	Chromium	19.2	mg/kg dw	J	MS recovery was >125%.
C-9	Chromium	20.1	mg/kg dw	J	MS recovery was >125%.
C-9-S	Chromium	16.6	mg/kg dw	J	MS recovery was >125%.

Table 1. Qualified Bremerton Sediment Data

Sample ID	Analyte	Result	Unit	Qualifier	Reason
S-3	Chromium	11	mg/kg dw	J	MS recovery was >125%.
S-4	Chromium	22.2	mg/kg dw	J	MS recovery was >125%.
S-5	Chromium	33.8	mg/kg dw	J	MS recovery was >125%.
C-10	Copper	20.8	mg/kg dw	J	Duplicate RPD was >20%.
C-10-S	Copper	16.1	mg/kg dw	J	Duplicate RPD was >20%.
C-6	Copper	15.3	mg/kg dw	J	Duplicate RPD was >20%.
C-6-S	Copper	17.2	mg/kg dw	J	Duplicate RPD was >20%.
C-7	Copper	11.6	mg/kg dw	J	Duplicate RPD was >20%.
C-7-S	Copper	10.7	mg/kg dw	J	Duplicate RPD was >20%.
C-8	Copper	15.8	mg/kg dw	J	Duplicate RPD was >20%.
C-8-S	Copper	19.5	mg/kg dw	J	Duplicate RPD was >20%.
C-9	Copper	19.0	mg/kg dw	J	Duplicate RPD was >20%.
C-9-S	Copper	14.8	mg/kg dw	J	Duplicate RPD was >20%.
S-3	Copper	9.9	mg/kg dw	J	Duplicate RPD was >20%.
S-4	Copper	29.1	mg/kg dw	J	Duplicate RPD was >20%.
S-5	Copper	32.7	mg/kg dw	J	Duplicate RPD was >20%.
C-1	Sulfides	0.91	mg/kg	UJ	Duplicate RPD was >30%.
C-2	Sulfides	6.5	mg/kg	J	Duplicate RPD was >30%.
C-3	Sulfides	580	mg/kg	J	Duplicate RPD was >30%.
C-4	Sulfides	17	mg/kg	J	Duplicate RPD was >30%.
C-5	Sulfides	500	mg/kg	J	Duplicate RPD was >30%.
S-1	Sulfides	11	mg/kg	J	Duplicate RPD was >30%.
S-2	Sulfides	4.9	mg/kg	J	Duplicate RPD was >30%.
S-6	Sulfides	1.3	mg/kg	UJ	Duplicate RPD was >30%.

J Analyte was detected; the reported concentration should be considered an estimate
JB Analyte was detected; the reported concentration should be considered an estimate based on blank contamination
MB Method blank
MRL Method reporting limit
UB Analyte should be considered not detected at the reported concentration based on blank contamination
UJ Analyte was not detected and the reporting limit should be considered an estimate

APPENDIX F

Field Forms

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number	Boring/Well Number #
Project Name	Date Completed
Location	Total Depth of Boring
Coordinates	Initial Water Level
Drilling Method	Static Water Level
Sampling Method	Logged by
Ground Elevation	Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					5 10 15 20 25 30 35					

FIELD PARAMETERS
SOIL SAMPLING

Sample #: _____

Project Number: _____

Project Name: _____

Project Address: _____

Client Name: _____

Sample Location: _____

Date: _____

Sampled By: _____

Depth of Sample (feet): _____

Date/Time Sampled: _____

Air temperature: _____

Weather Conditions: _____

PID Measurements (ppm): _____

Sample Number: _____

Sampled By: _____

Laboratory: _____

Chain-of-Custody (yes/no): _____

Date Sent to Lab: _____

Shipment Method: _____

Remarks/Notes:

Signature: _____

Chain of Custody Record

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Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
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Client	Project Manager	Date	Chain of Custody Number 22853
Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page _____ of _____
City / State / Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)
Project Name and Location (State)	Carrier/Waybill Number		Special Instructions/ Conditions of Receipt
Contract/Purchase Order/Quote No.	Matrix: Air, Aqueous, Sed., Soil	Containers & Preservatives: Unpres., H2SO4, HNO3, HCl, NaOH, ZnAc/NaOH	

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH													

Cooler
☐ Yes ☐ No Cooler Temp:_____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal ☐ Disposal By Lab ☐ Return To Client ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days)
☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

APPENDIX G

Standard Operating Procedures

APPENDIX G
STANDARD OPERATING PROCEDURES

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STANDARD OPERATING PROCEDURE
EXPLORATORY SOIL BORING LOG PREPARATION

OBJECTIVE

The objective of this standard operating procedure (SOP) is to describe a method for the preparation of an Exploratory Soil Boring Log. This log documents the subsurface information at the time of drilling. The level of detail required for soil classification will be based on project-specific considerations; however, the boring log procedures and required information described in the following sections will be the minimum. A blank boring log form is provided in Appendix B.

The exploratory borings will be installed by a subcontractor using a drill or push-probe rig. Soil sampling intervals will be based on project-specific considerations. Soil samples will be collected using a split-spoon (SPT) or push-probe sampler.

MATERIALS

- Exploratory soil boring log
- USCS visual-manual soil identification flow chart
- Hand lens (optional)
- Health and safety equipment

PROCEDURE

During drilling, the site geologist will log all pertinent information on a standard soil boring log form. Two general types of information will be collected:

1. Stratigraphic Information: A continuous log of subsurface materials encountered during drilling will be recorded. The site geologist will classify the soil in accordance with the Unified Soil Classification System (USCS), and note all significant stratigraphic contacts and geologic features. The site geologist will also note the color, plasticity, moisture content, density/compaction, and other project-specific information.
2. Hydrogeologic Information: A continuous log of soil moisture and/or saturated conditions will be recorded during drilling. The primary purpose is to obtain information that is only available during drilling regarding zones of saturation. In addition, a static water level will be collected at the beginning and end of each working day.

The exploratory soil boring log will include, at a minimum, the following items:

- Project name and number
- Boring or well number
- Boring location
- Date and time started/finished
- Name of drilling contractor
- Geologist's name
- Ground surface elevation (estimated)
- Drilling method and equipment

- Hole diameter
- Casing size
- Soil sampling method
- Depth of soil sample below grade
- Soil sample interval
- Soil sample type
- Percentage of soil sample recovered
- Geologic observations (soil description and classification)
- Graphic soil symbols
- Graphic representation of stratigraphic contracts
- Blow counts/advance rate
- Total depth of boring
- Headspace reading, if applicable
- Observations on groundwater: Degree of saturation, drill stem wet or dry, etc.
- Static water level, time of observation, total depth of boring and drive casing at time of observation.
- Well installation data (reported on separate Monitoring Well Field Installation Log)
- Borehole abandonment information, if applicable

NOTES

All drilling activities and other pertinent site information will be recorded in the field notebook. Field notes will include, at a minimum, the following:

- Project name and number
- Date
- Weather conditions
- Personnel on-site
- Any problems or corrective actions
- Any other information that will allow reconstruction of pertinent field activities without relying on personal memory

Soil samples will be retained for verification purposes until the boring log is finalized. If sampling for chemical analysis is required, sample collection and handling procedures will be determined prior to drilling activities. Drilling and logging activities will be performed under appropriate health and safety procedures.

STANDARD OPERATING PROCEDURE
SOIL SAMPLING

OBJECTIVES

The objective of this document is to describe procedures to be followed during soil sample collection. A blank soil sampling field form is provided in Appendix B.

MATERIALS

- Field sampling forms
- QAPP
- Health and safety equipment
- Sampling tools (spoons, bowls, sample containers, paper towels, etc.)

PROCEDURES

Soil Probe Sampling

A soil probe rig such as a Geoprobe, Strata-probe, or equivalent will be used to collect subsurface soil samples. This technique uses direct-push technology to drive a 2-inch diameter steel core barrel to pre-selected depths for collection of soil samples.

Soil samples will be collected using 1-inch diameter probe rods with a probe-driven soil sampling device attached to the end that retrieves discrete soil cores approximately two inches in diameter and four feet in length. Different samplers will be available to match subsurface soil conditions. Soil samples will be logged by a qualified geologist using the Unified Soil Classification System (USCS).

Soil samples will be collected using a stainless steel sampler. The sampler remains sealed by a piston tip at the end of the sample tube while it is pushed or driven to the desired depth. A piston stop-pin at the opposite end of the sampler is removed by means of extension rods inserted into the probe rods, and the sampler is driven to depth. This enables the piston to retract into the sample tube while the sample is collected.

Samples will be collected in disposable acetate sleeves. After sample collection, the probe rods will be retracted from the hole and the sample will be extruded from the sampler while it remained inside the acetate sleeve. The sleeves and end caps preserve bedding characteristics and soil moisture can be cut into sections to produce samples from discrete intervals, or cut length-wise to produce composite samples.

The soil sample will be placed directly into labeled sampling containers provided by the analytical laboratory. Soil samples will be collected using dedicated stainless steel or polyethylene spoons. Samples for volatile organic compounds (VOCs) or gasoline range organics (GRO) analyses a will be placed directly into labeled sample containers. These samples will be field preserved according to the procedure for EPA Method 5035A provided below. Samples for non-volatile analyses will be thoroughly homogenized in a dedicated stainless steel, polyethylene, or aluminum bowl prior to being placed in the appropriate sample containers. Additional soil will be placed in a self-sealing bag for in-field headspace analysis.

Surface Soil Sampling

Soil samples will be collected from shallow depths (less than 2 feet) using decontaminated hand tools such as a post-hole digger or shovel to reach the desired sample depth. Once the sample depth is reached, soil sample collection will be conducted as in Soil Probe Sampling above.

Test Pit Sampling

Soil samples will be collected from the base and sidewalls of excavated test pits. Specific sampling depths will be selected by the field geologist based on field conditions. Soil samples will be collected from the centre of the backhoe bucket at a depth at least 6-inches. Soil sample collection will be conducted as in Soil Probe Sampling. Test pits will be logged in a manner similar to that described in the SOP for Soil Boring Log Preparation.

Soil Boring Sampling

Soil samples will be collected from the soil borings using a decontaminated 2.5-inch I.D. split-spoon (SPT) sampler. Soil samples will generally be collected at 2.5 feet intervals to the planned depth of the borings. Once the sampling depth is reached for each sample, the SPT sampler will be driven 1 foot into the undisturbed soil at the base of the boring. The sampler will then be retrieved and opened for sample logging and field screening. Selected soil samples will be placed into the appropriate sample containers using the same methods as in Soil Probe Sampling above.

Samples for Volatiles Analysis using EPA Method 5035A

All soil samples for VOCs or GRO analysis will be collected using EPA Method 5035A. This method may involve field preservation using pre-weighed 40-mL vials that contain a pre-measured quantity of preservative. An alternate method is to use a proprietary disposable sample coring device such as an EnCore™ sampler. When using a disposable coring sampler, the sample is collected into the disposable coring container using the proprietary sampling tool, capped tightly, and returned to the laboratory within 48 hours for preservation and analysis.

For the field preservation method, a prescribed mass of soil is collected using a hand-held coring device and is placed directly into the sample vial with as little disturbance as possible. Soil mass and preservative volume requirements are laboratory specific. Typically, 10 grams of soil are required and are placed into vials pre-preserved with 10-mL of methanol. The pre-preserved vials are weighed in the laboratory and the weights are recorded on the sample label. Specific field procedures are as follows:

1. Calibrate the field balance and reweigh the laboratory-supplied vials. The field balance should be sensitive to +/- 0.1 grams. If the difference between the laboratory tare weight and the field weight is > 0.2 grams, do not use the vial.
2. Prepare a methanol blank by leaving a blank methanol vial open during collection of a soil sample to check for atmospheric VOCs. When sample collection is complete, cap the vial and ship it to the lab for analysis along with the other samples. Prepare at least one methanol blank per sample cooler.
3. Collect the soil sample using a pre-calibrated syringe. Several syringe types are currently commercially available. Collect the sample from undisturbed soil on a freshly-exposed surface. If the soil type is such that the syringe will not penetrate, use a dedicated stainless steel spoon to collect the sample. Extrude (or place) the sample gently into the vial. Reweigh the vial; the target soil weight is 5 +\- 0.5 grams. The desired ratio of grams soil to mL methanol is 1:1 with a +\- 25 % tolerance. In all cases, the soil sample must be completely immersed in methanol. Collect as many vials as required by the laboratory (typically one to two).
4. Record sample information on the sample label applied by the laboratory. Do not place an additional label on the vial as this will alter the tare weight and affect the analytical results.
5. For each sample, collect a full 40 mL-vial for moisture content analysis. Fill the vial so no headspace is present.

Sample Handling

Samples for chemical analysis will be stored at 4 (+\- 2) degrees C, and shipped or hand carried under chain-of-custody procedures to the analytical laboratory.

Headspace Measurements

During sampling operations, a field photoionization detector (PID) will be used to measure for the presence of VOCs vapors in the soil. For each sample, approximately 200 to 300 grams of soil will be collected and placed in a self-sealing bag. After approximately 10 minutes, during which the bag will be warmed in the sun and shaken, the intake tip of the PID will be inserted through the seal and the highest concentration of VOCs measured will be recorded on the field form. The PID will be calibrated to 100 ppm isobutylene at the beginning of the field day.

Decontamination

All drilling tools, non-disposable soil sampling equipment, and excavator buckets will be decontaminated prior to commencing sampling activities, between boring or test pit locations, and upon demobilization. Equipment will be cleaned using the method described in the Decontamination Standard Operating Procedure.

NOTES

All soil sampling activities and other pertinent site information will be recorded on filed sampling forms (Appendix B). Field notes will include, at a minimum, the following:

- Project name and number
- Date
- Weather conditions
- Personnel on-site
- Sample number, depth, and time, soil classification (USCS), analyses to be performed, and number and types of sample containers
- Any other information that will allow reconstruction of pertinent field activities without relying on personal memory

STANDARD OPERATING PROCEDURE
STATIC WATER LEVEL MEASUREMENT

OBJECTIVE

The objective of this standard operating procedure is to describe a method for collecting a static water level measurement. Measurements will be made from groundwater monitoring wells accurate to the nearest 0.01-foot from a standard reference point on the well casing.

MATERIALS

The following materials are required for the collection of static water level measurements:

- Well keys
- Electronic water-level indicator
- Weighted steel tape
- Paper towels
- Deionized water
- Health and safety equipment

PROCEDURE

The following steps will be taken during the collection of a static water level measurements:

1. Unlock and open well. Verify well integrity.
2. Lower electronic water level indicator to the water surface.
3. When the sounder indicates that the indicator probe has contacted water, raise and lower the probe to verify exact point at which measurement should be taken.
4. Measure the depth to water, to the nearest 0.01-foot, from the reference point (notch or mark on well casing).
5. Record the measurement, to the nearest 0.01-foot, in the field notebook or on the Groundwater Sampling Data Sheet.
6. Measure total well depth to the nearest 0.1-foot using weighted steel tape.
7. Replace well cap and close and lock protective well casing.

DECONTAMINATION

The following steps will be taken during decontamination of down-hole measuring equipment:

1. While winding the equipment up from the well, thoroughly rinse with deionized water.
2. Remove excess water from the equipment with clean paper towels prior to rewinding equipment on the reel.

Notes: Measurements will be made under appropriate health and safety procedures.

STANDARD OPERATING PROCEDURE
GROUNDWATER SAMPLING

OBJECTIVE

The objective of this document is to describe methods for the collection of groundwater samples from monitoring wells. Groundwater sample collection procedures include equipment cleaning, water elevation measurements, well purging, and sampling. A groundwater sampling field form is provided in Appendix B.

MATERIALS

The following materials will be used for collection of groundwater samples:

- Sample containers
- Multi-parameters meter with flow-through cell
- Electronic water-level indicator
- Purging and sampling pump
- Filters for dissolved metals

Prior to the sampling event, all non-disposable equipment which will be placed in the well or come in contact with the groundwater sample will be decontaminated using the procedure described in the section titled "Decontamination Standard Operating Procedure."

PROCEDURES

1. Prior to purging a monitoring well, measure the depth to water using the method described in the "Static Water Level Measurement Standard Operating Procedure."
2. Purging and sampling will be performed using a pump. Typically, the same pump used for purging is used for sampling. Groundwater samples for volatiles analysis will be collected using a decontaminated, positive-displacement down-hole pump. Non-volatiles samples may be collected using a peristaltic pump. An alternative is to purge using a peristaltic pump and collect volatiles samples using a check-valve type inertial pump or a bailer. For purging, lower the pump or sample tubing to the desired depth in the well. Purge the well by pumping at a flow rate of ≤ 0.5 liters per minute. Pumping rates should be adjusted so that groundwater surface drawdown stabilizes with a maximum total drawdown of less than 0.3 feet. A stable groundwater surface elevation indicates that fresh groundwater is being obtained directly from the aquifer. Check drawdown with electronic water-level indicator periodically. Record all measurements. The volume of water to be purged shall be determined by stabilization of measured parameters. Stabilization shall be considered complete when the following stabilization criteria is met over three measurement intervals of at least 3 minutes duration:

Purging Stabilization Criteria	
Parameter	Stabilization Criteria
pH	+/- 0.1 unit
Specific conductance	+\- 3%

Oxidation-reduction potential (ORP)	+\- 10 millivolts
Turbidity	+\- 10% (when greater that 10 NTUs)
Dissolved Oxygen	+\- 0.3 milligrams per liter

3. After purging is complete, begin sample collection at the purging flow rate. Ensure that the pumping rate does not exceed 0.5 liters per minute to minimize turbulence and aeration of the sample. If a bailer is used for volatiles sampling, it will be lowered gently into the well to prevent off-gassing.
4. Fill sample containers for volatile samples so that no headspace exists. After capping, invert the container and tap to verify that no air bubbles are present. For parameters other than volatile organic compounds, fill the sample container to within 2- to 5-cm of the top, in a manner to minimize aeration. When sampling for dissolved metals, filter the sample using an in-line disposable 0.45µ filter.
5. Label all sample containers at the time of sampling. Sample labels will include the following information:

   - Project name and number
   - Sample station
   - Sample number
   - Date and time of sample collection
   - Sampler's initials
   - Analyses requested

6. Store all samples at approximately 4°C for transport to the laboratory under chain-of-custody procedures. Samples that will be analyzed for volatile organic compounds will not be placed in direct contact with ice. Upon completion of sampling, the well will be locked and secured.

DECONTAMINATION

During field sampling, all equipment surfaces placed in well or in contact with groundwater samples will be cleaned before purging and sampling the next well. Plastic sheeting will be placed around the well-head to keep work area clean. The equipment will be cleaned using the method described in the "Decontamination Standard Operating Procedure."

STANDARD OPERATING PROCEDURE
DECONTAMINATION

OBJECTIVE

The objective of this document is to describe decontamination procedures to be followed during the performance of field activities. Dedicated, disposable sampling equipment (such as spoons, bowls, and tubing) will not require decontamination

MATERIALS

The following materials are required for performance of equipment decontamination:

- Scrub brush
- Alconox or equivalent soap
- Deionized water
- Water tubs
- Health and safety equipment

PROCEDURES

The following steps will be taken during decontamination of equipment and materials, which may affect sample quality:

1. Scrub with non-phosphate detergent
2. Rinse with tap water
3. Rinse thoroughly with deionized water
4. Air dry

Down-hole sampling pumps will be decontaminated using the above procedures and clean tubs or buckets that allow the pump to be immersed in the decontamination fluid. The pump will be operated for approximately 1 minute in each decontamination solution.

Notes:

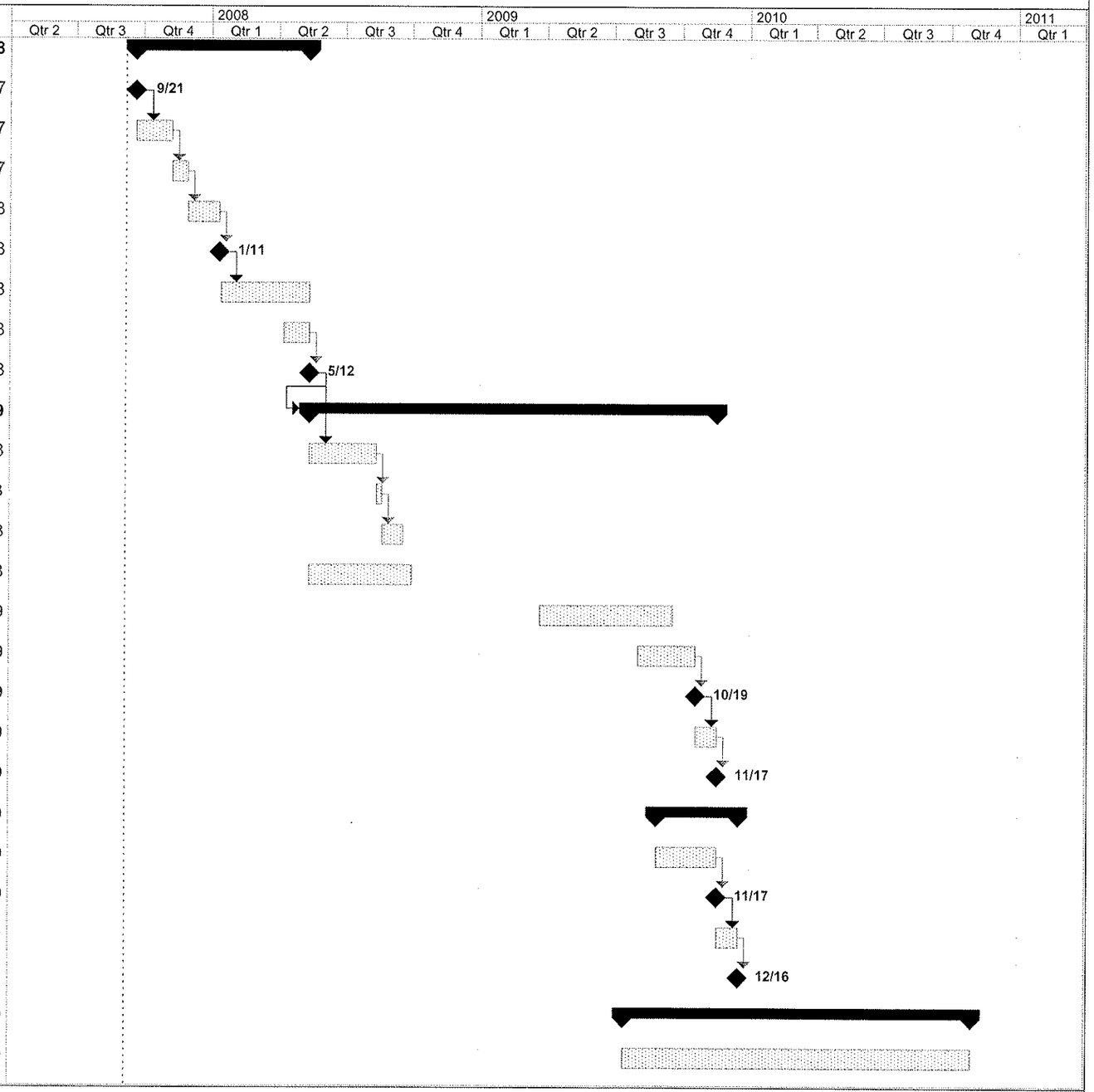
- Decontamination wastes will be disposed of according to project-specific considerations.
- Decontamination will be performed under Level D Health and Safety Procedures. Site-specific conditions may require additional health and safety precautions.

APPENDIX H

Project Schedule

FORMER CHEVRON PROPERTY RI/FS AND INTERIM ACTIONS SCHEDULE

ID	Task Name	Duration	Start	Finish
1	**RI/FS and Pilot Test**	**167 days**	**Fri 9/21/07**	**Mon 5/12/08**
2	Notice to Proceed (Council Approval)	0 days	Fri 9/21/07	Fri 9/21/07
3	Public Comment Period	35 days	Fri 9/21/07	Thu 11/8/07
4	RI Field Work	15 days	Fri 11/9/07	Thu 11/29/07
5	Pilot Test Design	31 days	Fri 11/30/07	Fri 1/11/08
6	Pilot Test and Exc. Plan Memo	0 days	Fri 1/11/08	Fri 1/11/08
7	Pilot Test	86 days	Mon 1/14/08	Mon 5/12/08
8	Full Scale Treatment Design	25 days	Tue 4/8/08	Mon 5/12/08
9	Full Scale Treatment Plan Tech Memo	0 days	Mon 5/12/08	Mon 5/12/08
10	**Interim Action Implementation**	**396 days**	**Tue 5/13/08**	**Tue 11/17/09**
11	Chemical Oxidation	66 days	Tue 5/13/08	Tue 8/12/08
12	Confirmation Soil Sampling	6 days	Wed 8/13/08	Wed 8/20/08
13	ORC Injection	21 days	Thu 8/21/08	Thu 9/18/08
14	Soil Excavation	101 days	Tue 5/13/08	Tue 9/30/08
15	Groundwater Confirmation Sampling	130 days	Mon 3/23/09	Fri 9/18/09
16	Prepare Draft RI/FS and IA Report	56 days	Mon 8/3/09	Mon 10/19/09
17	Draft RI/FS and Interim Actions Report	0 days	Mon 10/19/09	Mon 10/19/09
18	Review and Comment Period	21 days	Tue 10/20/09	Tue 11/17/09
19	Final RI/FS and Interim Actions Report	0 days	Tue 11/17/09	Tue 11/17/09
20	**Cleanup Action Planning**	**79 days**	**Fri 8/28/09**	**Wed 12/16/09**
21	Cleanup Action Planning	58 days	Fri 8/28/09	Tue 11/17/09
22	Draft Cleanup Action Plan	0 days	Tue 11/17/09	Tue 11/17/09
23	Review and Comment Period	21 days	Wed 11/18/09	Wed 12/16/09
24	Final Cleanup Action Plan	0 days	Wed 12/16/09	Wed 12/16/09
25	**Shoreline Restoration**	**338 days**	**Wed 7/15/09**	**Fri 10/29/10**
26	Shoreline Restoration	338 days	Wed 7/15/09	Fri 10/29/10



Project: Chevron Property RIFS Sche
Date: Fri 9/7/07

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

APPENDIX B

Sediment Sampling Results

APPENDIX B

SUMMARY OF SEDIMENT TESTING EVENTS

Due to the large size of the reports for the two sediment investigations, they are kept in Ecology Toxics Cleanup Programs Head Quarter's (TCP-HQ) Central Files for review by appointment only. You can make an appointment by calling the TCP-HQ resource contact at (360) 407-7224.

B.1 City of Bremerton 2006 Sediment Characterization Study

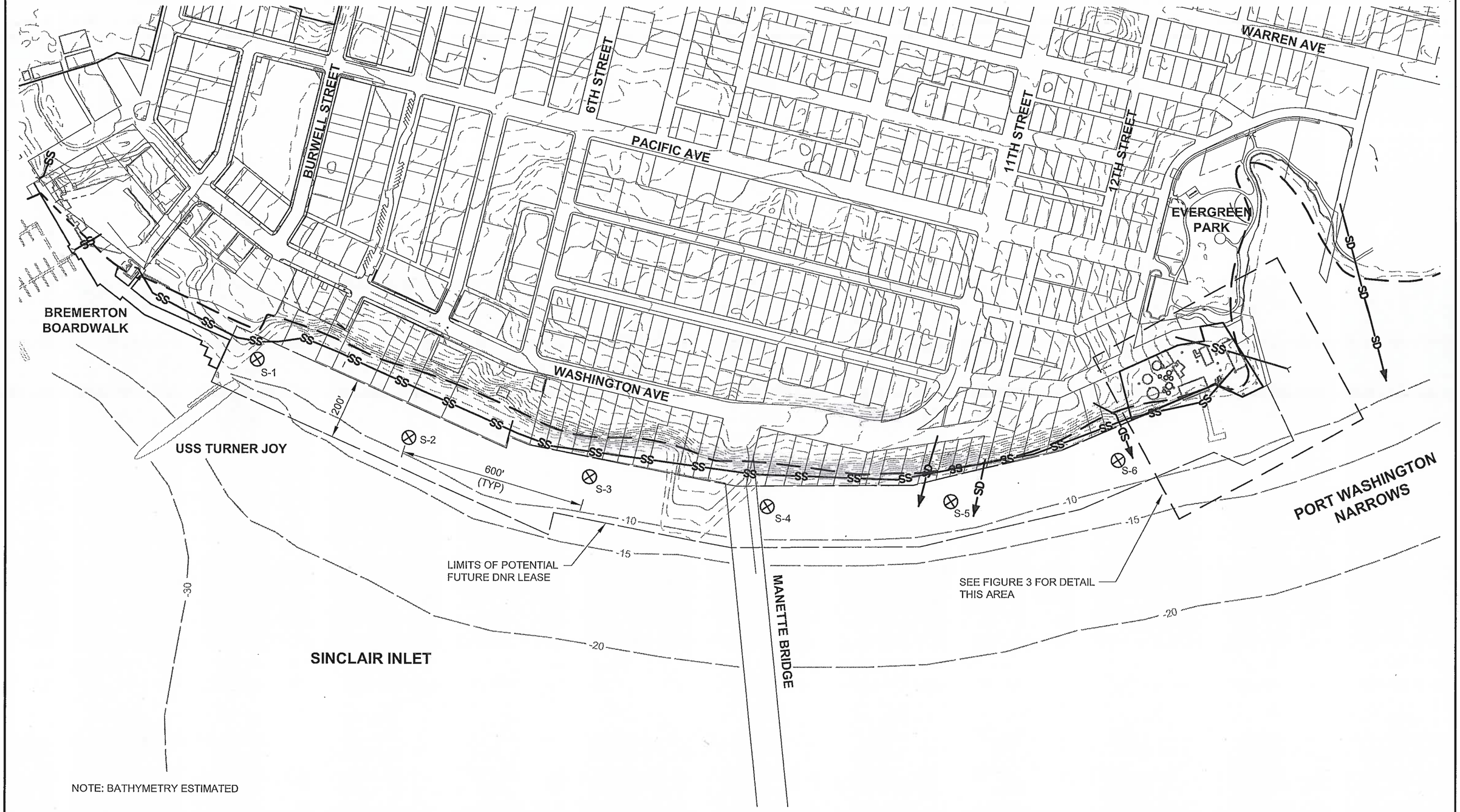
The City of Bremerton conducted a sediment characterization at the site in 2006 as part of initial site characterization activities. Sediment samples were collected from a total of 19 stations within intertidal and subtidal areas at the site and at an adjacent beach location for a sewer line corridor project (see Figures 2 through 4 in this appendix). Samples were analyzed for chemical Sediment Management Standards (SMS) criteria. Results are summarized in Table 2 in this appendix. As shown, station C-8 failed SMS sediment quality standards (SQS) criteria for several PAHs. A follow on biological sample was collected at the C-8 station and tested for SMS biological criteria. The test passed the all SMS criteria. However, it should be noted that the test was not performed with ultraviolet light exposure as recommended in the Ecology Sediment Sampling and Analysis Plan Appendix (Ecology 2008).

B.2 Ecology 2007 Sediment Characterization Study

Ecology conducted a follow on sediment study at the site to more fully characterize the sediments. Sediment samples were collected from a total of 13 stations within intertidal areas at the site and in adjacent Smith Cove (see Figure 2 in this appendix). Eight of the samples were tested for both chemical and biological SMS criteria (with ultraviolet light exposure). Results are summarized in Tables 1 through 4 in this appendix. As shown, two samples failed SQS criteria for phthalates and phenol. However, neither sample failed the chemical cleanup screening level (CSL) criteria. In addition, none of the biological tests failed either SQS or CSL criteria.

APPENDIX B1

City of Bremerton 2006 Sediment Characterization Study



Parametrix DATE: Feb 16, 2006 FILE: BR1896063P02T01F-02

N

0 300

SCALE IN FEET

Approx Shoreline

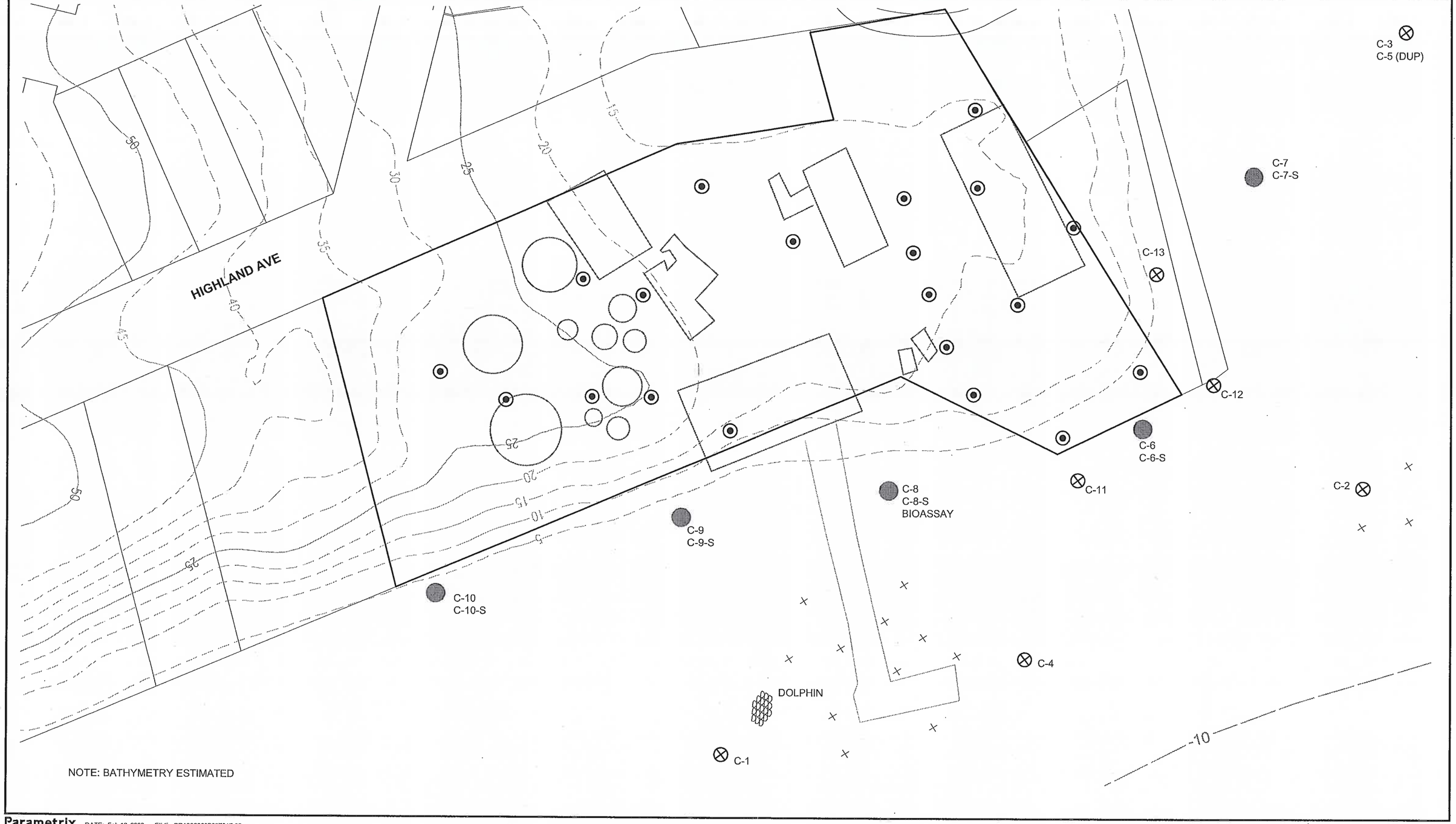
Sanitary Sewer

Storm Drain Outfall

Future DNR Lease Area

Sediment Grab Sample Location

Figure 2
Pt Narrows Beach
Sewer Line Corridor
Sediment Sample Locations



Parametrix DATE: Feb 16, 2006 FILE: BR1896063P02T01F-02

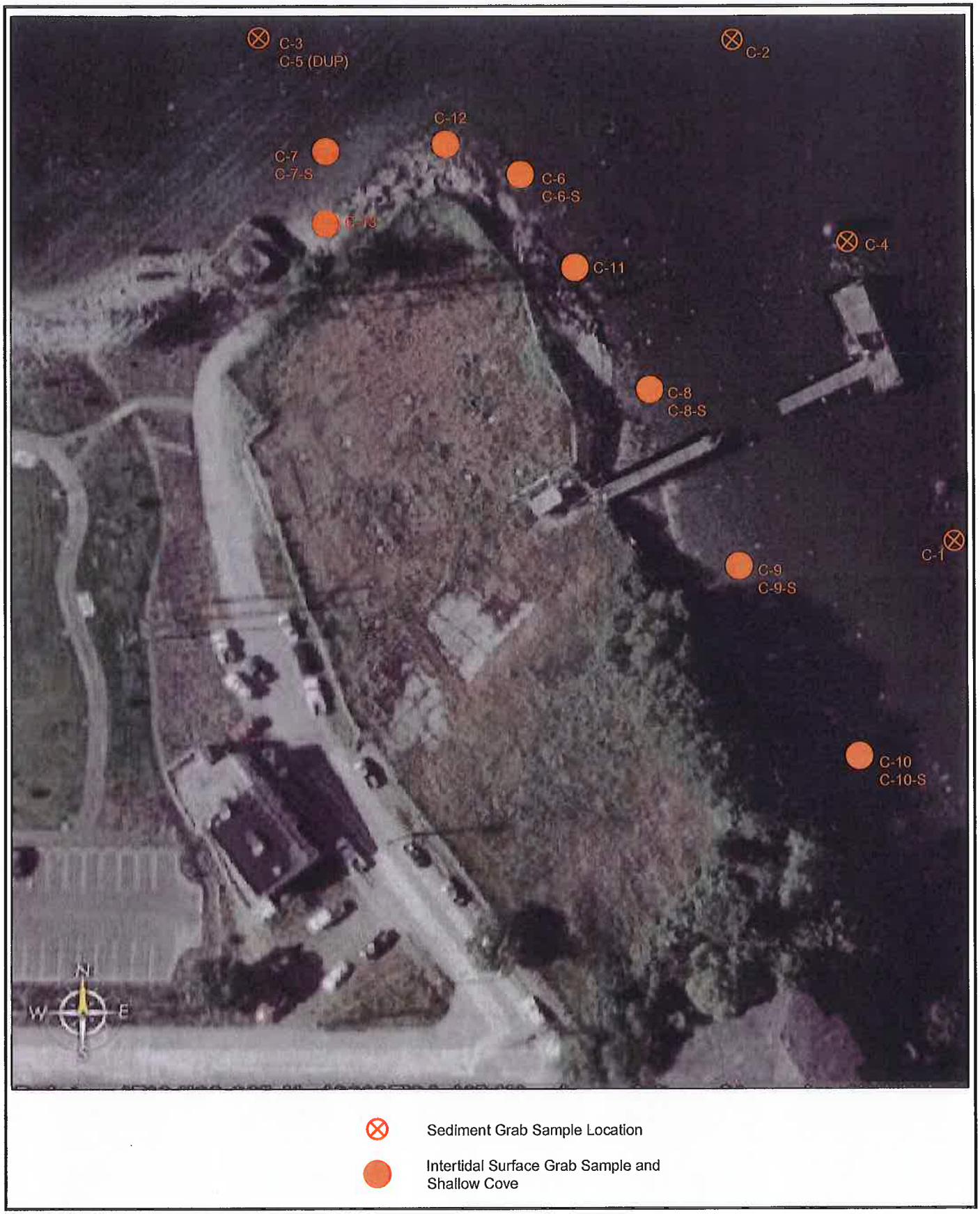
N

0 50

SCALE IN FEET

- Surface Sediment Grab Sample Location (Dec. 2005)
- Intertidal Surface Grab and Subsurface (2-ft BGS) Sample (Dec. 2005)
- Monitoring Well
- Failed Sampling Location Due to Large Cobble Substrate (Dec. 2005)
- Chevron Property

Figure 3
Former Chevron Site, Sample Locations



Parametrix DATE: Feb 16, 2006 FILE: BR1896063P02T01F-03

N

0

SCALE IN FEET

Figure 4
Pt Narrows Beach
Former Chevron Site
Sediment Sampling Locations

Table 2. Summary of sediment sampling results, ormer Chevron Property and sewer line corridor, City of Bremerton, Washington. Samples collected December 2005 and January 2006.

ANALYTE	SQS	SIZM/ SCSL	UNITS	C-1	C-2	C-3	C-4	C-5	S-1	S-2	S-6	S-3	S-4	S-5	C-6	C-7	C-8	C-9	C-10	C-6-S	C-7-S	C-8-S	C-9-S	C-10-S	C-11	C-12	C-13
Total Solids			%	77	74.9	63.2	74.1	62.7	78.5	80.6	76.6	80.9	81	84.6												82.6	71.9	73.5
Preserved Total Solids			%	76.7	72.3	59.2	73.8	64.9	77.1	77.1	73.7	81.7	81.3	85.2														
Total Volatile Solids			%	1.23	2.15	2.86	1.59	3.13	1.6	1.75	1.26	1.81	1.42	1.38														
N-Ammonia			mg-N/kg	6.97	13	9.92	6.51	10.5	7.28	4.95	4.28	6.03	1.47	0.66														
Sulfide			mg/kg	0.91 UJ	6.5 J	580 J	17 J	500 J	11 J	4.9 J	1.3 UJ	29	1.5 U	1.5 U														
Total Organic Carbon			%	0.593	0.81	1.65	0.468	2.24	0.461	0.409	0.426	0.421	0.28	0.268	0.380	0.526	0.528	0.492	0.503	0.269	1.140	0.305	0.205	0.167	0.392	0.631	1.040
Antimony			mg/kg dw	6 UJ	6 UJ	7 UJ	7 UJ	8 UJ	6 UJ	6 UJ	6 UJ	10 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ			
Arsenic	57	93	mg/kg dw	6 U	6 U	7 U	7 U	8 U	6 U	6 U	6 U	10 U	6 U	6 U	6 U	6 U	10 U	6 U	6	6 U	6 U	6 U	6 U	6 U			
Cadmium	5.1	6.7	mg/kg dw	0.3 U	0.3	0.5	0.3	0.5	0.3	0.2 U	0.2 U	0.6 U	0.3	0.2 U	0.3 U	0.2 U	0.6 U	0.2 U	0.2 U	0.2	0.2 U	0.2 U	0.2 U	0.2 U			
Chromium	260	270	mg/kg dw	18.6	14.1	20.8	18.8	21.9	17.5	13.3	16.3	11 J	22.2 J	33.8 J	16.5 J	20 J	15 J	20.1 J	23.3 J	19.8 J	24.8 J	19.2 J	16.6 J	18.8 J			
Copper	390	390	mg/kg dw	15.4	15	19.6	18.7	19.8	16.3	8.6	15.1	9.9 J	29.1 J	32.7 J	15.3 J	11.6 J	15.8 J	19 J	20.8 J	17.2 J	10.7 J	19.5 J	14.8 J	16.1 J			
Lead	450	530	mg/kg dw	15	13	27	16	21	14	12	24	16	82	34	26	14	18	18	23	31	13	28	23	147			
Mercury	0.41	0.59	mg/kg dw	0.06 U	0.06 U	0.09	0.06 U	0.09	0.05 U	0.06	0.05 U	0.06 U	0.04	0.04 U	0.07 U	0.05 U	0.21	0.05 U	0.05 U	0.04 U	0.21	0.06	0.05 U	0.05 U			
Nickel			mg/kg dw	18	17	20	20	22	20	13	16	13	24	26	18	25	16	24	24	22	21	22	17	22			
Silver	6.1	6.1	mg/kg dw	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.3 U	0.4 U	0.8 U	0.4 U	0.4	0.4 U	0.4 U	0.9 U	0.3 U	0.4 U	0.3 U	0.3 U	0.4 U	0.4 U	0.3 U			
Zinc	410	960	mg/kg dw	45.7	40.1	49.8	47.4	48.3	36	27.1	46.4	38	65.1	120	57.6	51.2	44	49.5	63.1	72.4	37.2	60	45.7	111			
Naphthalene	99	170	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	3.91 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	5.17	7.06 U	1.75 U	4.26 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Acenaphthylene	66	66	mg/kg oc	3.37 U	1.85 J	2.06	2.99 J	1.83	4.34 U	4.65 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	7.01	4.07 U	3.78 U	7.06 U	1.23 J	3.93 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Acenaphthene	16	57	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Fluorene	23	79	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.94	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Phenanthrene	100	480	mg/kg oc	3.37 U	7.41	7.27	4.49	8.93	3.47 J	15.65	4.46 U	6.89	3.93 J	7.46 U	3.42 J	3.61 J	16.86	11.38	7.36	7.06 U	2.28	5.90 J	5.85 J	9.58 J	4.85 U	4.28	1.92
Anthracene	220	1200	mg/kg oc	3.37 U	2.35 J	3.39	4.27 U	5.80	4.34 U	2.93 J	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	6.44	4.07 U	3.78 U	7.06 U	2.46	7.21	4.68 J	11.38 U	4.85 U	3.01 U	1.92 U
Total LPAHs	370	780	mg/kg oc	3.37 U	11.60	12.73	7.48	17.50	3.47	27.14	4.46 U	6.89	3.93	7.46 U	3.42	3.61	30.30	11.38	12.52	3.05 U	5.96	21.31	10.54	9.58	4.85 U	4.28	1.92
2-Methylnaphthalene	38	64	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	5.90 J	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Fluoranthene	160	1200	mg/kg oc	2.87 J	13.58	29.70	14.96	25.45	8.68	24.45	3.99 J	14.01	5.71 J	7.46 U	28.95	7.03	**587.12**	9.15	9.15	7.06 J	13.16	52.46	21.46	59.88	5.10	14.74	6.15
Pyrene	1000	1400	mg/kg oc	2.87 J	11.23	23.03	12.39	21.43	5.64	19.80	2.58 J	9.98	4.29 J	7.46 U	13.16	5.13	208.33	7.32	4.77	9.67	11.40	42.62	15.61	31.14	4.85 U	12.52	5.77
Benzo(a)anthracene	110	270	mg/kg oc	3.37 U	5.43	10.91	10.68	8.93	2.82 J	9.05	4.46 U	5.70	6.79 U	7.46 U	5.00 J	2.66 J	54.92	3.86 J	2.78 J	4.46 J	5.44	19.67	8.78 J	7.78 J	4.85 U	6.66	2.69
Chrysene	110	460	mg/kg oc	2.53 J	8.64	15.76	12.39	12.05	3.69 J	11.00	3.05 J	6.89	3.57 J	7.46 U	7.89 J	3.80	**136.36**	4.07	3.18 J	7.06 U	6.58	21.64	11.71	16.77	6.38	8.08	3.75
Benzo(b)fluoranthene			*mg/kg oc*	*3.37 U*	*7.41*	*13.94*	*15.60*	*10.71*	*5.21*	*19.07*	*2.35 J*	*5.23*	*6.79 U*	*7.46 U*	*6.84*	*3.80*	*130.68*	*3.86 J*	*3.78*	*5.20 J*	*6.40*	*23.61*	*15.61*	*14.97*	*4.85 U*	*9.19*	*3.56*
Benzo(k)fluoranthene			*mg/kg oc*	*3.37 U*	*6.42*	*12.73*	*12.39*	*12.50*	*3.04 J*	*12.96*	*3.52 J*	*5.94*	*6.79 U*	*7.46 U*	*5.26*	*2.09 J*	*125.00*	*4.07*	*2.39 J*	*3.72 J*	*4.74*	*14.43*	*12.68*	*7.19 J*	*4.85 U*	*6.34*	*2.69*
Benzofluoranthenes	230	450	mg/kg oc	3.37 U	13.83	26.67	27.99	23.21	8.24	32.03	5.87	11.16	6.79 U	7.46 U	12.11	5.89	**255.68**	7.93	6.16	8.92	11.14	38.03	28.29	22.16	4.85 U	*15.53*	6.25
Benzo(a)pyrene	99	210	mg/kg oc	3.37 U	6.30	12.12	15.17	10.71	3.47 J	14.91	4.46 U	5.94	6.79 U	7.46 U	3.95 J	3.23 J	54.92	4.88	2.98 J	5.95 J	6.58	23.28	9.27	7.19 J	4.85 U	7.61	3.17
Indeno(1,2,3-cd)pyrene	34	88	mg/kg oc	3.37 U	1.60 J	2.55	3.63	2.46	4.34 U	3.67 J	4.46 U	3.33 J	6.79 U	7.46 U	5.26 U	3.80 U	16.29	4.07 U	3.78 U	7.06 U	1.58 J	5.25 J	9.27 U	11.38 U	4.85 U	3.80	1.92 U
Dibenz(a,h)anthracene	12	33	mg/kg oc	3.37 U	2.47 U	0.91 J	4.27 U	0.71 J	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	4.36	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Benzo(g,h,i)perylene	31	78	mg/kg oc	3.37 U	1.73 J	2.61	3.85 J	2.46	4.34 U	3.18 J	4.46 U	4.04 J	6.79 U	7.46 U	5.26 U	3.80 U	13.26	4.07 U	3.78 U	7.06 U	1.67 J	6.56	9.27 U	11.38 U	4.85 U	4.28	2.02
Total HPAHs	960	5300	mg/kg oc	8.26	62.35	124.24	101.07	107.41	32.54	118.09	15.49	61.05	13.57	7.46 U	71.05	27.76	**1331.25**	37.20	29.03	36.06	57.54	209.51	95.12	144.91	11.48	73.22	29.81
1,2-Dichlorobenzene	2.3	2.3	mg/kg oc	**3.37 U**	**2.47 U**	1.15 U	**4.27 U**	0.89 U	**4.34 U**	**4.89 U**	**4.46 U**	**4.51 U**	**6.79 U**	**7.46 U**	**5.26 U**	**3.80 U**	**3.79 U**	**4.07 U**	**3.78 U**	**7.06 U**	1.75 U	**6.23 U**	**9.27 U**	**11.38 U**			
1,4-Dichlorobenzene	3.1	9	mg/kg oc	**3.37 U**	2.47 U	1.15 U	**4.27 U**	0.89 U	**4.34 U**	**4.89 U**	**4.46 U**	**4.51 U**	**6.79 U**	**7.46 U**	**5.26 U**	**3.80 U**	**3.79 U**	**4.07 U**	**3.78 U**	**7.06 U**	1.75 U	**6.23 U**	**9.27 U**	**11.38 U**			
1,2,4-Trichlorobenzene	0.81	1.8	mg/kg oc	**3.37 U**	**2.47 U**	**1.15 U**	**4.27 U**	**0.89 U**	**4.34 U**	**4.89 U**	**4.46 U**	**4.51 U**	6.79 U	**7.46 U**	**5.26 U**	**3.80 U**	**3.79 U**	**4.07 U**	**3.78 U**	**7.06 U**	**1.75 U**	**6.23 U**	**9.27 U**	**11.38 U**			
Hexachlorobenzene	0.38	2.3	mg/kg oc	0.17 U	0.12 U	0.06 U	0.21 U	0.05 U	0.22 U	0.23 U	0.23 U	0.23 U	0.35 U	0.36 U	**5.26 U**	**3.80 U**	**3.79 U**	**4.07 U**	**3.78 U**	**7.06 U**	**1.75 U**	**6.23 U**	**9.27 U**	**11.38 U**			
Dimethylphthalate	53	53	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Diethylphthalate	61	110	mg/kg oc	3.37 U	2.35 J	0.91 J	4.27 U	0.45 J	4.34 U	3.91 J	2.82 J	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Di-n-butylphthalate	220	1700	mg/kg oc	3.20 J	2.96	2.12	4.49	1.16	5.21	5.38	5.63	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.81	1.75 U	6.23 U	9.27 U	11.38 U			
Butylbenzylphthalate	4.9	64	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	**6.79 U**	**7.46 U**	**5.26 U**	3.80 U	3.79 U	4.07 U	3.78 U	**7.06 U**	1.75 U	**6.23 U**	**9.27 U**	**11.38 U**			
Bis(2-ethylhexyl)phthalate	47	78	mg/kg oc	3.37 UB	3.46 UB	4.61 JB	4.27 UB	3.39 JB	6.07 UB	8.56 JB	4.46 UB	3.33 J	4.64 J	7.46 U	3.42 J	3.42 J	3.79 U	4.07 U	10.34	9.29	1.40 J	13.11	7.80 J	9.58 J			
Di-n-octylphthalate	58	4500	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	35.79	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U			
Dibenzofuran	15	58	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	11.38 U	4.85 U	3.01 U	1.92 U
Hexachlorobutadiene	3.9	6.2	mg/kg oc	0.17 U	0.12 U	0.06 U	0.21 U	0.05 U	0.22 U	0.23 U	0.23 U	0.23 U	0.35 U	0.36 U	**5.26 U**	3.80 U	3.79 U	**4.07 U**	3.78 U	**7.06 U**	1.75 U	**6.23 U**	**9.27 U**	**11.38 U**			
N-Nitrosodiphenylamine	11	11	mg/kg oc	3.37 U	2.47 U	1.15 U	4.27 U	0.89 U	4.34 U	4.89 U	4.46 U	4.51 U	6.79 U	7.46 U	5.26 U	3.80 U	3.79 U	4.07 U	3.78 U	7.06 U	1.75 U	6.23 U	9.27 U	**11.38 U**			
Phenol	420	1200	ug/kg dw	72	340	19 U	16 J	20 U	20 U	14 J	22	38	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	130			
2-Methylphenol	63	63	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	17 J	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
4-Methylphenol	670	670	ug/kg dw	20 U	12 J	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
2,4-Dimethylphenol	29	29	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
Pentachlorophenol	360	690	ug/kg dw	99 U	99 U	96 U	97 U	98 U	98 U	98 U	97 U	95 U	96 U	99 U	98 U	98 U	97 U	99 U	95 U	97 U	98 U	96 U	96 U	96 U			
Benzyl Alcohol	57	73	ug/kg dw	20 U	20 U	19 U	20 U	20 U	20 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	20 U	20 U	19 U	19 U	20 U	19 U	19 U	19 U			
Benzoic Acid	650	650	ug/kg dw	200 U	200 U	190 U	200 U	200 U	200 U	200 U	190 U	190 U	190 U	200 U	200 U	200 U	200 U	200 U	190 U	190 U	200 U	190 U	190 U	190 U			
gamma-BHC (Lindane)			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--	
Heptachlor			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--	
Aldrin			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--	
Dieldrin			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	
4,4'-DDE			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	
4,4'-DDD			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	
4,4'-DDT			ug/kg dw	2 U	2 U	2 U	2 U	2.2 U	2 U	1.9 U	1.9 U	1.9 U	2 U	2 U	--	--	--	--	--	--	--	--	--	--	--	
gamma Chlordane			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--	
alpha Chlordane			ug/kg dw	0.99 U	0.99 U	0.98 U	0.97 U	1.1 U	1 U	0.96 U	0.97 U	0.96 U	0.98 U	0.97 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1016			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1221			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1232			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1242			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1248			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1254			mg/kg oc	3.37 U	2.47 U	1.15 U	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1260			mg/kg oc	3.37 U	2.47 U	4.24	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs	12	65	mg/kg oc	3.37 U	2.47 U	4.24	4.06 U	0.89 U	4.34 U	4.89 U	4.46 U	4.75 U	6.79 U	7.46 U	--	--	--	--	--	--	--	--	--	--	--	
Diesel			mg/kg dw	6 U	25	27	20	40	--	--	--	7.5	6 U	6 U	11	8.1	6.7	6.2 U	6 U	29	7.7	11	5.9 U	5.9 U			
Motor Oil			mg/kg dw	17	140	110	50	160	--	--	--	26	12 U	12 U	55	29	47	30	16	78	27	68	12 U	12 U			

111 Exceeds SQS

111 Not detected but TOC normalized result exceeds SQS.

APPENDIX B2

Ecology 2007 Sediment Characterization Study

Table 1 - Sample Location Coordinates

Sample ID	LAT	LONG
ES-01	47.573569	-122.628147
ES-02	47.573665	-122.627865
ES-03	47.573809	-122.627612
ES-04	47.573629	-122.627546
ES-05	47.573617	-122.627102
ES-06	47.573893	-122.627126
ES-07	47.574145	-122.627156
ES-08	47.573833	-122.626567
ES-09	47.574049	-122.626616
ES-10	47.574302	-122.626868
CS-01	47.573492	-122.625353
CS-02	47.573423	-122.625373
CS-03	47.573102	-122.625023

Table 2 - Sample Descriptions

Sample Number	Collection Date	Visual Sediment Description	Comments
CS-01	4/27/2007	Greenish brown, poorly graded, subangular SAND with Gravel (SP).	Hand core. Surface cobbles removed. Worms, shells, snails.
CS-02	4/26/2007	Greenish brown, poorly graded, angular to subangular SAND with Gravel (SP).	Grab. Worms, shore crab. Black creosote stain with slight oily odor
CS-03	4/27/2007	Greenish brown to black silty SAND (SM).	Hand core. Surface cobbles removed. Shells, worms, snails.
ES-01	4/26/2007	Greenish black, subangular, silty SAND (SM).	Grab. Shore crab, shrimp, hermit crab, shell pieces, *Ulva sp*.
ES-02	4/27/2007	Greenish brown/black, subangular, poorly graded SAND with Cobbles (SP).	Hand core. Worms, shells.
ES-03	4/27/2007	Greenish brown to black, subangular, silty SAND (SM).	Hand core. Shells, worms, *Ulva sp*.
ES-04	4/26/2007	Greenish brown, subangular, silty SAND (SM).	Grab. Amphipods, gastropods, *Ulva sp*.
ES-05	4/27/2007	Black, subangular, poorly graded SAND (SP).	Hand core.
ES-06	4/26/2007	Black, subangular, silty SAND (SM).	Grab.
ES-07	4/26/2007	Black, subangular, poorly graded SAND (SP).	Grab. Worms, seaweed, snails.
ES-08	4/26/2007	Black, subangular silty SAND (SM).	Grab. Gastropods, *Ulva sp*. Seagrass, bivalves
ES-09	4/26/2007	Black, subangular, silty SAND (SM).	Grab. Shrimp, snails, worms, *Ulva sp*.
ES-10	4/27/2007	Black, subangular, poorly graded SAND (SP).	Hand core. Worms, shells. Field duplicate.
Carr Ref 12	4/28/2007	Greenish brown, subangular, poorly graded SAND (SP).	Red algae, *Ulva sp*. Slight sulfur odor.
Carr Ref 29	4/28/2007	Dark greenish brown, subangular, silty SAND (SM).	Worms, red algae, *Ulva sp*. Slight sulfur odor.

Table 3 - Analytical Results for Sediment Samples Compared to SMS (Organic Carbon Normalized) Sediment Quality Criteria

Sample ID	SMS		ES-01	ES-06	ES-07	ES-08
Sampling Date	SQS	CSL	4/26/2007	4/26/2007	4/26/2007	4/26/2007
Conventionals in %						
Total Organic Carbon	-	-	1.15	0.598	1.01	1.33
Preserved Total Solids	-	-	58.30	62.50	69.20	54.30
Total Solids	-	-	67.10	70.80	70.70	64.30
Conventionals in mg/kg						
N-Ammonia	-	-	21.0	12.6	17.0	30.1
Sulfide	-	-	538	210	49.0	552
NWTPHD in mg/kg						
Diesel Range Hydrocarbons	-	-	200	30	36	39
Motor Oil	-	-	700	90	110	140
NWTPHG in mg/kg						
Gasoline Range Hydrocarbons	-	-	12 U	17 U	13 U	12 U
Metals in mg/kg						
Arsenic	57	93	4.7	2.6	2.8	3.1
Cadmium	5.1	6.7	0.6	0.3 U	0.3 U	0.5
Chromium	260	270	36.3	13.8	22.3	24.3
Copper	390	390	51.7	9.4	17.9	23.4
Lead	450	530	83	11	24	25
Mercury	0.41	0.59	0.31	0.12	0.10	0.16
Silver	6.1	6.1	0.5 U	0.4 U	0.4 U	0.4 U
Zinc	410	960	133	29	60	76
PCBs in mg/kg OC						
Aroclor 1016	-	-	1.65 U	3.34 U	1.88 U	1.43 U
Aroclor 1221	-	-	1.65 U	3.34 U	1.88 U	1.43 U
Aroclor 1232	-	-	1.65 U	3.34 U	1.88 U	1.43 U
Aroclor 1242	-	-	1.65 U	3.34 U	1.88 U	1.43 U
Aroclor 1248	-	-	1.65 U	3.34 U	1.88 U	1.43 U
Aroclor 1254	-	-	4.52	9.03	1.88 U	1.43 U
Aroclor 1260	-	-	2.17	3.34 U	1.88 U	1.43 U
Total PCBs	12	65	6.70	9.03	1.88 U	1.43 U
LPAHs in mg/kg OC						
2-Methylnaphthalene	38	64	33.91	10.37 U	6.04 U	4.66 U
Acenaphthene	16	57	5.39 U	10.37 U	6.04 U	4.66 U
Acenaphthylene	66	66	5.39 U	10.37 U	6.04 U	4.66 U
Anthracene	220	1200	7.65	10.37 U	9.80	5.71
Fluorene	23	79	5.39 U	10.37 U	6.04 U	4.66 U
Naphthalene	99	170	12.17	10.37 U	6.04 U	4.66 U
Phenanthrene	100	480	32.17	14.88	28.71	15.04
Total LPAHs	370	780	85.91	14.88	38.51	20.75
HPAHs in mg/kg OC						
Benzo(a)anthracene	110	270	29.57	25.08	21.78	15.79
Benzo(a)pyrene	99	210	38.26	28.43	23.76	18.05
Benzo(b)fluoranthene			49.57	23.41	18.81	19.55
Benzo(k)fluoranthene			42.61	26.76	19.80	15.04
Total Benzofluoranthenes	230	450	92.17	50.17	38.61	34.59
Benzo(g,h,i)perylene	31	78	25.22	20.07	14.85	12.78
Chrysene	110	460	39.13	33.44	25.74	21.05
Dibenz(a,h)anthracene	12	33	5.39	10.37 U	6.04 U	4.66 U

Table 3 - Analytical Results for Sediment Samples Compared to SMS (Organic Carbon Normalized) Sediment Quality Criteria

Sample ID	SMS		ES-01	ES-06	ES-07	ES-08
Sampling Date	SQS	CSL	4/26/2007	4/26/2007	4/26/2007	4/26/2007
Fluoranthene	160	1200	49.57	41.81	41.58	25.56
Indeno(1,2,3-cd)pyrene	34	88	23.48	16.56	12.87	11.28
Pyrene	1000	1400	64.35	60.20	47.52	36.09
Total HPAHs	960	5300	367.13	275.75	226.73	175.19
Phthalates in mg/kg OC						
bis(2-Ethylhexyl)phthalate	47	78	73.04	10.37 U	6.04 U	9.02
Butylbenzylphthalate	4.9	64	12.17	*10.37 U*	*6.04 U*	4.66 U
Diethylphthalate	61	110	5.39 U	10.37 U	6.04 U	4.66 U
Dimethylphthalate	53	53	5.39 U	10.37 U	6.04 U	4.66 U
Di-n-Butylphthalate	220	1700	5.39 U	10.37 U	6.04 U	4.66 U
Di-n-Octyl phthalate	58	4500	5.39 U	10.37 U	6.04 U	4.66 U
Chlorinated Hydrocarbons in mg/kg OC						
1,2,4-Trichlorobenzene	0.81	1.8	*5.39 U*	*10.37 U*	*6.04 U*	*4.66 U*
1,2-Dichlorobenzene	2.3	2.3	*5.39 U*	*10.37 U*	*6.04 U*	*4.66 U*
1,3-Dichlorobenzene			5.39 U	10.37 U	6.04 U	4.66 U
1,4-Dichlorobenzene	3.1	9	*5.39 U*	*10.37 U*	*6.04 U*	*4.66 U*
Hexachlorobenzene	0.38	2.3	*5.39 U*	*10.37 U*	*6.04 U*	*4.66 U*
Hexachlorobutadiene	3.9	6.2	*5.39 U*	*10.37 U*	*6.04 U*	*4.66 U*
Hexachloroethane			5.39 U	10.37 U	6.04 U	4.66 U
Misc. Extractables in mg/kg OC						
Dibenzofuran	15	58	5.39 U	10.37 U	6.04 U	4.66 U
N-Nitrosodiphenylamine	11	11	5.39 U	10.37 U	6.04 U	4.66 U
Phenolics (Acids) in ug/kg						
2,4-Dimethylphenol	29	29	*62 U*	*62 U*	*61 U*	*62 U*
2-Methylphenol	63	63	62 U	62 U	61 U	62 U
4-Methylphenol	670	670	62 U	62 U	61 U	62 U
Pentachlorophenol	360	690	310 U	310 U	310 U	310 U
Phenol	420	1200	62 U	62 U	61 U	62 U
Benzoic Acid	650	650	620 U	620 U	610 U	620 U
Benzyl Alcohol	57	73	*62 U*	*62 U*	*61 U*	*62 U*
Low Level (SIMs) Semivolatiles in mg/kg OC						
Dibenz(a,h)anthracene	12	33	4.78	3.68	2.48	2.56
Butylbenzylphthalate	4.9	64	13.04	1.04 U	0.60 U	0.47 U
Dimethylphthalate	53	53	3.04	1.04 U	0.60 U	0.47 U
1,2,4-Trichlorobenzene	0.81	1.8	0.54 U	1.04 U	0.60 U	0.47 U
1,2-Dichlorobenzene	2.3	2.3	0.54 U	1.04 U	0.60 U	0.47 U
1,3-Dichlorobenzene	-	-	0.54 U	1.04 U	0.60 U	0.47 U
1,4-Dichlorobenzene	3.1	9	1.13	1.04 U	0.60 U	0.47 U
Hexachlorobenzene	0.38	2.3	*0.54 U*	*1.04 U*	*0.60 U*	*0.47 U*
Hexachlorobutadiene	3.9	6.2	0.54 U	1.04 U	0.60 U	0.47 U
N-Nitrosodiphenylamine	11	11	2.78	1.04 U	0.60 U	0.47 U
Low Level (SIMs) Phenolics (Acids) in ug/kg						
2,4-Dimethylphenol	29	29	6.2 UJ	6.2 UJ	6.1 UJ	6.2 UJ
2-Methylphenol	63	63	6.2 U	6.2 U	6.1 U	9.4
Pentachlorophenol	360	690	31 U	31 U	31 U	31 U
Benzyl Alcohol	57	73	31 UJ	31 UJ	31 UJ	31 UJ

Table 3 - Analytical Results for Sediment Samples Compared to SMS (Organic Carbon Normalized) Sediment Quality Criteria

Sample ID	SMS		ES-01	ES-06	ES-07	ES-08
Sampling Date	SQS	CSL	4/26/2007	4/26/2007	4/26/2007	4/26/2007
Grain Size in %						
Gravel			15.6	7.6	1.0	3.6
Very Coarse Sand			4.0	1.7	3.7	2.5
Coarse Sand			9.3	4.1	7.5	5.7
Medium Sand			22.2	16.8	6.4	21.5
Fine Sand			16.6	33.1	46.9	28.6
Very Fine Sand			12.6	25.1	24.5	21.4
Total Fines			19.8	11.6	10.0	16.7
Coarse Silt			8.2	3.7	3.9	5.7
Medium Silt			3.9	1.5	0.9	2.6
Fine Silt			1.7	1.0	0.9	1.5
Very Fine Silt			1.3	1.0	0.8	1.6
8-9 Phi Clay			1.4	1.4	0.8	1.5
9-10 Phi Clay			0.9	0.8	0.7	1.1
> 10 Phi Clay			2.4	2.2	2.0	2.7

Concentration exceeding the criterion is boxed.
Reporting limit exceeding the criterion is italicized.
U = Not detected at reporting limit indicated.
J = Estimated value.

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CARR REF12	CARR REF29	CS-01
Sampling Date	LAET	2LAET	4/28/2007	4/28/2007	4/27/2007
Conventionals in %					
Total Organic Carbon	-	-	0.285	0.310	0.306
Preserved Total Solids	-	-	74.80	75.10	78.60
Total Solids	-	-	76.10	76.50	76.40
Conventionals in mg/kg					
N-Ammonia	-	-	9.73	8.96	11.6
Sulfide	-	-	1.32 U	20.3	1.24 U
NWTPHD in mg/kg					
Diesel Range Hydrocarbons	-	-	6.5	6.5 U	12
Motor Oil	-	-	13	15	110
NWTPHG in mg/kg					
Gasoline Range Hydrocarbons	-	-	9.5 U	11 U	9.2 U
Metals in mg/kg					
Arsenic	57	93	1.2	1.9	2.1
Cadmium	5.1	6.7	0.3 U	0.3 U	0.2 U
Chromium	260	270	16.0	19.7	19.5
Copper	390	390	3.9	8.3	21.8
Lead	450	530	3 U	3 U	16
Mercury	0.41	0.59	0.05 U	0.04 U	0.06 U
Silver	6.1	6.1	0.4 U	0.4 U	0.4 U
Zinc	410	960	22	27	50
PCBs in ug/kg					
Aroclor 1016	-	-	19 U	19 U	19 U
Aroclor 1221	-	-	19 U	19 U	19 U
Aroclor 1232	-	-	19 U	19 U	19 U
Aroclor 1242	-	-	19 U	19 U	19 U
Aroclor 1248	-	-	19 U	19 U	19 U
Aroclor 1254	-	-	19 U	19 U	19 U
Aroclor 1260	-	-	19 U	19 U	19 U
Total PCBs	130	1000	19 U	19 U	19 U
LPAHs in ug/kg					
2-Methylnaphthalene	960	4400	61 U	62 U	62 U
Acenaphthene	1300	1300	61 U	62 U	62 U
Acenaphthylene	670	1400	61 U	62 U	62 U
Anthracene	1500	5400	61 U	62 U	62 U
Fluorene	500	730	61 U	62 U	62 U
Naphthalene	2100	2400	61 U	62 U	62 U
Phenanthrene	540	1000	61 U	62 U	62 U
Total LPAHs	5200	13000	61 U	62 U	62 U
HPAHs in ug/kg					
Benzo(a)anthracene	1300	1600	61 U	62 U	62 U
Benzo(a)pyrene	1600	3000	61 U	62 U	62 U
Benzo(b)fluoranthene			61 U	62 U	62 U
Benzo(k)fluoranthene			61 U	62 U	62 U
Total Benzofluoranthenes	3200	3600	61 U	62 U	62 U
Benzo(g,h,i)perylene	670	720	61 U	62 U	62 U
Chrysene	1400	2800	61 U	62 U	62 U
Dibenz(a,h)anthracene	230	540	61 U	62 U	62 U

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CARR REF12	CARR REF29	CS-01
Sampling Date	LAET	2LAET	4/28/2007	4/28/2007	4/27/2007
Fluoranthene	1700	2500	61 U	62 U	62 U
Indeno(1,2,3-cd)pyrene	600	690	61 U	62 U	62 U
Pyrene	2600	3300	61 U	62 U	62 U
Total HPAHs	12000	17000	61 U	62 U	62 U
Phthalates in ug/kg					
bis(2-Ethylhexyl)phthalate	1300	1900	61 U	62 U	62 U
Butylbenzylphthalate	63	900	61 U	62 U	62 U
Diethylphthalate	200	200	61 U	62 U	62 U
Dimethylphthalate	71	160	61 U	62 U	62 U
Di-n-Butylphthalate	1400	1400	61 U	62 U	62 U
Di-n-Octyl phthalate	6200	6200	61 U	62 U	62 U
Chlorinated Hydrocarbons in ug/kg					
1,2,4-Trichlorobenzene	31	51	*61 U*	*62 U*	*62 U*
1,2-Dichlorobenzene	35	50	*61 U*	*62 U*	*62 U*
1,3-Dichlorobenzene			61 U	62 U	62 U
1,4-Dichlorobenzene	110	120	61 U	62 U	62 U
Hexachlorobenzene	22	70	*61 U*	*62 U*	*62 U*
Hexachlorobutadiene	11	120	*61 U*	*62 U*	*62 U*
Hexachloroethane			61 U	62 U	62 U
Misc. Extractables in ug/kg					
Dibenzofuran	540	700	61 U	62 U	62 U
N-Nitrosodiphenylamine	28	40	*61 U*	*62 U*	*62 U*
Phenolics (Acids) in ug/kg					
2,4-Dimethylphenol	29	29	*61 U*	*62 U*	*62 U*
2-Methylphenol	63	63	61 U	62 U	62 U
4-Methylphenol	670	670	61 U	77	62 U
Pentachlorophenol	360	690	300 U	310 U	310 U
Phenol	420	1200	61 U	62 U	150
Benzoic Acid	650	650	610 U	620 U	620 U
Benzyl Alcohol	57	73	*61 U*	*62 U*	*62 U*
Semivolatiles (SIM) in ug/kg					
1,2,4-Trichlorobenzene	31	51	6.1 U	6.2 U	6.2 U
1,2-Dichlorobenzene	35	50	6.1 U	6.2 U	6.2 U
1,3-Dichlorobenzene	-	-	6.1 U	6.2 U	6.2 U
1,4-Dichlorobenzene	110	120	6.1 U	6.2 U	6.2 U
Butylbenzylphthalate	63	900	6.1 U	6.2 U	6.2 U
Dibenz(a,h)anthracene	230	540	6.1 U	6.2 U	6.2 U
Dimethylphthalate	71	160	6.1 U	6.2 U	6.2 U
Hexachlorobenzene	22	70	6.1 U	6.2 U	6.2 U
Hexachlorobutadiene	11	120	6.1 U	6.2 U	6.2 U
N-Nitrosodiphenylamine	28	40	6.1 U	6.2 U	6.2 U
2,4-Dimethylphenol	29	29	6.1 UJ	6.2 UJ	6.2 UJ
2-Methylphenol	63	63	6.1 U	6.2 U	6.2 U
Pentachlorophenol	360	690	30 U	31 U	31 U
Benzyl Alcohol	57	73	30 UJ	31 UJ	31 UJ

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CARR REF12	CARR REF29	CS-01
Sampling Date	LAET	2LAET	4/28/2007	4/28/2007	4/27/2007
Grain Size in %					
Gravel			0.3	0.1 U	41.7
Very Coarse Sand			0.7	0.8	4.8
Coarse Sand			4.6	4.8	9.9
Medium Sand			27.6	9.7	29.3
Fine Sand			44.7	21.5	11.8
Very Fine Sand			18.5	38.0	0.8
Total Fines			3.5	25.2	1.7
Coarse Silt				14.4	
Medium Silt				5.5	
Fine Silt				1.8	
Very Fine Silt				0.8	
8-9 Phi Clay				0.8	
9-10 Phi Clay				0.4	
> 10 Phi Clay				1.5	

Concentration exceeding the criterion is boxed.
Reporting limit exceeding the criterion is italicized.
U = Not detected at reporting limit indicated.
J = Estimated value.

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CS-02	CS-03	ES-04
Sampling Date	LAET	2LAET	4/26/2007	4/27/2007	4/26/2007
Conventionals in %					
Total Organic Carbon	-	-	0.392	0.431	0.447
Preserved Total Solids	-	-	83.00	68.50	74.10
Total Solids	-	-	80.20	77.10	79.00
Conventionals in mg/kg					
N-Ammonia	-	-	17.8	14.5	12.7
Sulfide	-	-	1.21 U	192	1.39 U
NWTPHD in mg/kg					
Diesel Range Hydrocarbons	-	-	8.8	9.7	12
Motor Oil	-	-	32	29	49
NWTPHG in mg/kg					
Gasoline Range Hydrocarbons	-	-	8.8 U	11 U	9.9 U
Metals in mg/kg					
Arsenic	57	93	1.1 J	1.6	4.1
Cadmium	5.1	6.7	0.2 U	0.2 U	0.2
Chromium	260	270	17.4 J	31.0	19.4
Copper	390	390	14.1	34.6	11.6
Lead	450	530	14	15	13
Mercury	0.41	0.59	0.05 U	0.05 U	0.08
Silver	6.1	6.1	0.4 U	0.4 U	0.4 U
Zinc	410	960	50	61	48
PCBs in ug/kg					
Aroclor 1016	-	-	19 U	19 U	19 U
Aroclor 1221	-	-	19 U	19 U	19 U
Aroclor 1232	-	-	19 U	19 U	19 U
Aroclor 1242	-	-	19 U	19 U	19 U
Aroclor 1248	-	-	19 U	19 U	19 U
Aroclor 1254	-	-	19 U	19 U	19 U
Aroclor 1260	-	-	19 U	19 U	19 U
Total PCBs	130	1000	19 U	19 U	19 U
LPAHs in ug/kg					
2-Methylnaphthalene	960	4400	62 U	61 U	62 U
Acenaphthene	1300	1300	62 U	61 U	62 U
Acenaphthylene	670	1400	62 U	61 U	62 U
Anthracene	1500	5400	62 U	61 U	62 U
Fluorene	500	730	62 U	61 U	62 U
Naphthalene	2100	2400	62 U	61 U	62 U
Phenanthrene	540	1000	62 U	61 U	67
Total LPAHs	5200	13000	62 U	61 U	67
HPAHs in ug/kg					
Benzo(a)anthracene	1300	1600	62 U	61 U	66
Benzo(a)pyrene	1600	3000	62 U	61 U	72
Benzo(b)fluoranthene			62 U	61 U	83
Benzo(k)fluoranthene			62 U	61 U	73
Total Benzofluoranthenes	3200	3600	62 U	61 U	156
Benzo(g,h,i)perylene	670	720	62 U	61 U	62 U
Chrysene	1400	2800	62 U	61 U	89
Dibenz(a,h)anthracene	230	540	62 U	61 U	62 U

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CS-02	CS-03	ES-04
Sampling Date	LAET	2LAET	4/26/2007	4/27/2007	4/26/2007
Fluoranthene	1700	2500	62 U	61 U	150
Indeno(1,2,3-cd)pyrene	600	690	62 U	61 U	62 U
Pyrene	2600	3300	62 U	61 U	160
Total HPAHs	12000	17000	62 U	61 U	693
Phthalates in ug/kg					
bis(2-Ethylhexyl)phthalate	1300	1900	62 U	61 U	62 U
Butylbenzylphthalate	63	900	62 U	61 U	62 U
Diethylphthalate	200	200	62 U	61 U	62 U
Dimethylphthalate	71	160	62 U	61 U	62 U
Di-n-Butylphthalate	1400	1400	62 U	61 U	62 U
Di-n-Octyl phthalate	6200	6200	62 U	61 U	62 U
Chlorinated Hydrocarbons in ug/kg					
1,2,4-Trichlorobenzene	31	51	*62 U*	*61 U*	*62 U*
1,2-Dichlorobenzene	35	50	*62 U*	*61 U*	*62 U*
1,3-Dichlorobenzene			62 U	61 U	62 U
1,4-Dichlorobenzene	110	120	62 U	61 U	62 U
Hexachlorobenzene	22	70	*62 U*	*61 U*	*62 U*
Hexachlorobutadiene	11	120	*62 U*	*61 U*	*62 U*
Hexachloroethane			62 U	61 U	62 U
Misc. Extractables in ug/kg					
Dibenzofuran	540	700	62 U	61 U	62 U
N-Nitrosodiphenylamine	28	40	*62 U*	*61 U*	*62 U*
Phenolics (Acids) in ug/kg					
2,4-Dimethylphenol	29	29	*62 U*	*61 U*	*62 U*
2-Methylphenol	63	63	62 U	61 U	62 U
4-Methylphenol	670	670	62 U	61 U	62 U
Pentachlorophenol	360	690	310 U	310 U	310 U
Phenol	420	1200	93	1,100	62 U
Benzoic Acid	650	650	620 U	610 U	620 U
Benzyl Alcohol	57	73	*62 U*	*61 U*	*62 U*
Semivolatiles (SIM) in ug/kg					
1,2,4-Trichlorobenzene	31	51	6.2 U	6.1 U	6.2 U
1,2-Dichlorobenzene	35	50	6.2 U	6.1 U	6.2 U
1,3-Dichlorobenzene	-	-	6.2 U	6.1 U	6.2 U
1,4-Dichlorobenzene	110	120	6.2 U	6.1 U	6.2 U
Butylbenzylphthalate	63	900	6.2 U	6.1 U	7.5
Dibenz(a,h)anthracene	230	540	6.2 U	6.1 U	11
Dimethylphthalate	71	160	6.2 U	6.1 U	6.2 U
Hexachlorobenzene	22	70	6.2 U	6.1 U	6.2 U
Hexachlorobutadiene	11	120	6.2 U	6.1 U	6.2 U
N-Nitrosodiphenylamine	28	40	6.2 U	6.1 U	6.2 U
2,4-Dimethylphenol	29	29	6.2 UJ	6.1 UJ	6.2 UJ
2-Methylphenol	63	63	6.2 U	6.1 U	6.2 U
Pentachlorophenol	360	690	31 U	31 U	31 U
Benzyl Alcohol	57	73	31 UJ	31 UJ	31 UJ

Table 4 - Analytical Results for Sediment Samples Compared to Apparent Effects Threshold (Dry Weight) Sediment Quality Criteria

Sample ID	AETs		CS-02	CS-03	ES-04
Sampling Date	LAET	2LAET	4/26/2007	4/27/2007	4/26/2007
Grain Size in %					
Gravel			47.4	23.7	14.2
Very Coarse Sand			10.6	8.3	2.3
Coarse Sand			5.4	3.7	10.2
Medium Sand			8.7	14.6	31.3
Fine Sand			22.9	42.9	23.1
Very Fine Sand			2.1	4.4	12.6
Total Fines			2.8	2.3	6.3
Coarse Silt					2.9
Medium Silt					0.7
Fine Silt					0.4
Very Fine Silt					0.5
8-9 Phi Clay					0.5
9-10 Phi Clay					0.3
> 10 Phi Clay					1.1

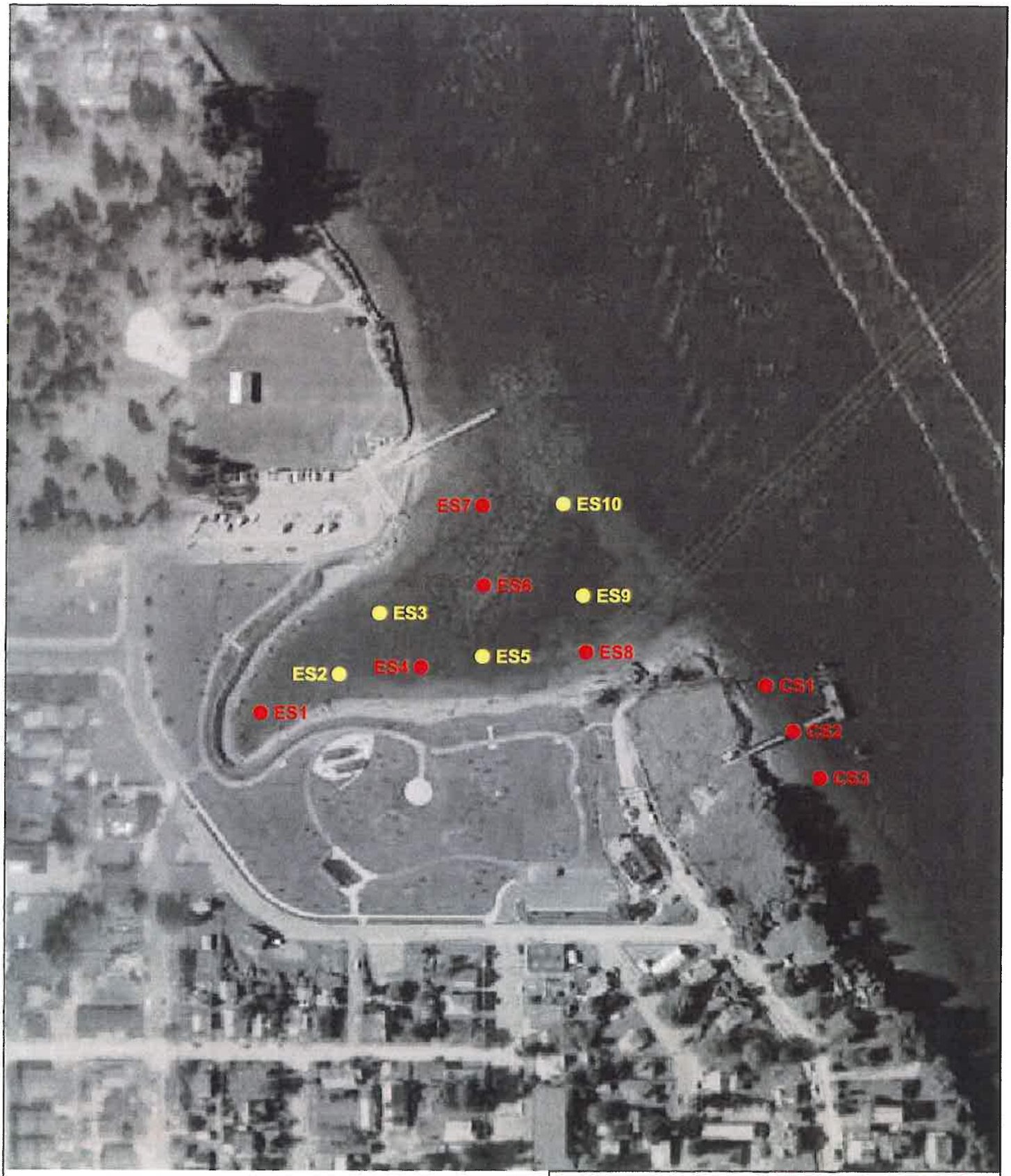
Concentration exceeding the criterion is boxed.
Reporting limit exceeding the criterion is italicized.
U = Not detected at reporting limit indicated.
J = Estimated value.





Evergreen Park Bremerton, Washington	
Vicinity Map	
17330-06	6/07
HARTCROWSER	Figure **1**

SRN 06/13/07 1733006-001.dwg



Sample Location and Number

ES1 Sample for Analysis

ES2 Archive Sample

0 200 400

Scale in Feet

N

Evergreen Park
Bremerton, Washington

Sediment Sample Location Plan

17330-06 6/07

HARTCROWSER

Figure
2

EAL 06/13/07 1733006-005.dwg

APPENDIX C

Pilot Test Memorandum

Parametrix ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

4660 KITSAP WAY, SUITE A
BREMERTON, WA 98312-2357
T. 360.377.0014 F. 360.479.5961
www.parametrix.com

TECHNICAL MEMORANDUM

Date:	April 17, 2008
To:	Panjini Balaraju, P.E. - Ecology
From:	David Dinkuhn, P.E. - Parametrix
Subject:	Pilot Scale Test Plan
cc:	Thomas Knuckey, P.E. - City of Bremerton
Project Number:	255-1896-063
Project Name:	Former Chevron Property RI/FS and Interim Action

FORMER CHEVRON PROPERTY PILOT SCALE TEST PLAN

This memorandum presents a plan for conducting a pilot scale test for treatment of contaminated soils at the Former Chevron Property using in-situ chemical oxidation. The plan is based on the results of recent RI/FS sampling at the site and an evaluation of commercially available oxidants. This memorandum represents the next step in cleanup design for the site and is a required submittal under the site's Agreed Order.

RI/FS Sampling Results

RI/FS sampling was conducted according to the project's work plan (Parametrix 2007) on March 5 through 19, 2008. Summaries of the sampling results are provided in Tables 1 through 4. Results for gasoline, diesel, and lube oil in subsurface soil and groundwater are also provided on Figures 1 and 2. Soil conditions encountered during sampling are illustrated in the attached push probe and monitoring well logs. The RI/FS sampling results are generally consistent with historical sampling results. In most of the lower yard, subsurface soil and groundwater contains contaminant concentrations above cleanup levels. Contaminated soil was observed between the depths of 8 and 14 feet in the lower yard. The average thickness of the contaminated soil zone is 4 feet.

In the upper yard, only groundwater samples contained concentrations above the cleanup levels. The lack of significant soil contamination in the probes installed around wells MW-16 and MW-18 indicates that the groundwater contamination historically seen in these wells is the result of very-localized sources. This may be explained by the tight, impermeable nature of the soils the upper yard, which consist of glacially-overridden outwash (silty sand and gravel). Releases in this type of soil typically do not migrate far.

The results of surface soil screening and sampling indicate that near-surface petroleum contamination is not present. However, one surface soil sampling location (SS04) contained lead at a concentration

slightly above the cleanup level. A zone of near-surface asphalt debris mixed with soil was observed from 2 to 6 feet in PP15. The extent of the asphalt debris will be explored using test pits on April 23 and 24, 2008. Following this work, a brief memo will be prepared and submitted that will propose an excavation plan for this material as well as for areas in the upper yard. Excavations are planned to occur in September 2008.

Pilot Scale Test

Treatment Area and Selected Reagent

Treatment of contaminated soils using chemical oxidation will be tested in a zone around push-probe PP14 (Figure 1). The soil sample from PP14 contained the highest total concentration of petroleum of any of the RI/FS samples. In addition, the petroleum consisted mainly of the heavier fractions (diesel and lube oil), which are more difficult to treat. The pilot test will be conducted as presented in the work plan, with only minor changes. The selected treatment reagent for the test is RegenOx™ provided by Regenesis of San Clemente, California. RegenOx™ is effective against petroleum constituents and is relatively safe to handle. A detailed description of the product is provided in the attached brochure from Regenesis. A case study describing the recent use of the reagent at a petroleum site is also attached. RegenOx™ is a proprietary solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. The reagent is provided in two parts (an oxidant powder and an activator gel) that are mixed on site with water to form a slurry.

Fenton's Reagent, an oxidant commonly used for petroleum contamination (EPA 2004; ITRC 2005), was also considered for the site. Fenton's Reagent is a strong oxidant consisting of hydrogen peroxide combined with iron. However, a disadvantage of Fenton's Reagent is that it preferentially reacts with carbonate ions, which are present in significant concentrations in marine water. Marine water intrusion is expected in the treatment area as illustrated by the chloride concentration in MW-26 (9,400 milligrams per liter), which was about half that of seawater. Fenton's Reagent also has the disadvantage of requiring an acidic environment for the chemical reaction to occur. To achieve this, acid is commonly injected into the subsurface with the reagent. Shells present in the beach sands beneath the fill in the lower yard would react with and buffer the acid while producing off gassing of carbon dioxide. For these reasons, Fenton's Reagent is not considered a viable option at the site.

Pilot Test Procedure

Nine locations on 10-foot centers centered around PP14 will be injected with RegenOx™ at a dosing rate of 20 pounds of reagent per vertical foot. A 6-foot zone between the depths of 8 and 14 feet will be treated. The reagent parts will be mixed with water to form a slurry to be applied at a volumetric rate of 31.1 gallons per vertical foot. The dosing rate and injection point spacing of 10 feet were provided by Regenesis based on site-specific information. A copy of the pilot test proposal from Regenesis is attached.

Injections will be conducted using a push-probe rig and injection pump. An injection rod with a disposable tip will be pushed to the desired depth and withdrawn 1 foot. The reagent slurry will then be pumped into the soil until the prescribed volume has been injected. The rod will then be raised 1 foot and the procedure repeated. Detailed mixing and installation instructions are attached.

Two injection events will occur spaced apart by 2 weeks. For more even distribution of the oxidant, the injection point locations for the second event will be offset 5 feet from the original locations.

Confirmation Sampling

One month following the second event, four confirmation push-probes will be installed to provide an "after" measurement of soil concentrations. The four push-probes will each be spaced 5 feet horizontally from the original PP14 location. Two soil samples will be collected from each probe for a total of eight samples. The original sample from PP14 was collected from a depth of 9 feet. Confirmation sample depths will be selected so that two samples are collected from 1 foot above the original sample (8 feet), three samples are collected from 1 foot below (10 feet), and three samples are collected from the same depth (9 feet). Confirmation samples will be analyzed for gasoline, BTEX, diesel, and lube oil. A third injection event and follow-up confirmation sampling may be conducted based on the results of the confirmation sampling.

Full Scale Treatment Recommendation

If proved effective by the pilot test, RegenOx^{TM} treatment will be applied across the lower yard at locations where soil concentrations exceed cleanup levels. Dosing rate, injection location spacing, and total number of injection events will be based on the results of the pilot test. The results of the pilot test and a recommended full-scale treatment plan will be provided in a technical memorandum following the pilot test. Regarding the full scale treatment, it is anticipated that the only regulatory requirement for the treatment using in-situ chemical oxidation is approval from Ecology and that a formal permit for the treatment will not be required (ITRC 2005, page 38).

References

EPA. 2004. How to evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites, a Guide for Corrective Action Plan Reviewers. Solid Waste and Emergency Response. EPA 510-R-04-002. May.

Interstate Technology Regulatory Council (ITRC). 2005. Technical and Regulatory Guidance for In-Situ Chemical Oxidation of Contaminated Soil and Groundwater. Second Edition. January.

Parametrix. 2007. Work Plan for Remedial Investigation/Feasibility Study, Interim Action, and Shoreline Restoration, Former Chevron Property, Bremerton, Washington. Prepared for The City of Bremerton. September.

Table 1 - Subsurface Soil Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Units	MTCA A	Station No. PP01		PP02		PP03		PP04		PP05	
			Sample Depth (ft) 8		14		17		14		16	
			Groundwater Depth (ft) 16		14		17		14		16	
			Date Sampled 3/7/08		3/7/08		3/7/08		3/7/08		3/7/08	
TOTAL PETROLEUM HYDROCARBONS												
Gasoline	mg/kg	30	8.1	U	4.2	U	9.4	U	9.3	U	9.7	U
Diesel	mg/kg	2000	300		28	U	28	U	82		28	U
Lube Oil	mg/kg	2000	55	U	55	U	55	U	54	U	56	U
METALS												
Lead	mg/kg	250	5.5	U	5.5	U	5.5	U	5.4	U	5.6	U
VOLATILE ORGANICS												
Benzene	mg/kg	0.03	0.020	U	0.020	U	0.020	U	0.093	U	0.020	U
Toluene	mg/kg	7	0.50	U	0.042	U	0.094	U	0.47	U	0.097	U
Ethylbenzene	mg/kg	6	0.50	U	0.042	U	0.094	U	0.47	U	0.097	U
m,p-Xylene	mg/kg	9	0.50	U	0.042	U	0.094	U	0.33		0.097	U
o-Xylene	mg/kg	9	0.50	U	0.042	U	0.094	U	0.47	U	0.097	U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)												
Naphthalene	mg/kg	5	0.0073	U	-		-		-		-	
2-Methylnapthalene	mg/kg	5	0.0073	U	-		-		-		-	
1-Methylnapthalene	mg/kg	5	0.25		-		-		-		-	
Acenaphthylene	mg/kg	-	0.0073	U	-		-		-		-	
Acenaphthene	mg/kg	-	0.020		-		-		-		-	
Fluorene	mg/kg	-	0.12		-		-		-		-	
Phenanthrene	mg/kg	-	0.067		-		-		-		-	
Anthracene	mg/kg	-	0.0073	U	-		-		-		-	
Fluoranthene	mg/kg	-	0.0073	U	-		-		-		-	
Pyrene	mg/kg	-	0.0073	U	-		-		-		-	
Benzo[g,h,i]perylene	mg/kg	-	0.0073	U	-		-		-		-	
Benzo(a)anthracene	mg/kg	-	0.0073	U	-		-		-		-	
Chrysene	mg/kg	-	0.0073	U	-		-		-		-	
Benzo(a)pyrene	mg/kg	0.1	0.0073	U	-		-		-		-	
Indeno(1,2,3-cd)pyrene	mg/kg	-	0.0073	U	-		-		-		-	
Dibenz(a,h)anthracene	mg/kg	-	0.0073	U	-		-		-		-	
Benzo(b)fluoranthene	mg/kg	-	0.0073	U	-		-		-		-	
Benzo(k)fluoranthene	mg/kg	-	0.0073	U	-		-		-		-	
Total cPAHs**	mg/kg	0.1	0.0055		-		-		-		-	
GENERAL CHEMISTRY												
Total Organic Carbon	%	-	0.09		-		-		-		-	

Table 1 - Subsurface Soil Sample Summary
Former Chevron Property RI/FS

	Station No.		PP06		PP07		PP08		PP08		PP09	
	Sample Depth (ft)		16		10		8		8*		6	
	Groundwater Depth (ft)		16		10		8		8		13	
PARAMETERS	**Date Sampled**		3/7/08		3/7/08		3/7/08		3/7/08		3/7/08	
	Units	**MTCA A**										
TOTAL PETROLEUM HYDROCARBONS												
Gasoline	mg/kg	30	11	U	11	U	130	U	110	U	12	U
Diesel	mg/kg	2000	28	U	1,400		2,000		2,000		230	
Lube Oil	mg/kg	2000	55	U	64		84		98		55	U
METALS												
Lead	mg/kg	250	5.5	U	5.6	U	5.8	U	5.7	U	5.5	U
VOLATILE ORGANICS												
Benzene	mg/kg	0.03	0.022	U	0.022	U	0.17		0.17		-	
Toluene	mg/kg	7	0.11	U	0.11	U	3.2	U	5.4	U	-	
Ethylbenzene	mg/kg	6	0.11	U	0.11	U	6.4	U	11	U	-	
m,p-Xylene	mg/kg	9	0.11	U	0.11	U	18		17		-	
o-Xylene	mg/kg	9	0.11	U	0.11	U	6.4	U	11	U	-	
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)												
Naphthalene	mg/kg	5	-		-		0.11		-		-	
2-Methylnapthalene	mg/kg	5	-		-		0.0078	U	-		-	
1-Methylnapthalene	mg/kg	5	-		-		3.7		-		-	
Acenaphthylene	mg/kg	-	-		-		0.0078	U	-		-	
Acenaphthene	mg/kg	-	-		-		0.10		-		-	
Fluorene	mg/kg	-	-		-		0.58		-		-	
Phenanthrene	mg/kg	-	-		-		0.41		-		-	
Anthracene	mg/kg	-	-		-		0.0078	U	-		-	
Fluoranthene	mg/kg	-	-		-		0.012		-		-	
Pyrene	mg/kg	-	-		-		0.012		-		-	
Benzo[g,h,i]perylene	mg/kg	-	-		-		0.0078	U	-		-	
Benzo(a)anthracene	mg/kg	-	-		-		0.0078	U	-		-	
Chrysene	mg/kg	-	-		-		0.0078	U	-		-	
Benzo(a)pyrene	mg/kg	0.1	-		-		0.0078	U	-		-	
Indeno(1,2,3-cd)pyrene	mg/kg	-	-		-		0.0078	U	-		-	
Dibenz(a,h)anthracene	mg/kg	-	-		-		0.0078	U	-		-	
Benzo(b)fluoranthene	mg/kg	-	-		-		0.0078	U	-		-	
Benzo(k)fluoranthene	mg/kg	-	-		-		0.0078	U	-		-	
Total cPAHs**	mg/kg	0.1	-		-		0.0074		-		-	
GENERAL CHEMISTRY												
Total Organic Carbon	%	-	-		-		0.124		-		-	

Table 1 - Subsurface Soil Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Station No.		PP09		PP10		PP11		PP12		PP13	
	Sample Depth (ft)		10		10		10		10		10	
	Groundwater Depth (ft)		13		10		10		10		10	
	Date Sampled		3/7/08		3/7/08		3/6/08		3/6/08		3/6/08	
	Units	MTCA A										
TOTAL PETROLEUM HYDROCARBONS												
Gasoline	mg/kg	30	8	U	140	O	1,600		1,000		5,100	
Diesel	mg/kg	2000	28		120		940	M	580	M	410	M
Lube Oil	mg/kg	2000	55	U	61		450	M	130	M	98	M
METALS												
Lead	mg/kg	250	-		53		28		19		32	
VOLATILE ORGANICS												
Benzene	mg/kg	0.03	.020	U	0.25		4.0		3.9		21	
Toluene	mg/kg	7	0.080	U	0.099	U	9.7		0.54	U	39	
Ethylbenzene	mg/kg	6	0.080	U	0.49	U	23		12		120	E
m,p-Xylene	mg/kg	9	0.080	U	0.96		110		35		350	E
o-Xylene	mg/kg	9	0.080	U	0.49	U	40		3.1		130	E
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)												
Naphthalene	mg/kg	5	-		-		-		-		-	
2-Methylnapthalene	mg/kg	5	-		-		-		-		-	
1-Methylnapthalene	mg/kg	5	-		-		-		-		-	
Acenaphthylene	mg/kg	-	-		-		-		-		-	
Acenaphthene	mg/kg	-	-		-		-		-		-	
Fluorene	mg/kg	-	-		-		-		-		-	
Phenanthrene	mg/kg	-	-		-		-		-		-	
Anthracene	mg/kg	-	-		-		-		-		-	
Fluoranthene	mg/kg	-	-		-		-		-		-	
Pyrene	mg/kg	-	-		-		-		-		-	
Benzo[g,h,i]perylene	mg/kg	-	-		-		-		-		-	
Benzo(a)anthracene	mg/kg	-	-		-		-		-		-	
Chrysene	mg/kg	-	-		-		-		-		-	
Benzo(a)pyrene	mg/kg	0.1	-		-		-		-		-	
Indeno(1,2,3-cd)pyrene	mg/kg	-	-		-		-		-		-	
Dibenz(a,h)anthracene	mg/kg	-	-		-		-		-		-	
Benzo(b)fluoranthene	mg/kg	-	-		-		-		-		-	
Benzo(k)fluoranthene	mg/kg	-	-		-		-		-		-	
Total cPAHs**	mg/kg	0.1	-		-		-		-		-	
GENERAL CHEMISTRY												
Total Organic Carbon	%	-	-		-		-		-		-	

Table 1 - Subsurface Soil Sample Summary
Former Chevron Property RI/FS

	Station No.		PP14		PP15		PP16		PP17		PP18	
	Sample Depth (ft)		9		10		10		10		10	
	Groundwater Depth (ft)		9		10		10		10		10	
PARAMETERS	Date Sampled		3/6/08		3/6/08		3/6/08		3/6/08		3/6/08	
	Units	**MTCA A**										
TOTAL PETROLEUM HYDROCARBONS												
Gasoline	mg/kg	30	31	U	110		80	U	3,900		92	O
Diesel	mg/kg	2000	2,100		110		2,316		790	M	130	
Lube Oil	mg/kg	2000	3,800		59	U	240	U	100	M	68	
METALS												
Lead	mg/kg	250	92		13		6.7	U	11		13	
VOLATILE ORGANICS												
Benzene	mg/kg	0.03	0.46		2.1		5.8		37		0.33	
Toluene	mg/kg	7	2.5	U	0.50	U	4	U	2.3		0.31	U
Ethylbenzene	mg/kg	6	2.5	U	4.0		4	U	70		0.31	U
m,p-Xylene	mg/kg	9	5.6		0.69		4.6		190	E	0.52	
o-Xylene	mg/kg	9	2.5	U	0.50	U	4	U	40		0.31	U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)												
Naphthalene	mg/kg	5	0.038		0.50		-		-		-	
2-Methylnapthalene	mg/kg	5	0.20		0.97		-		-		-	
1-Methylnapthalene	mg/kg	5	0.30		0.61		-		-		-	
Acenaphthylene	mg/kg	-	0.0079	U	0.10		-		-		-	
Acenaphthene	mg/kg	-	0.24		0.30		-		-		-	
Fluorene	mg/kg	-	0.18		0.28		-		-		-	
Phenanthrene	mg/kg	-	0.32		0.91		-		-		-	
Anthracene	mg/kg	-	0.076		0.27		-		-		-	
Fluoranthene	mg/kg	-	0.25		0.35		-		-		-	
Pyrene	mg/kg	-	0.59		0.62		-		-		-	
Benzo[g,h,i]perylene	mg/kg	-	0.043		0.093		-		-		-	
Benzo(a)anthracene	mg/kg	-	0.067		0.18		-		-		-	
Chrysene	mg/kg	-	0.14		0.17		-		-		-	
Benzo(a)pyrene	mg/kg	0.1	0.083		0.20		-		-		-	
Indeno(1,2,3-cd)pyrene	mg/kg	-	0.038		0.076		-		-		-	
Dibenz(a,h)anthracene	mg/kg	-	0.012		0.028		-		-		-	
Benzo(b)fluoranthene	mg/kg	-	0.120		0.14		-		-		-	
Benzo(k)fluoranthene	mg/kg	-	0.048		0.040		-		-		-	
Total cPAHs**	mg/kg	0.1	0.10		0.25		-		-		-	
GENERAL CHEMISTRY												
Total Organic Carbon	%	-	3.29		1.14		-		-		-	

Table 1 - Subsurface Soil Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Station No.		PP19		MW25		MW26	
	Sample Depth (ft):		10		10		9.5	
	Groundwater Depth (ft)		10		9.5		9.5	
	Date Sampled		3/6/08		3/7/08		3/7/08	
	Units	MTCA A						
TOTAL PETROLEUM HYDROCARBONS								
Gasoline	mg/kg	30	25	U	55		14	U
Diesel	mg/kg	2000	370		29	U	920	
Lube Oil	mg/kg	2000	56	U	57	U	240	
METALS								
Lead	mg/kg	250	5.6	U	5.7	U	26	
VOLATILE ORGANICS								
Benzene	mg/kg	0.03	0.22		0.021	U	0.028	U
Toluene	mg/kg	7	2.5	U	0.010	U	0.14	U
Ethylbenzene	mg/kg	6	2.5	U	0.010	U	0.14	U
m,p-Xylene	mg/kg	9	4.1		0.180		0.14	U
o-Xylene	mg/kg	9	2.5	U	0.010	U	0.14	U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)								
Naphthalene	mg/kg	5	-		-		-	
2-Methylnapthalene	mg/kg	5	-		-		-	
1-Methylnapthalene	mg/kg	5	-		-		-	
Acenaphthylene	mg/kg	-	-		-		-	
Acenaphthene	mg/kg	-	-		-		-	
Fluorene	mg/kg	-	-		-		-	
Phenanthrene	mg/kg	-	-		-		-	
Anthracene	mg/kg	-	-		-		-	
Fluoranthene	mg/kg	-	-		-		-	
Pyrene	mg/kg	-	-		-		-	
Benzo[g,h,i]perylene	mg/kg	-	-		-		-	
Benzo(a)anthracene	mg/kg	-	-		-		-	
Chrysene	mg/kg	-	-		-		-	
Benzo(a)pyrene	mg/kg	0.1	-		-		-	
Indeno(1,2,3-cd)pyrene	mg/kg	-	-		-		-	
Dibenz(a,h)anthracene	mg/kg	-	-		-		-	
Benzo(b)fluoranthene	mg/kg	-	-		-		-	
Benzo(k)fluoranthene	mg/kg	-	-		-		-	
Total cPAHs**	mg/kg	0.1	-		-		-	
GENERAL CHEMISTRY								
Total Organic Carbon	%	-	-		-		-	

Notes:

mg/kg = Milligrams per kilogram.

MTCA = Model Toxics Control Act.

E = The value reported exceeds the quantification range and is an estimate.

M = Hydrocarbons in the gasoline range are impacting the diesel range results.

O = Hydrocarbons indicates heavier fuels are present in the sample and are impacting the gasoline result.

U = Analyte not detected above given reporting limit.

= Result exceeds cleanup level.

* = Duplicate sample.

- = Not available/not analyzed.

** = Total of individual cPAHs multipied by benzo(a)pyrene toxicity equivalency factor. 1/2 the reporting limit was used for non-detected results.

Table 2 - Groundwater Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Units	MTCA A	Monitoring Well No.		MW04		MW10		MW11		MW19		MW20		MW21	
			Sample Depth (ft)		12		15		10		15		11		10	
			Groundwater Depth (ft)		12		8.40		6.90		10.91		7.45		8.85	
			Date Sampled		3/19/08		3/17/08		3/13/08		3/12/08		3/13/08		3/18/08	
VOLATILE ORGANICS																
Benzene	ug/L	5			160		4.0	U	1.0	U	4.0	U	1.0	U	15	
Toluene	ug/L	1000			10	U	4.0	U	1.0	U	4.0	U	1.0	U	91	
Ethylbenzene	ug/L	700			45		4.0	U	1.0	U	4.0	U	1.0	U	620	
m,p-Xylene	ug/L	1000			86		6.8		1.0	U	4.0	U	1.0	U	910	
o-Xylene	ug/L	1000			12		4.0	U	1.0	U	4.0	U	1.0	U	110	
TOTAL PETROLEUM HYDROCARBONS																
Gasoline	ug/L	800			5,400		400	U	100	U	400	U	100	U	9,200	
Diesel	mg/L	0.5			27		160		0.27		8.1		0.27	U	1.7	
Lube Oil	mg/L	0.5			2.3		8.8	U	0.40	U	0.42	U	0.44	U	0.40	U
METALS																
Total Lead	ug/L	15			-		-		-		4.5		15		10	
Dissolved Lead	ug/L	15			-		-		-		1.0	U	1.0	U	8.9	
FUEL ADDITIVES																
Methyl t-Butyl Ether (MTBE)	ug/L	20			-		1.0	U	0.20	U	1.0	U	0.20	U	2.0	U
1,2-Dichloroethane (EDC)	ug/L	5			-		1.0	U	0.20	U	1.0	U	0.20	U	2.0	U
1,2-Dibromoethane (EDB)	ug/L	0.01			-		0.0096	U	0.0095	U	0.0097	U	0.0095	U	0.0096	U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)																
Naphthalene	ug/L	160			-		-		-		0.88		0.12	U	18	
2-Methylnaphthalene	ug/L	-			-		-		-		0.11	U	0.12	U	32	
1-Methylnappthalene	ug/L	-			-		-		-		15		0.12	U	20	
Acenaphthylene	ug/L	-			-		-		-		0.42		0.12	U	0.099	
Acenaphthene	ug/L	-			-		-		-		0.96		0.38		1.1	
Flourene	ug/L	-			-		-		-		5.2		0.12	U	0.96	
Fluoranthene	ug/L	-			-		-		-		0.11	U	0.12	U	0.11	
Phenanthrene	ug/L	-			-		-		-		2.9		0.12	U	0.65	
Anthracene	ug/L	-			-		-		-		0.15		0.12	U	0.095	U
Pyrene	ug/L	-			-		-		-		0.11	U	0.12	U	0.095	U
Benzo[g,h,i]perylene	ug/L	-			-		-		-		0.11	U	0.12	U	0.013	
Benzo(a)anthracene	ug/L	-			-		-		-		0.011	U	0.015		0.012	
Chrysene	ug/L	-			-		-		-		0.021		0.013		0.011	

Table 2 - Groundwater Sample Summary
Former Chevron Property RI/FS

	Monitoring Well No.		MW04		MW10		MW11		MW19		MW20		MW21	
	Sample Depth (ft)		12		15		10		15		11		10	
	Groundwater Depth (ft)		12		8.40		6.90		10.91		7.45		8.85	
PARAMETERS	Date Sampled		3/19/08		3/17/08		3/13/08		3/12/08		3/13/08		3/18/08	
	Units	**MTCA A**												
Benzo(a)pyrene	ug/L	0.1	-		-		-		0.011	U	0.012	U	0.012	
Indeno(1,2,3-cd)pyrene	ug/L	-	-		-		-		0.011	U	0.012	U	0.0099	
Dibenz(a,h)anthracene	ug/L	-	-		-		-		0.011	U	0.012	U	0.0095	U
Benzo(b)fluoranthene	ug/L	-	-		-		-		0.011	U	0.012	U	0.010	
Benzo(k)fluoranthene	ug/L	-	-		-		-		0.011	U	0.012	U	0.011	
Total cPAHs**	ug/L	0.1	-		-		-		0.009		0.010		0.017	
GENERAL CHEMISTRY														
Alkalinity	mg/L	-	-		220		170		160		180		150	
Nitrate (as Nitrogen)	mg/L	-	-		0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
Sulfate	mg/L	-	-		5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Chloride	mg/L	-	-		2.5		5.2		3.4		11		28	
Chemical Oxygen Demand	mg/L	-	-		149		26.2		101		24.2		22.2	
Total Dissolved Solids	mg/L	-	-		-		-		-		-		200	

Table 2 - Groundwater Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Units	MTCA A	Monitoring Well No.		MW22		MW23		MW25		MW25		MW26		COVE[1]
			Sample Depth (ft)		10		38		12		12*		13		0
			Groundwater Depth (ft)		7.86		20.52		8.32		8.32		9.03		NA
			Date Sampled		3/17/08		3/12/08		3/18/08		3/18/08		3/18/08		3/12/08
VOLATILE ORGANICS															
Benzene	ug/L	5			4.0	U	1.1		4.0	U	4.0		17		-
Toluene	ug/L	1000			4.0	U	1.0	U	4.0	U	4.0		4.0	U	-
Ethylbenzene	ug/L	700			4.0	U	1.0	U	56		56		4.0	U	-
m,p-Xylene	ug/L	1000			4.0	U	1.0	U	4.2		4.1		4.0	U	-
o-Xylene	ug/L	1000			4.0	U	1.0	U	4.0	U	4.0		4.0	U	-
TOTAL PETROLEUM HYDROCARBONS															
Gasoline	ug/L	800			400	U	530		1,600		1,700		1,300		-
Diesel	mg/L	0.5			0.26	U	0.26	U	1.2		1		1.3		-
Lube Oil	mg/L	0.5			0.41	U	0.42	U	0.48	U	0.46	U	0.40	U	-
METALS															
Total Lead	ug/L	15			1.1	U	-		1.2		1.3		3.3		-
Dissolved Lead	ug/L	15			1.0	U	-		1.0	U	1.0	U	1.0	U	-
FUEL ADDITIVES															
Methyl t-Butyl Ether (MTBE)	ug/L	20			0.40	U	1.0	U	1.0	U	1.0	U	1.0	U	-
1,2-Dichloroethane (EDC)	ug/L	5			0.40	U	1.0		1.0	U	1.0	U	1.0	U	-
1,2-Dibromoethane (EDB)	ug/L	0.01			0.0095	U	0.0096	U	0.0096	U	0.0096	U	0.0095	U	-
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)															
Naphthalene	ug/L	160			0.098	U	-		1.2		1.4		0.80		-
2-Methylnaphthalene	ug/L	-			0.098	U	-		0.11	U	0.11	U	0.10	U	-
1-Methylnappthalene	ug/L	-			0.098	U	-		22		25		69		-
Acenaphthylene	ug/L	-			0.098	U	-		0.17		0.17		0.45		-
Acenaphthene	ug/L	-			0.52		-		0.98		0.96		23		-
Flourene	ug/L	-			0.098	U	-		1.6		1.7		4.8		-
Fluoranthene	ug/L	-			0.098	U	-		0.11	U	0.11	U	0.88		-
Phenanthrene	ug/L	-			0.098	U	-		0.11	U	0.11	U	10		-
Anthracene	ug/L	-			0.098	U	-		0.11	U	0.11	U	2.4		-
Pyrene	ug/L	-			0.098	U	-		0.11	U	0.11	U	1.2		-
Benzo[g,h,i]perylene	ug/L	-			0.0098	U	-		0.011	U	0.11	U	0.020		-
Benzo(a)anthracene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.10		-
Chrysene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.098		-

Table 2 - Groundwater Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Units	MTCA A	Monitoring Well No.		MW22		MW23		MW25		MW25		MW26		COVE[1]
			Sample Depth (ft)		10		38		12		12*		13		0
			Groundwater Depth (ft)		7.86		20.52		8.32		8.32		9.03		NA
			Date Sampled		3/17/08		3/12/08		3/18/08		3/18/08		3/18/08		3/12/08
Benzo(a)pyrene	ug/L	0.1			0.0098	U	-		0.011	U	0.011	U	0.051		-
Indeno(1,2,3-cd)pyrene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.017		-
Dibenz(a,h)anthracene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.010	U	-
Benzo(b)fluoranthene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.022		-
Benzo(k)fluoranthene	ug/L	-			0.0098	U	-		0.011	U	0.011	U	0.027		-
Total cPAHs**	ug/L	0.1			0.007		-		0.008		0.008		0.070		-
GENERAL CHEMISTRY															
Alkalinity	mg/L	-			340		230		420		410		190		-
Nitrate (as Nitrogen)	mg/L	-			0.050	U	0.051		0.052		0.050	U	0.050	U	-
Sulfate	mg/L	-			22		5.0	U	36		36		1,400		-
Chloride	mg/L	-			370		3.0		980		910		9,400		16,000
Chemical Oxygen Demand	mg/L	-			25.2		32.5		24.9		10.6		110		-
Total Dissolved Solids	mg/L	-			-		-		2,000		2,000		-		-

Notes:

mg/L = Milligrams per liter.

MTCA = Model Toxics Control Act.

U = Analyte not detected above given reporting limit.

ug/L = Micrograms per liter.

= Result exceeds cleanup level.

* = Duplicate sample.

- = Not available/not analyzed.

** = Total of individual carcinogenic PAHs multipied by benzo(a)pyrene toxicity equivalency factor. 1/2 the reporting limit was used for non-detected results.

[1] = Smith Cove surface water.

Table 3 - Surface Soil Sample Summary
Former Chevron Property RI/FS

PARAMETERS	Units	Station No. / Sample Depth (inches) / Date Sampled	MTCA A	SS04 0-6 3/7/08		SS09 0-6 3/7/08		SS09 0-6* 3/7/08		SS20 0-6 3/7/08		SS23 0 3/7/08	
TOTAL PETROLEUM HYDROCARBONS													
Gasoline	mg/kg		30	6.5	U	7.6	U	7.7	U	5.1	U	5.3	U
Diesel	mg/kg		2000	91		40		33	U	29	U	27	U
Lube Oil	mg/kg		2000	490		260		83		70		54	U
METALS													
Lead	mg/kg		250	310		160		170		220		5.4	U
VOLATILE ORGANICS													
Benzene	mg/kg		0.03	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U
Toluene	mg/kg		7	0.065	U	0.076	U	0.077	U	0.051	U	0.053	U
Ethylbenzene	mg/kg		6	0.065	U	0.076	U	0.077	U	0.051	U	0.053	U
m,p-Xylene	mg/kg		9	0.065	U	0.076	U	0.077	U	0.051	U	0.053	U
o-Xylene	mg/kg		9	0.065	U	0.076	U	0.077	U	0.051	U	0.053	U
FUEL ADDITIVES													
Methyl t-Butyl Ether (MTBE)	mg/kg		-	0.0014	U	0.0011	U	0.0012	U	-		-	
1,2-Dichloroethane (EDC)	mg/kg		-	0.0014	U	0.0011	U	0.0012	U	-		-	
1,2-Dibromoethane (EDB)	mg/kg		0.005	0.0014	U	0.0011	U	0.0012	U	-		-	
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)													
Naphthalene	mg/kg		5	0.0078	U	0.0087	U	0.0087	U	-		-	
2-Methylnapthalene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
1-Methylnapthalene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Acenaphthylene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Acenaphthene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Fluorene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Phenanthrene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Anthracene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Fluoranthene	mg/kg		-	0.0095		0.0087	U	0.0087	U	-		-	
Pyrene	mg/kg		-	0.011		0.0087	U	0.0087	U	-		-	
Benzo[g,h,i]perylene	mg/kg		-	0.054		0.010		0.0099		-		-	
Benzo(a)anthracene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Chrysene	mg/kg		-	0.0094		0.0092		0.0091		-		-	
Benzo(a)pyrene	mg/kg		0.1	0.0094		0.0087	U	0.0093		-		-	
Indeno(1,2,3-cd)pyrene	mg/kg		-	0.019		0.0087	U	0.0087	U	-		-	
Dibenz(a,h)anthracene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Benzo(b)fluoranthene	mg/kg		-	0.014		0.013		0.015		-		-	
Benzo(k)fluoranthene	mg/kg		-	0.0078	U	0.0087	U	0.0087	U	-		-	
Total cPAHs**	mg/kg		0.1	0.014		0.011		0.013		-		-	

Notes:

mg/kg = Milligrams per kilogram.

MTCA = Model Toxics Control Act.

U = Analyte not detected above given reporting limit.

= Result exceeds cleanup level.

* = Duplicate sample.

- = Not available/not analyzed.

** = Total of individual carcinigenic PAHs multipied by benzo(a)pyrene toxicity equivalency factor. 1/2 the reporting limit was used for non-detected results.

Table 4 - Summary of EPH/VPH Results
Former Chevron Property RI/FS

	Station No.		PP01		PP08		PP09		PP14		PP15		PP19	
	Sample Depth (ft bgs)		8		8		6		9		10		10	
	Groundwater Depth (ft bgs)		16		8		13		9		10		10	
PARAMETERS	**Date Sampled**		**3/7/08**		**3/7/08**		**3/7/08**		**3/6/08**		**3/6/08**		**3/6/08**	
	Units	**MTCA A**												
VOLATILE PETROLEUM HYDROCARBONS (VPH)														
Aliphatic C5-C6	mg/kg	-	5.0	U	5.0	U	5.0	U	5.0	U	15		11	
Aliphatic C6-C8	mg/kg	-	5.0	U	310		7.2		120		92		230	
Aliphatic C8-C10	mg/kg	-	5.0	U	790		9.5		120		13		200	
Aliphatic C10-C12	mg/kg	-	70		1,500		140		380		26		320	
Total Aliphatic	mg/kg	-	70		2,600		160		630		150		760	
Aromatic C8-C10	mg/kg	-	22		1,600		60		400		33		360	
Aromatic C10-C12	mg/kg	-	73		1,300		150		320		26		250	
Aromatic C12-C13	mg/kg	-	110		870		160		230		20		190	
Total Aromatic	mg/kg	-	200		3,800		370		950		80		810	
Methyl t-butyl ether (MTBE)	mg/kg	-	0.50	U	0.64	U	0.50	U	0.50	U	0.50	U	0.50	U
Benzene	mg/kg	0.03	0.020	U	0.17		0.024		0.46		2.1		0.22	
Toulene	mg/kg	7	0.50	U	3.2	U	0.50	U	2.5	U	0.50	U	2.5	U
Ethylbenzene	mg/kg	6	0.50	U	6.4	U	0.50	U	2.5	U	4.0		2.5	U
m,p-Xylene	mg/kg	9	0.50	U	18		0.50	U	5.6		0.69		4.1	
o-Xylene	mg/kg	9	0.50	U	6.4	U	0.50	U	2.5	U	0.50	U	2.5	U
EXTRACTABLE PETROLEUM HYDROCARBONS (EPH)														
C8-C10 Aliphatics	ug/kg	-	2900		25,000		2,200	U	92,000		21,000		39,000	
C10-C12 Aliphatics	ug/kg	-	15000		210,000		9,400		170,000		12,000		39,000	
C12-C16 Aliphatics	ug/kg	-	110000		580,000		53,000		480,000		31,000		76,000	
C16-C21 Aliphatics	ug/kg	-	55000		180,000		21,000		400,000		26,000		17,000	
C21-C34 Aliphatics	ug/kg	-	6000		38,000		2,800		1,200,000		21,000		8,000	
C8-C10 Aromatics	ug/kg	-	2200	U	2,300	U	2,200	U	2,400	U	7,500		2,400	U
C10-C12 Aromatics	ug/kg	-	2200	U	22,000		2,200	U	3,100		15,000		4,900	
C12-C16 Aromatics	ug/kg	-	30000		120,000		17,000		43,000		23,000		14,000	
C16-C21 Aromatics	ug/kg	-	46000		110,000		19,000		210,000		42,000		11,000	
C21-C34 Aromatics	ug/kg	-	4400		11,000		2,200	U	310,000		19,000		2,800	

Notes:

mg/kg = Milligrams per kilogram.

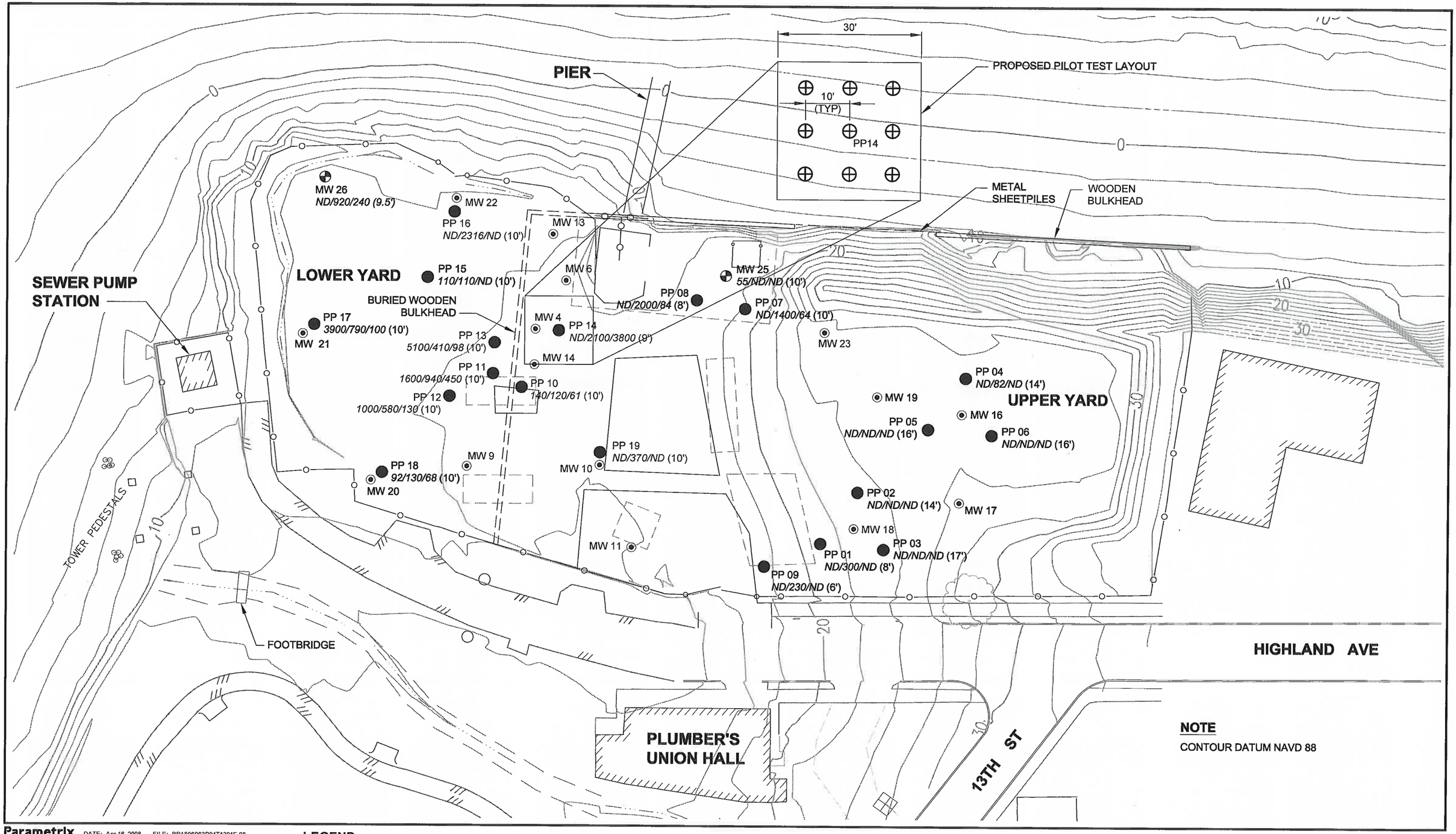
MTCA = Model Toxics Control Act.

U = Analyte not detected above given reporting limit.

ug/kg = Micrograms per kilogram.

= Result exceeds cleanup level.

- = Not available/not analyzed.



Parametrix DATE: Apr 16, 2008 FILE: BR1896063P04T1301F-08

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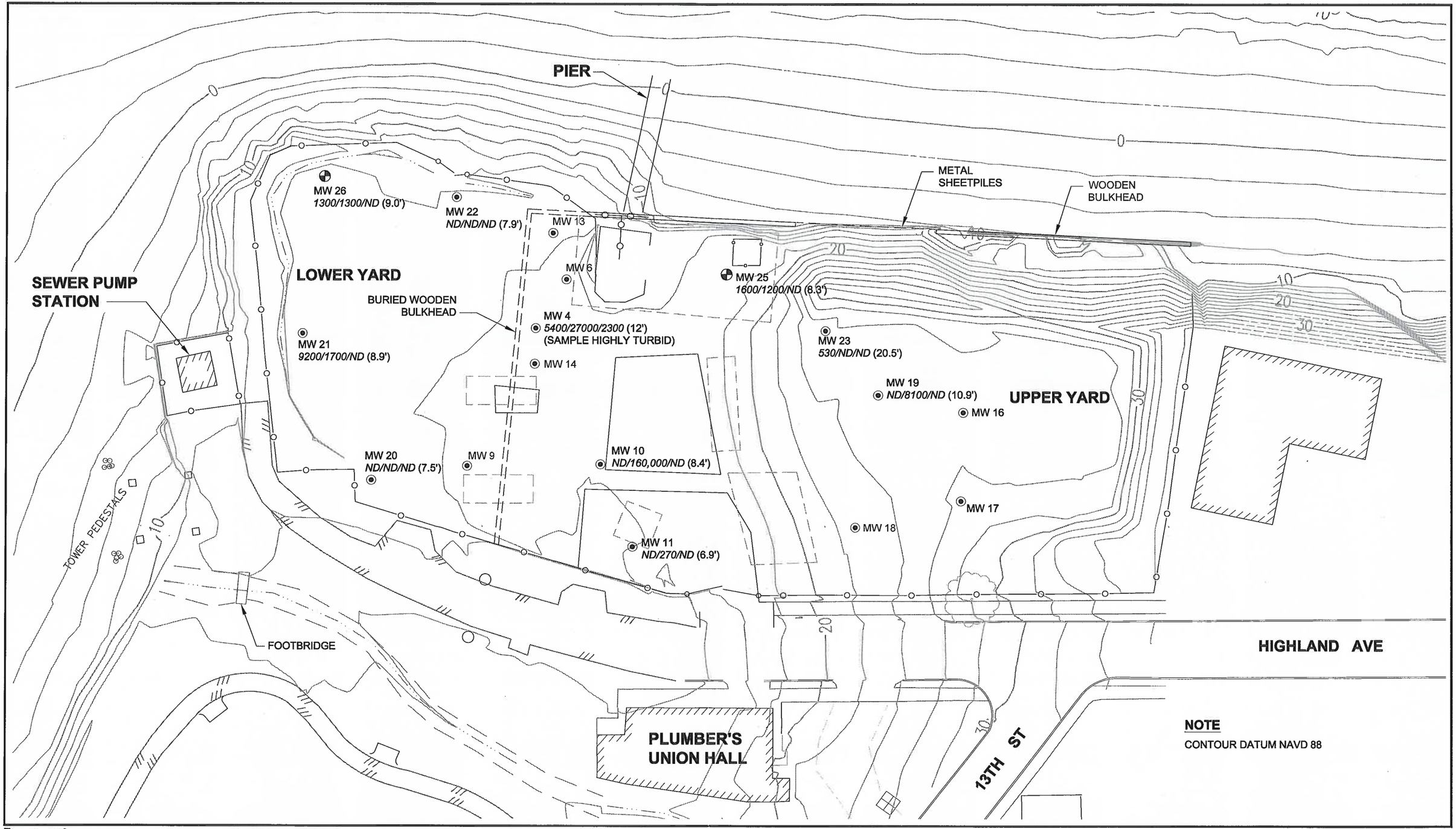
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SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- *ND* NOT DETECTED
- EXISTING MONITORING WELL
- NEW RI/FS PUSH PROBE
- RI/FS MONITORING WELL
- PROPOSED PILOT TEST PROBE LOCATION
- *ND/920/240* (9.5') RI/FS SOIL RESULTS FOR: *GASOLINE/DIESEL/LUBE OIL* (SAMPLE DEPTH) RESULTS IN mg/kg

Figure 1
Former Chevron Property
RI/FS Subsurface
Soil Sampling Locations



Parametrix DATE: Apr 16, 2008 FILE: BR1896063P04T1301F-08

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SCALE IN FEET

LEGEND

	EXISTING BUILDING		EXISTING MONITORING WELL
—o—	CHAIN LINK FENCE		RI/FS MONITORING WELL
— · — · —	DRAINAGE DITCH	*ND/920/240* (10')	RI/FS GROUNDWATER RESULTS FOR: *GASOLINE/DIESEL/LUBE OIL* (GROUNDWATER DEPTH BELOW TOP OF WELL CASING) RESULTS IN ug/L
ND	NOT DETECTED		

Figure 2
Former Chevron Property
RI/FS Groundwater Sampling Locations

PIER

METAL SHEETPILES

WOODEN BULKHEAD

SEWER PUMP STATION

LOWER YARD

BURIED WOODEN BULKHEAD

UPPER YARD

MW 26
MW 22
MW 13
MW 6
SS21
MW 25
SS22
MW 4
MW 21
MW 14
SS11
SS1
MW 23
SS3
SS2
SS6
SS7
SS4
SS14
SS5
MW 19
SS10
MW 16
SS15
SS18
SS16
SS9
MW 9
MW 20
MW 10
SS8
SS17
SS23
SS24
SS13
SS19
SS20
MW 17
MW 18
MW 11
SS12
TOWER PEDESTALS
FOOTBRIDGE
HIGHLAND AVE
PLUMBER'S UNION HALL
13TH ST

NOTE
CONTOUR DATUM NAVD 88

Parametrix DATE: Apr 17, 2008 FILE: BR1896063P04T1301F-08

N

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SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- EXISTING MONITORING WELL
- RI/FS MONITORING WELL
- RI/FS SURFACE SOIL SCREENING LOCATION
- RI/FS SURFACE SOIL SAMPLING LOCATION

Figure 3
Former Chevron Property
RI/FS Surface Soil
Sampling Locations

PARAMETRIX, INC. **BORING/WELL CONSTRUCTION LOG**

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location See Map
Coordinates
Drilling Method Push Probe
Sampling Method
Ground Elevation 08:30

Boring/Well Number # PP01
Date Completed 3/5/08
Total Depth of Boring 17'
Initial Water Level 16'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

NOTE: GW LEVEL IN MW-18 9.45' BELOW TOC

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')				1-18	Hd		0'-7' GY-BN SANDY GRAVEL, DAMP, NO ODOR (FILL)		
75	(8')					100%		7'-17' GRAY GRAVELLY SAND MOD. HC ODOR 7' TO 11'		
58	(13')					Hd 70%				
35	(17')					Hd 100%		MOIST TO WET @ 16'		
						Hd 100%	GW	BOH @ 17'		

0830
CHEV-PP01-0080
@ 8' G/BTEX, DX, cPAHs PB, TOC, EPH/VPH

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location See map
Coordinates
Drilling Method PushProbe
Sampling Method
Ground Elevation

Boring/Well Number # PP02
Date Completed 3/5/08
Total Depth of Boring 16'
Initial Water Level 14'
Static Water Level [redacted]
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	100%			1-4	Hd.		0'-8' RED-GY SILTY, SANDY GRAV, DAMP, NO ODOR		
0	(7')	100%			5-8	Hd.		8'-16' GRAY, GRAVELLY SAND NO HC ODOR		
		50%			9-10	Hd.				
0	(12')	100%			11-13	Hd.				
0	(14')	100%			14-16	Hd		▽ GWE 14' 3 WET BELOW 14'		
								BOH @ 16' 0940 CHEV-SO-PP02-0140 14' DEPTH Gx, Dx, Pb BTEx ✓		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location See Map
Coordinates
Drilling Method Push Probe
Sampling Method
Ground Elevation

Boring/Well Number # PP03
Date Completed 8/6/08
Total Depth of Boring 20'
Initial Water Level 17'
Static Water Level ⟶
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(3')	100%			1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Hd 100% Hd 50% Hd 100% Hd. 67% Hd 100% Hd. 100%		0"-3": SOD, TOPSOIL 3"-6' GRAY-BN, SL. SILTY, SDY GRAV, NO ODOR, DAMP 6'-20' GRAY, SL. SILTY, GRAV SAND, NO ODOR, DAMP TO WET ▼ GW @ 17' BOH @ 20' 1030 CHEV-SO-PP03 -0170 17' DEPTH G/BTEX, DX, Pb (V)		
0	(8')									
0	(11')									
0	(17')									

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method Push-Probe
Sampling Method
Ground Elevation NOTE 1030 GW IN MW-16 13.30' BELOW TOC

Boring/Well Number # PP04
Date Completed 3/5/08
Total Depth of Boring 17'
Initial Water Level 14'
Static Water Level ——
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
		48"			1	Hd.		0'-1.5' BN SILTY SANDY GRAVEL, NO ODOR DAMP		
18	(4')				3					
					4					
22	(8')	48"			5	Hd.		1.5'-17' GRAY, SL. SILTY, GRAVELLY SAND, MOD. HC ODOR TO DAMP TO WET		
					7					
					8					
15	10'	36"			9	Hd				
					10					
					11					
		36"			12	Hd				
35	(14')				13					
					14			▼ GW@14'		
		36"			15	Hd				
					16					
					17					
								BOH@17' 11:30 CHEV-SO-PP04-0140 14' DEPTH G/BTEX, DX, Pb		

(V)

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method Push PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP05
Date Completed 3/5/08
Total Depth of Boring 19'
Initial Water Level 16'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
		48"			1 2 3 4	Hd		0'–19' GY-BN GRAVELLY SAND NO ODOR		
0	(4')	36"			5 6 7 8	Hd.		Damp TO WET		
5	(10')	36"			9 10	Hd				
0	(13')	36"			11 12 13 14	Hd.				
24	(16')	36"			15 16 17	Hd.		▽ GWE 16'		
		36"			18 19	Hd.				
								12:00 CHEV-SO-PP05-0160 16' DEPTH G/BTEX, DX, Pb		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location See MAP
Coordinates
Drilling Method PUSH - PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP06
Date Completed 3/5/08
Total Depth of Boring 19'
Initial Water Level 16'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	48"			1 2 3 4	Hd.		0"-3" TOPSOIL 3"-5' GY-BN SDY GRAVEL, NO ODOR DAMP		
1	(7')	36"			7	Hd.		5'-6' MED SAND, DAMP NO ODOR		
0	(10')	36"			10	Hd.		6'-19' GRAY, SL. SILTY GRAVELLY SAND, NO ODOR		
		36"			13	Hd.		DAMP TO WET		
12	(16')	36"			16	Hd.		▼ GW@ 16'		
		36"			19			BOH @ 19'		

1300
CHEV-50-PP06-0160
16' DEPTH
G/BTEX, DX, Pb
(J)

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method Push PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP07
Date Completed 3/5/08
Total Depth of Boring 13'
Initial Water Level 10'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	48"			1	Hd.		0"-2" TOPSOIL		
					2			2"-8'		
		36"			4	Hd.		GY-BN SL. SILTY SANDY GRAVEL DAMP, NO ODOR		
					7	Nd.		8'-13'		
929	(10')	36"			10	Hd.		GRAY SANDY GRAVEL, DAMP TO WET		
		36"			13			MOD TO STRONG HC ODOR		

GWE 10'

BOH @ 13'

13:30

CHEV-SO-PP07-0100

10' DEPTH

G/BTEX, DX, PB. ✓

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location See MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP08
Date Completed 3/5/08
Total Depth of Boring
Initial Water Level 8'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
			48"		1 2 3 4	Md.		0"-2" TOPSOIL 2'L 8' GY BN, SL. SILTY, SANDY GRAVEL, DAMP, NO ODOR.		
			36"			Md.	GW			
636	(8')		36"		7	Md		8'-10' GRAY, GRAV SAND, WET, STRONG HC ODOR & SHEEN		
6	(12')		24"		10	Md.		10'-12' GRAY, SL. SILTY		
					12			Base 12' GRAV SAND DENSE SLIGHT HC ODOR		
								1400 CHEV-SO-PP08-0080 B/BTEX, Dx, Pb, cPAHs EPH/VPH (V)		
								1415 CHEV-SO-PP08-1080 DUPLICATE B/BTEX, Dx Pb cPAHs (V)		

Not as dense as below

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP09
Date Completed 3/5/08
Total Depth of Boring
Initial Water Level 13'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
		48"			1 2 3 4	Hd.		0"-4" SOD/TOPSOIL 4"-3.5' GRAY-BN SL. SILTY GRAVELLY SAND DAMP. NO ODOR		
42 (6')		36"			5 6 7 8	Hd.		3.5'-10' GRAY, GRAVELLY SAND, MOD. TO STRONG HC ODOR		
6 (10')		36"			9 10 11 12	Hd.	GW	10'-16' GRAY GRAVELLY SAND SL. TO NO ODOR DAMP		
0 (13')		36"			13 14 15 16	Hd.		BOH @ 16' TO WET 15:00 CHEV-SO-PP09-0060 G/BTEX, DX, EPH/VPH (V) 6FT DEPTH. 1515 CHEV-SO-PP09-0100 G/BTEX, DX, [redacted] 10' DEPTH [redacted]		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method DJSH PROBE
Sampling Method
Ground Elevation
NOTE: GW IN MW-14 = 9.5' bgs 8:30

Boring/Well Number # PP10
Date Completed 3/6/08
Total Depth of Boring 15'
Initial Water Level 10'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
7	(4')	40"			1-5	SF.		0'-10' GY-BN, SL SILTY SANDY GRAVEL NO HC ODOR, DAMP (FILL)		
0	(8')	35"			6-9	SF.		10'-15' GRAY, SL SILTY GRAVELLY SAND, STRONG HC ODOR 10' TO 13' DAMP TO WET		
39	(10')	30"			10-12	SF.		GW@10'		
22	(15')	36"			13-15	Hd.		BOH @ 15' 1/4" APPARENT ASH LAYER AT 10' 09:00 CHEV-50-PP10-10'DEPTH 0100 GAS/BTEX, DX, PB		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH-PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP 11
Date Completed 3/6/98
Total Depth of Boring 15
Initial Water Level 10'
Static Water Level ⟵
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	40"			1-15	SF		0'-8', GY-BN, SL. SILTY, SANDY GRAVEL, DAMP, NO HC ODOR (FILL)		
		30'				SF		8'-15' GRAY, SL SILTY GRAVELLY SAND, STRONG HC ODOR 9' TO 14'		
868	(10')	28"				SF		GWC 10' DAMP TOWET		
7	(15')	36"				HC		BOH @ 15' 0930 CHEV-SO-PP11-0100 10' DEPTH BAS/BTEX, DV, PB D		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP12
Date Completed 3/6/08
Total Depth of Boring 15'
Initial Water Level 10'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	48"			1-15	sf		0'-6' BROWN SL. SILTY, SANDY GRAVEL, DAMP NO HC ODOR. (FILL)		
		38"				sf.		6'-14' GRAY, SILTY, GRAVELLY SAND, MOD. TO STRONG HC ODOR 9' TO 14' (FILL)		
15	(8')									
224	(10')	46"				sf	3	GW @ 10'		
4	(15')	36"				md.		14'-15' GRAY, SANDY GRAVEL W/ SHELLS NO HC ODOR (BEACH)		
								BOH @ 15'		
								10:00		
								CHEV-SO-PP12-0100		
								GRS/BTEX, DX, Pb		

(1)

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP 13
Date Completed 3/6/08
Total Depth of Boring 16'
Initial Water Level 10'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	48"	1		1-16	SP		0'-8' BROWN, SC SILTY SAND, TRACE GRAVEL, DAMP NO HC ODOR (FILL)		
		40"				SP				
8	(8')					SM		8'-15' GRAY, SILTY, GRAVELLY SAND, MOD TO STRNG HC ODOR 9' TO 13' (FILL) DAMP TO WET		
391	(10')	40"				MD				
								15'-16' GRAY M-COARSE SAND, SHELLS LET (BEACH)		
5	(15')	40"				SD				
								BOH @ 16'		
								1030		
								CHEV-SD-PP13-01000		
								10' DEPTH		
								B/BTEX, DX, PB		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP 14
Date Completed 3/6/08
Total Depth of Boring 15'
Initial Water Level 9'
Static Water Level ⟶
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	40"			1–15	sf		0'-8' BROWN, SC STY GRAVELLY SAND, DAMP NO HC ODOR, (FILL)		
6	(8')	48"				sf		8'-12' GRAY, SILTY GRAV, SAND MOD HC ODOR 9'-11', WET FILL)		
130	(10')	48"				sf	▽ 3	GW @ 9'		
6	(15')	48"				md		12'-15' GRAY SAND, WET, NO HC ODOR (FILL)		
								BOH @ 15'		

11:00
CHEV-SO-PP14-0090
G/BTEX, DX, PB
cPAHs, TOC
EPH/VPH

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH-PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP15
Date Completed 3/6/08
Total Depth of Boring
Initial Water Level
Static Water Level
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(4')	35"			1 2 3 4 5	SP.		0-2' BN, MED SAND, DAMP, NO HC ODOR (FILL)		
		30"			5 6 7	SP.		2-6' GR SILTY, SANDY GRAV MIXED W/ ASPHALT DEBRIS BLACK - STRONG TAR/CREOSOTE ODOR		
0	(8')				8 9 10	SP.		GWE @ 10'		
455	(10')	36"			11 12 13	md.		6'-14' GRAY, SL. SILTY, GRAVELLY SAND MOD TO STRONG HC ODOR 8'-13'		
3	(15')	36"			14 15			BOH @ 15'		

12:00

CHEV-SO-PP15-0100

GAS/BTEX, DX, Pb cPAHs TOC EPH/VPH

✓

4117

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method Push Probe
Sampling Method
Ground Elevation

Boring/Well Number # PP16
Date Completed 3/6/08
Total Depth of Boring 15'
Initial Water Level 10'
Static Water Level ⟶
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(41)	40"			1-2-3-4-5	SF		0'-8' GY-BN, SILTY SANDY GRAVEL, DAMP, NO HC ODOR FILL		
13	(7')	30"			5-6-7-8	SF		8'-14' GRAY, SL SILTY GRAVELLY SAND DAMP TO WET, MOD HC ODOR		
156	(10')	48"			8-9-10	▽		GW @ 10'		
					10-11-12	3		9'-12' (FILL)		
0	(15)	36"			12-13-14-15	Md.		14'-15' GRAY, GRAVELLY SAND W/SHELLS, NO ODOR (BEACH)		
								BOH @ 15'		
								12:30		
								CHEV-SO-PP16-0100		
								10' DEPTH		
								GAS/BTEX, DX, Pb		
								▽		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP17
Date Completed 3/16/08
Total Depth of Boring 15'
Initial Water Level 10'
Static Water Level ⟶
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
		30"			1-9	SP		0-9' BROWN, SL. SILTY, GRAVELLY SAND, DAMP, NO HC ODOR (FILL)		
0	(8')	30"			9-14	SP	GW	9'-14' GRAY, SL. SILTY, GRAVELLY SAND. MOD HC ODOR		
141	(10')	36"			10	SP		10'-13' (FILL)		
					11-13		3			
22	(15')	86"			14-15	MD		14'-15' GRAY-BLK SAND W/ SHELLS, NO HC ODOR		
					15			BOH @ 15' WET, (BEACH)		

1300
CHEV-SO-PP17-0106
10' DEPTH
GAS/BTEX, DX, Pb
(✓)

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP18
Date Completed 3/6/08
Total Depth of Boring 16'
Initial Water Level 10'
Static Water Level ⟶
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(3')	40"			1 2 3 4	SF		0'-4' BROWN, SL. SILTY, SANDY GRAVEL, DAMP, NO HC ODOR (FILL)		
32	(6')	36"			5 6 7 8	SF		4'-14' GRAY, SL SILTY GRAVELLY SAND. DAMP TO SL. HC ODOR 5'-9' WET		
27	(10')	29"			9 10 11 12	SF		GW @ 10' MOD HC ODOR 10'-12' (FILL)		
14	(14')	40"			13 14 15 16	MS		14'-16' GY-BK SAND W/SHELLS TRACE GRAVEL, NO HC ODOR		
								BOH @ 16' WET (BEACH)		

1400
CHEV-SO-PP18-0100
10' DEPTH
GAS/BTEX, PX, Pb
(J)

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 235-1896-063
Project Name CHEVRON PROP RI/FS
Location SEE MAP
Coordinates
Drilling Method PUSH PROBE
Sampling Method
Ground Elevation

Boring/Well Number # PP19
Date Completed 3/6/08
Total Depth of Boring 14'
Initial Water Level 10'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
0	(41)				1-16	SP		0'-8' BN-TAN SAND NO ODOR (FILL)		
5	(8')					SP		4'-8' RED-BN SILTY, SANDY GRAVEL, DAMP NO HC ODOR (FILL)		
333	(10')					SP	3	9'-12' GRAY, SL SILTY GRAVELLY SAND, MOD. HC ODOR (FILL) GW @ 10'		
32	(14')					Hd		12'-14' GRAY, SL. SILTY SANDY GRAVEL, WET NO HC ODOR		
								BOH @ 14'		
								~~BOH @ 16'~~ (DLD)		
								1430		
								CHEV-SO-PP19-0100		
								10' DEPTH		
								~~GAS~~/BTEX, ~~DX~~, PB		
								EPH/VPH		
								✓		

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location SEEMAP
Coordinates
Drilling Method AUGUR
Sampling Method PUSH-PROBE
Ground Elevation (SAMPLED 1ST W/PROBE)

Boring/Well Number # MW-25
Date Completed 5/7/08
Total Depth of Boring 20'
Initial Water Level 9.5'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION
0	4'	48"			1-20	md		0'-9' BRN, SL. SILTY, SANDY GRAVEL, DAMP, NO HC ODOR (FILL)
0	8'	36"				md		
		36"				Hd		9'-11.5' GRAY, SILTY GRAVELLY SAND, MOD HC ODOR, WET (FILL)
1400	10'	24"				Hd		GW@9.5'
		36"				Hd		11.5'-20' SILTY GRAVELLY SAND, WET, NO HC ODOR, (OUTWASH)
4	15'	36"				Hd		

BOH @ 20'

10:00
CHEV-SO-MW25-0100
GAS/BTEX, DX, Pb ✓
10' DEPTH

— FLUSH MOUNT —
10/20 COLORADO SAND
0.010" SLOTS

DEPTH (ft.)	WELL DIAGRAM
	1' CONC
	2' BENT -3'
	5' BLANK
	SAND
	3" CAP

23/4" CUT OFF
- 7" STICKUP

PARAMETRIX, INC.

BORING/WELL CONSTRUCTION LOG

Project Number 255-1896-063
Project Name CHEVRON PROP RI/FS
Location ~~SFB~~ MAP
Coordinates
Drilling Method AUGER
Sampling Method (SAMPLED W/ PROBE 1ST)
Ground Elevation

Boring/Well Number # MW26
Date Completed 3/7/08
Total Depth of Boring 20'
Initial Water Level 9.5'
Static Water Level —
Logged by DAVID DINKUHN
Top of Casing Elevation

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION
0	(4')	40"			1-4	SP.		0'-9' BN STY SANDY GRAVEL, DAMP, NO HC ODOR (FILL)
0	(8')	36"			5-8	SP.		
559	(10')	36"			9-11	SP.	1/3	9'-14.5' BRAY-BLACK SILTY, GRAV. SAND, STRONG GWC 9.5' HC ODOR, OILY WET (FILL)
0	(16')	48"			12-16	SP.		14.5'-16' GRAY-BLACK MED. SAND, WENT SL. TO NO HC ODOR (BEACH)
					17-18	SP.		
					19-20			BOH@20'

1330 1 LINGATE ON SPLIT SPOON 6/BTEX, DX, PB 2 PAHS

1300
CHEV-50-MW26-0095
9.5' DEPTH
6/BTEX, DX, PB

DEPTH (ft.)	WELL DIAGRAM
	1' CONC
	2' BENT.
	-3'
5'	SAND
BL.	
5'	
5'	
5'	
3" CAP	

NOTE: 1ST ATTEMPT 22' FROM FENCE HIT CONCRETE @ 4'
5 1/2" CUT OFF 10/20 SAND -7" STICKUP

Boring ID: MW-25

Project Name: Chevron Prop RI/FS

Project #: 255-1896-063

Location: SEE MAP

Drilling Company: ESN

Drilling Method: Auger

Logged by: David Dinkuhn, P.E.

Checked by: David Dinkuhn, P.E.

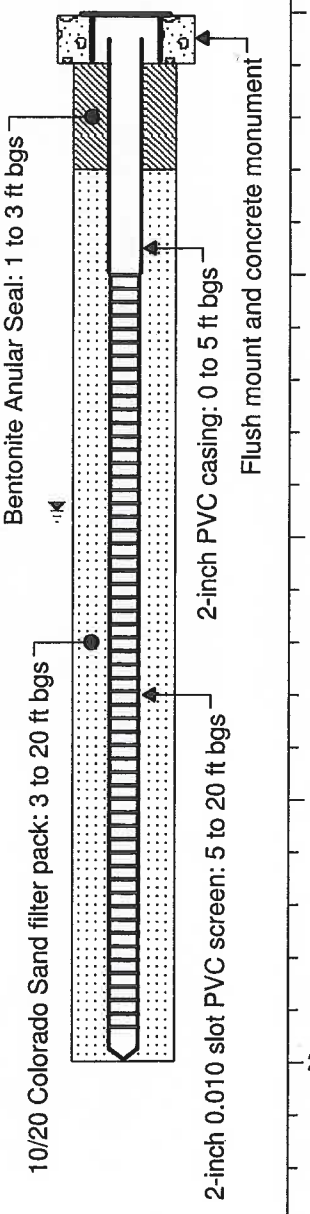
Sheet 1 of 1

Drilling Date: 3/7/08

Boring Depth: 20 ft

Depth to Water: 9.5 ft

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample: PID Reading	Sample: Sample ID	Recovery (ft)
0			Ground Surface			
			Silty Sandy Gravel Gray brown, damp, No petroleum hydrocarbon odor (FILL)			4
				0		
5						3
				0		3
			Silty Gravelly Sand Gray, wet, moderate petroleum hydrocarbon odor (FILL)	1400	CHEV-SO -MW25-0100	3
			Silty Gravelly Sand Wet, No petroleum hydrocarbon odor (OUTWASH)			3
15				4		3
						--
20			Bottom of boring at 20 feet bgs.			



Well Point Diagram

Depth (ft): 0, 5, 10, 15, 20

Boring ID: MW-26

Project Name: Chevron Prop RI/FS

Project #: 255-1896-063

Location: SEE MAP

Drilling Company: ESN

Drilling Method: Auger

Logged by: David Dinkuhn, P.E.

Checked by: David Dinkuhn, P.E.

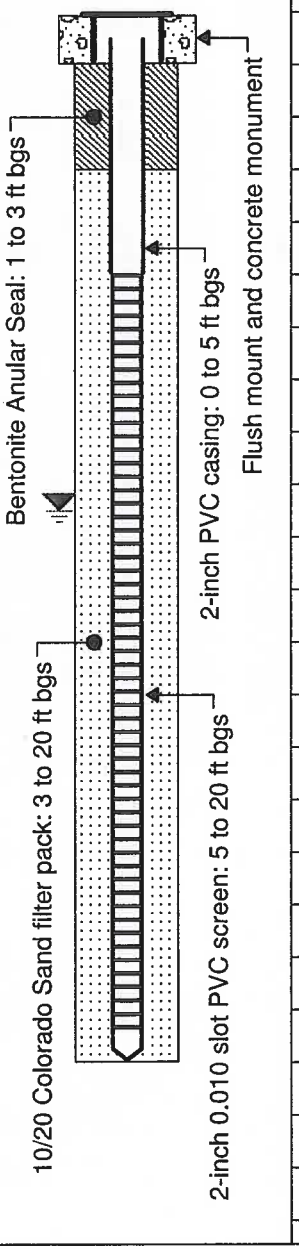
Sheet 1 of 1

Drilling Date: 3/7/08

Boring Depth: 20 ft

Depth to Water: 9.5 ft

Depth (ft)	Sample Type	Lithologic Symbol	Description/Classification of Materials	Sample: PID Reading	Sample: Sample ID	Sample: Recovery (ft)
0			Ground Surface			
0			**Silty Sandy Gravel** Brown, damp, No petroleum hydrocarbon odor (FILL)			3.3
5				0		3
10			**Silty Gravelly Sand** Gray to black, wet, strong petroleum hydrocarbon odor, oily (FILL)	0		
				359	CHEV-SO -MW26-0095	3
15			**Sand (SF)** Gray to black, wet, slight to no petroleum hydrocarbon odor (BEACH)			4
				0		
20			Bottom of boring at 20 feet bgs.			





RegenOx™

CHEMICAL OXIDATION REDEFINED...

RegenOx™ is an advanced in situ chemical oxidation technology designed to treat organic contaminants including high concentration source areas in the saturated and vadose zones*

PRODUCT FEATURES:

- Rapid and sustained oxidation of target compounds
- Easily applied with readily available equipment
- Destroys a broad range of contaminants
- More efficient than other solid oxidants
- Enhances subsequent bioremediation
- Avoids detrimental impacts to groundwater aquifers



RegenOx product application

HOW IT WORKS:

RegenOx maximizes in situ performance using a solid alkaline oxidant that employs a sodium percarbonate complex with a multi-part catalytic formula. The product is delivered as two parts that are combined and injected into the subsurface using common drilling or direct-push equipment. Once in the subsurface, the combined product produces an effective oxidation reaction comparable to that of Fenton's Reagent without a violent exothermic reaction. RegenOx safely, effectively and rapidly destroys a wide range of contaminants in both soil and groundwater (Table 1).

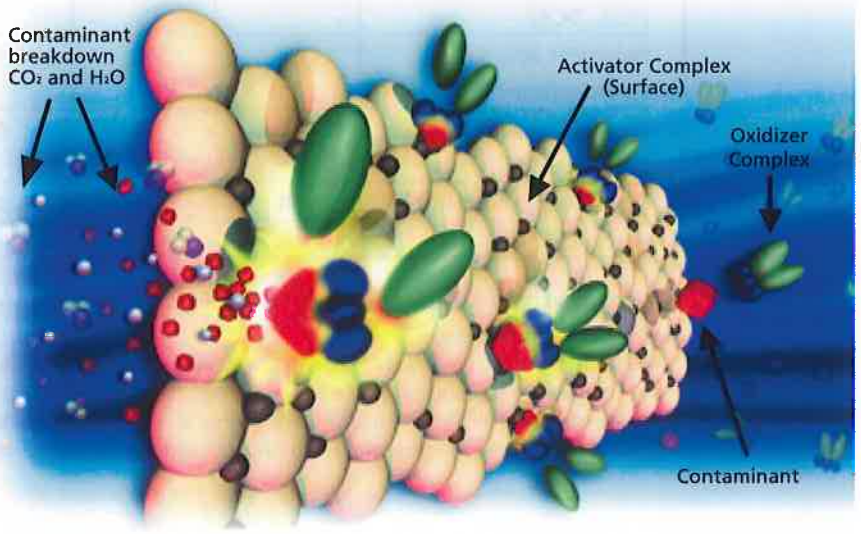
ACHIEVES RAPID OXIDATION VIA A NUMBER OF MECHANISMS

RegenOx directly oxidizes contaminants while its unique catalytic complex generates a suite of highly charged, oxidative free radicals that are responsible for the rapid destruction of contaminants. The mechanisms by which RegenOx operates are:

- Surface- Mediated Oxidation: (see Figure 1 and description below)
- Direct Oxidation: $C_2Cl_4 + 2\ Na_2CO_3 \bullet 3\ H_2O_2 + 2\ H_2O \leftrightarrow 2CO_2 + 4\ NaCl + 4\ H_2O + 2\ H_2CO_3$
- Free Radical Oxidation:
  - Perhydroxyl Radical ($HO_2\bullet$)
  - Hydroxyl Radical ($OH\bullet$)
  - Superoxide Radical ($O_2\bullet$)

Figure 1. Surface-Mediated Oxidation is responsible for the majority of RegenOx contaminant destruction. This process takes place in two stages. First, the RegenOx activator complex coats the subsurface. Second, the oxidizer complex and contaminant react with the activator complex surface destroying the contaminant.

Figure 1. RegenOx™ Surface-Mediated Oxidation



* Patent applied for



RegenOx™

From Mass Reduction to Bioremediation:

RegenOx™ is an effective and rapid contaminant mass reduction technology. A single injection will remove significant amounts of target contaminants from the subsurface. Strategies employing multiple Regenox injections coupled with follow-on accelerated bioremediation can be used to treat highly contaminated sites to regulatory closure. In fact, RegenOx was designed specifically to allow for a seamless transition to low-cost accelerated bioremediation using any of Regenesis controlled release compounds.

Significant Longevity:

RegenOx has been shown to destroy contaminants for periods of up to one month.

Product Application Made Safe and Easy:

RegenOx produces minimal heat and as with all oxidants proper health and safety procedures must be followed. The necessary safety guidance accompanies all shipments of RegenOx and additional resources are available on request. Through the use of readily available, highly mobile, direct-push equipment and an array of pumps, RegenOx has been designed to be as easy to install as other Regenesis products like ORC® and HRC®.

Effective on a Wide Range of Contaminants:

RegenOx has been rigorously tested in both the laboratory and the field on petroleum hydrocarbons (aliphatics and aromatics), gasoline oxygenates (e.g., MTBE and TAME), polyaromatic hydrocarbons (e.g., naphthalene and phenanthrene) and chlorinated hydrocarbons (e.g., PCE, TCE, TCA).

Oxidant Effectiveness vs. Contaminant Type:

Table 1

Contaminant	RegenOx™	Fenton's Reagent	Permanganate	Persulfate	Activated Persulfate	Ozone
Petroleum Hydrocarbons	A	A	B	B	B	A
Benzene	A	A	D	B	B	A
MTBE	A	B	B	C	B	B
Phenols	A	A	B	C	B	A
Chlorinated Ethenes (PCE, TCE, DCE, VC)	A	A	A	B	A	A
Chlorinated Ethanes (TCA, DCA)	A	B	C	D	C	B
Polycyclic Aromatic Hydrocarbons (PAHs)	A	A	B	B	A	A
Polychlorinated Biphenyls (PCBs)	B	C	D	D	D	B
Explosives (RDX, HMX)	A	A	A	A	A	A

Based on laboratory kinetic data, thermodynamic calculations, and literature reports.

Oxidant Effectiveness Key:

A = Short half life, low free energy (most energetically favored), most complete
B = Intermediate half life, low free energy, intermediate degree of completion
C = Intermediate half life, intermediate free energy, low degree of completion
D = Long half life, high free energy (least favored), very low degree of completion

REGENESIS
Advanced Technologies for Groundwater Resources
1011 Calle Sombra / San Clemente / California 92673-6244
Tel: 949/366-8000 / Fax: 949/366-8090 / www.regenesis.com

RegenOx™ Treats Benzene and MTBE in Low Permeability Soils

Introduction

Service station operations created a benzene and methyl tertiary-butyl ether (MTBE) contaminant plume in the subsurface which had migrated 320 feet downgradient. The tight subsurface soils included clayey sand to a depth of 7 feet below ground surface (bgs) and silty clay with intermittent sand "stringers" from 7 to 20 feet bgs. A dual-phase extraction system (DPE) was installed and removed a total of 9,965 pounds of petroleum hydrocarbons over two 90-day operational periods. However, contaminant removal was reaching asymptotic levels and a new method was needed to further remediate the remaining benzene and MTBE concentrations. The DPE system was shut down in December 2004 and in-situ chemical oxidation via RegenOx™ was deployed to treat the remaining benzene and MTBE concentrations (36.0 and 8.7 parts per million (ppm), respectively). RegenOx was pilot tested around well DPRW-6 to evaluate its effectiveness in tight soil. Two RegenOx applications were completed around DPRW-6 and a reduction of more than 75% was observed in benzene and MTBE (Table 1). Following the successful pilot test, a full-scale application was completed at the source and downgradient plume.

Objective

The objective was to provide rapid mass reduction in source areas to quickly lower benzene concentrations to below the cleanup goal of 20 ppm and acheive similar reductions in MTBE. A total of 1,439 pounds of RegenOx was applied as a pilot test in August 2005 (510 lbs) and July 2006 (929 lbs). The full-scale application included three separate RegenOx injections between May and July 2007. The injections targeted soil intervals of 14-15 feet bgs and 17-19 feet bgs. A top-down direct-push injection technique was applied using 5-15 lbs per vertical foot.

Table 1. Pilot Test Results in DPRW-6 (ppm)

Contaminant	Baseline Pilot	Post Pilot Inj.	Reduction
Benzene	36.3	8.7	76%
MTBE	8.7	1.3	85%

Table 2. Full-Scale Application Details

	Treatment Area (ft^2)	Amount Applied (lbs)	Injection Points
Area 1	600	1,560*	31
Area 2	750	1,320*	20
Area 3a	600	1,020*	18
Area 3b	400	300*	12

*Product Applied over 3 Injection Events

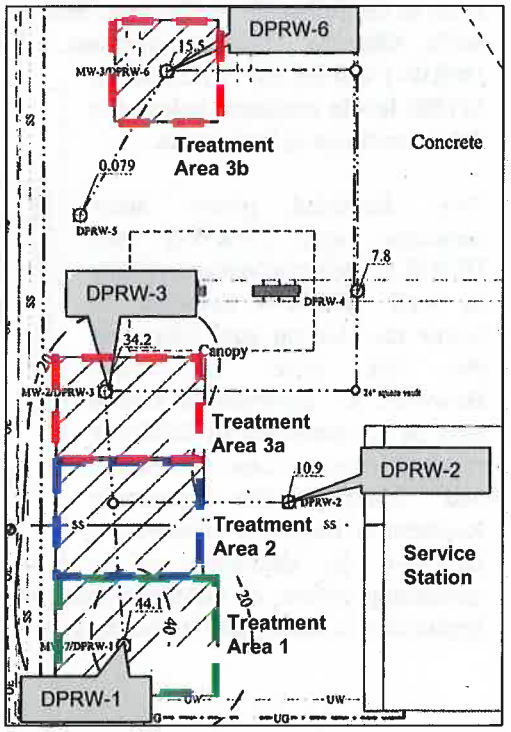


Figure 1.
RegenOx Full-Scale Treatment Areas

SLA Consulting Group

- **Soil Type:** Silty Clay
- **Depth to Groundwater:** 13 ft
- **Groundwater Velocity:** 0.20 ft/day
- **Groundwater Flow Direction:** Variable
- **Injection Spacing:** 5-8 ft (top down Injection)
- **Product Cost:** $12,790 (Pilot & Full-Scale)

Results

Pilot Test Results

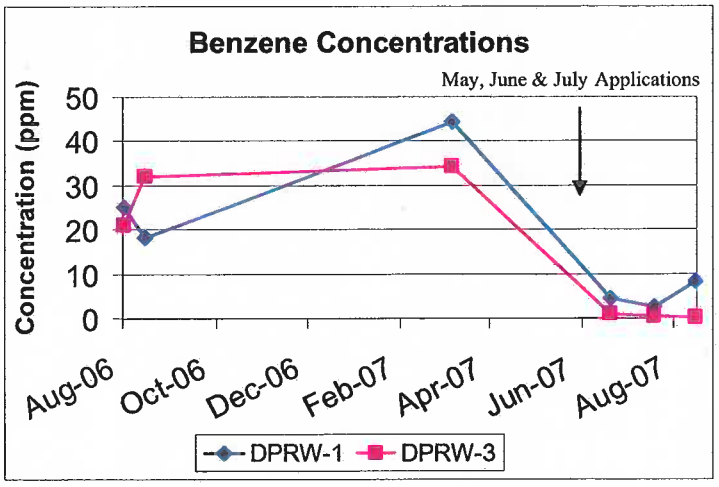
Following the DPE system shutdown, benzene and MTBE concentrations reached 36,300 ppb and 8,720 ppb, respectively. The RegenOx application resulted in a decline of almost 50% in both contaminants within two weeks. Recontamination of the pilot test area occurred from contaminants migrating from upgradient soil. After the second RegenOx application, a continuous decline was observed and an overall reduction of 76% in benzene and 85% in MTBE occurred (Table 3).

Table 3. Pilot Test Results in Well DPRW-6 (ppb)

	Benzene	MTBE
Baseline	**36,300**	**8,720**
RegenOx Application #1		
2 Weeks	20,300	<5,000
4 Weeks	23,800	4,710
8 Weeks	28,000	7,100
RegenOx Application #2		
2 Weeks	16,500	3,300
9 Weeks	12,000	2,600
11 Weeks	12,000	1,500
15 Weeks	8,700	1,300
Total Reduction	**76%**	**85%**

Full-Scale Results

Prior to the full-scale application, benzene concentrations were increasing in all three monitored wells. After the RegenOx injections, a benzene reduction of more than 95% occurred in wells DPRW-1 and DPRW-3 (Graph 1). MTBE levels remained below the detection limits in both wells.



Two dissolved plume areas remained near DPRW-2 and DPRW-6. Benzene concentrations in well DPRW-6 declined to below the cleanup goal following the full scale application. However, an unidentified source area on the periphery of DPRW-6 resulted in an increase in benzene and MTBE. The moderate response to RegenOx observed in DPRW-6 is indicative of a continuing influx of contamination not accounted for previously. An additional RegenOx application is anticipated in this area as well as untreated well DPRW-2.

REGENESIS

April 10, 2008 **Proposal No. 3BG08783 (Pilot Test)**

David Dinkuhn
Parametrix
4660 Kitsapway, Suite A
Bremerton, WA - 98312

Subject: Site Remediation with RegenOx™ : Preliminary Technical Review and Proposal

Dear Mr. Dinkuhn:

Thank you for your interest in Regenesis and our state-of-the-art chemical oxidation product RegenOx™. We have reviewed the information you provided for the Former Chevron Property site and developed a preliminary design and cost estimate for site treatment based on that information. We are also attaching, for your reference, general information on the delivery of RegenOx to the subsurface and a recommended monitoring program.

Please note this proposal includes material costs for a series of two RegenOx injection events all of which should be completed over the proposed treatment area within about a three to six-week period (i.e., 2 weeks apart). We recommend that you sample after the second application. You may find you have reached treatment goals at that point.

Total Material Cost

We recommend injection of a total of 2,160 lbs of RegenOx at the above mentioned site. The total cost for this amount of RegenOx is $5,292, plus applicable sales tax and shipping. See the attached Summary Table for detailed breakdown.

Soil Mixing Option

If you decide to soil mix in the pilot test area it would require between 2,210 lbs and 4,020 lbs of RegenOx. At a unit cost of $2.45 lb the total cost for 2,010 lbs of RegenOx is $4,924.50 plus shipping and applicable sales tax. At a unit cost of $2.45 lb of RegenOx, 4,020 lbs costs $9,849 plus shipping and applicable sales tax.

Preliminary Design and Cost Details for RegenOx Applications

Based on the data provided and our conversation, we have provided the material cost associated with applying RegenOx throughout a 30 ft. by 30 ft. area of the contaminated zone at the site and across a vertical thickness of 6 ft (8 to 14 feet bgs). The RegenOx material should be applied in a series of two injection events spaced 1 to 2 weeks apart. A total of 9 injection points spaced on 10-ft centers should be used for each event. To ensure the most effective distribution of the RegenOx material within the

subsurface, the injection point locations should be offset (moved roughly 5 feet) from one injection event to the next. The approximate location of the proposed RegenOx treatment area is shown on the attached figure. Both injections should occur at a dosing rate of 20 lbs per vertical foot.

Performance Goals for RegenOx Projects

The primary goals for a chemical oxidation project are to (1) rapidly reduce the mass of contaminants in the subsurface and (2) to stabilize and/or reduce the size of the contaminant plume. Please note that after the injection of any chemical oxidant to a contaminated aquifer, dissolved-phase contamination will be reduced initially, but will then rebound somewhat in most cases, as the sorbed contaminants become redissolved. It is therefore critically important to accurately estimate the mass of soil-bound contaminant within the subsurface and to anticipate and allow for this predictable rebound in dissolved-phase contaminants after the initial injection. It is for this reason that Regenesis strongly recommends the use of a series of two RegenOx injections performed 1 to 2 weeks apart.

As with any other remediation technology, chemical oxidation projects often reach asymptotic performance conditions. Therefore, a realistic set of goals should be established before the project is started. In many cases a cost-effective treatment strategy includes the recommended number of RegenOx injections to rapidly reduce contaminant mass at the site, followed by application of a slow-release bioremediation amendment such as Oxygen Release Compound Advanced (ORC-A®) or Hydrogen Release Compound (HRC®). As noted earlier, this approach assures continued long-term treatment of remaining contaminants through low-cost bioremediation after the chemical oxidation treatment is complete.

Preliminary Aquifer Volume Testing

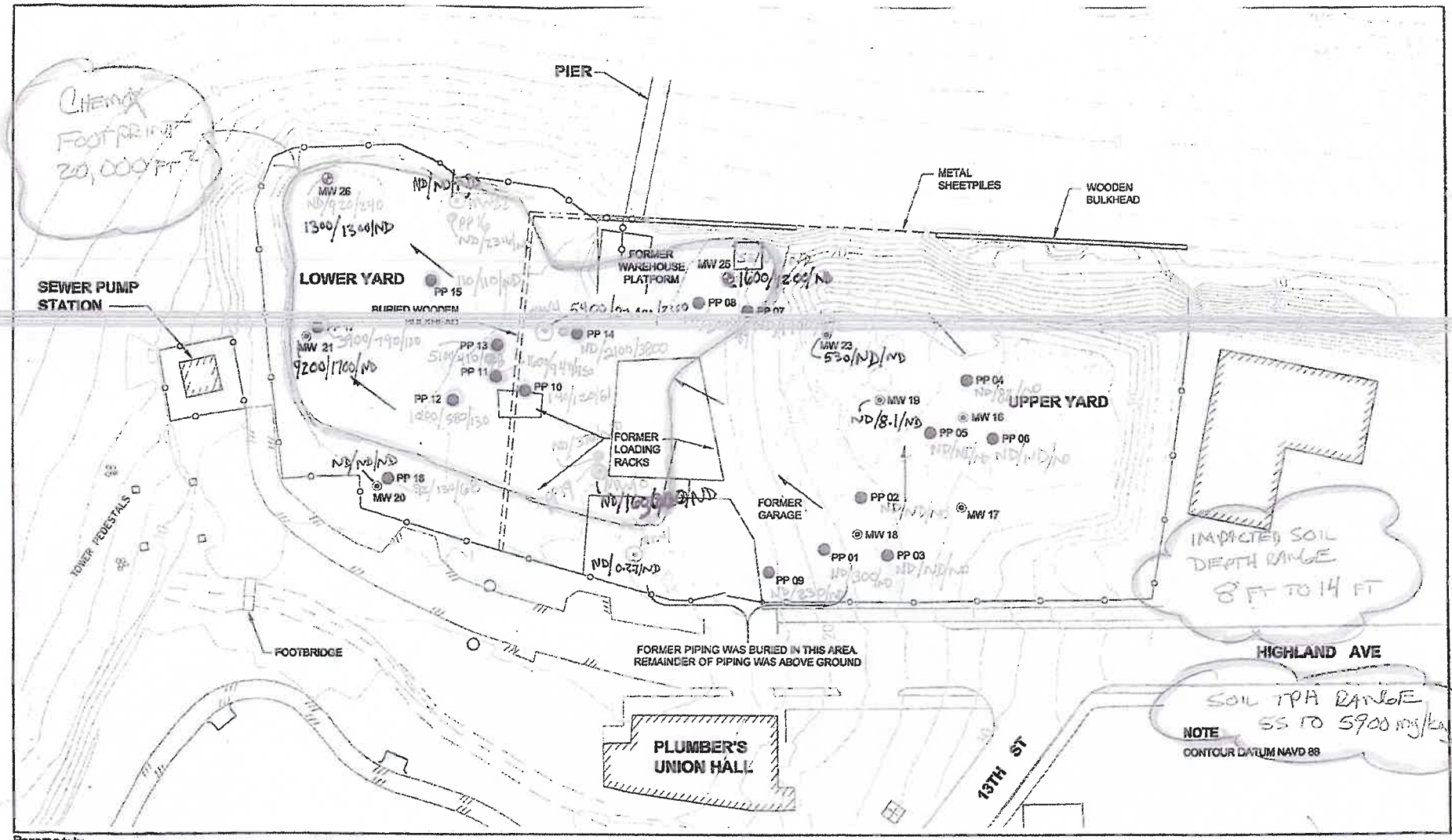
Prior to application of the RegenOx material, it is critical that a clear water injection be performed at the site. The injection a non-reactive (clear water) material at a volume that is approximately 25% greater than the anticipated application volume of RegenOx will provide good evidence of the aquifers capacity to accept the designed volume of RegenOx. Please note, the preliminary aquifer volume test should be conducted outside of the desired on-site treatment area(s) in order to avoid overloading the subsurface with clear-water before applying RegenOx on-site.

If you wish, Regenesis will conduct TOD testing at a cost of $300.00/sample. Please contact us for additional information.

Regenesis appreciates the opportunity to provide this information for your project. Please feel free to contact Jack Peabody at 925.944.5566 (jpeabody@regenesis.com) or me at 916.410.4002 (bgriffiths@regenesis.com).

Sincerely,

Brittain Griffiths
REGENESIS



Parametrix DATE Apr 02, 2003 FILE GR1650S3P0RT1301F-07

N

0 40

SCALE IN FEET

LEGEND

- EXISTING BUILDING
- CHAIN LINK FENCE
- DRAINAGE DITCH
- SURFACE SOIL SCREENING SAMPLE LOCATION
- EXISTING MONITORING WELL
- NEW RI/FS PUSH PROBE
- NEW RI/FS MONITORING WELL

KEY

ND/920/240 = GAS/DIESEL/OIL in mg/kg

1300/1300/ND = GAS/DIESEL/OIL in ug/L

Figure 1
Former Chevron Property
RI/FS Subsurface
Soil Sampling Locations

RegenOx Summary Page

Regenesis Technical Support: USA (949) 366-8000

Site Name: Former Chevron Property - Pilot Test Revision
Location: Proposal No. 3BG08783
Consultant: David Dinkuhn w/ Parametrix

Application Design Input Parameters

Width of plume (intersecting gw flow direction)	30	ft
Length of plume (parallel to gw flow direction)	30	ft
Thickness of contaminated zone	6	ft
Soil type	silty sand	

Design Summary - INITIAL APPLICATION ONLY

Number of RegenOx injection points (initial app)	9	pts
egenOx dose rate (oxidant + activator) (initial app)	20.0	lbs/ft
otal amount of water required for initial application	1,569	gallons
Total volume of RegenOx solution applied per foot of injection (initial app)	31.1	gallons/ft

Estimated number of RegenOx applications required (enter 1 through 6)	2

Summary of Estimated RegenOx Totals

Application number	Part A RegenOx Oxidant (lbs)	Part B RegenOx Activator (lbs)	Total RegenOx Material Requirement (lbs)	Cumulative Amount of Oxidant (Part A) Applied (lbs)	Cumulative Amount of Activator (Part B) Applied (lbs)	Cumulative RegenOx Cost	Total RegenOx Material Cost Per Application
First	540	540	1,080	540	540	$2,646	$2,646.00
Second	540	540	1,080	1,080	1,080	$5,292	$2,646.00
Third	0	0	0	0	0	$0	$0.00
Fourth	0	0	0	0	0	$0	$0.00
Fifth	0	0	0	0	0	$0	$0.00
Sixth	0	0	0	0	0	$0	$0.00
TOTALS	1,080	1,080	2,160		Volume discount if purchased all together		$5,292.00

(not including shipping or applicable taxes)

Ben Mark
949-366-8000

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RegenOx™
CHEMICAL OXIDATION REDEFINED...

INSTALLATION INSTRUCTIONS

RegenOx Part A and Part B Mixing (basic)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personnel working with or in areas of potential contact with RegenOx should be required at a minimum to be fitted with modified Level D personal protective equipment:

- Eye protection – Wear goggles or a face shield
- Head – Hard hat when required
- Respiratory – Use dust respirator approved by NIOSH/MSA
- Hands – Wear neoprene gloves
- Feet – Wear steel toe shoes with chemical resistant soles or neoprene boots
- Clothing – Wear long sleeve shirts and long pant legs. Consider using a Tyvek® body suit, Carhartt® coverall or splash gear

See also Material Safety Data Sheets (MSDS) for RegenOx Part A and Part B for support in the development of a project-specific Health and Safety Plan (HSP).

MATERIAL OVERVIEW, HANDLING, AND SAFETY

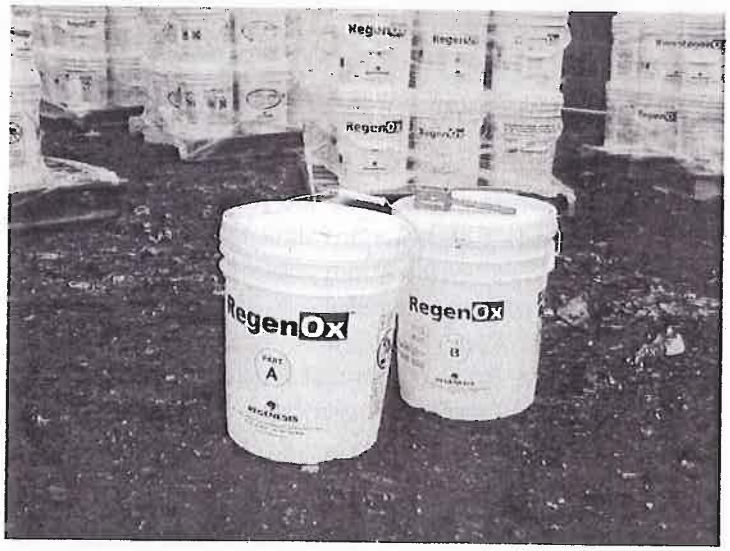
RegenOx is packaged in two parts. Part A is the RegenOx Oxidizer and Part B is the RegenOx Activator. Part A and Part B are shipped in separate 20-Litre buckets and each bucket has a gross weight of approximately 15 kg (net weight of RegenOx is 13.6 kg). The RegenOx Oxidizer is shipped as a fine white powder and the RegenOx Activator is shipped as a gel. The Activator has a viscosity roughly equivalent to cold honey. It is common for stored RegenOx Activator to settle somewhat in a container. Pre-heating the RegenOx Activator makes it easier to work with the material. A Material Safety Data Sheet for Part A (RegenOx Oxidizer) and for Part B (RegenOx Activator) is provided with each shipment. Personnel who operate field equipment during the installation process should have appropriate training, supervision, and experience.

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RegenOx™ Mixing



1. RegenOx™ (and ORC-*Advanced*®) are delivered on pallets



2. RegenOx is in two parts:

Part A – the oxidiser
Part B – the activator

Each pail contains 13.6 kg RegenOx net

Each pail weights approximately 15 kg gross



3. Open a tub of RegenOx Part B (activator) (a brownish gel). Add about 4 litres of water to the tub, or approximately 5 cm depth on the gel surface.



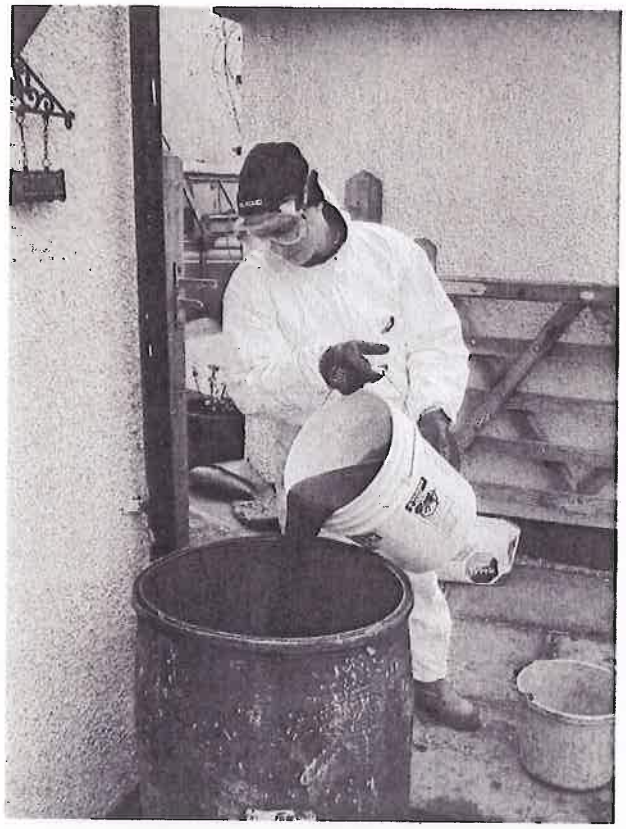
4. Thorougly mix the water and RegenOx Part B until it is suspended in a silky mixture. Then leave it to one side while you prepare the RegenOx Part A.



5. Open a tub of RegenOx Part A (oxidiser) (a white powder). Pour it into approximately 150 L of water. (Tip – if a 150 L container is not available, mix it pro rata to the volume available.)



6. Thoroughly mix the RegenOx Part A and water until the powder is dissolved (some may remain suspended). This may require 5 – 10 minutes mixing.

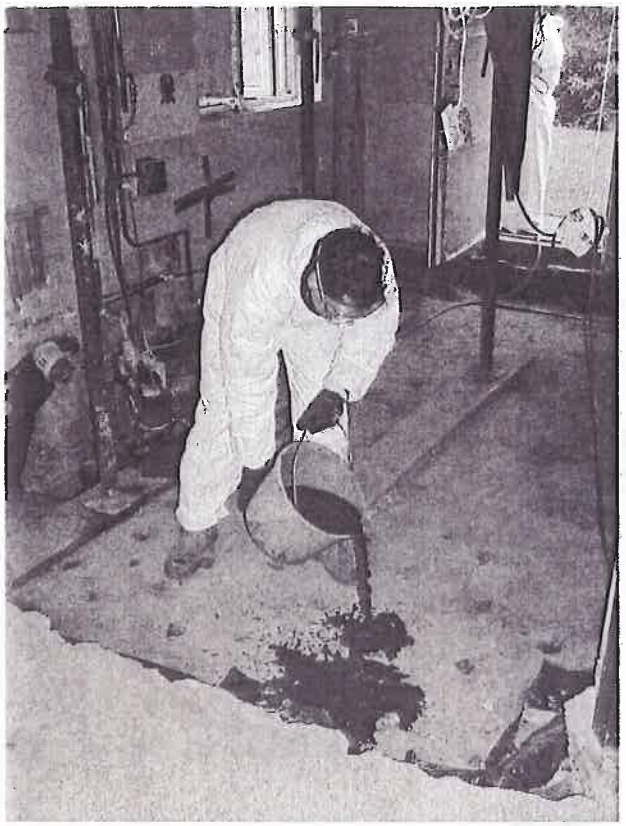


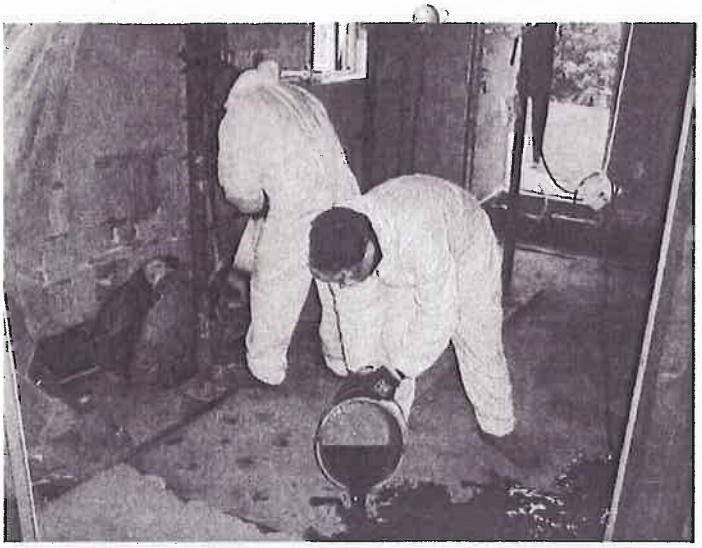


7. When you are ready to inject / apply the Regenox, add the 'silky' Part B to the Part A.

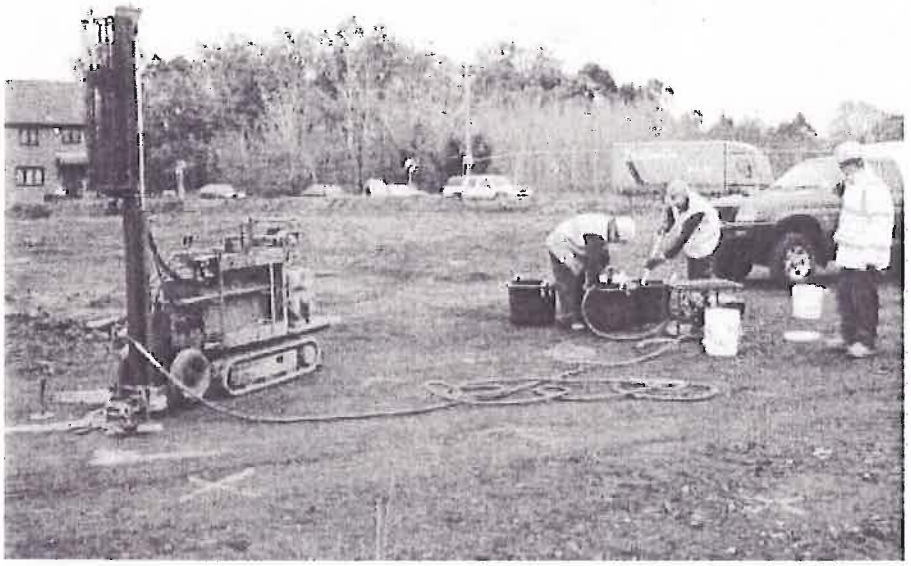


8. Thoroughly mix the combined RegenOx Part A and RegenOx Part B until the mixture is even and any remaining Part A solids are dissolved.





8. The mixed RegenOx can now be directly applied to the contaminated zones. This can be by hand where contamination is shallow…



…or using direct-push equipment and a suitable pump where the contamination is deep.

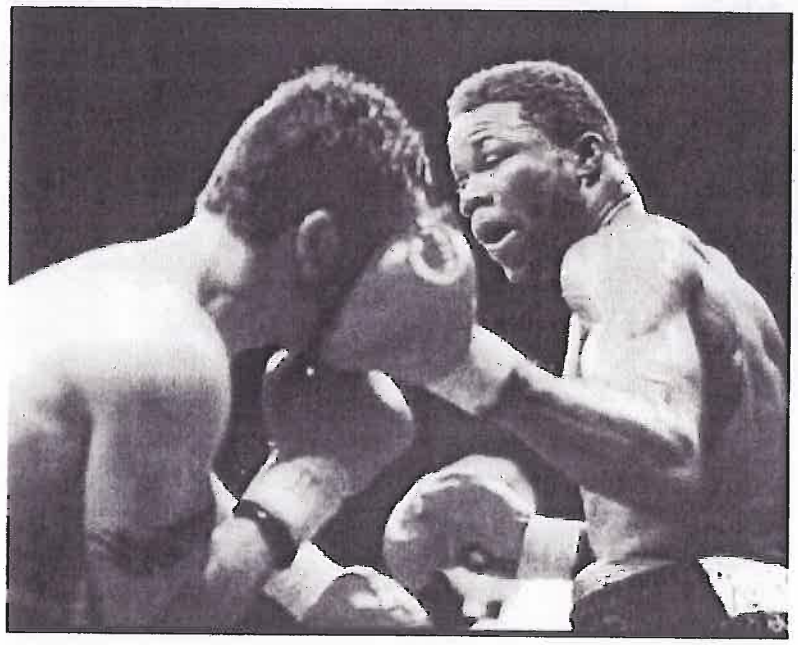
BUT REMEMBER…

REGENESIS
Advanced Technologies for Groundwater Resources

...successful treatment depends on **DOSE** and **CONTACT**.

Where too little RegenOx is applied, contaminant oxidation will be incomplete – residues will remain. RegenOx will only oxidise the contamination it contacts. If mixing / distribution is poor, residues will remain.

But when the dose and application are correct, the contaminants are rapidly destroyed.



For KNOCK OUT you need

Contact,

Contact,

CONTACT!

REGENESIS

RegenOx™

INSTALLATION INSTRUCTIONS
Direct-Push Injection

GENERAL GUIDELINES

One of the best methods to deliver RegenOx™ into the subsurface is to inject the material through direct push rods using hydraulic equipment. This approach increases the spreading and mixing of RegenOx into the aquifer. This set of instructions is specific to direct push equipment. For advice on other injections methods such as soil mixing, hydraulic and pneumatic fracturing, and vertical injection, please contact Technical Services directly.

The installation of RegenOx should span the entire vertical contaminated saturated thickness, or in the case of vadose zone treatment the entire affected vadose zone targeted for treatment.

TYPICAL INSTALLATION EQUIPMENT

- Direct push rig
- Drive Rods (typically 1 ½-inch O.D.) & Injection Tooling with fluid deliver sub-assembly
- Injection Pump rated for 5 gpm @ 200 psi for sandy formations and 800 psi for silt and clay formations (Geoprobe DP-800, Yamada, Moyno, Rupe Models 9-1500 and 9-1600, Wilden, etc.)
- Injection hosing and a pressure relief valve with a bypass
- Clear hosing between mixing tank/drum and pump
- Pressure gauges
- Power drill paint stirrer (3-inch diameter or smaller propeller tip)
- Plastic bucket lid puller tool/opener tool
- 5-amp sump pump (such as Little Giant) and hose
- Three to four 55-gallon drums or similarly sized mixing tanks for RegenOx mixing
- Sand, bentonite chips, granular bentonite, cement, hydraulic cement, and quick-set concrete for closing and sealing temporary injection holes
- Wood plugs or similar for temporarily sealing injection holes prior to grout sealing
- Access to water
- Access to electricity

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personnel working with or in areas of potential contact with RegenOx should be required at a minimum to be fitted with modified Level D personal protective equipment:

- Eye protection – Wear well sealed goggles or a face shield (face shield recommended for full face protection)
- Head – Hard hat when required
- Respiratory – Use dust respirator approved by NIOSH/MSA
- Hands – Wear neoprene gloves
- Feet – Wear steel toe shoes with chemical resistant soles or neoprene boots
- Clothing – Wear long sleeve shirts and long pant legs. Consider using a Tyvek® body suit, Carhartt® coverall or splash gear

MATERIAL OVERVIEW, HANDLING, AND SAFETY

RegenOx is packaged in two parts. Part A is the RegenOx Oxidizer complex and Part B is the RegenOx Activator complex. Part A and Part B are shipped in separate 5-gallon buckets and each bucket has a gross weight of approximately 32 pounds (net weight of RegenOx material in each bucket is 30 pounds). The RegenOx Oxidizer complex is shipped as a fine white powder and the RegenOx Activator complex is shipped as a liquid gel. The Activator has a viscosity roughly equivalent to honey. It is common for stored RegenOx Activator to settle somewhat in a container, so it is imperative to adequately pre-mix the RegenOx Activator prior to mixing it with the RegenOx Oxidizer. Mixing the RegenOx Part B Activator with water at a ratio of roughly 1 gallon water per bucket of Activator makes the activator pourable and easier to work with. A Material Safety Data Sheet for Part A (RegenOx Oxidizer) and for Part B (RegenOx Activator) is provided with each shipment. Personnel who operate field equipment during the installation process should have appropriate training, supervision, and experience.

INSTALLATION PROCEDURES

1) Prior to the installation of RegenOx, any surface or overhead impediments should be identified as well as the location of all underground structures. Underground structures include but are not limited to: utility lines; tanks; distribution piping; sewers; drains; and landscape irrigation systems.

2) The planned installation locations should be adjusted to account for all impediments and obstacles.

3) Pre-mark the installation locations, noting any points that may have different vertical application requirements or total depth.

4) Set up the direct push unit over each specific point and follow the manufacturer standard operating procedures (SOP) for the direct push equipment. Care should be taken to assure that probe holes remain in the vertical.

5) For most applications, Regenesis suggests using 1.5-inch O.D./0.625-inch I.D drive rods. However, some applications may require the use of 2.125-inch O.D./1.5-inch I.D. or larger drive rods.

6) Advance drive rods through the surface pavement, as necessary, following SOP.

7) Push the drive rod assembly with an expendable tip to the desired maximum depth. Regenesis suggests pre-counting the number of drive rods needed to reach depth prior to starting injection activities.

8) After the drive rods have been pushed to the desired depth, the rod assembly should be withdrawn three to six inches. Then the expendable tip can be dropped from the drive rods, following SOP. If an injection tool was used instead of an expendable tip, the application of material can take place without any preliminary withdrawal of the rods.

9) In some cases, introduction of a large column of air prior to RegenOx application may be problematic. This is particularly the case in deep injections (>50 ft) with large diameter rods (>1.5-inch O.D.). To prevent the injection of air into the aquifer during RegenOx application, as well as to prevent problems associated with heaving sands, fill the drive rods with water, or the RegenOx mixture prior dropping the expendable tip or exposing the injection tool.

10) Open one of the buckets of RegenOx Part B Activator and pour/spoon the entire bucket of Activator into a small mixing bucket or tank, making sure that any Activator that settled in the bottom of the bucket was scraped out of the Activator bucket and into the mixing tank. Stir the Activator with the power drill mixer for roughly 2 to 3 minutes. Add roughly one gallon of water to the activator, and stir again for at least 2 to 3 minutes. The net weight of Activator in a bucket is 30 pounds. The pounds of Activator required for one vertical foot of injection can be divided by 30. Pour the stirred/mixed Activator into empty buckets based on that fraction. (For example, if 5 pounds of activator are required per foot, pour 5/30 or 1/6 of the contents into each of 6 empty buckets.)

11) Measure the appropriate quantity of RegenOx Oxidizer for each vertical foot of injection.

12) RegenOx % oxidizer in solution should typically range between 4% to 8%. Solutions up to 10% can be used, but flocculation of the solution prior to injection may result. Solutions with greater than 10% oxidizer in solution will result in excess reaction and flocculation prior to injection and are not normally recommended.

Into a 55-gallon drum or mixing tank, pour the required amount of water for one to four vertical feet of injection. The volume of water per injection location can be calculated from the following equation:

Volume of water (gallons/vertical foot of injection):

$$\frac{\text{RegenOx Oxidizer lbs/foot}}{(8.34\ \text{lbs/gal water})(\%\ RegenOx\_Oxidizer\ \text{solids})}[1-(\%\ RegenOx\_Oxidizer\ \text{solids})]$$

Tighter formations (clays and silts), and even some fine sand formations will likely require higher oxidant percentages since less volume can be injected per location. The following are guides to various RegenOx mixing ratios based on the above equation.

- to make a roughly 5% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx), use 22 gallons of water.
- to make a roughly 8% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx), use 13.5 gallons of water.
- to make a roughly 10% oxidant solution for every 10 lbs of oxidant and 10 lbs of activator (20 lbs total RegenOx), use 11 gallons of water.

13) Pour the pre-measured quantity of RegenOx Oxidizer to make the desired target % oxidant in solution mixture into the mixing drum or tank. Mix the water and oxidant with a power drill paint stirrer to ensure that the Oxidizer has dissolved in the water.

14) Pour the applicable amount of the pre-mixed RegenOx Activator into the oxidant mixing tank or pump hopper. Mix the Oxidant and Activator using a power drill paint stirrer or hand paddle mixer for at least 5 minutes until a homogenous mixture is formed. After mixing the RegenOx mixture should be injected into the subsurface as soon as possible.

15) Do not mix more RegenOx material then will be used over roughly 1 to 4 feet of injection so as to minimize potential above ground reaction/flocculation prior to injection.

16) Transfer the contents of the mixing tank to the pump hopper using a gravity drain or a sump pump.

17) For some types of pumps, it may be desirable to perform a volume check prior to injecting RegenOx. Determining the volume displaced per pump stroke can be accomplished in two easy steps.

a) Determine the number of pump strokes needed to deliver 3 gallons of RegenOx (use a graduated bucket for this)

b) Divide 3 gallons by the results from the first step to determine the number of gallons of RegenOx delivered by each pump stroke.

18) Connect the delivery hose to the pump outlet and the delivery sub-assembly. Circulate RegenOx though the hose and the delivery sub-assembly to displace air in the hose.

19) Connect the sub-assembly to the drive rod. After confirming that all of the connections are secure, pump the RegenOx through the delivery system to displace the water/fluid in the rods.

20) Slowly withdraw the drive rods. Commonly RegenOx injection progress at1-foot intervals. However, continuous injection while slowly withdrawing single lengths of drive rod (3 or 4 feet) is an acceptable option. The pre-determined volume of RegenOx should be pumped into the aquifer across the desired treatment interval.

21) Remove one section of the drive rod. The drive rod may contain some residual RegenOx. Place the RegenOx-filled rod in a clean, empty bucket and allow the RegenOx to drain. Eventually, the RegenOx should be returned to the RegenOx pump hopper for reuse.

22) Observe any indications of aquifer refusal. This is typically indicated by a high-pitched squeal in the pump's hydraulic system or (in the case of shallow applications) RegenOx "surfacing" around the injection rods or previously installed injection points. At times backpressure caused by gassing will impede pump movement. This can be corrected by bleeding the pressure off using a pressure relief/bypass valve (placed inline between the pump discharge and the delivery sub-assembly) and then resume pumping. If aquifer acceptance appears to be low, allow enough time for the aquifer to equilibrate prior to removing the drive rod.

23) Repeat steps 13 through 23 until treatment of the entire contaminated vertical zone has been achieved. It is recommended that the procedure extend to the top of the capillary fringe/smear zone, or to the top of the targeted treatment interval.

24) Install an appropriate seal, such as bentonite, above the RegenOx material through the entire vadose zone. Prior to emplacing the borehole seal, we recommend placing clean sand in the hole to the top of the RegenOx treatment zone (especially important in holes that stay open). Bentonite chips or granular bentonite should be placed immediately above the treatment zone, followed by a cement/bentonite grout to roughly 0.5 feet below ground surface. Quick-set concrete should then be used as a surface seal.

25) Remove and clean the drive rods as necessary.

26) Finish the borehole at the surface as appropriate (concrete or asphalt cap, if necessary). We recommend a quick set concrete to provide a good surface seal with minimal set up time.

27) A proper borehole and surface seal assures that the RegenOx remains properly placed and prevents contaminant migration from the surface. Each borehole should be sealed immediately following RegenOx application to minimize RegenOx surfacing during the injection process. If RegenOx continues to "surface" up the direct push borehole, an appropriately sized (oversized) disposable drive tip or wood plug/stake can be used to plug the hole until the aquifer equilibrates and the RegenOx stops surfacing. If wells are used for RegenOx injection the RegenOx injection wells and all nearby groundwater monitoring wells should be tightly capped to reduce potential for surfacing through nearby wells.

28) Periodically compare the pre- and post-injection volumes of RegenOx in the pump hopper using pre-marked volume levels. Volume level indicators are not on all pump hoppers. In this case, volume level markings can be temporarily added using known amounts of water and a carpenter's grease pencil (Kiel crayon). We suggest marking the water levels in 3-gallon increments.

29) Move to the next probe point, repeating steps 8 through 29. We recommend that the next RegenOx injection point be as far a distance as possible within the treatment zone from the previous RegenOx injection point. This will further minimize RegenOx surfacing and short circuiting up an adjacent borehole. When possible, due to the high volumes of liquid being injected, working from the outside of the injection area towards the center will limit expansion of the plume.

HELPFUL HINTS

1) *RegenOx Pump Information*

Regenesis has evaluated a number of pumps that are capable of delivering RegenOx to the subsurface at a sufficient pressure and volumetric rate. Although a number of pumps may be capable of delivering the RegenOx to the subsurface at adequate pressures and volume, each pump has a set of practical issues that make it difficult to manage in a field setting. In general, Regenesis strongly recommends using a pump with a minimum pressure rating of 200 pounds per square inch (psi) in sandy formations or 800 psi in silt, clay or weathered bedrock formations, and a minimum delivery rate of 5 gallons per minute (gpm). A lower gpm rated pump can be used; however, they are not recommended due to the amount of time required to inject the volume of liquids typically associated with a RegenOx injection (i.e. 1,000 lbs of RegenOx [500 lbs Oxidant/500 lbs Activator] require roughly 1,100 gallons of water to make a 5% Oxidant solution).

2) *Pump Cleaning*

For best results, use a hot water pressure washer (150 - 170 °F or 66 - 77 °C) to clean equipment and rods periodically throughout the day. Internal pump mechanisms and hoses can be easily cleaned by circulating hot water and a biodegradable cleaner such as Simple Green through the pump and delivery hose. Further cleaning and decontamination (if necessary due to subsurface conditions) should be performed according to the equipment supplier's standard procedures and local regulatory requirements.

APPENDIX D

Interim Action Plan Memorandum

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TECHNICAL MEMORANDUM

Date:	March 17, 2009
To:	Panjini Balaraju, P.E. - Ecology
From:	David Dinkuhn, P.E. - Parametrix
Subject:	Interim Action Plan
cc:	Thomas Knuckey, P.E. - City of Bremerton Bill Webb – Parametrix
Project Number:	255-1896-063
Project Name:	Former Chevron Property RI/FS and Interim Action

FORMER CHEVRON PROPERTY INTERIM ACTION PLAN

INTRODUCTION

This memorandum presents an Interim Action (IA) Plan for the Former Chevron Property (Figure 1). The goal of the IA is to significantly reduce contamination levels at the site and enhance bioattenuation processes so that cleanup levels are met within a reasonable time frame. It is anticipated that the restoration timeframe following the IA will be on the order of two to five years. The IA was designed based on additional information gathered during a Remedial Investigation/Feasibility Study (RI/FS) conducted in 2008. The RI/FS, IA design, and implementation of the IA are requirements of the 2007 Agreed Order (AO) Number DE-07TCPHQ-5024 established between the City of Bremerton and the Washington State Department of Ecology (Ecology). All RI/FS and IA design activities were conducted in accordance with the site's approved RI/FS and IA work plan (Parametrix 2007). In addition to a description of the IA, this memorandum also summarizes the RI/FS activities performed to date.

The 2007 RI/FS work plan contains a conceptual IA plan based on site information existing at that time. To provide a basis for final IA design, RI/FS activities were conducted in 2008 to define the nature and extent of contamination at the site and to evaluate selected cleanup technologies. RI/FS activities included site-wide soil and groundwater sampling and treatment feasibility testing using chemical oxidation. In-situ chemical oxidation was selected as a preferred cleanup approach based on an analysis of alternatives that included encapsulation and site-wide contaminated soil removal. The effectiveness of chemical oxidation was evaluated using bench-scale and pilot-scale tests.

The proposed IA will consist of the cleanup of contaminated soils at the site using a combination of hot spot removal, in-situ treatment by chemical oxidation, and enhanced bioremediation. Approximately 1,050 cubic yards (cy) of hot spot soils will be excavated and removed from the site for disposal at a permitted landfill. The remaining contaminated soil (approximately 4,000 cy) will be mixed in place with

a proprietary chemical oxidant (RegenOx) manufactured by Regenesis of San Clemente, California. Based on the bench scale test, RegenOx is expected to reduce contaminant levels on the order of 70 to 80 percent on contact. An oxygen release compound (ORC) will be mixed with the soil at the same time as the RegenOx to provide a long-term oxygen source. The addition of oxygen to the system will enhance bioremediation of the petroleum by naturally-occurring aerobic bacteria. Contamination that remains following the RegenOx step will be reduced over time through a combination of enhanced bioremediation via the ORC and natural attenuation. Hot spot soil removal will occur in areas where soil mixing is not feasible or is expected to be less effective. Refer to Figure 1 for the location of the soil excavation areas.

IA work will be bid in March 2009 but intrusive work will be delayed until at least April 15, 2009. The delay is necessary so that the mid-winter rainy season is avoided and potential problems associated with soft ground and control of stormwater runoff are minimized.

PILOT SCALE AND BENCH SCALE TEST RESULTS

A pilot test was performed in May 2008 to evaluate the effectiveness of treating subsurface soil with RegenOx. Refer to the Pilot Scale Test Plan (Parametrix 2008) for a detailed description of the pilot test procedures. During the test, RegenOx was injected using a push-probe rig into a 30-foot by 30-foot test zone (located in an area of elevated contamination). Test injections were spaced on 10-foot centers and RegenOx was injected a rate of 10.8 pounds (lbs) per cy of contaminated soil. Confirmation sampling results showed that RegenOx was effective at reducing total petroleum hydrocarbon (TPH) concentrations. The results of the pilot test are summarized below.

- A total of eight confirmation soil samples were collected from the pilot test area (Figure 2). Results from seven of the samples indicated that post-test TPH concentrations were either not detectible or were reduced significantly. For example, at the center of the pilot test area (PP-20; Figure 2), TPH was reduced from 5,900 milligrams per kilogram (mg/kg) to 157 mg/kg, or 97 percent.

- The eighth sample contained TPH at 8,000 mg/kg, an increase over pre-pilot test concentrations. This sample was collected from a depth of 10 feet below ground surface (bgs) in Probe PP-23, located just 5-feet away from PP-20. It is likely that the increased TPH concentration resulted from the presence of a buried wooden bulkhead located a short distance from the pilot test area. This wooden bulkhead may be saturated with petroleum, which was desorbed by the RegenOx and migrated to the PP-23 area.

A bench scale test was conducted following the pilot test to further evaluate the effectiveness of RegenOx and to provide a basis for developing site-specific dosing rates. To establish a worst case scenario, a sample of site soil was collected from a test pit located adjacent to PP-23 and the buried wooden bulkhead. The sample was shipped to Western Research Institute (WRI) of Laramie, Wyoming for the bench test. WRI routinely performs RegenOx bench tests for Regenesis. Bench test results are provided in Table 1. The TPH concentration of the bulk soil sample, as tested upon arrival at WRI, was 3,483 mg/kg, primarily in the gasoline range. The bench test (designed by Regenesis) consisted of dosing sample aliquots in triplicate with a RegenOx solution at three different concentrations (1-, 3-, and 5-percent solution by weight). A control sample was also prepared. Soil aliquots weighing 240 grams were placed into test vials and 100 ml of RegenOx solution was added to each aliquot. The vials were stirred lightly and capped with limited head space. TPH concentrations were measured at 7 days, which, according to Regenesis, is sufficient time for the majority of the reaction to occur.

Test results are shown and plotted in Table 1; reductions in TPH concentrations range from an average of 35 percent for the untreated control samples to 79 percent for the 5 percent solution samples. Inspection

of the plot shows diminishing returns for increasing RegenOx dosing. This effect is partly due to the reaction rate, which is affected by TPH concentration. The reaction occurs faster at higher TPH concentrations; thus, no matter how much RegenOx is present, the rate of TPH removal slows as the TPH concentration decreases. The reaction rate is also proportional to temperature and the field reaction rate may be slower than shown in Table 1 due to the lower ground temperatures (approximately 52°F) as compared to the laboratory temperature during the test (68°F). According to Regenesis, further concentration reductions of approximately 10 percent would be expected at 14 days, giving total treated reductions of approximately 82 percent to 89 percent.

HOT SPOT SOIL REMOVAL

Soil Removal and Confirmation Sampling

Hot spots soils will be removed from Soil Excavation Areas 1, 2, and 3 as shown on Figure 1. Areas 1 and 2 represent contaminated soils located near MW-16, MW-18, and MW-19, where floating product or elevated TPH levels were measured during the RI/FS. Area 3 represents a shallow zone of soil containing asphalt rubble. In addition to Areas 1, 2, and 3, any obviously contaminated (fuel saturated) soil observed during the removal of the buried wooden and concrete bulkheads will be removed. The buried bulkheads are to be removed to facilitate soil mixing.

In general, the actual extent of the excavations will be determined in the field by real-time observation and field screening. Once the apparent limit of contaminated soil is reached, the bottom and sidewalls of the excavations will be sampled to confirm removal. Exceptions are Area 3 and the excavations for the buried bulkheads, where any remaining contaminated soil will be treated in place by soil mixing.

In Areas 1 and 2, fuel-saturated soils near the groundwater table will be targeted for removal. These soils are expected to be present within the smear zone defined by historical groundwater table fluctuations. In Area 1, existing data indicates a groundwater table fluctuation zone of approximately 7 to 16 feet bgs. In Area 2, groundwater fluctuates between approximately 5 and 12 feet bgs. Soil excavation in these areas will be timed to avoid the mid-winter rainy season and associated high groundwater table. Excavation will occur following the soil mixing and no earlier than June 15th (Bremerton typically receives 1.43 inches of precipitation in June compared to 7.71 inches in December). According to the Office of the Washington State Climatologist, precipitation during the spring of 2009 is predicted to be normal. Thus, the depth to groundwater in Areas 1 and 2 should be well below the seasonal high by mid June.

Contaminated soil in Areas 1 and 2 will initially be removed to just below the groundwater table. If contaminated soil is still present at concentrations above the cleanup levels, the excavation will be dewatered and soil removal will continue. Removed water will be stored on site in Baker tanks for later removal by a permitted oily-water disposal service.

In Area 3, soil containing asphalt rubble was observed between the depths of 2 to 6 feet bgs in test probe PP-15. It is this asphalt rubble that is targeted for removal.

It is estimated that a total of 1,330 cy of clean overburden and 1,050 cy of contaminated soil will be excavated and stockpiled for sampling. Contaminated soil volumes are estimated as follows:

- Area 1 – 590 cy
- Area 2 – 200 cy
- Area 3 – 60 cy
- Bulkheads – 200 cy

Confirmation samples will be collected at the base and sidewalls of the Area 1 and Area 2 excavations. It is estimated that the final dimensions of the Area 1 cleanup footprint will be 70 feet long by 30 feet wide by 17 feet deep. The confirmation sampling scheme for this excavation is as follows: two samples collected from each of the longer sidewalls, one sample collected from each of the shorter sidewalls, and three samples collected from the bottom (a total nine samples). For Area 2, it is estimated that the final dimensions of the cleanup footprint will be 30 feet by 30 feet by 13 feet deep. The confirmation sampling approach for this excavation is to collect a single sample from each sidewall and two samples from the bottom (six samples total). The primary contaminants of concern (COCs) in the excavation areas are gasoline, volatile aromatics (BTEX compounds), diesel, and lube oil. Accordingly, all confirmation soil samples will be analyzed for these constituents. Two confirmation samples from the Area 1 excavation and one sample from the Area 2 excavation will also be analyzed for polycyclic aromatic hydrocarbons (PAHs). In addition to the excavation samples, confirmation samples will be collected from each soil stockpile. The clean soil stockpile will be sampled according to Ecology sampling guidance (Ecology 1995). Soil that is confirmed clean will be returned to the excavations as backfill. The contaminated soil stockpile will be sampled per the requirements of the receiving landfill. It is estimated that the clean soil stockpile will contain 1,300 cubic yards (cy) and will be characterized by ten soil samples. The estimated contaminated soil stockpile volume is 1,050 cy, which may require five to ten samples. Stockpile samples will be analyzed for gasoline, BTEX, diesel, and lube oil. Although lead was not shown to be of concern during the RI sampling, contaminated soil bound for the landfill will be analyzed for lead to meet landfill requirements. Field sampling and laboratory methods used for this and all IA tasks shall be as described in the project work plan (Parametrix 2007).

Excavations will not be backfilled until confirmed clean by the sampling results. Stockpiled soils that are confirmed clean by confirmation sampling will be returned to the excavation as backfill. Contaminated soils not meeting cleanup levels will be transported to a permitted landfill. Once all of the clean soil has been placed as backfill, the excavations will be brought to surrounding grade with clean pit run.

Cultural Resources

Cultural resources are not anticipated in the upper yard but are potentially present in the lower yard at the interface between the fill and original ground surface. This contact zone may be exposed during the removal of the buried bulkheads. Accordingly, excavation of the bulkheads will be observed by an archaeologist on a full-time basis to screen for the presence of cultural resources. If cultural resources are observed, excavation will be halted in the area and the Suquamish tribe, the State Historic Preservation Officer (SHPO), and Ecology project manager will be notified and consulted. At this time, appropriate methods for continuing the soil cleanup in the affected area will be evaluated.

Hot Spot Residual Plume Treatment

ORC will be mixed with backfilled soils below the high-average water table depth in Areas 1 and 2 to enhance the biodegradation of residual petroleum constituents in groundwater. The required amount of ORC in lbs per cy was determined using guidelines provided by Regenesis. For this determination, a typical groundwater TPH concentration was assumed based on site data. The mass of TPH contained in one cy of saturated backfill was calculated using the assumed concentration and the volume of water contained in the soil pore spaces. Then the required mass of ORC was determined by multiplying the TPH mass by three for the required pounds of oxygen per pound of TPH, by eight for additional oxygen demand, and by ten for the required pounds of ORC per pound of oxygen. Assumptions and calculations are shown below.

Say TPH in groundwater following soil removal is equal to the concentration measured in MW-19 during the RI/FS sampling, 8.1 milligrams per liter (mg/L).

Calculate mass TPH per cy of saturated soil below the groundwater table,

$$MassTPH = \left(\frac{27\,ft^3}{cy}\right)0.3(porosity)\left(\frac{62.4lbs}{ft^3}\right)\left(\frac{8.1x10^{-6}\,lbTPH}{lbGW}\right) = \frac{0.0041lbTPH}{cy}$$

Now, calculate mass ORC needed per cy of soil,

$$MassORC = \left(\frac{0.0041lbTPH}{cy}\right)\left(\frac{3lbsO_2}{lbTPH}\right)8(addtl.demand)\left(\frac{10lbORC}{lbO_2}\right) = \frac{0.984lbORC}{cy} \approx 1lbORC/cy$$

Say FS = 1.5; design rate is **1.5 lbs ORC/cy**.

Using historical groundwater monitoring data, it is estimated that the depth to the average seasonal high groundwater table is 8 feet bgs in Area 1 and 7 feet bgs in Area 2. The estimated volume of backfill below these depths is 790 cy, corresponding to a required ORC mass of 790 cy x 1.5 lbs/cy ≈ 1,200 lbs.

IN-SITU SOIL MIXING

Elevated TPH concentrations found in PP-23 following the pilot test showed that contaminant concentrations at the site are not spatially uniform and that isolated hot spots may be present, particularly near the buried wooden bulkhead. In-situ soil mixing was selected as an alternative to injection since the mixing will homogenize the hot spots with other contaminated soils and provide a more uniform ratio of RegenOx to contaminant. Soil mixing in this application will involve inserting a mechanical mixing tool into the soil treatment zone to mix the soil while simultaneously injecting reagent slurry. The soil mixing area shown in the drawings was developed based on the historical and RI/FS sampling results, including the historical presence of floating product in the monitoring wells. A vertical treatment zone of between 8 and 14 feet bgs was selected, corresponding to the "smear zone" of seasonal groundwater table fluctuation. The only area of contaminated soil observed to occur shallower than 8 feet bgs is Excavation Area 3 as discussed previously.

The soil mixing tool will be inserted into the existing ground surface and extended to the top of the treatment zone without injecting reagent. Reagent injection will begin at the top of the treatment zone and will continue at a uniform rate as the soil is mixed through the full thickness of the zone (6 feet). This approach was selected to reduce the amount of soil requiring handling since removing the clean surface soils prior to mixing would require a large stockpile area and there is limited room at the site. In addition, retreatment of some areas may be required and the likelihood being able to operate the mixing equipment over areas that have been disturbed is much greater if these areas are at grade and surface soils have had a chance to drain. Equipment capable of mixing soil from the ground surface to the selected treatment depth is commercially available.

Two dosing rates – baseline and aggressive – were recommended by Regenesis based the distribution of soil contamination and the bench test results. Figure 2 shows the areas where each dosing rate is to be applied; areas to receive aggressive dosing were selected because they contain the highest levels of contamination measured during the RI. Dosing rates are as follows:

- RegenOx baseline dosing rate – 10 lbs/cy
- RegenOx aggressive dosing rate – 20 lbs/cy
- ORC dosing rate – 1.5 lbs/cy

RegenOx and ORC will be applied simultaneously in slurry form at the above rates. A solution of 8 percent by weight of oxidant shall be applied. This corresponds to 1.33 pounds RegenOx (Parts A and B combined) and 0.2 pounds of ORC per gallon of water. For the baseline dosing rate, each 10 foot by 10 foot cell will require 296 gallons of slurry. Each 10-foot by 10-foot cell treated using the aggressive dosing rate will require 592 gallons of slurry. Slurry mixing instructions will be provided to the Contractor (and Parametrix) by Regenesis at the time the product is purchased.

Confirmation Soil Sampling

RI/FS soil sample results and proposed confirmation sample locations are shown on Figure 2. A total of eleven confirmation samples will be collected from the locations shown, which are adjacent to the RI/FS samples so that a basis exists for comparing soil concentrations before and after treatment. Confirmation samples will be collected using a backhoe as soon as feasible, following soil mixing, and will be immediately shipped to the project laboratory for storage. Samples will be analyzed at 7 days following collection and results will be available the following day. All confirmation samples will be analyzed for gasoline, BTEX, diesel, lube oil, and PAHs. Samples will not be analyzed for lead since this constituent was not detected at concentrations of concern during the RI sampling. Confirmation sample results will be compared to the following remediation levels:

- Gasoline – 70 percent of pretreatment gasoline concentration in RI/FS sample located in same area
- BTEX – 70 percent of pretreatment BTEX concentration in RI/FS sample located in same area
- Diesel Range Organics – 2,000 mg/kg
- Lube-Oil Range Organics – 2,000 mg/kg

If the results of any individual confirmation sample exceed one or more of the remediation levels, the confirmation sample area will be retreated. Retreatment dosing rates will be the same as the initial dosing rate unless a higher (or lower) rate is indicated by the confirmation results. Retreatment shall occur within the same cell and one adjacent cell in all directions. This corresponds to a 30-foot by 30-foot square retreatment area containing the failing cell in the center and nine retreated cells total. Immediately following retreatment (the same day), a second confirmation sample will be collected from the same location as the original confirmation sample. The sample will be analyzed for the constituent(s) that exceeded the remediation level(s). Based on the results of the bench test, it is anticipated that all remediation levels will be met following a single retreatment and no additional soil retreatment is planned.

Based on past project experience (Kitay 2008), the soil mixing process produces wet, loose soil that will not support equipment or foot traffic for some time. Even though the Chevron Property soils consist largely of sands and gravels, it is likely that this condition will occur and that, once mixed, site soils will not support the weight of equipment. To address the need for re-accessing mixed areas that require retreatment, soil mixing will be staged so that approximately every third row of cells is left undisturbed. These untreated "third rows" will be treated as soon as retreatment is performed or shown to be unnecessary by the initial confirmation test results. Most mixing equipment should have sufficient reach to treat up to two cells away (20 feet).

Confirmation Groundwater Monitoring

A total of eleven monitoring wells will be sampled 6-, 9-, and 12-months following the IA to provide an assessment of IA effectiveness. Wells to be sampled consist of MW-4, MW-9, MW-10, MW-11, MW-13, MW-18, MW-19, MW-21, MW-22, MW-25, and MW-26, shown on Figure 1. Note that eight

of these wells are located in the soil mixing or excavation areas and will require removal during the IA. The replacement well for MW-4 will be installed between the current locations of MW-4 and MW-14. Wells to be removed shall be decommissioned according to Ecology regulations and will be replaced following the IA in time for the 6-month sampling event.

Wells in the lower yard and the replacement for MW-18 will be installed to be similar to the existing wells that are being replaced. Wells will be constructed of 2-inch I.D. PVC casing installed to a depth of 15 feet with 10-foot long PVC screens (0.020-inch slot). Surface completion will consist of flush monuments. The replacement for MW-19 will be installed to a depth of 20 feet with a 15-foot long screen and a flush monument. Soils from the monitoring well borings will be screened for the presence of contamination, but no soil samples will be collected for analysis.

All groundwater samples will be analyzed for gasoline, BTEX, diesel, lube oil, lead, and PAHs. If lead and/or PAHs are not present at concentrations exceeding the cleanup levels during the 6-month sampling event, their removal from the monitoring program will be considered.

To provide a baseline for assessing whether bioattenuation is occurring at the site, all groundwater samples will be analyzed for nitrate, sulfate, alkalinity, dissolved ferrous iron, dissolved manganese, methane, temperature, specific conductivity and biochemical oxygen demand (BOD5). The geochemical indicators dissolved oxygen and redox potential will be measured in the field during well sampling. All groundwater samples will also be analyzed for chloride so that an assessment of tidal influences can be made. A baseline chloride concentration was obtained from a surface water sample collected from Smith Cove during the RI.

REFERENCES

Ecology. 1995. Guidance for Remediation of Petroleum Contaminated Soils. Washington State Department of Ecology Toxics Cleanup Program. 91-30. November.

Kitay. 2008. November 21, 2008 personal conversation between Parametrix staff and Robert Kitay of Aqua Science Engineers, Danville, CA. Discussed current RegenOx soil mixing project located in Hayward, CA.

Parametrix. 2007. Work Plan for Remedial Investigation/Feasibility Study, Interim Action, and Shoreline Restoration, Former Chevron Property, Bremerton, Washington. Prepared for the City of Bremerton. September.

Parametrix. 2008. Technical Memorandum, Former Chevron Property Pilot Scale Test Plan. Former Chevron Property RI/FS and Interim Action, Bremerton, Washington. Prepared for the City of Bremerton. April.

ATTACHMENTS

Table 1 – Bench Scale Treatability Test Results

Figure 1 – Soil Mixing and Excavation Areas

Figure 2 – Confirmation Sampling Locations

FIGURES

Table 1. Bench Scale Treatability Test Results

Western Research Institute

Bench Test: Chemical Oxidation of Petroleum Hydrocarbons in Soil by RegenOx

Project Name: Former Chevron Property
Organization: Parametrix
Contact Name: David Dinkuhn
E-mail: ddinkuhn@parametrix.com
Samples: 1
Matrix:Soil

Bench Test Details

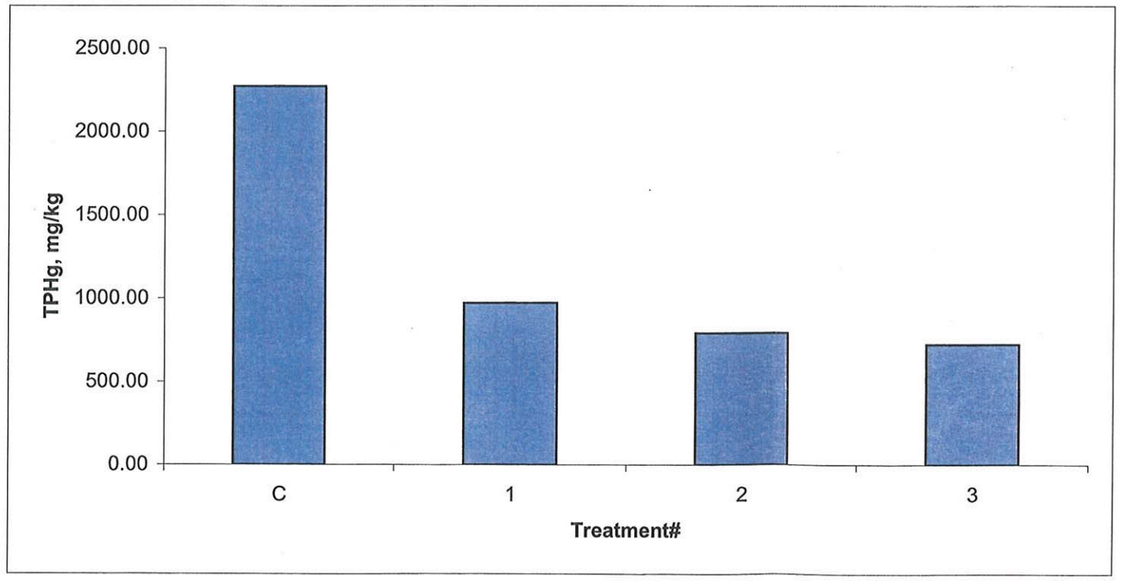
Evaluation of performance of RegenOx.
Contaminant of concern: Total Petroleum Hydrocarbons (TPH)--gasoline (TPHg), diesel (TPHd), motor oil (TPHm)
240 g soil,
100 mL oxidant dosing solution
Oxidant solution concentrations 1, 3, 5%
Replicates of 3 for each treatment

Results

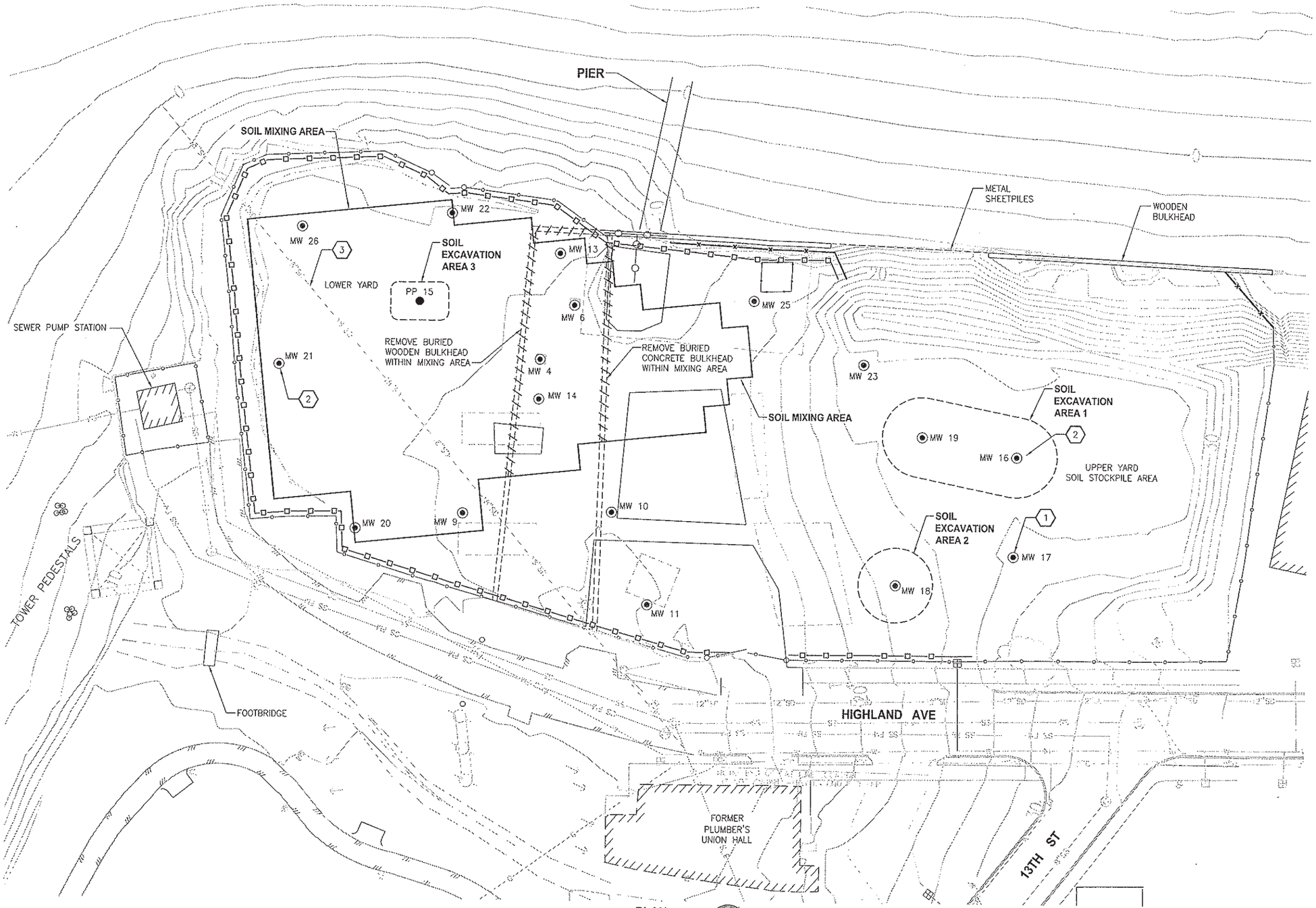
Soil Bulk Density = 1.45 g/cm$^{3)}$

Treatment #	Part A (g)	Part B (g)	Part A (lb/yd$^{3)}$	Part B (lb/yd$^{3)}$	Duration (days)	Baseline Sample "Bulk" TPH (mg/kg)	TPHg mg/kg	TPHdm mg/kg	TPHm mg/kg	TPH Reduction from Baseline (%)
C	0	0	0	0	7	3,483	2272.48	ND	ND	35
1	0.5	0.5	4.75	4.75	7	3,483	971.92	ND	ND	72
2	1.5	1.5	14.2	14.2	7	3,483	790.35	ND	ND	77
3	2.5	2.5	23.65	23.65	7	3,483	722.17	ND	ND	79

ND = none detected (<0.010 mg/kg)



Note: Table adapted from 9/17/08 original by Western Research Institute with only minor changes.



PLAN
SCALE IN 1"=20'
0 20 40

LEGEND

- EXISTING BUILDING
- EXISTING CHAIN LINK FENCE
- DRAINAGE DITCH
- MONITORING WELL
- CONCRETE SLAB
- SOIL EXCAVATION AREA
- SILT FENCE
- TEMPORARY CHAIN LINK FENCE

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

KEY NOTES:

1. PRESERVE MONITORING WELL, TYPICAL
2. REMOVE MONITORING WELL MONUMENT WITHIN TREATMENT OR EXCAVATION AREA, TYPICAL. WELL DECOMMISSIONED BY OTHERS.
3. PRESERVE AND PROTECT STORM DRAIN

ESTIMATED QUANTITIES

CONTAMINATED SOIL EXCAVATION	1470 TONS
CONCRETE SLABS	305 TONS
SILT FENCE	700 LF
IMPORTED FILL	1190 TONS

REVISIONS

NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
HORIZ. 1"=20' VERT. N/A

FIELD BOOK

DRAWING NO. C1

DRAWN BY: SBR DATE 11/08

DESIGN BY: DD WASH. P.E. # DATE 11/08

CHECKED BY: WASH. P.E. # DATE

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

FORMER CHEVRON PROPERTY
REMEDIAL ACTION
SOIL MIXING AND EXCAVATION AREAS

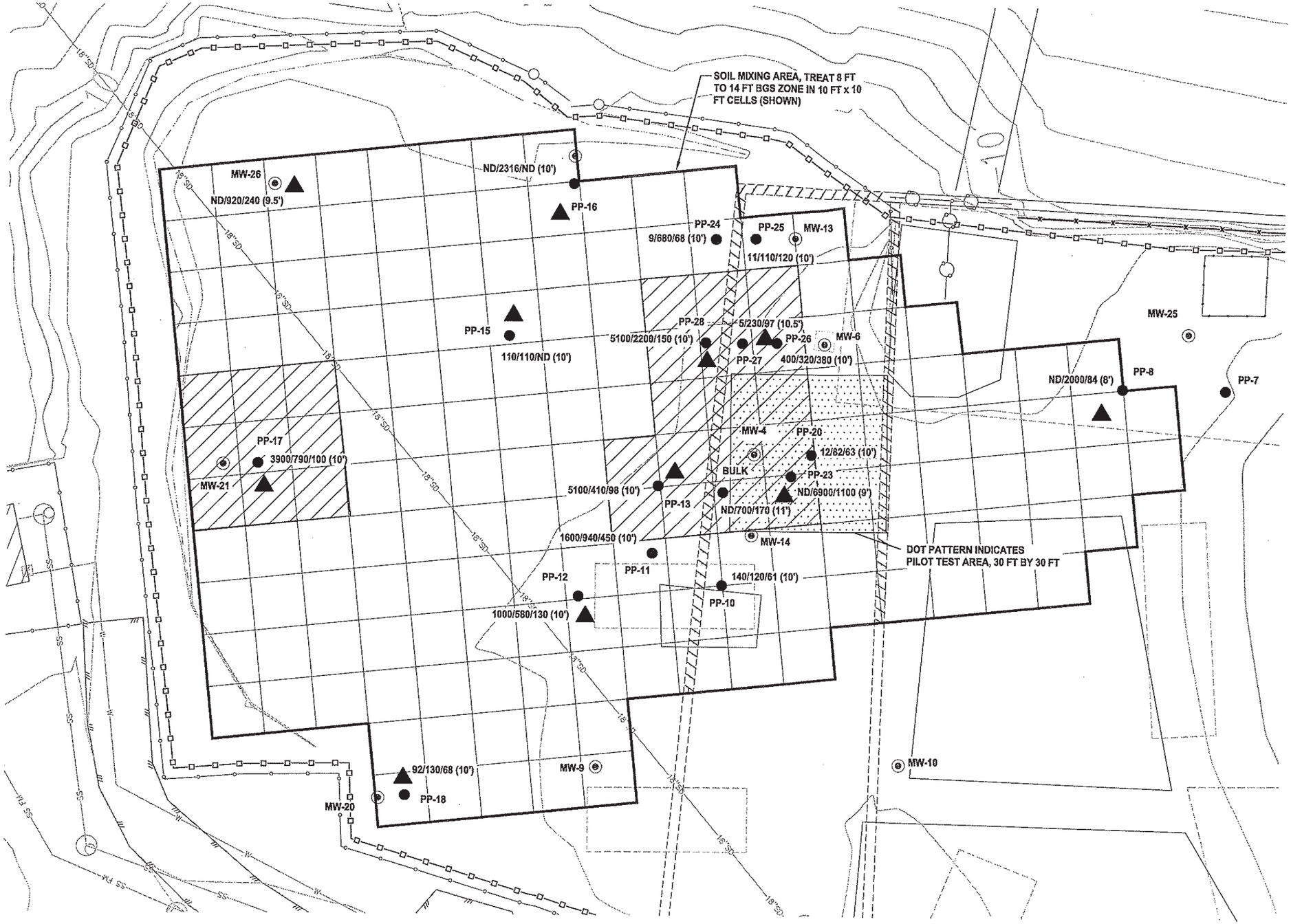
FIG. NO. 1

PN: 255-1896-063

SHEET 2 OF 2

BREMERTON BOARDWALK PROJECT

FILE: BR1896063P041301RA_C-02
DATE: Mar 06, 2009 - 11:31am PLOTTED BY: dinkudav
IMAGES: Chevron Property.tif
XREFs: XB-BREM_WTRFRNT-BA-SV-061201 | XBR1896063P041301F-BA



LEGEND

- ● RI/FS PUSH-PROBE LOCATION
- ND/2000/84 RI/FS GASOLINE/DIESEL/OIL RESULTS IN MG/KG (POST PILOT TEST RESULTS SHOWN)
- (10') SOIL SAMPLE DEPTH IN FEET
- ⊙ EXISTING MONITORING WELL
- ▲ PROPOSED CONFIRMATION SAMPLE LOCATION
- ▭ TREATMENT CELL
- ▨ AGGRESSIVE DOSE TREATMENT AREA

NOTES

1. BASELINE DOSING RATE – 10 LBS/CY REGENOX, 1.5 LBS/CY ORC
2. AGGRESSIVE DOSING RATE – 20 LBS/CY REGENOX, 1.5 LBS/CY ORC
3. CONFIRMATION SAMPLING REMEDIATION LEVELS:

   DIESEL RANGE ORGANICS – 2,000 MG/KG

   LUBE-OIL RANGE ORGANICS – 2,000 MG/KG

   GASOLINE RANGE ORGANICS AND BTEX – 70 PERCENT OF CONCENTRATION FROM PRE-TREATMENT SAMPLES COLLECTED AT SAME LOCATION
4. HATCHED AREAS TO RECEIVE AGGRESSIVE DOSING RATE. NON-HATCHED AREAS TO RECEIVE BASELINE DOSING RATE

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
TWO INCHES AT FULL SCALE IF NOT SCALE ACCORDINGLY

SCALE HORIZ. 1"=10' VERT. N/A

FIELD BOOK

DRAWING NO. 1

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: DATE

DESIGN BY: DLD WASH. P.E. # DATE 02/09

CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
REMEDIAL ACTION
CONFIRMATION SAMPLING LOCATIONS

FIG. NO. 2

PN: 255-1696-053

SHEET 2 OF 2

BREMERTON BOARDWALK PROJECT

FILE: BR1696053P0411J01RA_C-03
DATE: Mar 17, 2009 - 9:31am PLOTTED BY: peterjil
IMAGES: Chevron Property FIG1 |
XREFS: XB-BREM_WRFRNT-BA-SV-061201 | XBR1696063P0411J01F-BA

APPENDIX E

Interim Action Report

Parametrix ENGINEERING . PLANNING . ENVIRONMENTAL SCIENCES

4660 KITSAP WAY, SUITE A
BREMERTON, WA 98312-2357
T. 360.377.0014 F. 360.479.5961
www.parametrix.com

TECHNICAL MEMORANDUM

Date:	June 7, 2010
To:	Panjini Balaraju, P.E. – Ecology
From:	David Dinkuhn, P.E. – Parametrix
Subject:	Interim Action Report
cc:	Thomas Knuckey, P.E.– City of Bremerton Bill Webb – Parametrix
Project Number:	255-1896-063
Project Name:	Former Chevron Property RI/FS and Interim Action

FORMER CHEVRON PROPERTY INTERIM ACTION REPORT

This memorandum presents the results of the Interim Action (IA) performed at the Former Chevron Property site during the summer of 2009. The objective of the IA was to significantly reduce contaminant levels at the site and enhance bioattenuation processes so that cleanup levels are met within a reasonable timeframe. It is anticipated that the restoration timeframe following the IA will be on the order of 2 to 5 years. The IA was conducted according to the Washington State Department of Ecology (Ecology) -approved IA Plan (Parametrix 2009). The IA is one step in the overall cleanup process being conducted at the site under Agreed Order (AO) Number DE-07TCPHQ-5024.

The IA consisted of the removal of site debris, excavation and removal of contaminated soil from several hot spots, and treatment of contaminated site soils by in-situ chemical oxidation (chemox). A detailed description of these activities and the results for confirmation samples is provided below. A discussion of follow-on soil and groundwater confirmation sampling is also provided.

HOT SPOT SOIL REMOVAL

Contaminated soils were excavated and removed from Areas 1, 2, and 3 as shown on Figure 1. Sidewall and bottom soil confirmation samples were collected from each excavation once all apparently contaminated soils were removed. The locations of the confirmation samples are shown on Figure 1. Analytical results summaries are provided in Tables 1 and 2. Note that Area 1 was subdivided into subareas 1A and 1B. Note also that no confirmation samples were collected from Area 3 since this area is located within the soil mixing area and received later treatment during the soil mixing phase.

All confirmation soil concentrations from Areas 1 and 2 were below Ecology Model Toxics Control Act (MTCA) Method A cleanup levels. These levels were established as applicable cleanup levels in the site's Remedial Investigation/Feasibility Study (RI/FS) work plan (Parametrix 2007). Results for samples collected from the Area 3 contaminated soil stockpile are provided in Table 3. No samples were collected from contaminated soil stockpiles from Areas 1 and 2.

A summary of the quantities of contaminated soil removed from each area is provided as follows:

- Area 1 (combined Areas 1A and 1B) – 924 tons. Average depth of excavation: Area 1A – 17 feet, Area 1B – 13 feet. Groundwater encountered at approximately 16 feet. No dewatering was conducted due to a very slow groundwater inflow rate.

- Area 2 – 476 tons. Average depth of excavation: 12 feet. No groundwater encountered.

- Area 3 – 244 tons. This quantity includes grossly contaminated soil excavated during the removal of the nearby wooden bulkhead. Average depth of excavation: 6 feet. No groundwater encountered.

All contaminated soil (1,644 tons total) was transported and disposed at Waste Management's Subtitle D landfill located in Arlington, Oregon. A copy of the certificate of disposal for the contaminated soil is attached. In addition to the contaminated soil, two buried bulkheads (one wooden and one concrete) and miscellaneous concrete debris were removed and disposed of to facilitate soil mixing. Treated timbers from the wooden bulkhead and miscellaneous concrete debris were disposed at the same landfill as the contaminated soil (31.49 tons). A certificate of disposal for this material is attached. Concrete bulkhead debris was observed to be clean and was disposed of at a local concrete recycling facility.

Clean overburden soil removed from Areas 1 and 2 was stockpiled separately and tested to confirm that it was clean (approximately 500 cubic yards). Sample results are provided in Table 4. As shown, cleanup levels were not exceeded in the samples and the clean overburden soil was replaced in the excavations in compacted lifts. Groundwater in Areas 1 and 2 occurs between 3 and 5 feet below the ground surface (bgs). Oxygen Release Compound™ (ORC) was mixed with the clean soil backfill below the depths of 4 feet bgs (corresponding to the anticipated saturated zone) in Areas 1 and 2 to provide an oxygen source for naturally-occurring bacteria. A total of 1,500 pounds of ORC™ was applied at an approximate rate of 1.5 pounds per cubic yard.

SOIL MIXING

Soils located within the soil mixing area (Figure 2) were treated in place by mixing using specialized equipment manufactured by Lang Tool of Beaverton, Michigan. The equipment was used to mix soils between the depths of 8 and 14 feet bgs while simultaneously injecting a slurry containing RegenOx™, ORC™, and water. Refer to the Interim Action Plan for a detailed description of the soil mixing procedure and chemical dosing rates. A total of 57,000 pounds of RegenOx™ and 5,500 pounds of ORC™ were applied during the project.

Following an initial mixing pass, confirmation samples of the treated soil were collected from pre-determined locations. Sample depths were targeted to reproduce the depths of samples collected during RI/FS sampling (Parametrix 2008). Samples were collected using new 2-inch-outside-diameter PVC pipe inserted to the depths required. Soil entering the end of the pipes was trapped in place by placement of tape over the above-ground end, thereby creating a vacuum in the pipe. The pipe was removed from the ground and a sample was placed into appropriate sample containers. Confirmation samples were analyzed on the 7th day following soil treatment to allow time for the majority (estimated at 90 percent) of the oxidation reaction to occur. Confirmation sample locations are shown on Figure 2. Sample results are provided in Table 5.

The goal of the chemox treatment was to achieve at least a 70 percent reduction from pre-treatment concentrations. Pre-treatment concentrations are provided in Table 5 as samples containing "PP-" or "MW-" in the sample number. For each sample station, pre-treatment results are in the left hand column. The right hand column(s) contains the confirmation results. If the initial confirmation sample results did not meet the 70 percent criteria, a second treatment pass was performed and a second confirmation sample was collected and analyzed. The chemox treatment effectiveness is discussed according to individual petroleum fraction below and shown in Table 6.

Gasoline Results

Pre-treatment gasoline concentrations in site soils ranged as high as 5,100 milligrams per kilogram (mg/kg) with an average of 1,441 mg/kg. Post treatment concentrations ranged as high as 1,800 mg/kg and averaged 321 mg/kg. Six of the eleven confirmation sample stations experienced significant reductions in gasoline concentrations. Concentrations increased at the remaining five stations. The increases could have been caused by varying gasoline concentrations within the treatment zone soil (i.e., the confirmation samples could not be collected from the exact spot where pre-treatment samples were collected and gasoline concentrations varied between sample locations), mobilization of gasoline contamination within the treatment area caused by the desorption effects of the RegenOxTM, or from longer chain hydrocarbons breaking down into lighter products. According to a Regenesis representative, it is likely that the increase in gasoline concentrations was due to either mobilization or varying concentrations in the treatment zone. While the chemox process does break down long chain hydrocarbons, it does so in a very irregular fashion, and it would be rare for the resulting daughter products to register as gasoline range hydrocarbons. A comparison of results is provided in Table 6. As shown, a calculation of gasoline mass reduction indicates that, on average, a 78 percent reduction in gasoline mass was achieved.

Diesel Results

Diesel concentrations experienced significant declines and an average 88 percent mass reduction was achieved. All remaining concentrations are below the MTCA A cleanup level.

Lube Oil Results

Lube oil concentrations also experienced overall declines and an average 40 percent mass reduction was achieved. Note that all pre-treatment and post-treatment lube oil concentrations are below the MTCA A cleanup level.

Polycyclic Aromatic Hydrocarbons (PAHs) Results

PAHs were generally not analyzed in the pretreatment samples so a detailed comparison cannot be made. However, PAHs concentrations exceeding the cleanup level were reported in several of the confirmation samples.

POST-TREATMENT SOIL SAMPLING AND GROUNDWATER MONITORING

Follow-on soil confirmation sampling was conducted approximately 6 months after completion of the IA to provide an assessment of post-treatment soil conditions. Soil samples were collected from a series of borings located as shown on Figure 3 (PP-30 through PP-36). These borings correspond to locations containing elevated contaminant concentrations based on the IA confirmation samples. Samples were analyzed for the targeted constituents presented in Table 7. In addition to the soil sampling, a total of ten new monitoring wells were installed to provide a well network for groundwater monitoring. The new wells replaced wells decommissioned during the IA and contain an “R” in the well identifier (MW-4R, MW-9R, MW-10R, MW-13R, MW-16R, MW-18R, MW-19R, MW-21R, MW-22R, and MW-26R). Soil samples were also collected from selected well borings to assess contaminant levels (Table 7).

Soil sampling and well installation occurred on December 14, 15, and 29, 2009. Results for all soil samples are presented in Table 8. As shown, several samples contained gasoline, BTEX (benzene, toluene, ethylbenzene, and xylene), and PAHs at concentrations exceeding cleanup levels. In samples where comparisons can be made to previous confirmation sample results, concentrations increased at six of eleven sampling stations. As described above, this trend may be attributable to mobilization or varying concentrations between discrete sample locations.

Replacement wells were configured to be similar to the originals. Due to the soft ground at the site, the replacement wells were installed using a limited access push probe drill rig and are constructed of 3/4-inch-inside-diameter PVC casing installed to a depth of 15 feet with 10-foot-long, pre-packed PVC screens (0.020-inch slot). Surface completion consists of flush monuments. An exception is the replacement for MW-19, which was installed to a depth of 20 feet with a 15-foot-long screen. Soil boring logs showing well details are attached.

A total of three rounds of groundwater sampling will be conducted under the ongoing RI/FS. Tabulated results for the groundwater monitoring will be submitted as they are developed. Formal reporting for all three groundwater sampling events will be provided in the RI/FS report. The analytical program for the groundwater monitoring (as presented in the RI/FS work plan) is provided in Table 7.

All groundwater samples from the wells will be analyzed for gasoline, BTEX, diesel, lube oil, lead, and PAHs. If lead and/or PAHs are not detected at concentration above the practical quantitation level (PQL) for the analytical method used, their removal from the monitoring program will be considered. If they are detected above the PQL, they will remain in the monitoring program.

To provide a baseline for assessing whether bioattenuation is occurring at the site, all groundwater samples will be analyzed for nitrate, sulfate, alkalinity, dissolved ferrous iron, dissolved manganese, methane, temperature, specific conductivity, and biochemical oxygen demand (BOD5). The geochemical indicators dissolved oxygen and redox potential will be measured in the field during well sampling. All groundwater samples will also be analyzed for chloride so that an assessment of tidal influences can be made. A baseline chloride concentration was obtained from a surface water sample collected from Smith Cove during the RI.

REFERENCES

Parametrix. 2009. Technical memorandum, interim action plan, former Chevron Property RI/FS and interim action, Bremerton, Washington. Prepared for the City of Bremerton. March 17.

Parametrix. 2008. Technical memorandum, pilot scale test plan, former Chevron Property RI/FS and interim action, Bremerton, Washington. Prepared for the City of Bremerton. April 18.

Parametrix. 2007. Work plan for remedial investigation/feasibility study, interim action, and shoreline restoration, former Chevron Property, Bremerton, Washington. Prepared for the City of Bremerton. September.

ATTACHMENTS

Figures

- Figure 1. Soil Excavation Areas
- Figure 2. Soil Mixing Area and Confirmation Sample Results
- Figure 3. Well Location Plan and 6-Month Post Treatment Soil Sample Results

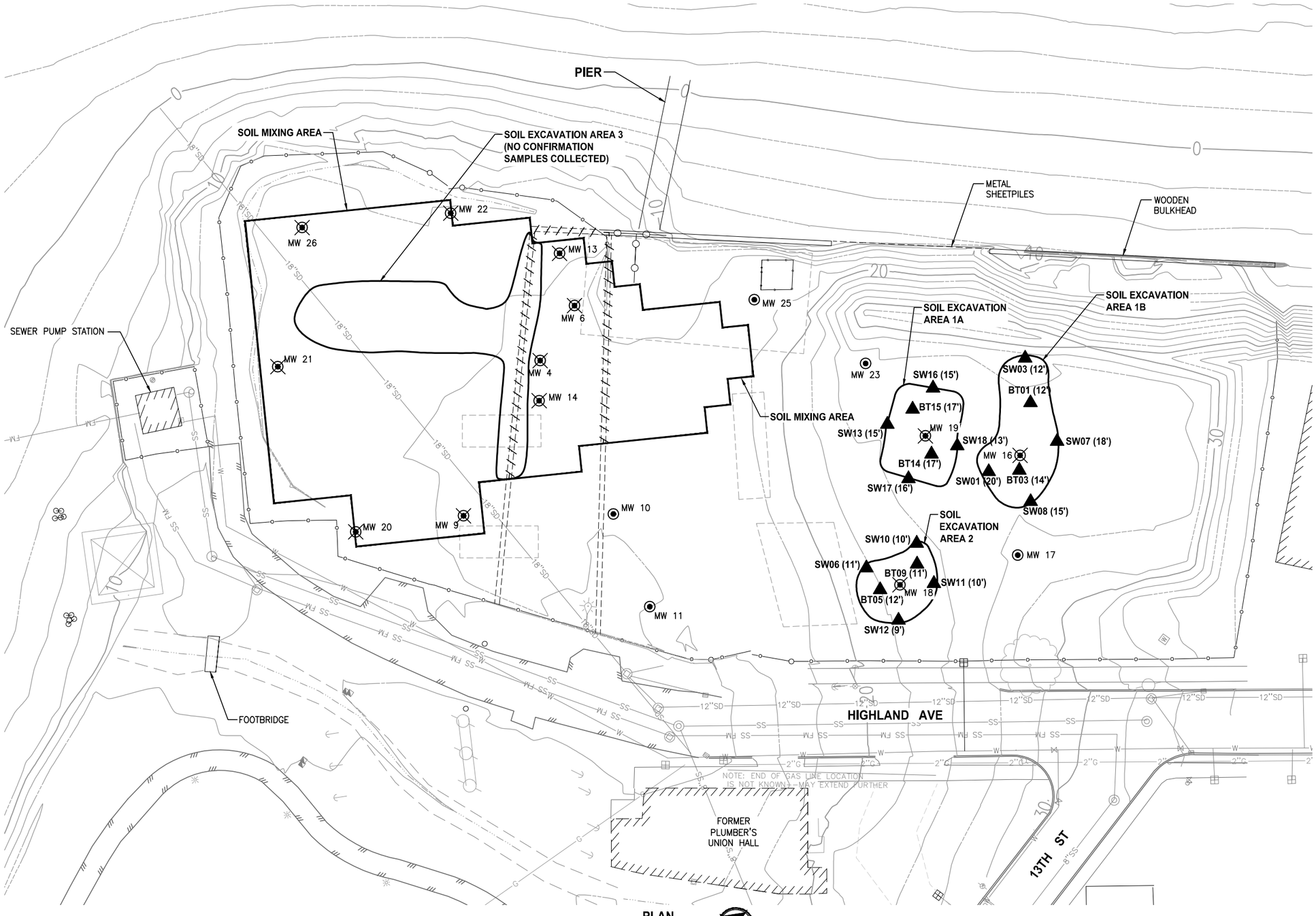
Tables

- Table 1. Area 1 Excavation Confirmation Sample Results
- Table 2. Area 2 Excavation Confirmation Sample Results
- Table 3. Area 3 Contaminated Soil Stockpile Sample Results
- Table 4. Areas 1 and 2 Clean Soil Stockpile Sample Results
- Table 5. Soil Mixing Area Confirmation Sample Results
- Table 6. Soil Mixing Results Comparison
- Table 7. Soil and Groundwater Post Treatment Sampling Program
- Table 8. 6-Month Post Treatment Soil Sample Results

Certificates of Soil Disposal

Boring Logs

FIGURES



LEGEND

- EXISTING BUILDING
- EXISTING CHAIN LINK FENCE
- MW 10 — EXISTING MONITORING WELL
- REMOVED MONITORING WELL
- BT01 (10') — CONFIRMATION SOIL SAMPLE LOCATION (DEPTH)
- SOIL EXCAVATION AREA

GENERAL NOTES:

1. CONTOUR DATUM NAVD 88

BT BOTTOM SAMPLE

SW SIDEWALL SAMPLE

PLAN
SCALE IN 1"=20'
0 20 40

REVISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
T□ O INC□ES AT F□LL SCALE
IF NOT SCALE ACCORDIN□L□

SCALE
□ORI□□ 1"=20' □ERT□ N/A

FIELD BOOK

DRAWING NO. 1

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: SBR DATE 10/09
DESIGN BY: DD WASH. P.E. # DATE 10/09
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
INTERIM ACTION REPORT
SOIL E□ CAVATION AREAS

FI□□NO□ 1

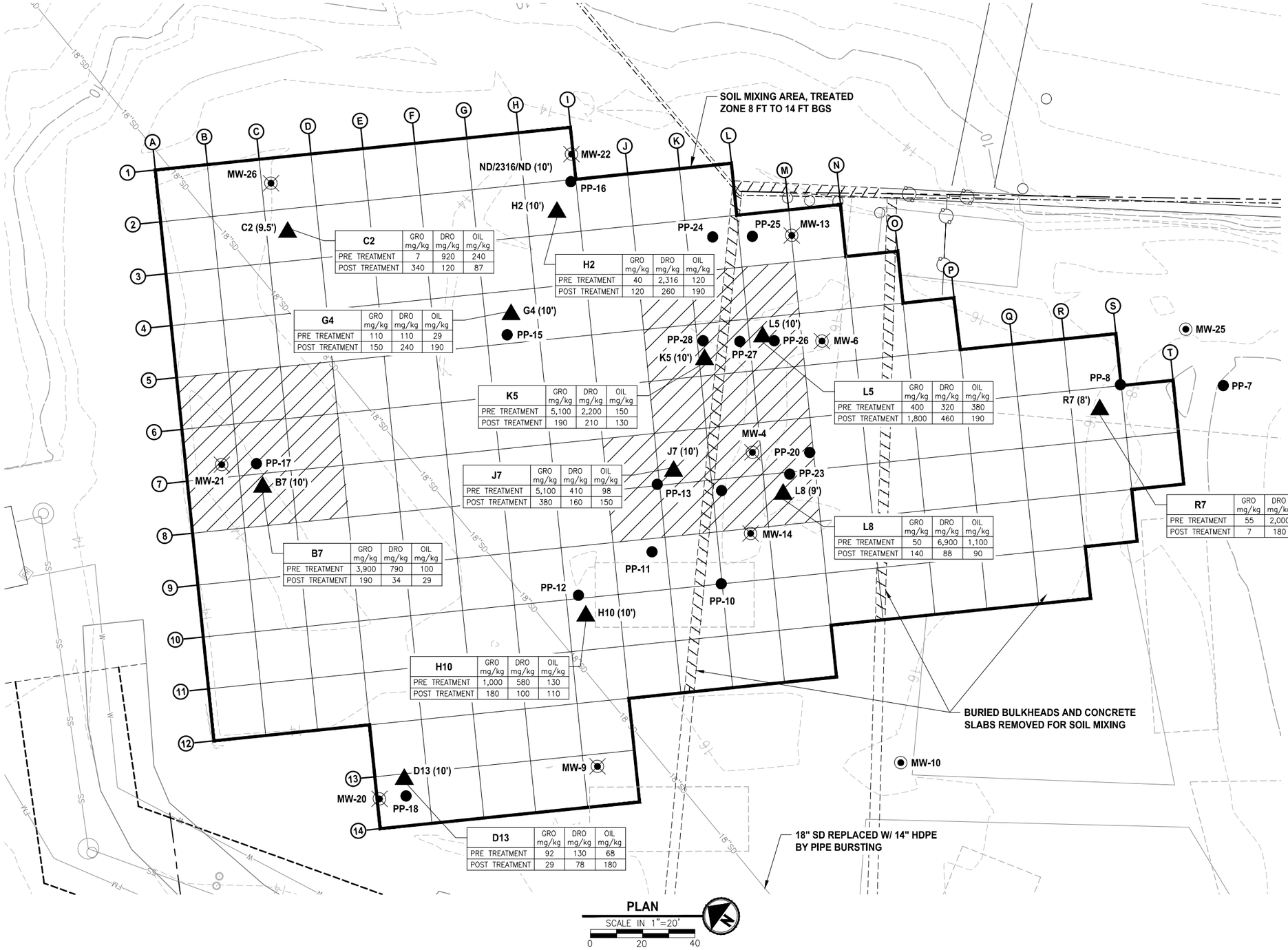
PN: 2□□1896-063

S□EET 1 OF 3

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FILE: BR1896063P04-PRK-1A_C-01
DATE: Apr 15, 2010 - 1:07pm PLOTTED BY: peterjal

IMAGES: Chevron Property FIG1 |
XREFS: XB-BRDM_WTRFRNT-BA-SV-061201 | XBR1896063P041T130F-BA



C2	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	7	920	240
POST TREATMENT	340	120	87

H2	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	40	2,316	120
POST TREATMENT	120	260	190

G4	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	110	110	29
POST TREATMENT	150	240	190

K5	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	5,100	2,200	150
POST TREATMENT	190	210	130

L5	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	400	320	380
POST TREATMENT	1,800	460	190

J7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	5,100	410	98
POST TREATMENT	380	160	150

L8	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	50	6,900	1,100
POST TREATMENT	140	88	90

R7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	55	2,000	98
POST TREATMENT	7	180	150

B7	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	3,900	790	100
POST TREATMENT	190	34	29

H10	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	1,000	580	130
POST TREATMENT	180	100	110

D13	GRO mg/kg	DRO mg/kg	OIL mg/kg
PRE TREATMENT	92	130	68
POST TREATMENT	29	78	180

LEGEND

PP-11 ●	RI/FS PUSH-PROBE LOCATION
MW-10 ◉	EXISTING MONITORING WELL
B7(10') ▲	CONFIRMATION SAMPLE LOCATION AND DEPTH
▭	TREATMENT CELL-BASLINE DOSE (10LB/CY REGENOX)
▨	AGGRESSIVE DOSE TREATMENT AREA (20LB/CY REGENOX)
⊗	MONITORING WELL REMOVED FOR SOIL MIXING
GRO	GASOLINE RANGE ORGANICS
DRO	DIESEL RANGE ORGANICS
OIL	LUBE OIL RANGE ORGANICS
mg/kg	MILLIGRAMS PER KILOGRAM
400	SAMPLE RESULT IN mg/kg

REVISIONS

NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
THIS BLOCK IS AT FULL SCALE
IF NOT SCALE ACCORDINGLY

SCALE
ORIG 1"=10' REDUCED N/A

FIELD BOOK

DRAWING NO. 2

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: JLP DATE 4/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
INTERIM ACTION REPORT
SOIL MIXING AREA AND
CONFIRMATION SAMPLE RESULTS

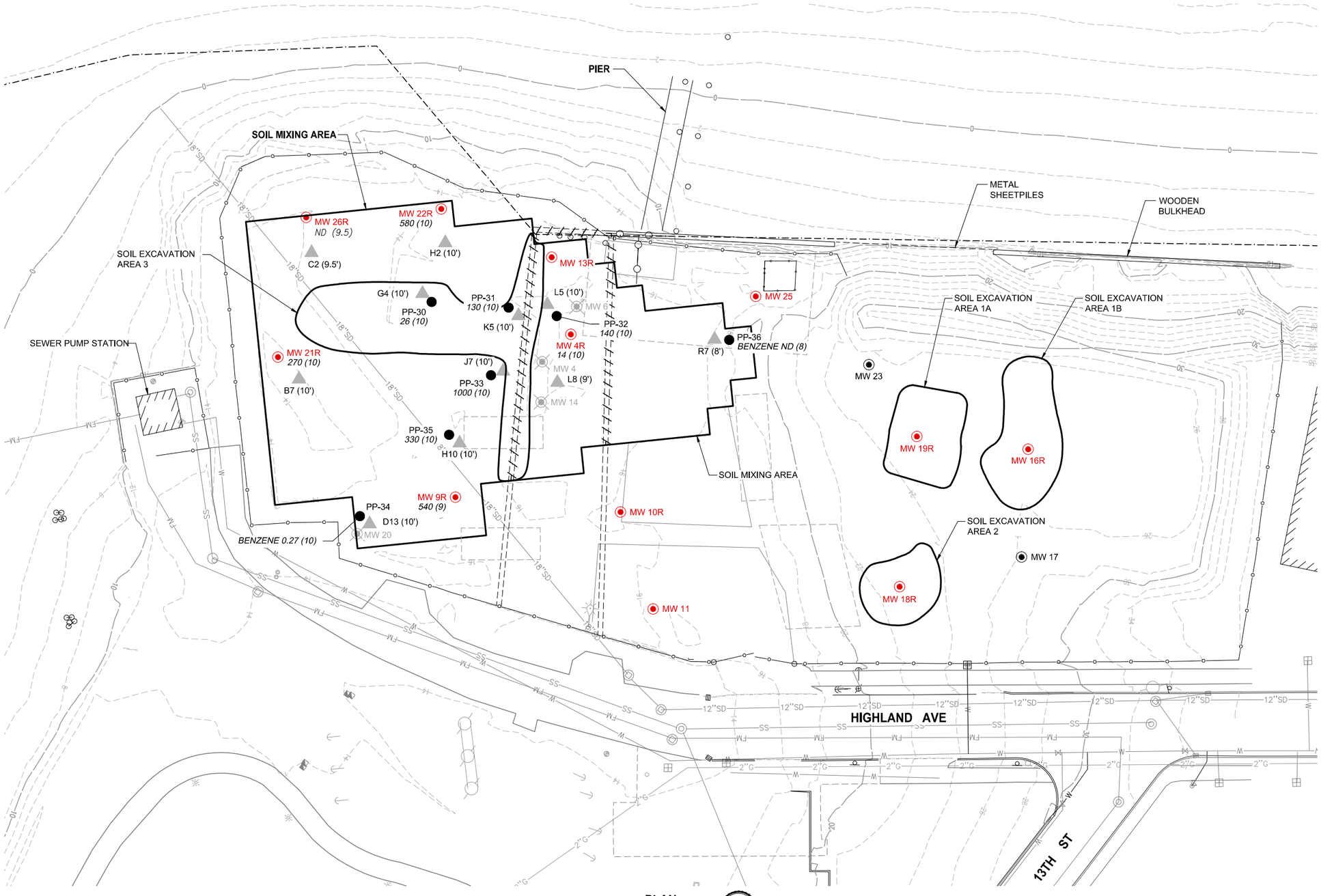
FIG NO. 2

PN: 2-1896-063

SHEET 2 OF 3

FILE: BR189606JP04-PRK-IA_C-02
DATE: Apr 15, 2010 - 1:08pm PLOTTED BY: peterjul
IMAGES: Chevron Property FIG1 |
XREFS: XBR189606JBA-SV-070731 | XBR189606JP04T130IF-BA

BREMERTON BOARD AND COMMISSION PROJECT



LEGEND

- E□ISTIN□ C□AIN LIN□ FENCE
- E□ISTIN□ MONITORIN□ □ ELL
- □2 □10□ — SOIL MI□IN□ AREA CONFIRMATION SOIL SAMPLE LOCATION □DEPT□□
- P□S□-PROBE LOCATION
- SOIL E□CA□ATION AREA
- MW 14 — □ ELL DESTRO□ED D□RIN□ INTERIM ACTION
- M□ 19R — □ ELL TO BE INCL□DED IN □RO□ND□ ATER MONITORIN□ PRO□RAM
- R — INDICATES REPLACEMENT □ ELL INSTALLED FOR POST TREATMENT □RO□ND□ ATER MONITORIN□
- □40 — □ASOLINE OR BEN□ENE CONCENTRATION IN □ □□□□
- ND — NOT DETECTED
- □ □□□□ — MILLI□RAMS PER □ILO□RAM
- □6□ — SAMPLE DEPT□ IN FEET

GENERAL NOTES:

1□ CONTO□R DAT□M NA□D 88

IMAGES: Chevron Property FIG1 | XREFS: XBR1896063BA-SV-070731 | XBR1896063P0411301F-BA

FILE: BR1896063P04-PRK-1A_C-03
DATE: Apr 16, 2010 – 3:15pm PLOTTED BY: peterjal

BREMERTON BOARD: AL PRO ECT

RE□ISIONS NO.	DESCRIPTION	DATE	BY

ENGINEER STAMP

0 1" 2"
T□ O INC□ES AT F□LL SCALE IF NOT SCALE ACCORDIN□L□

SCALE □ORI□□ 1"=20' □ERT□ N/A

FIELD BOOK

DRAWING NO. 3

CITY OF BREMERTON
DEPARTMENT OF PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

DRAWN BY: JLP DATE 4/10
DESIGN BY: DLD WASH. P.E. # DATE 4/10
CHECKED BY: WASH. P.E. # DATE

FORMER CHEVRON PROPERTY
INTERIM ACTION REPORT
WELL LOCATION PLAN AND
6-MONTH POST TREATMENT SOIL RESULTS

FI□□NO□ 3

PN: 2□□1896-063

S□EET 3 OF 3

TABLES

Table 1. Area 1 Excavation Confirmation Sample Results

			Area 1.A							Area 1.B				
Sample No.			BT01-0120	SW01-0200	BT03-0140	SW03-0120	SW07-0180	SW08-0150	SW13-0150	BT14-0170	BT15-0170	SW16-0150	SW17-0160	SW18-0150
Date Sampled:			6/16/2009	6/16/2009	6/16/2009	6/16/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009
Sample Depth (ft):			12	20	14	12	18	15	15	17	17	15	16	15
		MTCA A												
VOLATILE ORGANICS														
Benzene	mg/kg	0.03	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.03	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	mg/kg	7	0.086 U	0.040 U	0.035 U	0.038 U	0.087 U	0.072 U	0.089 U	0.096 U	0.093 U	0.097 U	0.077 U	0.091 U
Ethylbenzene	mg/kg	6	0.12	0.040 U	0.035 U	0.038 U	0.087 U	0.072 U	0.59	0.096 U	0.44	0.26	0.077 U	0.091 U
m,p-Xylene	mg/kg	9	0.26	0.040 U	0.035 U	0.038 U	0.090	0.072 U	0.68	0.096 U	0.58	0.27	0.077 U	0.091 U
o-Xylene	mg/kg	9	0.67	0.040 U	0.035 U	0.038 U	0.087 U	0.072 U	0.74	0.096 U	0.58	0.22	0.077 U	0.091 U
TOTAL PETROLEUM HYDROCARBONS														
Gasoline	mg/kg	100	22 U	4.0 U	3.5 U	3.8 U	8.7 U	7.2 U	8.9 U	9.6 U	9.3 U	9.7 U	7.7 U	9.1 U
Diesel Range	mg/kg	2000	900 Z	44	27 U	28 U	580	27 U	150	27 U	290	28 U	28 U	28 U
Lube Oil Range	mg/kg	2000	160 Z	56 U	54 U	55 U	56 U	54 U	56 U	54 U	55 U	56 U	56 U	56 U
POLYCYLIC AROMATIC HYDROCARBONS (PAHS)														
Naphthalene	mg/kg	5	--	--	--	--	0.0074 U	--	--	--	0.013	--	--	--
2-Methylnaphthalene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.059	--	--	--
1-Methylnaphthalene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.28	--	--	--
Acenaphthylene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0095	--	--	--
Acenaphthene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.025	--	--	--
Fluorene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.13	--	--	--
Phenanthrene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.13	--	--	--
Anthracene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0096	--	--	--
Fluoranthene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Pyrene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Benzo[a]anthracene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Chrysene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Benzo[b]fluoranthene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Benzo[k]fluoranthene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Benzo[a]pyrene	mg/kg	0.1	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Indeno(1,2,3-c,d)pyrene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Dibenzo[a,h]anthracene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
Benzo[g,h,i]perylene	mg/kg	--	--	--	--	--	0.0074 U	--	--	--	0.0073 U	--	--	--
cPAHs (see cPAHs calcs)	mg/kg	0.1	--	--	--	--	0.011	--	--	--	0.011	--	--	--

Notes:

mg/kg = Milligrams per kilogram.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Z = Hydrocarbons in the diesel range are impacting lube oil results

-- = Not analyzed/not available.

Table 2. Area 2 Excavation Confirmation Sample Results

		Sample No.	BT05-0120	SW06-0110	BT09-0110	SW10-0100	SW11-0100	SW12-0090
		Date Sampled:	6/16/2009	6/16/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009
		Sample Depth (ft):	12	11	11	10	10	9
VOLATILE ORGANICS		MTCA A						
Benzene	mg/kg	0.03	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	mg/kg	7	0.052 U	0.058 U	0.085 U	0.088 U	0.091 U	0.085
Ethylbenzene	mg/kg	6	0.052 U	0.058 U	0.11	0.088 U	0.091 U	0.16
m,p-Xylene	mg/kg	9	0.052 U	0.058 U	0.27	0.088 U	0.12	0.47
o-Xylene	mg/kg	9	0.052 U	0.058 U	0.085 U	0.088 U	0.091 U	0.57
TOTAL PETROLEUM HYDROCARBONS								
Gasoline	mg/kg	100	5.2 U	5.8 U	8.5 U	8.8 U	9.1 U	8.5 U
Diesel Range	mg/kg	2000	29 U	28 U	170	300	270	1700
Lube Oil Range	mg/kg	2000	57 U	55 U	55 U	57	57 U	89 U
POLYCYCLIC AROMATIC HYDROCARBONS								
Naphthalene	mg/kg	5	--	0.0073 U	--	--	--	--
2-Methylnaphthalene	mg/kg	--	--	0.0073 U	--	--	--	--
1-Methylnaphthalene	mg/kg	--	--	0.0073 U	--	--	--	--
Acenaphthylene	mg/kg	--	--	0.0073 U	--	--	--	--
Acenaphthene	mg/kg	--	--	0.0073 U	--	--	--	--
Fluorene	mg/kg	--	--	0.0073 U	--	--	--	--
Phenanthrene	mg/kg	--	--	0.0073 U	--	--	--	--
Anthracene	mg/kg	--	--	0.0073 U	--	--	--	--
Fluoranthene	mg/kg	--	--	0.0073 U	--	--	--	--
Pyrene	mg/kg	--	--	0.0073 U	--	--	--	--
Benzo[a]anthracene	mg/kg	--	--	0.0073 U	--	--	--	--
Chrysene	mg/kg	--	--	0.0073 U	--	--	--	--
Benzo[b]fluoranthene	mg/kg	--	--	0.0073 U	--	--	--	--
Benzo[k]fluoranthene	mg/kg	--	--	0.0073 U	--	--	--	--
Benzo[a]pyrene	mg/kg	0.1	--	0.0073 U	--	--	--	--
Indeno(1,2,3-c,d)pyrene	mg/kg	--	--	0.0073 U	--	--	--	--
Dibenzo[a,h]anthracene	mg/kg	--	--	0.0073 U	--	--	--	--
Benzo[g,h,i]perylene	mg/kg	--	--	0.0073 U	--	--	--	--
cPAHs (see cPAHs calcs)	mg/kg	0.1	--	0.011	--	--	--	--

Notes:

mg/kg = Milligrams per kilogram.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

-- = Not analyzed/not available.

Table 3. Area 3 Contaminated Soil Stockpile Sample Results

		Sample No.	SB01-0000	SB02-0000
		Date Sampled:	6/2/2009	6/2/2009
		Sample Depth (ft):	0.5	0.5
VOLATILE ORGANICS		MTCA A		
Benzene	mg/kg	0.03	4.3	1.5
Toluene	mg/kg	7	4.8	2.7
Ethylbenzene	mg/kg	6	11	6.2
m,p-Xylene	mg/kg	9	68	18
o-Xylene	mg/kg	9	24	7.3
TOTAL PETROLEUM HYDROCARBONS				
Gasoline	mg/kg	100	2100 O	1600 O
Diesel Range	mg/kg	2000	660 M	5200 M
Lube Oil Range	mg/kg	2000	330 M	2100 M
METALS				
Total Lead	mg/kg	250	40	44

Notes:

Shaded cells = Exceeds MTCA A cleanup levels.

mg/kg = Milligrams per kilogram.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

-- = Not analyzed/not available.

Table 4. Areas 1 and 2 Clean Soil Stockpile Sample Results

		Sample No.	SP19-0000	SP20-0000	SP21-0000	SP22-0000	SP-23-0000
		Date Sampled:	6/18/2009	6/18/2009	6/18/2009	6/18/2009	6/18/2009
		Sample Depth (ft):	0.5	0.5	0.5	0.5	0.5
VOLATILE ORGANICS		MTCA A					
Benzene	mg/kg	0.03	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	mg/kg	7	0.045 U	0.088 U	0.048 U	0.042 U	0.044 U
Ethylbenzene	mg/kg	6	0.045 U	0.088 U	0.048 U	0.042 U	0.044 U
m,p-Xylene	mg/kg	9	0.045 U	0.088 U	0.048 U	0.042 U	0.044 U
o-Xylene	mg/kg	9	0.045 U	0.088 U	0.048 U	0.042 U	0.044 U
TOTAL PETROLEUM HYDROCARBONS							
Gasoline	mg/kg	100	4.5 U	8.8 U	4.8 U	4.2 U	4.4 U
Diesel Range	mg/kg	2000	25 U	33	28 U	26 U	30
Lube Oil Range	mg/kg	2000	50 U	54 U	55 U	53 U	89

Notes:

mg/kg = Milligrams per kilogram.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

Table 5. Soil Mixing Area Confirmation Sample Results

Station No:			B7		C2			D13		H2			H10		G4				
Sample No.:			PP-17	B7-0100	MW-26	C2-0095	C2-2095	PP-18	D13-0100	PP-16	H2-0100	H2-2100	PP-12	H10-0100	PP-15	G4-1100	G4-2100		
Date Sampled:			3/6/08	6/4/09	3/7/08	6/5/09	6/16/09	3/6/08	6/9/09	3/6/08	6/5/09	6/16/09	3/6/08	6/9/09	3/6/08	6/11/09	6/16/09		
Sample Depth (ft)			10	10	9.5	9.5	9.5	10	10	10	10	10	10	10	10	10	10		
		MTCA A																	
VOLATILE ORGANICS																			
Benzene	mg/kg	0.03	37	1.4	0.028 U	1.3	2.2	0.33	0.12	5.8	0.18	0.15	3.9	0.67	2.1	0.21	1.4		
Toluene	mg/kg	7	2.3	0.31 U	0.14 U	0.32 U	0.63	0.31 U	0.065 U	4 U	0.072 U	0.13 U	0.54 U	0.29	0.50 U	0.15	0.16		
Ethylbenzene	mg/kg	6	70	2.6	0.14 U	1.9	4.0	0.31 U	0.097	4 U	0.20	0.31	12	2.3	4.0	0.37	1.1		
m,p-Xylene	mg/kg	9	190 E	7.0	0.14 U	4.7	12	0.52	0.19	4.6	0.38	0.46	35	4.8	0.69	0.56	1.2		
o-Xylene	mg/kg	9	40	1.4	0.14 U	1.1	3.1	0.31 U	0.065 U	4 U	0.072 U	0.13 U	3.1	1.1	0.50 U	0.24	0.41		
TOTAL PETROLEUM HYDROCARBONS																			
Gasoline	mg/kg	30	3900	190	14 U	150 O	340 O	92 O	29 O	80 U1	7.2 U	120 O	1000	180 O	110	140 O	150 O		
Diesel Range	mg/kg	2000	790 M	68 U1	920	63 M	120 M	130	78	2316	250	260	580 M	100	110	220	240		
Lube Oil Range	mg/kg	2000	100 M	59 U1	240	95 M	87 M	68	180	240 U	170	190	130 M	110	59 U	180	190		
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)																			
Naphthalene	mg/kg	5	--	0.18	--	0.23	0.25	--	0.0087	--	0.12	0.063	--	0.14	--	0.35	3.6		
2-Methylnaphthalene	mg/kg	--	--	0.46	--	0.33	0.44	--	0.036	--	0.73	0.26	--	0.34	--	0.87	5.3		
1-Methylnaphthalene	mg/kg	--	--	0.23	--	0.31	0.32	--	0.027	--	0.75	0.50	--	0.19	--	1.2	3.2		
Acenaphthylene	mg/kg	--	--	0.0078 U	--	0.054	0.033	--	0.029	--	0.14	0.15	--	0.0089 U	--	0.84	1.8		
Acenaphthene	mg/kg	--	--	0.022	--	0.098	0.075	--	0.0098	--	0.16	0.11	--	0.014	--	0.38	0.54		
Fluorene	mg/kg	--	--	0.033	--	0.087	0.064	--	0.024	--	0.25	0.19	--	0.027	--	0.90	1.6		
Phenanthrene	mg/kg	--	--	0.069	--	0.26	0.18	--	0.099	--	0.93	0.59	--	0.068	--	2.9	5.1		
Anthracene	mg/kg	--	--	0.0095	--	0.072	0.050	--	0.028	--	0.34	0.18	--	0.012	--	0.99	1.5		
Fluoranthene	mg/kg	--	--	0.031	--	0.11	0.079	--	0.074	--	0.53	0.27	--	0.046	--	1.5	1.8		
Pyrene	mg/kg	--	--	0.026	--	0.21	0.13	--	0.14	--	0.93	0.51	--	0.047	--	2.9	3.4		
Benzo[a]anthracene	mg/kg	--	--	0.0078 U	--	0.065	0.041	--	0.050	--	0.27	0.17	--	0.016	--	0.94	1.0		
Chrysene	mg/kg	--	--	0.0078 U	--	0.062	0.040	--	0.053	--	0.22	0.15	--	0.018	--	0.87	0.90		
Benzo[b]fluoranthene	mg/kg	--	--	0.0078 U	--	0.035	0.022	--	0.035	--	0.1	0.080	--	0.013	--	0.46	0.39		
Benzo[k]fluoranthene	mg/kg	--	--	0.0078 U	--	0.044	0.028	--	0.040	--	0.13	0.096	--	0.012	--	0.61	0.56		
Benzo[a]pyrene	mg/kg	0.1	--	0.0078 U	--	0.082	0.047	--	0.073	--	0.26	0.19	--	0.013	--	1.2	1.0		
Indeno(1,2,3-c,d)pyrene	mg/kg	--	--	0.0078 U	--	0.043	0.025	--	0.034	--	0.098	0.072	--	0.0089 U	--	0.41	0.31		
Dibenzo[a,h]anthracene	mg/kg	--	--	0.0078 U	--	0.012	0.0084 U	--	0.011	--	0.082 U	0.024	--	0.0089 U	--	0.14	0.11		
Benzo[g,h,i]perylene	mg/kg	--	--	0.0078 U	--	0.077	0.044	--	0.043	--	0.15	0.10	--	0.0094	--	0.52	0.38		
cPAHs (see cPAHs calcs)	mg/kg	0.1	--	0.012	--	0.10	0.060	--	0.091	--	0.33	0.24	--	0.019	--	1.5	1.2		

(Table Continues)

Table 5. Soil Mixing Area Confirmation Sample Results

	Station No:		J7			K5		L5			L8			R7		
	Sample No.:		PP-13	J7-0100	J7-2100	PP-28	K5-0100	PP-26	L5-0100	L5-2100	PP-23	L8-0090	L8-2090	PP-8	R7-0800	R7-2100
	Date Sampled:		3/6/08	6/8/09	6/17/09	8/20/08	6/8/09	8/20/08	6/8/09	6/17/09	6/23/08	6/8/09	6/17/09	3/7/08	6/10/09	6/22/09
	Sample Depth (ft)		10	10	10	10	10	10	10	10	9	9	9	8	8	8
		MTCA A														
VOLATILE ORGANICS																
Benzene	mg/kg	0.03	21	1.5	1.2	21 U1	0.63	1.6 U1	1.8	2.2	4.0	0.26	0.095	0.17	0.043	0.064
Toluene	mg/kg	7	39	1.4	1.7	5.2 U1	0.11	0.32 U	2.2	0.31	10 U1	0.060 U	0.75 U1	5.4 U	0.36 U1	0.14 U
Ethylbenzene	mg/kg	6	120 E	3.5	2.8	5.2 U1	0.58	7.6	7.8	8.4	20	1.0	0.17	11 U1	0.53	0.37
m,p-Xylene	mg/kg	9	350 E	11	14	9.2	1.3	24	37	29	40	1.8	0.55	17	0.83	0.84
o-Xylene	mg/kg	9	130 E	4.2	4.8	5.2 U1	0.27	0.48	14	9.5	21 U1	1.5	0.15 U	11 U1	0.79	0.78
TOTAL PETROLEUM HYDROCARBONS																
Gasoline	mg/kg	30	5100	390 O	380 O	5100 O	190 O	400	1300 O	1800 O	100 U	350 O	140 O	110 U1	240 O	14 U
Diesel Range	mg/kg	2000	410 M	160 M	160 M	2200	210 M	320 M	230 M	460 M	6900	120 M	88	2000	96 M	180
Lube Oil Range	mg/kg	2000	98 M	140 M	150 M	150	130 M	380 M	200 M	190 M	1100	73 M	90	98	61 UM	150
POLYCYCLIC AROMATIC HYDROCARBONS (PAHS)																
Naphthalene	mg/kg	5	--	1.1	0.41	--	1.8	--	1.9	0.70	--	0.021	0.011	--	0.0097	0.0079 U
2-Methylnaphthalene	mg/kg	--	--	2.0	0.74	--	0.88	--	2.9	1.3	--	0.087	0.022	--	0.021	0.0079 U
1-Methylnaphthalene	mg/kg	--	--	1.2	0.54	--	0.77	--	1.6	0.81	--	0.15	0.041	--	0.054	0.0079 U
Acenaphthylene	mg/kg	--	--	0.54	0.19	--	0.039	--	0.014	0.021	--	0.030	0.015	--	0.0081 U	0.0079 U
Acenaphthene	mg/kg	--	--	0.18	0.42	--	2.3	--	0.13	0.20	--	0.45	0.24	--	0.0081 U	0.0079 U
Fluorene	mg/kg	--	--	0.35	0.55	--	2.0	--	0.14	0.19	--	0.44	0.22	--	0.025	0.0079 U
Phenanthrene	mg/kg	--	--	1.4	1.5	--	5.9	--	0.27	0.38	--	1.3	0.50	--	0.026	0.0079 U
Anthracene	mg/kg	--	--	0.46	0.49	--	1.4	--	0.15	0.066	--	0.18	0.11	--	0.0081 U	0.0079 U
Fluoranthene	mg/kg	--	--	1.3	0.87	--	3.8	--	0.14	0.18	--	0.68	0.63	--	0.0098	0.0079 U
Pyrene	mg/kg	--	--	2.6	1.1	--	2.7	--	0.12	0.16	--	0.53	0.53	--	0.0096	0.0086
Benzo[a]anthracene	mg/kg	--	--	0.90	0.35	--	0.78	--	0.040	0.047	--	0.16	0.16	--	0.0081 U	0.0079 U
Chrysene	mg/kg	--	--	0.84	0.35	--	0.64	--	0.044	0.046	--	0.15	0.16	--	0.0081 U	0.0079 U
Benzo[b]fluoranthene	mg/kg	--	--	0.43	0.18	--	0.4	--	0.022	0.025	--	0.076	0.078	--	0.0081 U	0.0079 U
Benzo[k]fluoranthene	mg/kg	--	--	0.55	0.20	--	0.38	--	0.021	0.025	--	0.080	0.080	--	0.0081 U	0.0079 U
Benzo[a]pyrene	mg/kg	0.1	--	0.99	0.33	--	0.44	--	0.030	0.035	--	0.099	0.095	--	0.0081 U	0.0079 U
Indeno(1,2,3-c,d)pyrene	mg/kg	--	--	0.37	0.12	--	0.15	--	0.012	0.013	--	0.037	0.035	--	0.0081 U	0.0079 U
Dibenzo[a,h]anthracene	mg/kg	--	--	0.12	0.042	--	0.059	--	0.0079 U	0.0078 U	--	0.014	0.014	--	0.0081 U	0.0079 U
Benzo[g,h,i]perylene	mg/kg	--	--	0.46	0.14	--	0.16	--	0.016	0.016	--	0.041	0.038	--	0.0081 U	0.0079 U
cPAHs (see cPAHs calcs)	mg/kg	0.1	--	1.2	0.42	--	0.62	--	0.041	0.047	--	0.14	0.13	--	0.012	0.012

Notes:

Shaded cells = Exceeds MTCA A cleanup levels.

E = The value reported exceeds the quantification range and is an estimate.

M = Hydrocarbons in the gasoline range are impacting the diesel range results.

O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 = The practical quantitation limit is elevated due to interferences present in the sample.

-- = Not analyzed/not available.

Table 6. Soil Mixing Results Comparison

	Gasoline (mg/kg)		Diesel (mg/kg)		Lube Oil (mg/kg)	
Station No.	Pre-Treatment	Post-Treatment	Pre-Treatment	Post-Treatment	Pre-Treatment	Post-Treatment
B7	3900	190	790	34	100	29
C2	7	340	920	120	240	87
D13	92	29	130	78	68	180
H2	40	120	2316	260	120	190
H10	1000	180	580	100	130	110
G4	110	150	110	240	29	190
J7	5100	380	410	160	98	150
K5	5100	190	2200	210	150	130
L5	400	1800	320	460	380	190
L8	50	140	6900	88	1100	90
R7	55	7	2000	180	98	150
Average	1441	321	1516	175	228	136
Average % Reduction ((Pre-Treatment-Post-Treatment)/ Pre-Treatment)	78		88		40	

Notes:

mg/kg = Milligrams per kilogram.

Table 7. Soil and Groundwater Post Treatment Sampling Program

Location	Medium	Sample Depth (ft)	Gasoline/ BTEX	Diesel/ Lube Oil	PAHs	Analysis Lead (total and dissolved)	Chloride	Attenuation Parameters[1]
Push Probes								
PP-30	Soil	10	x	-	x	-	-	-
PP-31	Soil	10	x	-	x	-	-	-
PP-32	Soil	10	x	-	-	-	-	-
PP-33	Soil	10	x	-	x	-	-	-
PP34	Soil	10	-	x	-	-	-	-
PP35	Soil	10	-	x	-	-	-	-
PP36	Soil	8	-	x	-	-	-	-
Monitoring Wells[2]								
MW-4R	Soil	10	x	-	x	-	-	-
	Groundwater	-	x	x	x	x	x	x
MW-9R	Soil	9	x	x	x	-	-	-
	Groundwater	-	x	x	x	x	x	x
MW-11	Groundwater	-	x	x	x	x	x	x
MW-13R	Groundwater	-	x	x	x	x	x	x
MW-16R	Groundwater	-	x	x	x	x	x	x
MW-18R	Groundwater	-	x	x	x	x	x	x
MW-19R	Groundwater	-	x	x	x	x	x	x
MW-21R	Soil	10	x	-	-	-	-	-
	Groundwater	-	x	x	x	x	x	x
MW-22R	Soil	10	x	-	x	-	-	-
	Groundwater	-	x	x	x	x	x	x
MW-25	Groundwater	-	x	x	x	x	x	x
MW-26R	Soil	6	x	-	-	-	-	-
	Groundwater	-	x	x	x	x	x	x

Notes:

BTEX = Benzene, ethybenzene, toluene, and xylenes.

PAHs = Polycyclic aromatic hydrocarbons.

R = Replacement well.

[1]= Nitrate, sulfate, alkalinity, ferrous iron (dissolved), manganese (dissolved), methane and BOD5.

[2] = Monitoring well groundwater samples will be collected for three quarterly events.

- = Not applicable.

Table 8. Six-Month Post Treatment Soil Sample Results

			Sample ID:	MW-4R	MW-9R	MW10R	MW-21R	MW-22R	MW-26R	PP-30	PP-31	PP-32	PP-33	PP-34	PP-35	PP-36
			Date:	12/29/09	12/15/09	12/29/09	12/15/09	12/29/09	12/29/09	12/15/09	12/29/09	12/29/09	12/15/09	12/15/09	12/15/09	12/29/10
			Sample Depth (ft)	10	9	7	10	10	9.5	10	10	10	10	10	10	8
		MTCA A														
VOLATILE ORGANICS (mg/kg)																
Benzene	mg/kg	0.03		0.028	1.8	--	2.2	0.87	0.02 U	0.11	0.5	0.12	5.4	0.27	1.5	0.02 U
Toluene	mg/kg	7		0.047 U	0.22	--	0.11	0.12	0.049 U	0.049 U	0.051 U	0.087 U	2.5	--	0.079	--
Ethylbenzene	mg/kg	6		0.047 U	8.2	--	3.7	0.69	0.049 U	0.097	0.26 U1	0.78	20	--	6.4	--
m,p-Xylene	mg/kg	9		0.13	19	--	9.4	2.7	0.049 U	0.17	0.43	1.3	75	--	8.0	--
o-Xylene	mg/kg	9		0.047 U	0.23	--	0.088	0.6 U1	0.049 U	0.049 U	0.26 U1	0.44 U	19	--	0.46 U	--
TOTAL PETROLEUM HYDROCARBONS (mg/																
Gasoline	mg/kg	30		14	540 O	--	270 O	580 O	4.9 U	26 O	130 O	140	1,000 O	--	330 O	
Diesel Range	mg/kg	2000		--	270	29 U	--	--	--	--	--	--	--	--	--	
Lube Oil Range	mg/kg	2000		--	460	260	--	--	--	--	--	--	--	--	--	--
PAHs (mg/kg)																
Naphthalene	mg/kg	5		0.55	0.99	--	--	0.35	--	1.3	0.045	--	2.6	--	--	--
2-Methylnaphthalene	mg/kg			1	3.8	--	--	0.25	--	3.5	0.076	--	2.1	--	--	--
1-Methylnaphthalene	mg/kg			0.74	2	--	--	5.2	--	3.5	0.054	--	1.2	--	--	--
Acenaphthylene	mg/kg			0.027	0.031	--	--	0.27	--	2.8	0.01	--	0.15	--	--	--
Acenaphthene	mg/kg			0.17	0.12	--	--	1.2	--	0.5	0.047	--	0.39	--	--	--
Fluorene	mg/kg			0.18	0.12	--	--	1.3	--	2.1	0.054	--	0.35	--	--	--
Phenanthrene	mg/kg			0.33	0.28	--	--	3.5	--	6.6	0.14	--	0.76	--	--	--
Anthracene	mg/kg			0.047	0.074	--	--	0.67	--	2.3	0.065	--	0.19	--	--	--
Fluoranthene	mg/kg			0.15	0.34	--	--	0.84	--	3.4	0.083	--	1.1	--	--	--
Pyrene	mg/kg			0.17	0.29	--	--	1.5	--	5.8	0.091	--	0.87	--	--	--
Benzo[a]anthracene	mg/kg			0.043	0.15	--	--	0.5	--	1.9	0.025	--	0.25	--	--	--
Chrysene	mg/kg			0.044	0.17	--	--	0.42	--	1.7	0.038	--	0.23	--	--	--
Benzo[b]fluoranthene	mg/kg			0.038	0.11	--	--	0.16	--	0.75	0.034	--	0.12	--	--	--
Benzo[k]fluoranthene	mg/kg			0.011	0.08	--	--	0.21	--	0.86	0.012	--	0.12	--	--	--
Benzo[a]pyrene	mg/kg	0.1		0.033	0.11	--	--	0.4	--	2.2	0.026	--	0.18	--	--	--
Indeno(1,2,3-c,d)pyrene	mg/kg			0.014	0.059	--	--	0.12	--	0.63	0.014	--	0.079	--	--	--
Dibenzo[a,h]anthracene	mg/kg			0.0077 U	0.023	--	--	0.049	--	0.22	0.0078 U	--	0.027	--	--	--
Benzo[g,h,i]perylene	mg/kg			0.019	0.072	--	--	0.14	--	0.75	0.018	--	0.095	--	--	--
cPAHs[1]	mg/kg	0.1		0.044	0.17	--	--	0.51	--	2.7	0.035	--	0.24	--	--	--

Notes:

O = Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

PAHs = Polycyclic aromatic hydrocarbons.

Shaded cell = Exceeds MTCA A cleanup levels.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

[1] = Total benzo(a)pyrene using toxicity equivalency method. One-half the detection limit was used for non-detected concentrations.

-- = Not analyzed.

CERTIFICATES OF SOIL DISPOSAL

WASTE MANAGEMENT

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

April 19, 2010

Strider Construction
4721 NW Drive
Bellingham, WA 98226

CERTIFICATE OF DISPOSAL

Waste Management Inc., dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from Strider Construction via Olympic View Transfer Station (OVTS). The material has been commingled.

Date Received at CRL:	June 12th through June 23rd, 2009
Generator:	City of Bremerton
Profile #:	101621WA
Tons Disposed:	1644.40 tons
Waste Description:	PCS

I certify, on behalf of the above listed facility, that to the best of my knowledge the above-described non hazardous waste was managed in compliance with all applicable laws.

Victoria McKinney
Special Waste Billing Department

WASTE MANAGEMENT

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643
(541) 454-3279 Fax

April 19, 2010

Strider Construction
4721 NW Drive
Bellingham, WA 98226

CERTIFICATE OF DISPOSAL

Waste Management Inc., dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from Strider Construction via Olympic View Transfer Station (OVTS). The material has been commingled.

Date Received at CRL:	Jun 10th, 2009
Generator:	City of Bremerton
Profile #:	101628WA
Tons Disposed:	31.49 tons
Waste Description:	Treated Wood and Concrete

I certify, on behalf of the above listed facility, that to the best of my knowledge the above-described non hazardous waste was managed in compliance with all applicable laws.

Victoria McKinney
Special Waste Billing Department

From everyday collection to environmental protection, Think Green® Think Waste Management.

Printed on 100% post-consumer recycled paper.

BORING LOGS

Parametrix

Boring Log

Boring ID: MW-4R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

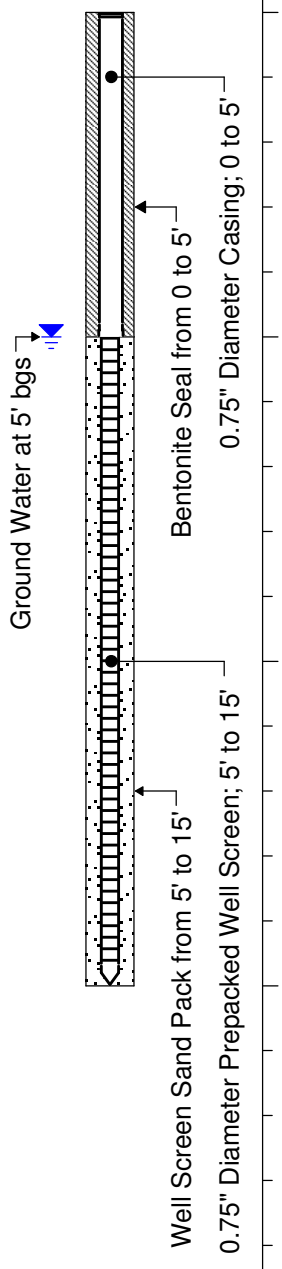
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				55"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.		40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-9R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

Starting Date: 12/15/09

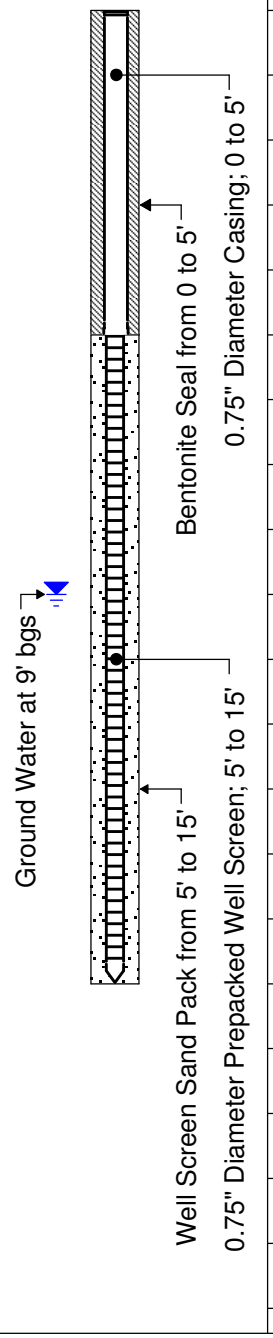
Ending Date: 12/15/09

Boring Depth: 15 ft

Depth to Water: 9 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery
0		Ground Surface		
		TOP SOIL with VEGETATION Silty sand		30"
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		
5				45"
			CHEV-SO-MW9R-0090	
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.		24"
15		Bottom of boring at 15 feet bgs.		
20				

Boring Diagram



Parametrix

Boring Log

Boring ID: MW-10R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

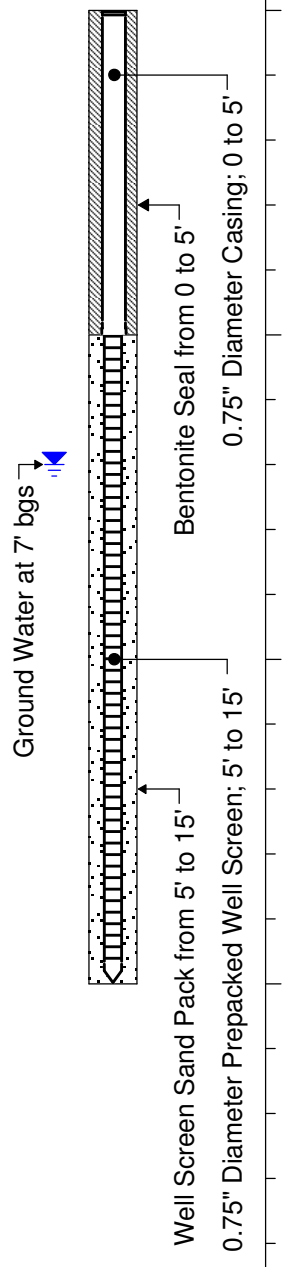
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		TILL and FILL MATERIAL Silty sand and gravel, brown tan.		12"		
5		Damp, starting at approximately 5 ft bgs.				5
		Saturated starting at approximately 7 ft bgs.	CHEV-SO-MW10R-0070	20"		
10				20"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-13R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

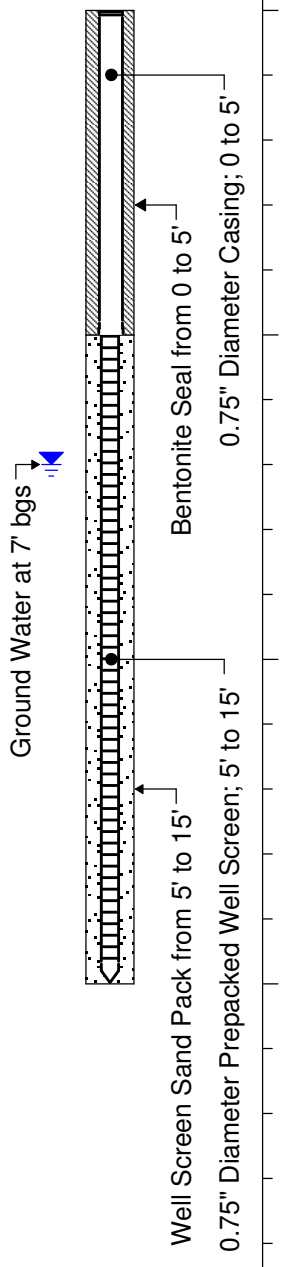
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		45"		
5				50"		5
10		Silty sand and gravel, tan brown, saturated, at approximately 10 ft bgs.		30"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-16R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

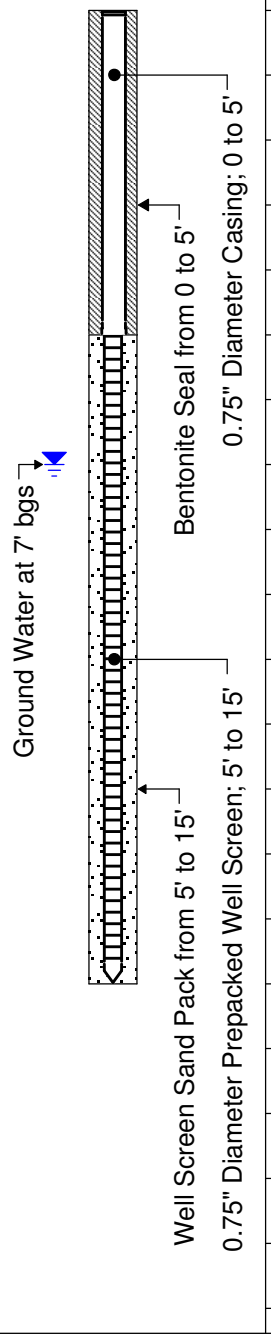
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-18R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

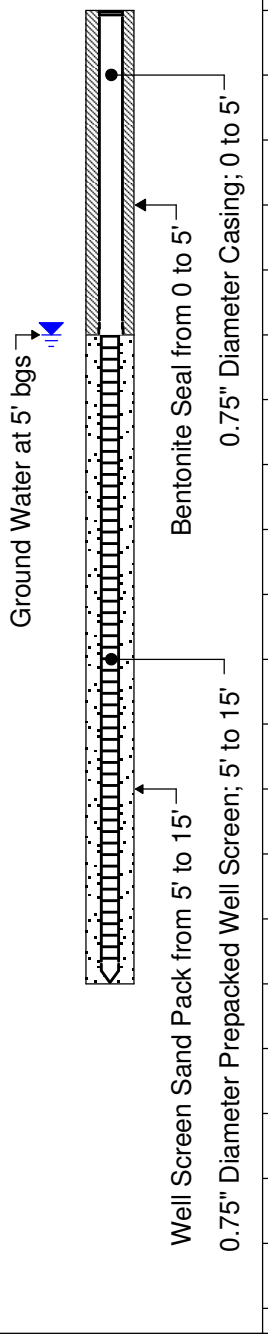
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-19R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

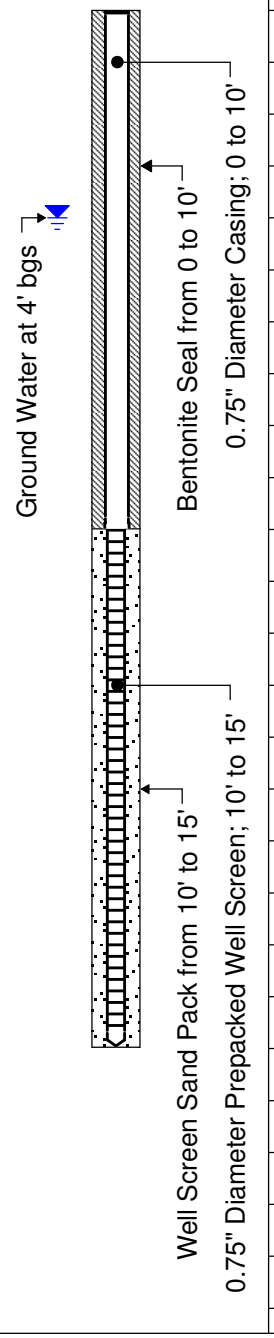
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 4 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15						15
20		Bottom of boring at 20 feet bgs.				20
25						25



Parametrix

Boring Log

Boring ID: MW-21R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

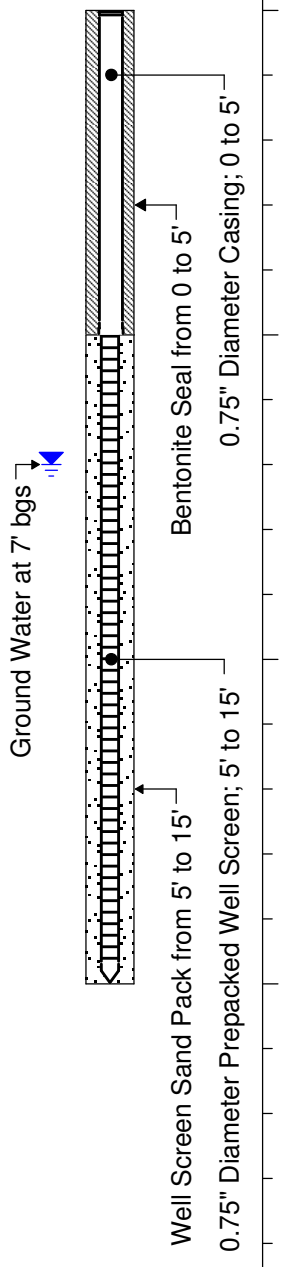
Starting Date: 12/15/09

Ending Date: 12/15/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				50"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.	CHEV-SO-MW21R-0100	40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-22R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 10 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				55"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.	CHEV-SO-MW22R-0100	45"	Ground Water at 10' bgs	10
15		Bottom of boring at 15 feet bgs.			Bentonite Seal from 0 to 5' 0.75" Diameter Casing; 0 to 5' Well Screen Sand Pack from 5' to 15' 0.75" Diameter Prepacked Well Screen; 5' to 15'	15
20						20

Parametrix

Boring Log

Boring ID: MW-26R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

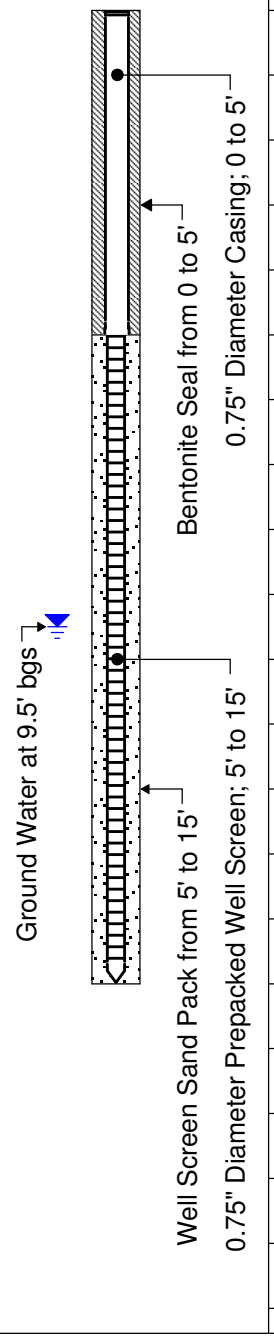
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 9.5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				45"		5
			CHEV-SO-MW26R-0095			
10		Silty sand and gravel, tan brown, saturated, untreated fill in saturation zone, starting at approximately 10 ft bgs.		40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



APPENDIX F

Photographs



Photo D1-1. Former Chevron Property shortly after City of Bremerton purchases, looking north towards Port Washington Narrows.



Photo D1-2. View from the demolished Plumbers Union Building roof, looking northeast towards the fueling pier.



Photo D1-3. Derelict fueling pier from near the eastern edge of the property.



Photo D1-4. Access to the property from the beach, pier out of view on the left, concrete armoring and wooden bulkhead on the right.



Photo D2-1. Digging test pits in the lower yard, looking south.



Photo D2-2. Test pit showing petroleum contamination at depth.



Photo D2-3. Test pit showing buried wooden bulkhead.



Photo D2-4. Installing borings in lower yard, looking west.



Photo D2-5. Installing MW-25 with hollow stem auger, looking northeast.



Photo D2-6. Setting up for pilot test mixing chemical oxidant.



Photo D2-7. Injection of oxidant into boring for pilot test.



Photo D2-8. Boring location experiencing reaction after injection.



Photo D3-1. Site prior to remediation, looking northwest.



Photo D3-2. Concrete bulkhead removal.



Photo D3-3. Soil Excavation Area 1A.



Photo D3-4. Soil Excavation Area 1B after removal and backfill, looking east.



Photo D3-5. Soil Excavation Area 1B being backfilled, looking southeast.



Photo D3-6. Soil Excavation Area 3, looking west.



Photo D3-7. Active soil mixing in June 2009.



Photo D3-8. Post remediation conditions in December 2009.

APPENDIX G

Monitoring Well Logs

Parametrix

Boring Log

Boring ID: MW-4R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

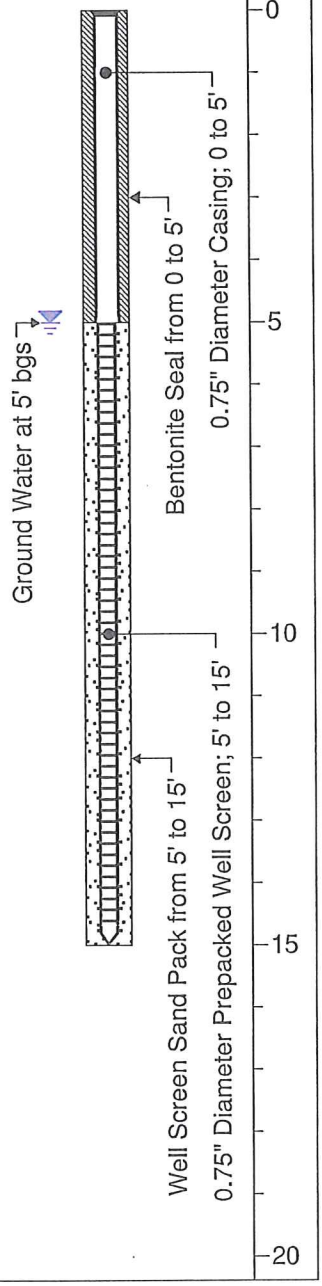
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				55"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.		40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-9R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

Starting Date: 12/15/09

Ending Date: 12/15/09

Boring Depth: 15 ft

Depth to Water: 9 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		TOP SOIL with VEGETATION Silty sand		30"		
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.				
5				45"		5
			CHEV-SO-MW9R-0090			
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.		24"		10
15		Bottom of boring at 15 feet bgs.				15
20						20

Ground Water at 9' bgs

Bentonite Seal from 0 to 5'

0.75" Diameter Casing; 0 to 5'

Well Screen Sand Pack from 5' to 15'

0.75" Diameter Prepacked Well Screen; 5' to 15'

Parametrix

Boring Log

Boring ID: MW-10R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

Starting Date: 12/29/09

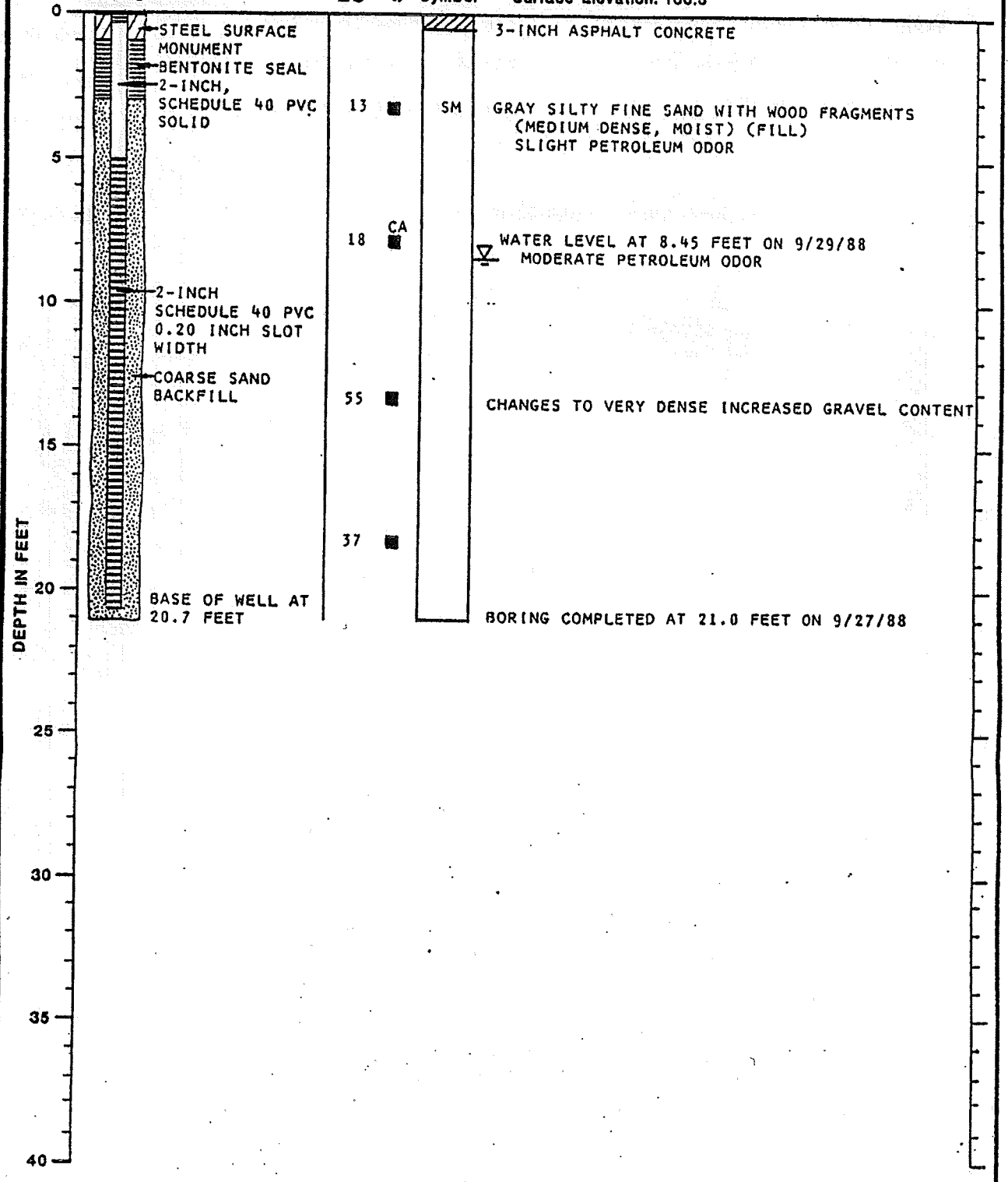
Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		TILL and FILL MATERIAL Silty sand and gravel, brown tan.		12"		
5		Damp, starting at approximately 5 ft bgs.				5
		Saturated starting at approximately 7 ft bgs.	CHEV-SO-MW10R-0070	20"	Ground Water at 7' bgs	
10				20"	Bentonite Seal from 0 to 5' 0.75" Diameter Casing; 0 to 5' Well Screen Sand Pack from 5' to 15' 0.75" Diameter Prepacked Well Screen; 5' to 15'	10
15		Bottom of boring at 15 feet bgs.				15
20						20

MONITOR WELL NO. M -11



Note: See Figure A-2 for Explanation of Symbols

0372-34-4 KRF:DWA:GD 10/12/88

GeoEngineers

LOG OF MONITOR WELL

FIGURE A-13

Parametrix

Boring Log

Boring ID: MW-13R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

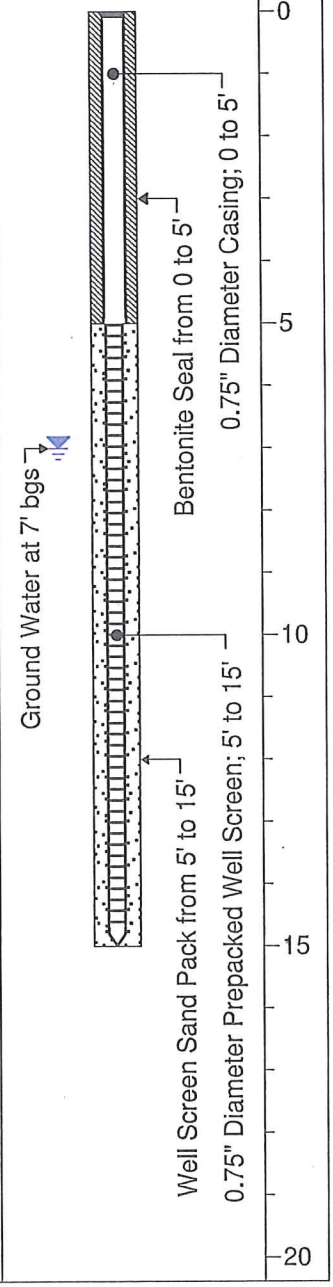
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		45"		
5				50"		5
10		Silty sand and gravel, tan brown, saturated, at approximately 10 ft bgs.		30"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-16R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

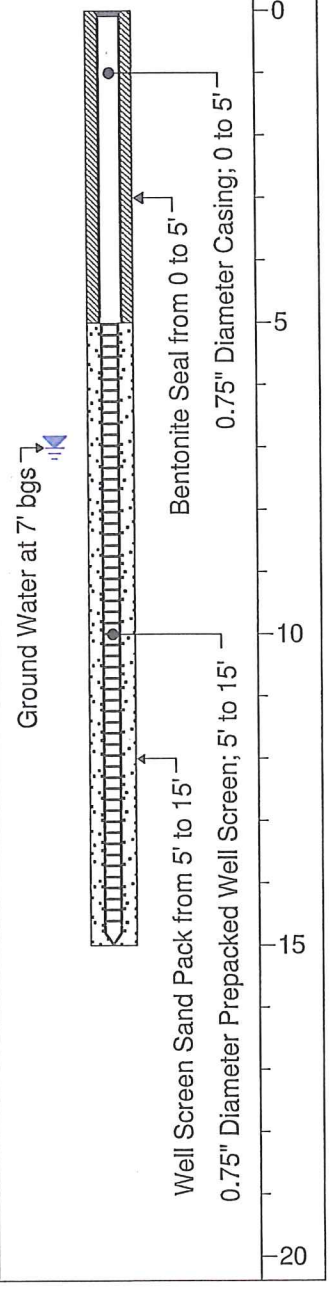
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-18R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

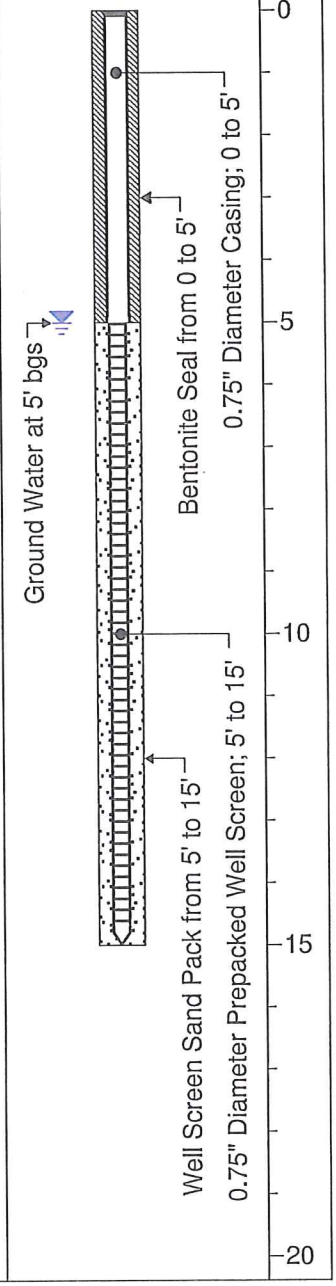
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-19R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

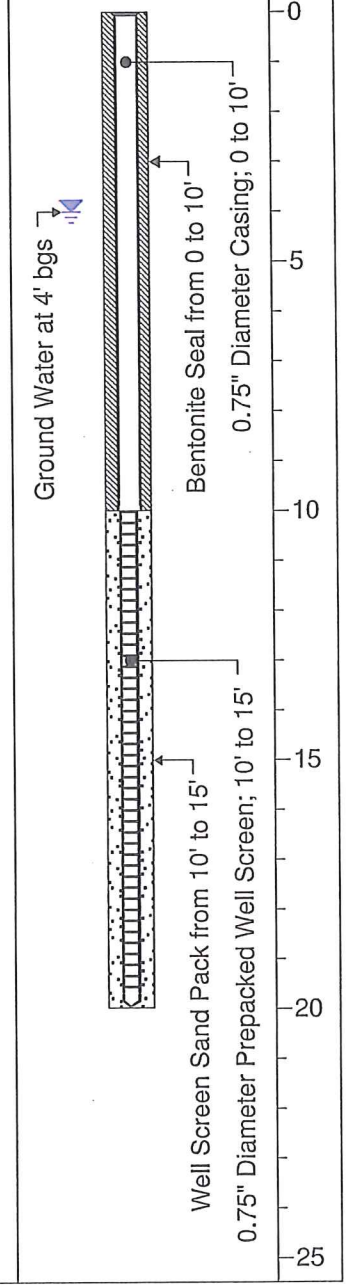
Starting Date: 12/29/09

Ending Date: 12/29/09

Boring Depth: 15 ft

Depth to Water: 4 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		SILTY GRAVELLY SAND Gray brown, damp, fill.				
5						5
10						10
15						15
20		Bottom of boring at 20 feet bgs.				20
25						25



Parametrix

Boring Log

Boring ID: MW-21R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

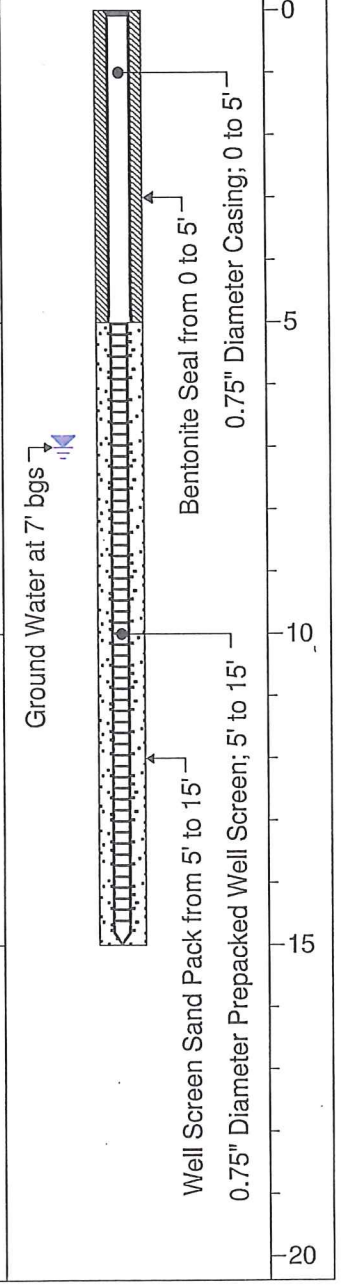
Starting Date: 12/15/09

Ending Date: 12/15/09

Boring Depth: 15 ft

Depth to Water: 7 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				50"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.	CHEV-SO-MW21R-0100	40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Parametrix

Boring Log

Boring ID: MW-22R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

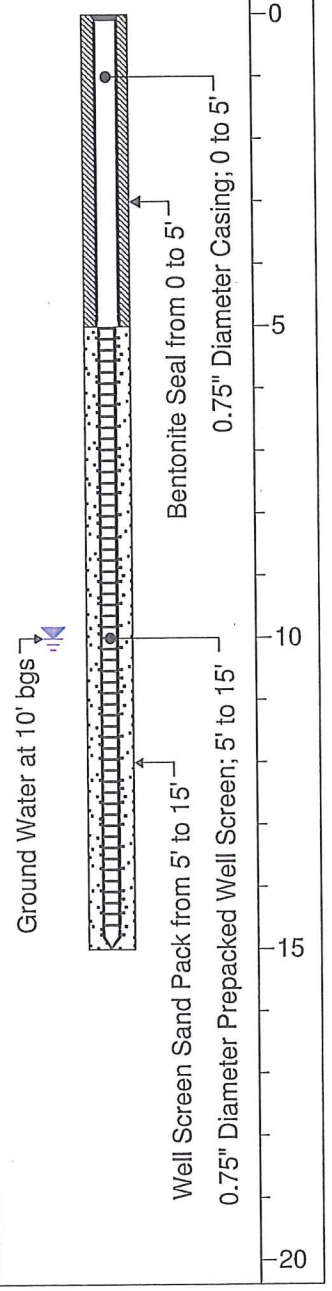
Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 10 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				55"		5
10		Silty sand and gravel, tan brown, saturated, starting at approximately 10 ft bgs.	CHEV-SO-MW22R-0100	45"		10
15		Bottom of boring at 15 feet bgs.				15
20						20



Boring ID: MW-25

Project Name: Chevron Prop RI/FS

Project #: 255-1896-063

Location: SEE MAP

Drilling Company: ESN

Drilling Method: Auger

Logged by: David Dinkuhn, P.E.

Checked by: David Dinkuhn, P.E.

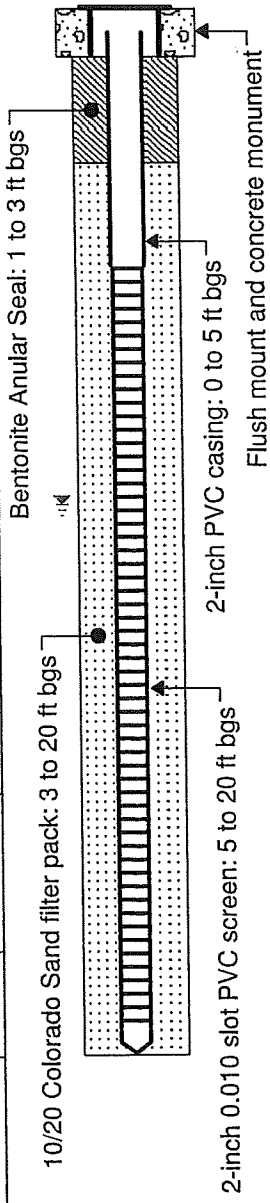
Sheet 1 of 1

Drilling Date: 3/7/08

Boring Depth: 20 ft

Depth to Water: 9.5 ft

Depth (ft)	Description/Classification of Materials	Sample: PID Reading	Sample: Sample ID	Sample: Recovery (ft)
0	Ground Surface			
	Silty Sandy Gravel Gray brown, damp, No petroleum hydrocarbon odor (FILL)			4
		0		
5				3
		0		3
	Silty Gravelly Sand Gray, wet, moderate petroleum hydrocarbon odor (FILL)	1400	CHEV-SO -MW25-0100	3
	Silty Gravelly Sand Wet, No petroleum hydrocarbon odor (OUTWASH)			3
15		4		3
				--
20	Bottom of boring at 20 feet bgs.			



Parametrix

Boring Log

Boring ID: MW-26R

Project Name: Chevron Interim Action

Project #: 255-1896-063 / 04-1304

Location: Bremerton, WA

Drilling Company:

Drilling Method: Direct Push

Logged by: Lily Vagelatos

Checked by: Ingmar Saul, L.G.

Sheet 1 of 1

Starting Date: 12/14/09

Ending Date: 12/14/09

Boring Depth: 15 ft

Depth to Water: 9.5 ft

Depth (ft)	Lithologic Symbol	Description/Classification of Materials	Sample ID	Recovery	Boring Diagram	Depth (ft)
0		Ground Surface				0
		MIXED TREATMENT ZONE Sandy silt with gravel, tan brown, very moist.		50"		
5				45"		5
			CHEV-SO-MW26R-0095			
10		Silty sand and gravel, tan brown, saturated, untreated fill in saturation zone, starting at approximately 10 ft bgs.		40"		10
15		Bottom of boring at 15 feet bgs.				15
20						20

Ground Water at 9.5' bgs

Bentonite Seal from 0 to 5'

0.75" Diameter Casing; 0 to 5'

Well Screen Sand Pack from 5' to 15'

0.75" Diameter Prepacked Well Screen; 5' to 15'

Parametrix

Boring

Boring ID: MW-27

Project Name: Former Cheveron Prop. Remediation

Project #: 233-1896-098 / 01-03

Location: 1310 Highland Drive, Bremerton

Drilling Method: Probe/HSA Combo

Sample Method: Split Spoon

Logged by: Lara Linde

Checked by: Ingmar Saul, R.G.

Sheet 1 of 1

Drilling Date: 3/11/11

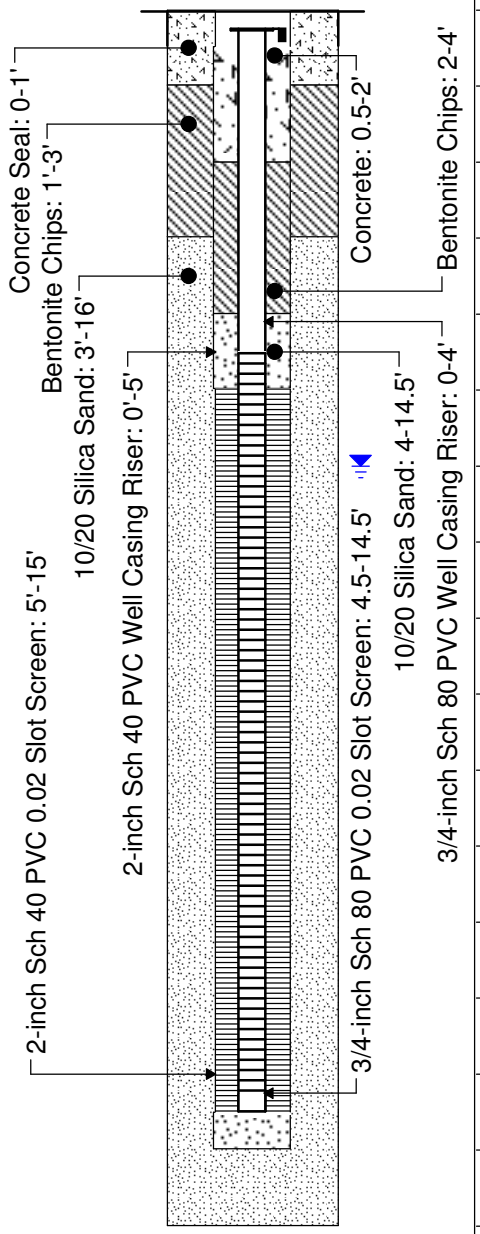
Boring Depth: 16 ft

Depth to Water: 6 ft

Ecology Tag #: BCN 891

Elevation (ft)	Lithologic Symbol	U.S.C.S.	Description/Classification of Materials; Soil: Group name, group symbol, color, plasticity, grain size, moisture, density, misc.	PID (PPM)	Recovery (in)
12.0			Ground Surface		
11.5	GW		**RIP RAP** Coarse gravel to cobbles (beach reinforcement)		
			SAND Brown, fine to medium grained, dry, loose, occassional fine gravel, no odor.	0	36/48
9.0					
	SP		Red, moist, iron staining starting at approximately 3 ft bgs.		
				0	18/48
6.0			Moist to wet, few fine gravels, no odor, starting at approximately 6 ft bgs.		
3.5					
			SAND Brown to gray, fine to medium grained, wet, loose, organic odor, no sheen.	0	40/48
	SM				
			Gray, fine grained, wet to saturated, 5% shell fragments, moderate petroleum odor at approximately 16 ft bgs.	0	42/48
-4.0					
			Bottom of boring at 16 feet bgs.		

Well Diagram



Depth (ft)

0
5
10
15

APPENDIX H

Groundwater Sampling Field Logs

NOT FOR FILE

Parametrix, Inc.

Well #: MW-4R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/21/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other 3/4"

3 VOA HCl
2 500 mL Amb HCl
1 500 mL Nitric
2 1 L Amb
2 500 mL unpre
1 1L unpre.

Depth to Water (feet)	3.94	Purge Vol. Meas.Method	
Depth of Well (feet)	~~to~~ 15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

3.59 × 3 = 10.77

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1154		6.79	4.63	6.31	12.8	>1000	-135	
1158		6.74	4.14	5.68	13.2	>1000	-138	
~~1202~~		6.74	4.07	5.00	13.3	962.0	-138	
1206		6.70	3.83	4.96	13.2	~~6.0~~ 586	-139	
1210		6.72	3.74	4.94	13.2	437	-138	
1214		6.68	3.59	4.93	13.2	373	-137	
1218		6.64	3.52	4.93	13.1	367	-136	
1222		6.63	3.56	4.91	13.1	333	-136	

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

14 containers

Parametrix, Inc.

Well #: MW-9R
Sample #:

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/20/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	4.82	Purge Vol. Meas.Method	
Depth of Well (feet)	~~10~~ 15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1142		6.20	1.60	6.32	12.1	>1000	-138	
1146		6.33	1.62	5.96	12.1	>1000	-146	
1150		6.35	1.60	6.42	12.4	>1000	-145	
1154		6.39	1.58	7.77	12.5	393.0	-138	
1158		6.40	1.57	8.59	12.5	365	-133	
1202		✓6.37	✓1.94	✓9.25	12.4	★177	✓-127	
1206		6.36	1.57	9.69	12.5	146	-124	

1154
0346.3

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks Turbidity varying greatly - collected sample
Signature _____ Page _____ of _____

Parametrix, Inc.

Well #: MW1R
Sample #:

Groundwater Sampling Field Data Sheet

Project Number	236-2542-019 04/03 (CHEVRON 255189 L063 04/1304)	Date	10/20/2010 (DW)
Project Name	Fort Flagler Sewer Improvements	Location	
Project Address	Marrowstone Island	Sampled By	LV
Client Name	WA State Parks	Purged By	

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	3.64	Purge Vol. Meas.Method	Grad Cyl/stop watch
Depth of Well (feet)		Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

5.490 − .585 = 4.905

TIME (2400 hr)	WATER LEVEL (feet) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if >10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1036		5.67	0.314	7.14	11.4	167.	4	
1040		5.84	0.345	5.78	10.9	109.0	-41	
1044		5.97	0.357	5.59	10.8	62.9	-61	
1048		✓5.94	✓0.357	✓5.45	11.0	✓54.0	-56	
1052		✓5.99	✓0.356	✓5.37	10.9	✓56.1	✓-62	
1056		✓6.00	0.359	5.38	10.9	54.7	-64	

Purge Equipment	Grundfos Redi-flo 2	Sampling Equipment	Grundfos Readi-flo 2
Laboratory	Twiss	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method	Hand delivered	Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

(11)

Parametrix, Inc.

Well #: MW-11
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/20/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" X 4" ____ 6" ____ Other ~~3/4"~~

Depth to Water (feet)	2.81	Purge Vol. Meas.Method	
Depth of Well (feet)		Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
0904	2.97	5.18	0.117	6.93	11.1	272	184	
0909	2.95	5.26	0.114	6.46	10.9	226	184	
0912	2.93	5.26	0.112	6.17	10.8	193	173	
0916	2.90	5.24	0.107	6.00	10.7	178	171	
0920	2.90	5.23	0.103	5.91	10.7	182	173	
0924	2.99	5.27	0.103	5.87	10.8	165	169	

178 .107
.17 .03
195 321
6.00
-.6
5.40

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

6

(14)

Parametrix, Inc.

Well #: MW-13R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/21/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other ____

Depth to Water (feet)	3.83	Purge Vol. Meas.Method	
Depth of Well (feet)	15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
0942		6.53	5.80	5.67	10.8	751.0	-73	
0946		6.59	5.29	8.32	11.2	>1000	-109	
0950		6.65	5.07	9.71	11.2	>1000	-116	
0954		6.71	4.92	10.39	11.3	>1000	-118	
0958		6.74	4.84	10.67	11.3	>1000	-120	
1002		6.81	4.77	11.06	11.3	>1000	-123	
1006		6.84	4.75	11.22	11.4	>1000	-125	

? H.94 .03 .1452

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks * lots of bubbles in line. Very low recovery
Signature _____ Page 1 of _____

0 @

Parametrix, Inc.

Well #: MW-13R
Sample #:

Groundwater Sampling Field Data Sheet

Project Number		Date	2/15/10
Project Name		Location	Chevron Prop
Project Address		Sampled By	L.L.V
Client Name		Purged By	L.L.V

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	5.90	Purge Vol. Meas.Method	
Depth of Well (feet)	15.00	Date Purged	
Reference Point (surveyors notch/etc)	notch	Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1129		6.66	0.641	0.16	11.3	481	-12	
1134		6.82	0.622	7.72	11.9	496	-49	
1138		7.11	0.596	7.04	12.2	414	-59	
1144		7.11	0.589	8.08	12.1	402.0	-28	
1148		7.00	0.584	7.46	12.0	389.0	-32	
1152		6.96	0.573	7.56	11.9	366.0	-13	

low-no flow ☆ ☆

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity
Remarks: Flow very low, lots of bubbles, effecting probe readings
Signature _____ Page _____ of _____

Parametrix, Inc.

Well #: MW-8-16R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063	Date	2/16/2016
Project Name	Chevron 1A	Location	Chevron Property
Project Address	Bremerton WA	Sampled By	I. Vagelatos
Client Name	City of Bremerton	Purged By	" "

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	1.20	Purge Vol. Meas.Method	
Depth of Well (feet)	16.00	Date Purged	
Reference Point (surveyors notch/etc)	notch	Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1004		7.59	5.4	10.82	9.5	121.0	224	
1009		7.06	5.0	10.41	9.2	411	246	
1012		6.78	5.0	10.29	9.2	130.0	261	
1016		6.57	4.9	10.22	9.1	91.9	271	
1020		6.39	4.9	10.20	9.1	87.1	278	
1024		6.26	4.9	10.15	9.1	85.7	284	
1027		6.20	4.9	10.11	9.1	85.9	289	
1030		6.16	4.9	10.09	9.1	86.3	290	

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

Parametrix, Inc.

Well #: MW18R
Sample #:

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063	Date	2/16/2010
Project Name	Chevron Interim Action	Location	Chevron Property
Project Address	Bremerton WA	Sampled By	L. Vagelatos
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" X 4" ____ 6" ____ Other X

Depth to Water (feet)	1.31	Purge Vol. Meas.Method	
Depth of Well (feet)	16.0	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1128		6.29	55.4	2.86	10.6	173.0	133	
1132		6.13	52.3	2.64	10.4	83.1	139	
1136		6.08	53.5	2.58	10.3	53.1	138	
1140		6.05	52.6	2.76	10.3	55.0	140	
1144		6.03	51.6	2.79	10.3	58.1	143	

53.5
.03
1605

Purge Equipment _____ Sampling Equipment _____

Laboratory OnSite Environmental
Chain-of-Custody (yes/no) YES
Shipment Method _____

Date Sent to Lab _____
Field QC Sample Number _____
Split with (name(s)/organization) _____

Well Integrity _____
Remarks Suspended orange PM in first draw.
Signature _____ Page _____ of _____

19

Parametrix, Inc.

Well #: MW-19R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/21/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other 3/4 "

Depth to Water (feet)	3.00	Purge Vol. Meas.Method	
Depth of Well (feet)	26	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1406		5.98	0.426	6.04	11.4	283.0	-65	
1412		6.32	0.438	5.13	10.8	>1000	-97	
1419		6.41	0.435	4.99	11.1	>1000	-110	
lost Flow * 1422	6.34	5.64	0.374	*5.68	11.6	>1000	-116	
1426		6.39	0.371	*7.21	11.5	>1000	-111	
1430		6.40	0.372	*8.88	11.4	>1000	-109	

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks ** Low recovery lots of bubbles
Signature _____ Page _____ of _____

Parametrix, Inc.

Well #: 19R
Sample #:

Groundwater Sampling Field Data Sheet

Project Number	255 1896-063	Date	2/16/10
Project Name	Chevron IA	Location	Chevron Property
Project Address	Bremerton WA	Sampled By	L. Vagoletos
Client Name	City of Bremerton	Purged By	" "

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	3.59	Purge Vol. Meas.Method	
Depth of Well (feet)	20.00	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
0810		8.27	59.0	0.02	10.8	76945	45	
0814		7.30	59.9	0.00	10.6	560	41	
0818		6.99	58.1	0.00	10.6	318	14	
0822		6.77	57.1	0.00	10.7	242	19	
0826		6.62	52.7	0.00	11.0	150	17	
0830		6.40	48.2	3.00	11.2	340	1	

Lost Flow ⚠

Purge Equipment _____ Sampling Equipment _____

Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

(14)

Parametrix, Inc.

Well #: MW-21R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063 04/1304	Date	1/20/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	4.30	Purge Vol. Meas.Method	
Depth of Well (feet)	15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1304		6.54	3.66	7.12	13.0	>1000	-117	
1308		6.47	3.25	6.39	12.8	>1000	-124	
1312		6.46	3.10	5.87	12.9	>1000	-132	
1316		6.48	2.89	5.64	12.7	>1000	-138	
1320		6.44	2.86	5.46	12.7	>1000	-140	

3 volumes = 2.86 gal

Purge Equipment		Sampling Equipment	
Laboratory	OnSite Environmental	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

Parametrix, Inc.

Well #: MW-21R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063	Date	February 15, 2010
Project Name	Chevron Interim Action	Location	Chevron Pier Bremerton
Project Address	Bremerton WA	Sampled By	L. Vagelatos
Client Name	City of Bremerton	Purged By	L. Vagelatos

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	4.27	Purge Vol. Meas.Method	____
Depth of Well (feet)	15.00	Date Purged	2/15/10
Reference Point (surveyors notch/etc)	casing notch	Purge Time (from/to)	____
Date/Time Sampled	2/15/10		

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1007		6.65	0.370	0.00	11.1	21000	-73	
1011		6.61	0.363	0.00	11.1	7630	-83	
1015		6.60	0.359	0.00	11.2	443.0	-93	
1019		6.60	0.355	0.00	11.2	324 312	-97	
1023		6.57	0.350	0.00	11.3	291.0	-101	
1027		6.56	0.344	0.00	11.3	287.0	-103	
1031		6.56	0.334	0.00	11.3	293.0	-106	
1035		6.56	0.333	0.00	11.5	303.0	-107	

1 2
3.38
.103
1114
287

Purge Equipment	____	Sampling Equipment	____
Laboratory	OnSite Environmental	Date Sent to Lab	____
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	____
Shipment Method	____	Split with (name(s)/organization)	____

Well Integrity ____
Remarks ____
Signature ____ Page ____ of ____

Parametrix, Inc.

Well #: MW-22R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	255-1896-063-04/1304	Date	1/20/2010
Project Name		Location	
Project Address		Sampled By	
Client Name		Purged By	

Casing Diameter: 2" ____ 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	4.77	Purge Vol. Meas.Method	
Depth of Well (feet)	40.15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1532		6.50	20.7	8.96	10.5	395	54	
1536		6.48	20.3	8.70	10.5	183.0	51	
1540		6.39	18.9	8.08	10.3	61.4	48	
1544		6.35	14.2	7.81	10.3	53.5	51	
1548		6.34	18.0	7.69	10.3	51.0	53	
1552		6.32	17.9	7.55	10.3	56.3	54	

61.91
6.19
55.71
2
18.9
103
567

Purge Equipment		Sampling Equipment	
Laboratory		Date Sent to Lab	
Chain-of-Custody (yes/no)		Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

(14)

Parametrix, Inc.

Well #: MW-25
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number ~~236-2542-019 04/03~~ 255-1896-003 04/1304
Project Name ~~Fort Flagler Sewer Improvements~~
Project Address ~~Marrowstone Island~~
Client Name ~~WA State Parks~~ City of Brem

Date 1/21/2010
Location _____
Sampled By _____
Purged By _____

Casing Diameter: 2" ~~X~~ OK 4" _____ 6" _____ Other _____

Depth to Water (feet) 4.94
Depth of Well (feet) 15
Reference Point (surveyors notch/etc) _____
Date/Time Sampled _____

Purge Vol. Meas.Method Grad Cyl/stop watch
Date Purged _____
Purge Time (from/to) _____

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if >10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1308		7.04	0.390	5.81	11.5	308.0	-98	
1312		6.15	0.367	5.23	10.8	152.0	-47	
1316		5.98	0.352	5.07	10.4	167.0	-34	
1320		5.85	0.326	5.01	10.8	167.0	-19	
1324		5.83	0.321	4.98	10.8	166.6	-16	
1328		5.81	0.318	4.96	10.8	164.0	-14	

Purge Equipment Grundfos Redi-flo 2
Sampling Equipment Grundfos Readi-flo 2

Laboratory Twiss
Chain-of-Custody (yes/no) YES
Shipment Method Hand delivered

Date Sent to Lab _____
Field QC Sample Number _____
Split with (name(s)/organization) _____

Well Integrity _____
Remarks _____
Signature _____

Page _____ of _____

Parametrix, Inc.

Well #: MW-26R
Sample #: _____

Groundwater Sampling Field Data Sheet

Project Number	~~236-2542-019 04/03~~ 255-1896-063 04/1304	Date	1/20/2010
Project Name	~~Fort Flagler Sewer Improvements~~	Location	
Project Address	~~Marrowstone Island~~	Sampled By	
Client Name	~~WA State Parks~~	Purged By	

Casing Diameter: 2" ~~X~~ 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	5.61	Purge Vol. Meas.Method	Grad Cyl/stop watch
Depth of Well (feet)	15	Date Purged	
Reference Point (surveyors notch/etc)		Purge Time (from/to)	
Date/Time Sampled			

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if >10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1420		6.74	16.3	9.64	10.7	801.0	-8	
1424		6.35	16.5	7.23	10.3	145.0	27	
1428		6.25	16.5	6.97	10.3	78.9	43	
1432		6.22	16.5	6.92	10.5	70.3	52	
1436		6.20	16.6	6.73	10.6	73.7	57	
1440		6.19	16.6	6.75	10.4	70.2	58	

Purge Equipment	Grundfos Redi-flo 2	Sampling Equipment	Grundfos Readi-flo 2
Laboratory	Twiss	Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method	Hand delivered	Split with (name(s)/organization)	

Well Integrity _____
Remarks _____
Signature _____ Page _____ of _____

NOT FOR FILE

Parametrix, Inc.

Well #: MW-4R
Sample #: CHEV-GW-MW4R-0120

Groundwater Sampling Field Data Sheet

Project Number ~~415-2328-007~~ 255-1896-063 Diff 1304
Project Name ~~Palermo Longterm GW Monitoring~~
Project Address Chevron Emp
Client Name ~~EPA Region X~~ City of Bremerton

Date 6/1/10
Location
Sampled By L. Lundi
Purged By "

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet) 7.11
Depth of Well (feet) 14 ft
Reference Point (surveyors notch/etc) TOC
Date/Time Sampled 6/1 1100

Purge Vol. Meas.Method meas cup / water
Date Purged 6/1/10
Purge Time (from/to) 1018 - 1038
200 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1018	~~7~~.92	6.95	3.880	6.34	13.69	18.5	-118.7	
1023	~~7~~.99	6.90	3.775	5.016	14.01	11.8	-116.6	
1026	~~7~~.95	6.90	3.770	4.88	13.97	12.0	-116.2	
1029	~~7~~.96	6.89	3.577	4.78	14.02	8.2	-116.4	
1032	~~7~~.99	6.90	3.504	4.63	13.85	6.16	-116.7	
1035	8.00	6.89	3.445	4.59	13.76	6.6	-115.5	
1038	8.00	6.90	~~3~~.423	4.55	13.64	5.3	-115.0	2.5 gal

Purge Equipment peristaltic
Sampling Equipment same

Laboratory Onsite/ARI
Chain-of-Custody (yes/no) YES
Shipment Method Hand

Date Sent to Lab 6/1/10
Field QC Sample Number ~~DUP~~ CHEV-GW-MW4R-1120
Split with (name(s)/organization) N/A

Well Integrity Good
Remarks Water in monument, good producer
Signature L. Lundi

Page 1 of 1

Parametrix, Inc.

Well #: MW-9R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW9R-0130

Project Number	255-1896-063	Date	5/25/10
Project Name	Chevron Trap	Location	
Project Address		Sampled By	L. Lindl
Client Name	City of Bremerton	Purged By	

Casing Diameter: 2" X 4" ____ 6" ____ Other ____

Depth to Water (feet)	9.35	Purge Vol. Meas.Method	measuring/watch
Depth of Well (feet)	~~TOC~~ 14 ft	Date Purged	5/25/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1454 - 1517
Date/Time Sampled	5/25/10 1530		200 ml/min, < 100 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) ____ Actual Purge Volume (gallons) ____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1454	13.00	6.70	1.476	1.25	14.09	251.0	-126.5	
1457	12.75	6.70	1.475	1.13	14.07	>198.0	-129.6	
1500	11.90	6.73	1.485	1.10	14.33	170.4	-130.8	
1503	12.95	6.74	1.485	1.08	14.20	112.0	-133.3	
1506	--	6.76	1.413	0.99	13.00	73.4	-137.0	
1510	13.47	6.75	1.419	0.96	13.38	64.7	-137.0	
1513	13.10	6.77	1.420	0.95	13.67	51.7	-137.6	
1517	12.03	6.77	1.420	0.96	13.97	57.9	-136.8	1.5 gal

Purge Equipment	Bennett Pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	5/25
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	CHEV-GW-MW9R-1130
Shipment Method	Hand	Split with (name(s)/organization)	

Well Integrity Good
Remarks water in monument
Signature [signature]
Page 1 of 1

Snow recharge

Field duplicate collected @ 1600

Parametrix, Inc.

Well #: MW-9R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW9R-0125D

Project Number	255-1896-063	Date	5/25/10
Project Name	Chevron Prop	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	

Casing Diameter: 2" ___ X 4" ___ 6" ___ Other x 3/4" inner

Depth to Water (feet)	6.44	Purge Vol. Meas.Method	measuring tape / watch
Depth of Well (feet)	14	Date Purged	5/25/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1201-1213
Date/Time Sampled	5/25/10 1215		300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND. (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1201	7.08	6.32	0.507	7.85	13.07	79	-22.5	
1204	7.16	6.34	0.508	7.34	13.11	25.6	-14.7	
1207	7.10	6.32	0.510	6.85	12.98	3.1	-18.2	
1210	7.22	6.31	0.511	6.55	12.96	2.4	-16.3	
1213	7.12	6.32	0.512	6.31	13.01	3.0	-19.0	2gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite / ARI	Date Sent to Lab	5/25, 5/26
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand delivered	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: RD shown & odor on purge meter, good producer
Signature: L. Linde Page 1 of 1

1 L BOD

Parametrix, Inc.

Groundwater Sampling Field Data Sheet

Well #: MW-11
Sample #: CHEVGW-MW11-0100

Project Number	255-1896-008	Date	5/25/10
Project Name	Chevron Prop.	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" X 4" 6" Other

Depth to Water (feet)	6.00	Purge Vol. Meas.Method	meas. cup/watch
Depth of Well (feet)	14.77	Date Purged	5/25/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1350 - 1406
Date/Time Sampled	5/25/10 1425		300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1350	6.50	6.21	0.322	--	12.79	11.6	-47.4	
1354	6.74	6.15	0.307	1.10	13.86	5.9	-43.6	
1357	6.80	6.15	0.305	0.99	13.02	4.8	-37.8	
1400	6.85	6.17	0.311	0.94	13.19	2.7	-40.3	
1403	6.95	6.19	0.326	0.91	12.25	2.8	-45.7	
1406	6.95	6.20	0.320	0.90	13.35	1.5	-49.3	2.5 gal

Purge Equipment	Peristaltic	Sampling Equipment	same
Laboratory	Onsite (AK)	Date Sent to Lab	5/26
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	hand	Split with (name(s)/organization)	N/A

Well Integrity: Good, but missing monument
Remarks: Field (carried by cone), good producer
Signature: L. Linde

Parametrix, Inc.

Groundwater Sampling Field Data Sheet

Well #: MW-13R
Sample #: CHEV-GW-MW13R-D130

Project Number	255-1896-063	Date	5/26/10
Project Name	Chevron FDP	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" — X — 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	14.15	Purge Vol. Meas.Method	meas. cup / watch
Depth of Well (feet)	17.93	Date Purged	5/26/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1130 - 1151
Date/Time Sampled	5/26/10 1230		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1130	14.60	6.79	5.229	3.00	13.28	258.0	-105.0	
1133	12.50	6.80	4.944	3.06	13.23	207.0	-103.3	
1137	—	6.80	4.879	3.07	13.43	285.6	-102.1	
1140	12.40	6.80	4.891	3.04	13.63	245	-100.0	
1145	12.03	6.81	4.766	3.16	14.02	289.6	-99.9	
1148	12.04	6.82	4.536	3.06	13.51	291.0	-96.3	
1151	12.05	6.81	4.525	3.07	13.73	275.3	-96.3	1.5 gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite / ARI	Date Sent to Lab	5/26, 5/27, 6/1
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks gauge in monument
Signature L. Linde Page 1 of 1

slow recharge

Parametrix, Inc.

Well #: MW-16R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW16R-0130

Project Number	255-1896-063	Date	5/27/10
Project Name	Chevron Prop.	Location	
Project Address		Sampled By	L. Lindle
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet)	8.15	Purge Vol. Meas.Method	Meas. Cup / watch
Depth of Well (feet)	14.74	Date Purged	5/27/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	0849 - 0905
Date/Time Sampled	5/27/10 0915		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% (Hit bottom)	ORP (mV)	CUM. VOL. (gal)
0849	14.27	6.56	0.458	2.33	11.94	2579	-22.3	
0853	14.12	6.54	0.459	2.40	12.00	2579	-16.6	
0857	—	6.54	0.461	2.32	12.05	2560	-13.4	
0901	14.34	6.54	0.465	2.21	12.24	2400	-13.4	
0905	14.13	6.53	0.469	2.38	12.28	2565*	-20.3	1/2 gal

Purge Equipment	Peristaltic	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	5/27/10
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument
Signature L. Lindle Page 1 of 1

slow recharge

* visual ~ 500 NTU

Parametrix, Inc.

Well #: MW-18R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW18R-0090

Project Number	255-1896-063	Date	5/25/10
Project Name	Chevron-Trop.	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" —X— 4" ____ 6" ____ Other 3/4"

Depth to Water (feet)	4.109	Purge Vol. Meas.Method	mens. cup/watch
Depth of Well (feet)	14 FT	Date Purged	5/25/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1644-1705
Date/Time Sampled	5/25/10 1720		300 ml/min, 200 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1644	6.10	6.45	0.291	1.44	13.96	571.2	216	
1647	6.60	6.43	0.602	1.30	13.36	180.7	-23.9	
1650	0.95	6.48	0.591	1.29	13.50	96.6	-27.2	
1653	5.90	6.48	0.587	1.28	13.60	56.0	-26.2	
1656	6.00	6.52	0.533	1.26	13.59	32.5	-27.0	
1659	5.81	6.52	0.584	1.28	13.67	26.0	-13.0	
1702	5.75	6.51	0.583	1.29	13.49	18.1	-6.4	
1705	5.80	6.49	0.580	1.27	13.72	16.7	-2.1	3 gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	5/25
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: Good marker in monument, good producer
Signature: L. Linde

Page 1 of 1

purge water has suspended orange solids

Parametrix, Inc.

Well #: MW-19R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW19R-0160

Project Number	255-1896-063	Date	5/26/10
Project Name	Chevron Prop.	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet)	8.25	Purge Vol. Meas.Method	meas cup/watch
Depth of Well (feet)	20	Date Purged	5/26/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	0812-0845
Date/Time Sampled	5/26/10 1000		300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
0812	15.82	6.49	0.390	3.20	11.85	30.1	-52.0	
0815	16.3	6.52	0.375	1.32	11.84	22.4	-69.1	
~~0817~~	Repositioning tubing							
0830	17.91	6.64	0.382	*	12.26	[illegible]	-60.2	
0833	17.82	6.68	0.382	*	12.33	469.7	-59.7	
0836	17.75	6.69	0.382	5.07	12.40	444.6	-56.5	
0840	17.77	6.69	0.381	5.06	12.46	382.9	-52.9	
0845	17.80	6.68	0.380	5.05	12.54	319.0**	-49.8	1.5 gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	5/26
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity	Good
Remarks	water in monument
Signature	

Page 1 of 1

slow recharge

* too many bubbles in flow through cell

** visual turbidity < 100 NTU

Parametrix, Inc.

Well #: MW-21R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW21R-0120

Project Number	055-1896-063	Date	6/1/10
Project Name	Chevron Prop.	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet)	6.28	Purge Vol. Meas.Method	measure cup/watch
Depth of Well (feet)	14 FT	Date Purged	6/1/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	0900 - 0919
Date/Time Sampled	6/1 0930	200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
0900	7.30	6.85	2.84	6.04	12.90	20.6	-120.1	
0903	7.44	6.83	2.78	5.61	12.97	16.8	-126.8	
0907	7.50	6.84	2.67	5.30	12.81	13.3	-132.6	
0910	7.50	6.84	2.62	5.32	12.83	12.5	-135.1	
0913	7.40	6.84	2.55	5.14	12.72	10.3	-138.1	
0916	7.39	6.83	2.52	5.02	12.71	10.1	-139.7	
0919	7.40	6.83	2.50	4.92	12.68	8.9	-140.0	2.5 gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	6/1/10
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Dry; good protector
Signature L. Linde

Page 1 of 1

Parametrix, Inc.

Well #: MW-16 22R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW22R-0130

Project Number	255-1896-063	Date	5/26/10
Project Name	Chevron Prop.	Location	
Project Address		Sampled By	L. Lindle
Client Name	City of Bremerton	Purged By	L. Lindle

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet)	8.30	Purge Vol. Meas.Method	meas. cup / watch
Depth of Well (feet)	14.4	Date Purged	5/26/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1301 - 1316
Date/Time Sampled	5/26/10 1345		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1311	8.47	6.48	1.360	6.21	13.73	16.6	45.2	
1304	9.00	6.85	1.345	5.99	13.87	21.3	52.9	
1307	9.45	6.84	1.345	5.73	13.76	11.1	56.0	
1310	9.42	6.82	1.343	5.42	13.51	10.0	56.7	
1313	9.42	6.82	1.354	5.17	13.33	4.1	59.6	
1316	9.42	6.82	1.370	4.90	13.25	4.1	62.0	2 gal

Purge Equipment	peristaltic	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	5/26/10
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Monitor in monument
Signature L. Lindle Page 1 of 1

some algal growth

Parametrix, Inc.

Well #: MW-25
Sample #: CHEV-GW-MW25-0130

Groundwater Sampling Field Data Sheet

Project Number	255-1896-003	Date	5/27/10
Project Name	Chevron Knop	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ___ X 4" ___ 6" ___ Other ___

Depth to Water (feet)	8.57	Purge Vol. Meas.Method	meas. cup / water
Depth of Well (feet)	14.77	Date Purged	5/27/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1115 - 1133
Date/Time Sampled	5/27/10	300ml/min, 200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) ___ Actual Purge Volume (gallons) ___

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1115	8.86	6.43	0.312	3.91	11.29	64.9	77.0	
1118	8.92	6.34	0.305	1.90	11.41	25.8	88.3	
1121	8.97	6.29	0.298	1.47	11.31	11.5	96.4	
1124	9.00	6.28	0.293	1.19	11.29	11.4	102.0	
1127	9.10	6.27	0.290	1.16	11.25	6.6	95.3	
1130	9.15	6.27	0.290	1.12	11.25	4.6	89.0	
1133	9.19	6.28	0.289	1.10	11.26	4.8	85.6	2 gal

Purge Equipment	Peristaltic	Sampling Equipment	same
Laboratory	Onsite / ARI	Date Sent to Lab	5/27/10
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	N/A
Shipment Method	Hand	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: Water in monument, good producer
Signature: L. Linde

Parametrix, Inc.

Well #: MW-26R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW26R-0130

Project Number	255-1896-063	Date	5/26/10
Project Name	Chevron Prop	Location	
Project Address		Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ~~X~~ 4" 6" Other 3/4"

Depth to Water (feet)	5.25	Purge Vol. Meas.Method	meas cup / watch
Depth of Well (feet)	14.77	Date Purged	5/26/10
Reference Point (surveyors notch/etc)		Purge Time (from/to)	1447 - 1505
Date/Time Sampled	5/26/10 1530	300 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV)	CUM. VOL. (gal)
1447	-	6.28	23.40	5.06	12.42	42.5	-45.5	
1450	-	6.28	22.90	4.85	12.37	31.3	-48.9	
1453	-	6.29	22.80	4.97	12.29	14.0	-53.0	
1456	-	6.29	22.59	5.13	12.21	10.8	-55.9	
1459	-	6.30	22.39	5.41	12.14	4.5	-58.8	
1502	-	6.30	22.39	5.65	12.20	4.1	-61.9	
1505	-	6.31	22.42	5.52	12.00	3.8	-64.5	2 gal

Purge Equipment		Sampling Equipment	
Laboratory		Date Sent to Lab	
Chain-of-Custody (yes/no)	YES	Field QC Sample Number	
Shipment Method		Split with (name(s)/organization)	

Well Integrity Good
Remarks Water in casing, moderate producer
Signature L. Linde Page 1 of 1

Water level not working

NOT FOR FILE

Parametrix, Inc.

Well #: MW-4R
Sample #:

Groundwater Sampling Field Data Sheet CHEV-GW-MW4R-0120

Project Number	255-1896-063 04/1304	Date	8/11/10
Project Name	Former Chevron Property	Location	Lower Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.00	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 13.95	Date Purged	8/11/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1513 - 1528
Date/Time Sampled	8/11/10 1540	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	
									Sill(2.0)
1513	10.30	7.21	38.7	2.39	17.2	21000	-175		2.3
1516	10.30	7.07	32.9	0.04	16.1	550	-168		2.0
1519	10.30	7.05	32.0	0.01	15.9	336	-166		2.0
1522	10.35	7.03	32.8	0.00	15.7	191	-163		2.1
1525	10.30	7.02	32.6	0.00	15.6	146	-162		2.3
1528	10.31	7.01	32.6	0.00	15.6	106	-161	2.5 gal	

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/12/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	CHEV-GW-MW4R-1120 @1600 cPAHs only
Shipment Method	Courier	Split with (name(s)/organization)	NA

Well Integrity Good
Remarks Water in monument, good producer
Signature [signature] Page 1 of 1

Duplicate collected for cPAHs only

Parametrix, Inc.

Well #: MW-9R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-mw9R-0140

Project Number	255-1896-063 04/1304	Date	8/11/10
Project Name	Former Chevron Property	Location	Lower Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	8.56	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 14.47	Date Purged	8/11/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	0831 - 0902
Date/Time Sampled	8/11/10 0915	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal (ppt)
0831	12.14	6.35	2.50	1.55	15.8	642	-143		0.1
0835	12.79	6.69	2.13	0.00	15.5	650	-156		0.1
0839	-	6.75	2.23	0.32	16.8	653	-156		0.1
0843	13.17	6.88	3.10	0.06	15.0	>1000	-160		0.2
0847	13.41	6.87	3.86	0.00	14.9	>1000	-164		0.2
0850	13.70	6.89	3.74	0.00	15.6	>1000	-169		0.2
0853	13.90	6.90	3.34	0.00	15.8	>1000	-168		0.2
0856	13.46	6.93	3.18	0.00	15.8	858	-168		0.2
0859	13.82	6.95	2.93	0.00	15.7	>1000	-168		0.1
0902	13.97	6.94	2.65	0.00	16.3	>1000	-169	2gal	0.1

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/12/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument, moderate producer
Signature L. Linde

Parametrix, Inc.

Well #: MW-10R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW10R-0140

Project Number	255-1896-063 04/1304	Date	8/10/10
Project Name	Former Chevron Property	Location	Lower Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	8.56	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 14.35	Date Purged	8/10/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1513 - 1533
Date/Time Sampled	8/10/10 1540	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal) Silt bag
1513	12.85	5.96	0.90	4.25	18.8	658	-74	0.0
1520	12.90	5.90	0.90	2.40	18.6	483	-73	0.0
1524	12.95	5.98	0.90	1.29	17.2	534	-70	0.0
1527	12.95	5.95	0.90	2.40	17.5	408	-75	0.1
1530	12.96	5.95	0.90	2.44	17.5	378	-76	0.02
1533	12.95	6.05	0.90	2.38	17.5	235	-79	0.0

1 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/11/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks water in monument, moderate recharge
Signature L. Linde

Parametrix, Inc.

Well #: MW-11
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW11-D170

Project Number	255-1896-063 04/1304	Date	8/10/10
Project Name	Former Chevron Property	Location	Lower yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ___ X 4" ___ 6" ___ Other ___

Depth to Water (feet)	7.47	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~20.70~~ 19.90	Date Purged	8/10/10
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1311 – 1329
Date/Time Sampled	8/10/10 ~~1540~~ 1400 LL 8/10/10	Screen Interval (feet bgs)	5-20.7

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) ___ Actual Purge Volume (gallons) ___

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)
1311	8.09	~~6.93~~	0.90	1.82	14.7	148	-125	
1315	—	6.17	0.90	0.22	14.8	36.6	-120	
1318	8.57	6.44	0.90	0.14	14.8	30.4	-113	
1322	8.70	6.37	0.90	0.02	15.0	29.4	-112	
1325	8.80	6.29	0.90	0.14	15.0	32.0	-110	
1329	9.00	6.27	0.90	0.0	15.3	32.9	-110	2gal

Sml(2L) 6 0 0 0 0 0 0

water impacting stagnant water in well? surface water influence

YSI 556 may be solution

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/16/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	CHEV-GW-MW11-1190 @ 1400
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity: Missing monument & cone
Remarks: Guard protection
Signature: L. Linde

Duplicate collected for all parameters except cTAHs & TPD lea

Parametrix, Inc.

Well #: MW-13R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW13R-0130

Project Number	255-1896-063 04/1304	Date	8/11/10
Project Name	Former Chevron Property	Location	Lower Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	8.30	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 13.50	Date Purged	8/11/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1346 - 1407
Date/Time Sampled	8/11/10 1440	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Gal(s)
1346	10.36	6.53	49.6	1.94	17.1	324	-158		3.2
1349	–	6.83	46.6	0.34	18.0	321	-156		3.1
1352	11.33	6.87	46.3	0.06	17.5	207	-152		3.0
1355	11.50	6.87	45.4	0.09	18.1	142	-150		2.9
1358	10.45	6.88	48.0	0.02	17.5	143	-148		3.2
1401	12.13	6.90	53.4	0.00	16.2	136	-145		3.5
1404	10.96	6.88	54.6	0.00	17.7	113	-145		3.5
1407	12.00	6.89	55.2	0.0	17.2	106	-146	0.5 gal	3.7

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/12/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: water in monument, poor producer
Signature: [signature]

Parametrix, Inc.

Well #: MW-16R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW16R-0140

Project Number	255-1896-063 04/1304	Date	8/10
Project Name	Former Chevron Property	Location	Upper Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	11.12	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 14.41	Date Purged	8/10/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1026 - 1041
Date/Time Sampled	8/10/10 1045	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal (%)
1026	13.40	6.60	1.36	3.31	15.8	>1000	-12		0
1030	13.41	6.60	1.39	1.58	16.1	710.0	-18		0
1034	13.40	6.70	1.38	* 4.51	16.5	>1000	-28		0.1
1038	13.42	6.80	1.38	* 5.53	16.7	710.0	-36		0
1041	13.42	6.87	1.38	* 6.27	16.8	>1000	-38	0.5 gal	0

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/11/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: Water in monument, bad recharge
Signature: L. Linde

* lots of bubbles in flow cell

Parametrix, Inc.

Well #: MW-18R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW18R-0130

Project Number	255-1896-063 04/1304	Date	8/10/10
Project Name	Former Chevron Property	Location	upper yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	8.04	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 13.76	Date Purged	8/10/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	0850 - 0908
Date/Time Sampled	8/10/10 0930	Screen Interval (feet bgs)	5-15

300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48 \text{ gal/ft}^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

Sulfide

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)
0852	10.97	6.11	1.87	2.96	15.9	843	-101	0
0856	9.57	6.45	2.08	0.00	15.3	>1000	-144	0
0859	9.80	6.56	2.17	0.00	14.9	318	-150	0
0902	9.80	6.58	2.30	0.00	14.9	204	-150	0
0905	9.75	6.60	2.32	0.00	14.6	214	-154	0
0908	9.80	6.61	2.20	6.00	14.5	221	-156	1.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/11/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: Water in monument, moderate producer
Signature: L. Linde

Page 1 of 1

Parametrix, Inc.

Well #: MW-19R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW19R-0180

Project Number	255-1896-063 04/1304	Date	8/12/10
Project Name	Former Chevron Property	Location	Upper Island
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	12.49	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~20.00~~ 18.83	Date Purged	8/12/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	0904 - 0927
Date/Time Sampled	8/12/10 0930	Screen Interval (feet bgs)	10-20

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal (ppt)
0904	14.95	5.79	0.90	1.77	14.3	99.3	-53		0
0908	15.35	6.99	0.90	0.36	14.8	93.3	-63		0.4
0912	15.60	6.10	0.90	0.26	15.5	84.8	-68		0.3
0916	15.80	6.21	5.55	0.19	15.1	70.1	-75		0.3
0920	16.18	6.30	99.9*	0.06	15.6	32.9	-80		4.0*
0924	16.44	6.32	99.9*	0.01	15.1	34.1	-83		4.0*
0927	16.64	6.34	99.9*	0.01	15.3	32.7	-84	0.5 gal	4.0*

Purge Equipment	Peristaltic pump / bailer	Sampling Equipment	same / bailer
Laboratory	Onsite/ARI	Date Sent to Lab	8/13/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	NA
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks painter in monument, poor producer
Signature L. Linde
Page 1 of 1

* blinking value = out of calibration range

Parametrix, Inc.

Well #: MW-21R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW21R-0140

Project Number	255-1896-063 04/1304	Date	8/11/10
Project Name	Former Chevron Property	Location	Lower Yard
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	7.81	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 15.42	Date Purged	8/11/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1012 - 1042
Date/Time Sampled	8/11/10 1050	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal(ppt)
1012	8.79	7.01	3.21	1.03	16.9	>1000	-153		0.2
1016	8.60	6.99	3.21	1.23	15.6	>1000	-143		0.2
1019	8.58	6.94	3.40	0.00	15.4	>1000	-149		0.2
1022	8.50	6.93	6.07	0.00	15.3	71000	-152		0.3
1026	8.45	6.93	6.46	0.00	15.6	>1000	-154		0.3
1029	6.20	6.92	5.88	0.00	15.2	>1000	-155		0.3
1032	8.33	6.93	5.55	0.00	15.3	>1000	-157		0.3
1035	8.33	6.96	5.03	0.00	15.1	841	-158		0.3
1038	6.23	6.99	4.64	0.00	15.1	348	-159		0.2
1042	6.37	7.00	4.47	0.00	15.1	384	-162	3 gal	0.2

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/12/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	CHEV-GW-MW21R-1140@1110
Shipment Method	Courier	Split with (name(s)/organization)	(metals only)

Well Integrity Good
Remarks Dry initially, good producer
Signature _____ Page 1 of 1

Duplicate collected for metals only.

Parametrix, Inc.

Well #: MW-22R
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-mw22R-0140

Project Number	255-1896-063 04/1304	Date	8/12/10
Project Name	Former Chevron Property	Location	Lower Upland
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	8.40	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 14.09	Date Purged	8/12/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1009
Date/Time Sampled	8/12/10 1030	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal (ppt)
1009	6.16	6.91	29.9	2.48	15.2	>1000	-50		1.8
1012	7.28	6.68	99.8	0.14	15.3	>1000	-54		1.9
	Empty flow cell								
1015	6.75	6.71	6.18	2.30	15.1	218	-39		0.3
1018	6.70	6.68	8.69	0.34	15.0	143	-33		0.5
1021	—	6.69	99.9*	0.01	15.3	132	-36	½ gal	4.0*

water level NA working properly

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/13/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument, good producer, suspended orange particles in water
Signature L. Linde Page 1 of 1

* blinking value = out of calibration range

Parametrix, Inc.

Well #: MW-25
Sample #:

Groundwater Sampling Field Data Sheet

CHEV-GW-MW25-0130

Project Number	255-1896-063 04/1304	Date	8/12/10
Project Name	Former Chevron Property	Location	Lower lawn
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" X 4" 6" Other X

Depth to Water (feet)	10.00	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~20.00~~ 19.62	Date Purged	8/12/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1319 - 1343
Date/Time Sampled	8/12/10 1350	Screen Interval (feet bgs)	5-20

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal(%)
1140	10.04	7.22	2.34	1.26	13.1	56.1	-131		0.1
	Pump Stopped								
1319	10.33	7.08	2.97	1.27	13.2	209	-114		0.2
1322	10.30	7.00	6.89	0.11	13.5	122	-120		0.4
1325	10.41	7.04	2.33	1.27	13.8	79.9	-115		0.1
1328	10.87	7.02	3.32	0.00	13.5	50.4	-117		0.2
1331	11.00	7.00	5.93	0.00	13.6	44.8	-116		0.3
1334	11.06	6.97	6.22	0.00	14.1	39.7	-117		0.3
1337	11.10	6.96	5.01	0.00	14.7	40.2	-118		0.3
1340	11.08	6.96	5.29	0.00	14.7	29.0	-119		0.3
1343	11.08	6.96	5.13	0.00	14.7	32.6	-120	2.5 gal	0.3

Purge Equipment	~~Peristaltic pump~~ ProActive VF	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/13/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Labeled in monument, good producer
Signature L. Linde

Parametrix, Inc.

Groundwater Sampling Field Data Sheet

Well #: MW-26R
Sample #: 0115
CHEV-GW-MW26R-~~0130~~

Project Number	255-1896-063 04/1304	Date	8/11/10
Project Name	Former Chevron Property	Location	Lower Upland
Project Address	1310 Highland Ave, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	L. Linde

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	6.17	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	~~15.00~~ 14.30	Date Purged	8/11/10
Reference Point (surveyors notch/etc)	TOC (inner)	Purge Time (from/to)	1157 - 1222
Date/Time Sampled	8/11/10 1230	Screen Interval (feet bgs)	5-15

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

suspect water level indicator not function properly

TIME (2400 hr)	WATER LEVEL (feet)	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10%	ORP (mV) ±10mV	CUM. VOL. (gal)	Sal (ppt)
1157	6.15	7.30	99.9*	0.00	16.2	307	-63		4.0*
1201	—	6.87	99.9*	0.00	15.9	158	-49		4.0*
1205	9.55	6.65	99.9*	0.00	15.2	110	-64		4.0*
1208	8.15	6.57	99.9*	0.25	15.1	107	-73		4.0*
1212	9.15	6.53	99.9*	0.33	15.4	75.6	-82		4.0*
1216	6.47	6.53	99.9*	0.14	15.3	66.2	-89		4.0*
1219	—	6.54	99.9*	0.09	15.2	57.4	-94		4.0*
1222	—	6.53	99.9*	0.01	15.7	38.0	-98	3 gal	4.0*

Purge Equipment	Peristaltic pump	Sampling Equipment	same
Laboratory	Onsite/ARI	Date Sent to Lab	8/12/10
Chain-of-Custody (yes/no)	Y	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Good producer
Signature [signature] Page 1 of 1

* value blinking - exceeds calibration

Parametrix, Inc.

Well #: MW-4R
Sample #: CHEV-GW-MW4R-0120

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/5/11
Project Name	Former Chevron Prop Remediation	Location	former yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Mills
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.05	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 14.00	Date Purged	4/5/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1436-1500
Date/Time Sampled	4/5/11 1510	200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1436	9.00	6.93	4.67	4.86	11.29	37.3	-144	
1440	9.21	7.06	3.77	3.27	11.34	31.2	-147	
1444	9.20	7.05	3.68	3.11	11.35	28.5	-147	
1448	9.22	7.05	3.62	3.49	11.38	14.6	-148	
1452	9.24	7.06	3.58	3.95	11.43	8.8	-148	
1456	9.31	7.07	3.58	4.06	11.48	8.1	-148	
1500	9.21	7.09	3.51	4.07	11.47	9.0	-149	2 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/6/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	CHEV-GW-MW4R-1120 PAHs only
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity: Good
Remarks: water in monument
Signature: _____ Page 1 of 1

Collect field duplicate on PAHs only @ 1520
CHEV-GW-MW4R-1120

Parametrix, Inc.

Well #: MW-9R
Sample #: CHEV-GW-MW9R-0146

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/7/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	6.63	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	4/1/11 14.47	Date Purged	4/7/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1038 - 1100
Date/Time Sampled	4/7/11 1115	200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1038	9.50	6.44	0.190	5.49	10.21	968	-90	
1042	12.30	6.60	0.184	0.93	10.08	>1000	-111	
1048	10.02	6.72	0.186	0.78	9.90	>1000	-119	
1052	13.30	6.75	0.183	0.47	10.25	>1000	-126	
1056	9.61	6.78	0.181	0.46	10.23	>1000	-131	
1100	14.42	6.78	0.181	0.40	10.32	>1000	-134	2gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/8/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks water in monument
Signature L. Linde

Page 1 of 1

Note: collected turbidity reading during sample collection → 355 NTU

Parametrix, Inc.

Well #: MW-10R
Sample #: CHEV-GW-MW10R-0140

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/5/11
Project Name	Former Chevron Prop Remediation	Location	MW-10R
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Lincoln
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	4.04	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 14.50	Date Purged	4/5/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	0909 - 0929
Date/Time Sampled	4/5/11 0935	300 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
0907	5.44	5.55	0.090	4.45	10.20	13.1	-60	
0911	5.51	5.47	0.090	3.52	10.16	2.5	-80	
0915	~~6.23~~ 5.46	6.23	0.090	3.27	10.24	6.1	-95	
0919	5.48	6.40	0.090	2.26	10.22	5.2	-107	
0925	5.49	6.42	0.090	2.24	10.17	3.1	-109	
0929	5.49	6.50	0.090	2.20	10.17	2.7	-110	2.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/6/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks water in monument
Signature [signature]

Parametrix, Inc.

Well #: ~~MW-25~~ 11
Sample #: CHEV-GW-~~MW25~~ 11 - 0130

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/5/11
Project Name	Former Chevron Prop Remediation	Location	~~MW-25~~ Lower Vjewl
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	11

Casing Diameter: 2" ___ X 4" ___ 6" ___ Other ___

Depth to Water (feet)	4.38	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 19.80	Date Purged	4/5/11
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1012 - 1036
Date/Time Sampled	4/5/11 1040		300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1012	4.55	6.66	95.8	4.39	10.74	18.8	-43	
1016	4.64	6.41	94.5	3.10	10.56	14.2	-44	
1020	4.70	6.31	82.0	2.72	10.48	6.8	-42	
1024	4.74	6.28	75.9	2.60	10.33	9.7	-39	
1028	4.77	6.27	69.4	2.55	10.39	4.3	-36	
1032	4.80	6.23	65.1	2.65	10.35	4.2	-32	
1036	4.80	6.17	64.3	2.67	10.29	3.4	-31	2.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/6/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	CHEV-GW-MW25-1130
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Missing monument cover but plug intact
Signature _____ Page 1 of 1

Duplicate collected @ 1100 CHEV-GW-MW25-1130

Parametrix, Inc.

Well #: MW-13R
Sample #: CHEV-GW-MW13R-0130

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/6/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	7.18	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 13.67	Date Purged	4/6/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1245 - 1307
Date/Time Sampled	4/6/11 1320		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO * (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1245	8.90	7.01	0.506	3.96	10.70	>1000	-76	
1249	10.00	7.05	0.494	6.56	10.87	>1000	-82	
1253	7.79	6.98	0.481	2.09	11.59	>1000	-94	
1255	—	7.02	0.431	3.76	11.38	>1000	-101	
1259	13.70	6.99	0.438	2.04	11.34	>1000	-105	
1303	—	7.00	0.443	2.06	11.72	>1000	-104	
1307	11.35	6.99	0.438	4.82	11.99	>1000	-103	1 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/7/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks water in monument, poor producer
Signature L. Linde
Page 1 of 1

* lots of bubbles

Parametrix, Inc.

Well #: MW-16R
Sample #: CHEV-GW-MW16R-0140

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/5
Project Name	Former Chevron Prop Remediation	Location	Upper Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linell
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.10	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 14.70	Date Purged	4/5
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1310 - 1333
Date/Time Sampled	4/5 1335		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1310	5.75	7.10	20.7	15.53	9.97	>1000	14	
1313	6.89	6.93	17.1	13.54	9.61	>1000	88	
1317	6.10	6.45	17.0	12.71	9.61	910	124	
1321	8.25	6.32	16.3	12.85	9.60	497	150	
1325	8.13	6.34	16.6	13.31	9.59	522	155	
1329	7.84	6.27	17.7	13.32	9.58	706	150	
1333	5.70	6.37	18.6	14.10	9.53	704	147	1gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/6/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument, bad producer
Signature [signature]

Parametrix, Inc.

Well #: MW-18R
Sample #: CHEV-GW-MW18R-0130

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/5/11
Project Name	Former Chevron Prop Remediation	Location	upper yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	2.53	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 13.95	Date Purged	4/5/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1210 - 1226
Date/Time Sampled	4/5/11 1235		200 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1210	3.22	6.43	0.090	4.61	9.91	76.0	-29	
1214	3.25	6.48	0.090	3.46	9.88	41.5	-30	
1218	3.29	6.51	0.090	3.42	9.88	29.4	-31	
1222	3.21	6.55	0.090	3.33	9.84	29.5	-27	
1226	3.20	6.61	0.090	3.39	9.88	28.6	-27	1.5gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/6/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks water in monument, mod producer
Signature [signature]

Parametrix, Inc.

Well #: MW-19R
Sample #: CHEV-GW-MW19R-0180

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/7/11
Project Name	Former Chevron Prop Remediation	Location	Upper Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.90	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	3/31/11 19.15	Date Purged	0904 - 0938
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	4/7/11
Date/Time Sampled	4/7/11 1000		150 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

	TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (mS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
	0904	7.55	5.23	0.090	8.61	10.13	>1000	81	
	0907	8.05	5.60	0.090	4.53	9.21	>1000	20	
*	0915	8.35	6.12	91.1	2.55	9.63	>1000	-4	
	0920	8.81	6.24	90.9	3.33	9.48	>1000	-4	
	0924	9.00	6.37	83.0	4.23	8.95	>1000	-2	
	0934	9.00	6.41	78.3	4.21	8.43	>1000	3	
	0938	9.25	6.41	82.1	4.10	8.82	>1000	4	1/2 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/8/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument.
Signature Linde
Page 1 of 1

* Stopped purging to sign samples to courier
NOTE: took turbidity during sample collection => 30 NTU

Parametrix, Inc.

Well #: MW-21R
Sample #: CHEV-GW-MW21R-1140

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/6/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.75	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	4/1/11 15.52	Date Purged	4/6/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	0852-0922
Date/Time Sampled	4/6/11 0930	200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
0852	6.67	6.51	0.496	4.25	11.12	120	-137	
0856	6.78	6.79	0.456	2.03	11.36	69.1	-149	
0900	6.85	6.91	0.436	1.50	11.16	55.0	-156	
	STOP to relinquish coolers to courier							
0910	6.62	7.02	0.434	1.55	11.00	42.0	-155	
0914	6.81	7.04	0.430	1.73	11.01	51.0	-156	
0918	6.85	7.05	0.431	1.83	11.16	49.2	-159	
0922	6.85	7.06	0.430	1.80	11.16	52.2	-160	8gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/7/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	CHEV-GW-MW21R-1140
Shipment Method	Courier	Split with (name(s)/organization)	

Well Integrity Good
Remarks water in monument
Signature Linde Page 1 of 1

collect field duplicate on T&D lead only 0945
CHEV-GW-MW21R-1140

Parametrix, Inc.

Well #: MW-22R
Sample #: CHEV-GW-MW22R-040

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/6/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linell
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	6.76	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	4/1/11 14.13	Date Purged	4/6/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1104 - 1135
Date/Time Sampled	4/6/11 1140		200 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1114	8.06	7.56	0.132	2.47	10.69	50.1	7	
1118	8.15	7.35	0.129	2.20	10.64	17.4	11	
1123	8.20	7.17	0.129	1.78	10.66	3.0	19	
1127	8.24	7.10	0.128	1.72	10.67	1.9	24	
1131	8.31	7.05	0.128	1.66	10.68	0.9	28	
1135	8.31	7.03	0.128	1.75	10.68	0.8	32	2gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/7/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument
Signature L. Linell

Parametrix, Inc.

Well #: MW-25
Sample #: CHEV-GW-MW-25-0130

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/6/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ___ X 4" ___ 6" ___ Other ___

Depth to Water (feet)	7.31	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	4/1/11 19.67	Date Purged	4/6/11
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1417 - 1445
Date/Time Sampled	4/6/11 1450	300 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1417	8.23	7.60	0.101	3.28	10.41	111	-59	
1421	7.92	7.15	0.090	1.80	10.12	62	-54	
1425	7.97	6.84	0.090	1.26	10.08	56.4	-45	
1429	8.05	6.58	0.090	0.99	9.71	69.4	-15	
1433	8.11	6.38	0.090	0.83	9.65	59.2	-20	
1437	8.22	6.21	0.090	0.61	9.66	62.5	-20	
1441	8.31	6.20	0.090	0.58	9.79	64.2	-25	
1445	8.32	6.20	0.090	0.57	9.73	65.5	-30	2.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/7/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument
Signature [signature]

Page 1 of 1

Parametrix, Inc.

Well #: MW-26R
Sample #: CHEV-GW-MW26R-[illegible]5

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/6/11
Project Name	Former Chevron Prop Remediation	Location	Lower Yard
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Hinde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ 4" ____ 6" ____ Other X ¾"

Depth to Water (feet)	5.73	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	4/1/11 14.25	Date Purged	4/6/11
Reference Point (surveyors notch/etc)	TOC (outter)	Purge Time (from/to)	1014 - 1034
Date/Time Sampled	4/6/11 1040	200 ml/min	

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1014	6.95	7.31	9.99 *	0.53	9.44	14.6	-44	
1018	6.48	7.13	9.99 *	0.33	9.44	0.1	-58	
1023	5.54	7.00	9.99 *	0.33	9.39	0.5	-72	
1027	5.65	6.96	9.99 *	0.34	9.39	0.2	-77	
1031	6.00	6.90	9.99 *	0.35	9.37	0.1	-84	
1034	6.10	6.88	9.99 *	0.36	9.37	0.1	-84	1.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/7/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good
Remarks Water in monument
Signature L. Hinde Page 1 of 1

* out of range
** water level indicator having trouble determining exact W.L.

Parametrix, Inc.

Well #: MW-27
Sample #: CHEV-GW-MW27- 0120

Groundwater Sampling Field Data Sheet

Project Number	233-1896-098 01/03	Date	4/7/11
Project Name	Former Chevron Prop Remediation	Location	Everett Park
Project Address	1310 Highland Drive, Bremerton	Sampled By	L. Linde
Client Name	City of Bremerton	Purged By	"

Casing Diameter: 2" ____ X 4" (outer casing) ____ 6" ____ Other x 3/4" sch 80 PVC

Depth to Water (feet)	5.81	Purge Vol. Meas.Method	Meas.cup/stop watch
Depth of Well (feet)	14.15 4/7/11	Date Purged	4/7/11
Reference Point (surveyors notch/etc)	TOC	Purge Time (from/to)	1222-1246
Date/Time Sampled	4/7/11 1250		300 ml/min

Purge Volume Calculation: $(\pi r^2 h)(7.48\ gal/ft^3)$(# Casing volumes)
Purge Volume (gallons) for 2" = (0.16)(h)(#Cv); 4" = (0.653)(h)(#Cv); 6" = (1.48)(h)(#Cv)
Calculated Purge Volume (gallons) _____ Actual Purge Volume (gallons) _____

TIME (2400 hr)	WATER LEVEL (ft) ± 0.3	pH (units) ± 0.1	COND (µS/cm) ± 3%	DO (mg/L) ±10%	TEMP °C	TURB. ±10% if > 10 NTU	ORP (mV) ± 10 mV	CUM. VOL. (gal)
1222	6.04	6.86	0.090	1.65	10.00	381	-68	
1226	6.20	6.62	0.090	0.73	10.05	170	-71	
1230	6.24	6.68	0.090	0.57	10.09	114	-77	
1234	6.26	6.59	0.090	0.40	10.19	90.5	-80	
1238	6.29	6.59	0.091	0.34	10.22	46.8	-83	
1242	6.28	6.58	0.092	0.30	10.27	47.5	-85	
1246	6.28	6.58	0.092	0.27	10.26	49.2	-88	2.5 gal

Purge Equipment	Peristaltic pump	Sampling Equipment	Same
Laboratory	Onsite/ARI	Date Sent to Lab	4/8/11
Chain-of-Custody (yes/no)	Yes	Field QC Sample Number	N/A
Shipment Method	Courier	Split with (name(s)/organization)	N/A

Well Integrity Good.
Remarks Sand in monument
Signature L. Linde Page 1 of 1

2" well broken, driller installed 3/4" schedule 80 PVC inside 2" casing
4'-14.5': 10/20 silica sand, 2'-4' bentonite chips, 0.5'-2' concrete

APPENDIX I

Data Validation Memoranda

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TECHNICAL MEMORANDUM

Date:	April 23, 2008
To:	Project File
From:	Stuart Currie
Subject:	Quality Assurance/Quality Control Review of Park Remedial Design/Chevron RI Soil and Groundwater Data
cc:	David Dinkuhn Lily Isenhart
Project Number:	255-1896-063 (04/1301)
Project Name:	Bremerton Boardwalk (Boardwalk, Sewer Park Design)

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for soil and water samples collected from March 5-19, 2008. Twenty-eight soil samples, eighteen groundwater samples, one surface water sample, two rinsate blanks, and two trip blanks were submitted to OnSite Environmental Inc. (Redmond, WA) for analysis.

Soil samples were analyzed for NWTPH-Gx/BTEX, NWTPH-Dx, chlorinated PAHs (cPAHs), total organic carbon (TOC), EPH/VPH and total lead. Water samples were analyzed for NWTPH-Gx/BTEX, NWTPH-Dx, EDB, EDC and MTBE, total and/or dissolved lead, chlorinated PAHs, and conventionals (alkalinity, nitrate, sulfate, chloride, and chemical oxygen demand).

Final laboratory data were submitted to Parametrix via Tier II-type data reports (Laboratory Reference Numbers 0803-043, 0803-055, 0803-097, and 0803-146). All data and analytical QC elements were reviewed against laboratory and method QC criteria, and qualifiers were applied where judged appropriate.

DATA REVIEW SUMMARY

All samples collected were prepared and analyzed using standard methods. All method holding times were met, except for following:

- cPAHs: rinsate sample collected on 3/7/08 and received by the laboratory on 3/14/08; sample was extracted on 3/24/08, seventeen days after collection (the method holding time is 7 days), potentially resulting in a loss of target analytes. All sample results were reported as non-detects; therefore, reported detection limits were qualified as estimated ("UJH" qualifier).

For several analyses, the laboratory reported elevated practical quantitation limits (PQLs) due to interferences present in the sample. Affected results were qualified in the data packet(s) with a "U1" qualifier. In the NWTPH-Gx/BTEX analyses, the laboratory reported that the gasoline-range results were

impacted by heavier fuel hydrocarbons present in the sample. Affected results were qualified in the data packet(s) with an "O" qualifier. In the NWTPH-Dx analyses, the laboratory reported that the diesel-range results were impacted by gasoline-range hydrocarbons present in the sample. Affected results were qualified in the data packet(s) with an "M" qualifier. No further action was required for any of these samples.

No laboratory method blank contamination was observed. Low-level rinsate blank contamination was noted in the sample collected on 3/18/08, for diesel and 1-methylnaphthalene. Blank levels for both analytes were greater than the PQL. For the diesel analyses, corresponding sample results (i.e., collected on the same day as the rinsate sample) that were less than 10 times the rinsate blank concentration were qualified as estimated ("JB" qualifier). Non-detects and results greater than 10 times the blank level were not qualified. No 1-methylnaphthalene data were qualified as all corresponding results were either non-detect or greater than 10 times the rinsate blank concentration.

For the cPAH analyses, several samples each had one surrogate recovery (out of 3) that exceeded the laboratory control limits. The laboratory SOP for this analysis considers this acceptable, as long as the recovery is greater than 10%. This was the case for all samples; therefore, no further action was required and no data were qualified.

All other analytical QC results were in control, indicating good analytical accuracy and precision. Table 1 summarizes all data qualified based on this review (i.e., does not include laboratory qualified data).

Table 1. Qualified Park Remedial Design/Chevron RI Soil and Groundwater Data

Sample ID	Matrix	Analyte	Result	Qualifier	Reason
Rinsate (3/7/08)	Water	Naphthalene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	2-Methylnaphthalene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	1-Methylnaphthalene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Acenaphthylene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Acenaphthene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Fluorene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Phenanthrene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Anthracene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Fluoranthene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Pyrene	0.097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Benzo(a)anthracene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Chrysene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Benzo(b)fluoranthene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Benzo(k)fluoranthene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Benzo(a)pyrene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Indeno(1,2,3-c,c)pyrene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Dibenz(a,h)anthracene	0.0097 ug/L	UJH	Holding time exceeded.
Rinsate (3/7/08)	Water	Benzo(g,h,i)perylene	0.0097 ug/L	UJH	Holding time exceeded.
CHEV-GW-MW21-0100	Water	Diesel Range Organics	1.7 mg/L	J	Rinsate contamination.
CHEV-GW-MW25-0120	Water	Diesel Range Organics	1.2 mg/L	J	Rinsate contamination.
CHEV-GW-MW26-0130	Water	Diesel Range Organics	1.3 mg/L	J	Rinsate contamination.
CHEV-GW-MW25-1120	Water	Diesel Range Organics	1.0 mg/L	J	Rinsate contamination.

J Analyte was detected; the reported concentration should be considered an estimate

UJH Analyte was not detected at the PQL; value should be considered an estimate due to exceeded method holding time

CONCLUSION

All samples were analyzed within holding times, with the exception of one rinsate blank sample, and appropriate standard methods were used. Analytical accuracy and precision were determined to be generally acceptable based on this review. Specific instances of low-level rinsate blank contamination were identified for several analyses, and corresponding data were qualified where appropriate; however, no data were rejected based on this review. All data reported should be considered valid as qualified and acceptable for further use.

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TECHNICAL MEMORANDUM

Date:	February 8, 2010
To:	Project File
From:	Lara Linde
Subject:	Quality Assurance/Quality Control Review – 0912-107 and 0912-190
cc:	David Dinkuhn
Project Number:	255-1896-063 (04/1301)
Project Name:	Chevron Property

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for soil samples collected on December 14, 15 and 29, 2009. A total of fourteen soil samples each were submitted to Onsite Environmental, Inc. in Redmond, Washington for analysis.

Soil samples were analyzed for a combination of analyses included in Table 1.

Final laboratory data were submitted to Parametrix via a Tier II-type data report (On-Site Laboratory Reference Number 0912-107 and 0912-190). All data and analytical QC elements were reviewed against laboratory and method QC criteria and qualifiers were judged where appropriate.

DATA REVIEW SUMMARY

- All samples collected were prepared and analyzed using standard methods.
- All method holding times were met.
- All analyses requested on the chain-of-custody (COC) were conducted.
- No laboratory method blank contamination was observed.
- Checkmarks utilized for field QA/QC purposes were included in the sample identification number on laboratory report 0912-190.
- All nine of the samples requested for Gx/BTEX analysis reported interferences due to heavier fuels which impacted the gasoline result.
- All other analytical QC results were in control indicating acceptable analytical accuracy and precision.

Table 1. Summary of Soil Samples and Analyses

			Analysis				
Report	Sample ID	Date	Gx/BTEX	Dx	Benzene	PAHs	Moisture
0912-107	CHEV-SO-MW22R-0100	12/14/09				X	X
	CHEV-SO-MW21R-0100	12/15/09	X				X
	CHEV-SO-PP34-0110	12/15/09			X		X
	CHEV-SO-MW9R-0090	12/15/09	X	X		X	X
	CHEV-SO-PP35-0100	12/15/09	X			X	X
	CHEV-SO-PP33-0100	12/15/09	X			X	X
	CHEV-SO-PP30-0100	12/15/09	X			X	X
0912-190	CHEV-SO-MW4R-0100	12/29/09	X			X	X
	CHEV-SO-MW10R-0070	12/29/09		X			X
	CHEV-SO-MW22R-0100	12/29/09	X				X
	CHEV-SO-MW26R-0060	12/29/09	X				X
	CHEV-SO-PP31-0010	12/29/09	X			X	X
	CHEV-SO-PP32-0100	12/29/09	X				X
	CHEV-SO-PP36-0080	12/29/09				X	X

Dx = Diesel extended

Gx/BTEX = Gasoline extended and benzene, toluene, ethylbenzene, and mp- and o-xylene

CONCLUSION

All samples were analyzed within holding times and appropriate standard methods were used. No laboratory method blank contamination was observed. Analytical accuracy and precision were determined to be generally acceptable and no data was qualified based on this review. All data reported should be considered valid as qualified and acceptable for further use.

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TECHNICAL MEMORANDUM

Date:	June 4, 2010
To:	Project File
From:	Lara Linde
Subject:	Quality Assurance/Quality Control Review of Former Chevron Property RI/FS Soil and Groundwater Data through March 2010
cc:	David Dinkuhn
Project Number:	255-1896-063 04/1304
Project Name:	Bremerton Boardwalk

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for soil and groundwater samples collected between June 23, 2008 and February 16, 2010. Sixty soil samples, fourteen groundwater samples, and one trip blank were submitted to OnSite Environmental, Inc., (Redmond, WA) for analysis. A portion of samples were sent to Analytical Resources, Inc., (Tukwila, WA) and AMTEST, Inc. (Kirkland, WA) for conventional analysis.

All samples were analyzed for one or more of the following:

- Benzene, toluene, ethyl benzene, xylenes (BTEX)
- Diesel-range organics
- Lube-oil range organics
- Gasoline range organics
- Total lead
- Full list or carcinogenic polycyclic aromatic hydrocarbons (PAHs)
- Dissolved lead, iron, manganese
- Alkalinity
- Nitrate
- Percent moisture
- Sulfate
- Chloride
- Biological oxygen demand (BOD)
- Dissolved methane

A summary of samples and analyses is provided in Table 1.

Final laboratory data were submitted to Parametrix via Tier II-type data reports (OnSite Laboratory Reference Numbers 0806-187, 0808-164, 0906-029, 0906-069, 0906-084, 0906-099, 0906-122, 0906-146, 0906-147, 0906-148, 096-200, 1001-116, 1001-123, 1001-132, 1002-114; ARI Reference Numbers MO-25, MN41, MM-16, ML85, MM03; AMTEST Laboratory Reference Numbers 10-A00810,10-A000880, 10-A000922, 10-A002705). All data and analytical QC elements were reviewed against laboratory and method QC criteria, and qualifiers were applied where judged appropriate.

DATA REVIEW SUMMARY

All analyses requested on the COC were conducted. All samples collected were prepared and analyzed using standard methods with the exception of samples associated with the following laboratory reports: 0906-069, 0906-

084, 0906-099, 0906-148, and 0906-200. To simulate environmental conditions after remediation, all samples contained within the reports listed above were collected in 4 ounce jars and allowed to sit at room temperature for seven days after collection to mimic field conditions for soil treated with chemical oxidant.

All method holding times were met except the holding time for a single nitrate sample from report # 1002-114 was exceeded. The sample was collected on 2/15/10 and analyzed on 2/17/10 just hours after the method hold time expired. The associated result was reported as a non-detect and was not qualified.

No laboratory method blank or trip blank contamination was observed. Groundwater samples for reports 1001-116, 1001-123, 1001-132, 1002-114 were not accompanied by trip blanks. Associated detected volatiles results were qualified as estimated "J".

A total of one soil field duplicate sample was collected and analyzed. RPDs for the duplicate sample fell within acceptable limits. The sampling frequency for field duplicate samples was not met (1 field duplicate per 20 samples); however no data qualifiers were applied to the associated data.

For several PAHs analyses for reports 1001-116 and 1001-123, the laboratory reported a single surrogate recovery outside of control limits. This was within the allowance of the laboratory's SOPs since the associated recoveries were above 10 % and no data qualifiers were applied.

For one or more samples the following was observed: the laboratory reported elevated practical quantitation limits (PQLs) due to interferences present in the sample. Affected results were qualified in the data packet(s) with a "U1" qualifier. For NWTPH-Gx/BTEX analyses, the laboratory reported that the gasoline-range results were impacted by heavier fuel hydrocarbons present in the sample. Affected results were qualified in the data packet(s) with an "O" qualifier. In the NWTPH-Dx analyses, the laboratory reported that the diesel-range results were impacted by gasoline-range hydrocarbons present in the sample. In the NWTPH-Dx analyses, the laboratory reported that the oil-range results were impacted by diesel-range hydrocarbons present in the sample. Affected results were qualified in the data packet(s) with a "Z" qualifier. No further action was required for any of these samples.

For report 1002-114, a single sulfate sample PQL was increased due to sample interference. The associated sample result was not qualified by the laboratory.

Table 2 summarizes all data qualified based on this review (i.e., does not include laboratory qualified data).

CONCLUSION

All samples were analyzed within holding times, with the exception of one nitrate analysis, and appropriate standard methods were used. No laboratory method blank contamination was observed. Analytical accuracy and precision were determined to be acceptable based on this review. RPD results for the single field duplicate sample were acceptable. All data reported should be considered valid as qualified and acceptable for further use.

Table 1. Former Chevron Property RI/FS Summary of Samples and Analyses

Report #	Sample #	Date	Time	Matrix	Gx	BTEX	Dx	PAHs	Total Lead	Dissolved Lead	Dissolved Iron	Dissolved Manganese	% Moisture	Alkalinity	Nitrate	Sulfate	Chloride	Methane	BOD5
0806-187	CHEV-SO-PP20-0090	6/23/2008	1030	Soil	X	X	X	X					X						
	CHEV-SO-PP20-0100	6/23/2008	1045	Soil	X	X	X						X						
	CHEV-GW-PP20-0130	6/23/2008	1100	Water	X	X	X						X						
	CHEV-SO-PP21-0090	6/23/2008	1115	Soil	X	X	X						X						
	CHEV-SO-PP21-1090	6/23/2008	1130	Soil	X	X	X						X						
	CHEV-SO-PP21-0100	6/23/2008	1145	Soil	X	X	X						X						
	CHEV-SO-PP22-0080	6/23/2008	1200	Soil	X	X	X						X						
	CHEV-SO-PP22-0100	6/23/2008	1215	Soil	X	X	X						X						
	CHEV-SO-PP23-0080	6/23/2008	1230	Soil	X	X	X						X						
	CHEV-SO-PP23-0090	6/23/2008	1245	Soil	X	X	X						X						
0808-164	CHEV-SO-PP24-0100	8/20/2008	1200	Soil	X	X	X						X						
	CHEV-SO-PP25-0100	8/20/2008	1215	Soil	X	X	X						X						
	CHEV-SO-PP26-0100	8/20/2008	1225	Soil	X	X	X						X						
	CHEV-SO-PP27-0105	8/20/2008	1250	Soil	X	X	X						X						
	CHEV-SO-PP28-0100	8/20/2008	1315	Soil	X	X	X						X						
	CHEV-SO-BULK-0110	8/20/2008	1220	Soil	X	X	X						X						
	CHEV-GW-PP29-0140	8/20/2008	1430	Water	X	X	X												
	TRIP BLANK	8/20/2008	800	Water	X	X													
0906-029	CHEV-SO-SB01-0000	6/2/2009	948	Soil	X	X	X		X				X						
	CHEV-SO-SB02-0000	6/2/2009	952	Soil	X	X	X		X				X						
0906-069	CHEV-SO-SBB7-0100	6/4/2009	1400	Soil	X	X	X	X					X						
	CHEV-SO-SBC2-0100	6/5/2009	1300	Soil	X	X	X	X					X						
	CHEV-SO-SBH2-0100	6/5/2009	1350	Soil	X	X	X	X					X						
0906-084	CHEV-SO-SBJ7-0100	6/8/2009	1430	Soil	X	X	X	X					X						
	CHEV-SO-SBK5-0100	6/8/2009	1015	Soil	X	X	X	X					X						
	CHEV-SO-SBL5-0100	6/8/2009	1030	Soil	X	X	X	X					X						
	CHEV-SO-SBL8-0090	6/8/2009	1445	Soil	X	X	X	X					X						
	CHEV-SO-SBD13-0100	6/9/2009	1530	Soil	X	X	X	X					X						
	CHEV-SO-SBH10-0100	6/9/2009	1500	Soil	X	X	X	X					X						
	CHEV-SO-SBR7-0080	6/10/2009	1350	Soil	X	X	X	X					X						
0906-099	CHEV-SO-SBG4-1100	6/11/2009	1300	Soil	X	X	X	X					X						
0906-122	CHEV-SO-BT01-0120	6/16/2009	1145	Soil	X	X	X						X						
	CHEV-SO-SW01-0200	6/16/2009	1150	Soil	X	X	X						X						
	CHEV-SO-BT03-0140	6/16/2009	1205	Soil	X	X	X						X						

Table 1. Former Chevron Property RI/FS Summary of Samples and Analyses

Report #	Sample #	Date	Time	Matrix	Gx	BTEX	Dx	PAHs	Total Lead	Dissolved Lead	Dissolved Iron	Dissolved Manganese	% Moisture	Alkalinity	Nitrate	Sulfate	Chloride	Methane	BOD5
	CHEV-SO-SW03-0120	6/16/2009	1212	Soil	X	X	X						X						
0906-146	CHEV-SO-BT05-0120	6/16/2009	1400	Soil			X						X						
	CHEV-SO-SW06-0110	6/16/2009	1445	Soil			X						X						
	CHEV-SO-BT05-1120	6/19/2009	1430	Soil	X	X							X						
	CHEV-SO-SW06-1110	6/19/2009	1445	Soil	X	X							X						
0906-147	CHEV-SO-SW07-0180	6/18/2009	800	Soil	X	X	X	X					X						
	CHEV-SO-SW08-0150	6/18/2009	805	Soil	X	X	X						X						
	CHEV-SO-BT09-0110	6/18/2009	830	Soil	X	X	X						X						
	CHEV-SO-SW10-0100	6/18/2009	833	Soil	X	X	X						X						
	CHEV-SO-SW11-0100	6/18/2009	838	Soil	X	X	X						X						
	CHEV-SO-SW12-0090	6/18/2009	855	Soil	X	X	X						X						
	CHEV-SO-SW13-0150	6/18/2009	1020	Soil	X	X	X						X						
	CHEV-SO-BT14-0170	6/18/2009	1022	Soil	X	X	X						X						
	CHEV-SO-BT15-0170	6/18/2009	1024	Soil	X	X	X	X					X						
	CHEV-SO-SW16-0150	6/18/2009	1026	Soil	X	X	X						X						
	CHEV-SO-SW17-0160	6/18/2009	1028	Soil	X	X	X						X						
	CHEV-SO-SW18-0150	6/18/2009	1030	Soil	X	X	X						X						
	CHEV-SO-SP19-0000	6/18/2009	1105	Soil	X	X	X						X						
	CHEV-SO-SP20-0000	6/18/2009	1107	Soil	X	X	X						X						
	CHEV-SO-SP21-0000	6/18/2009	1114	Soil	X	X	X						X						
	CHEV-SO-SP22-0000	6/18/2009	1110	Soil	X	X	X						X						
	CHEV-SO-SP23-0000	6/18/2009	1120	Soil	X	X	X						X						
	CHEV-SO-SBC2-2095	6/16/2009	1215	Soil	X	X	X	X					X						
	CHEV-SO-SBH2-2100	6/16/2009	1210	Soil	X	X	X	X					X						
	CHEV-SO-SBG4-2100	6/16/2009	1200	Soil	X	X	X	X					X						
	CHEV-SO-SBL5-2100	6/17/2009	1535	Soil	X	X	X	X					X						
	CHEV-SO-SBL8-2090	6/17/2009	1540	Soil	X	X	X	X					X						
	CHEV-SO-SBJ7-2100	6/17/2009	1530	Soil	X	X	X	X					X						
0906-200	CHEV-SO-SBR7-2100	6/22/2009	1145	Soil	X	X	X	X					X						
1001-116	CHEV-GW-MW9R-0120	1/20/2010	1210	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW11-0120	1/20/2010	920	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW10R-0120	1/20/2010	1100	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
1001-123	CHEV-GW-MW22R-0120	1/20/2010	1610	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW26-0120	1/20/2010	1445	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
1001-132	CHEV-GW-MW25-0120	1/21/2010	1330	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
1002-114	CHEV-GW-MW21-0120	2/15/2010	1040	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW13-0120	2/15/2010	1400	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW4-0120	2/15/2010	1500	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW19-0170	2/16/2010	930	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW16-0120	2/16/2010	1030	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X
	CHEV-GW-MW18-0120	2/16/2010	1145	Water	X	X	X	X	X	X	X	X		X	X	X	X	X	X

Table 2. Former Chevron Property Qualified Data

Report #	Sample #	Matrix	Analyte	Qualifier	Reason
1001-116	CHEV-GW-MW9R-0120	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.
	CHEV-GW-MW26-0120	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.
1001-132	CHEV-GW-MW25-0120	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.
	CHEV-GW-MW21-0120	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.
1002-114	CHEV-GW-MW13-0120	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.
	CHEV-GW-MW19-0170	Water	Detected GRO/BTEX compounds	J	Sample not accompanied by trip blank.

J = Analyte was detected; the reported concentration should be considered an estimate.

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TECHNICAL MEMORANDUM

Date:	June 18, 2010
To:	Project File
From:	Annika Deutsch
Subject:	Quality Assurance/Quality Control Review for Chevron
cc:	David Dinkuhn
Project Number:	255-1896-063 (04/1304)
Project Name:	Chevron 2Q2010 Groundwater Monitoring

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for groundwater samples collected on May 25-27 and June 1, 2010. Fifteen groundwater samples (including two field duplicates [CHEV-GW-MW4R-1120 and CHEV-GW-MW9R-1130]) were submitted to OnSite Environmental, Inc. (Redmond, WA) for analysis. The samples were accompanied by three trip blanks.

The samples were analyzed for a combination of gas-extended, BTEX, diesel-extended, total and dissolved lead, dissolved manganese, chloride, alkalinity, sulfate, nitrate, dissolved methane, ferrous iron, and BOD. A spreadsheet is attached summarizing the analyses requested on the four chains-of-custody (COCs).

Final laboratory data were submitted to Parametrix via a Tier II-type data report (On-Site Laboratory Reference Numbers 1006-006, 1005-180, 1055-197, 1005-219). All data and analytical QC elements were reviewed against laboratory and method QC criteria, and qualifiers were applied where judged appropriate.

DATA REVIEW SUMMARY

All samples collected were prepared and analyzed using standard methods. All method holding times were met. All analyses requested on the COC were conducted, with two exceptions: nitrate was requested for sample CHEV-GW-MW10R-0120 but was not analyzed, and ferrous iron was not requested for CHEV-GW-MW19R-0160 but was analyzed and reported. Additionally, for report #1005-219, the COC provided to the subcontract lab ARI mistakenly requested analysis of CHEV-GW-MW13R-0130 for ferrous iron and BOD; however, their was no associated sample received, so the lab could not perform the erroneous analyses.

No laboratory method or trip blank contamination was observed.

Field duplicate results were acceptable, with the exception of diesel, total lead, and BOD. One of the field duplicate results for diesel was an estimated value due to gasoline interference. Therefore, it was deemed acceptable. The total lead relative percent difference (RPD) was 69% (limit 25%); therefore, all total lead results were qualified as estimated "J". The BOD RPD was over the limit (36%, limit 25%) but was close to being within the detection limit (1.1, difference 1.3). Due to the nature of BOD, this was deemed acceptable.

The case narrative did not note any issues. The lab qualified two diesel results as "M" based on gasoline interference.

All other analytical QC results were in control, indicating acceptable analytical accuracy and precision. Table 1 summarizes all data qualified based on this review (i.e., does not include laboratory qualified data).

Table 1. Qualified Chevron Groundwater Data

Sample ID	Analyte	Result	Qualifier	Reason
CHEV-GW-MW21R-0120	Total Lead	2.8 µg/L	J	Field duplicate RPD out of control.
CHEV-GW-MW9R-0130	Total Lead	36 µg/L	J	Field duplicate RPD out of control.
CHEV-GW-MW9R-1130	Total Lead	74 µg/L	J	Field duplicate RPD out of control.

J Analyte was detected; the reported concentration should be considered an estimate due to the reason noted above.

As an editorial note, the report #1005-197 had two typos related to sample IDs. Page 15 listed a sample CHEV-GW-MWPR-1130, which should have been CHEV-GW-MW**9**R-1130. Page 23 listed a sample MW-GW-MW13R-0130, which should have been **CHEV**-GW- MW13R-0130.

CONCLUSION

All samples were analyzed within holding times, and appropriate standard methods were used. No laboratory method blank contamination was observed. Analytical accuracy and precision were determined to be generally acceptable based on this review. Field duplicate results were acceptable, with the exception of total lead as noted. All data reported should be considered valid as qualified and acceptable for further use.

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TECHNICAL MEMORANDUM

Date:	October 20, 2010
To:	Project File
From:	Annika Deutsch
Subject:	Quality Assurance/Quality Control Review for Chevron
cc:	David Dinkuhn
Project Number:	255-1896-063 (04/1304)
Project Name:	Chevron 3Q2010 Groundwater Monitoring

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for groundwater samples collected on August 10 through 12, 2010. Fifteen groundwater samples (including two three duplicates [CHEV-GW-MW21R-1140, CHEV-GW-MW-4R-1120, and CHEV-GW-MW11-1170]) were submitted to OnSite Environmental, Inc. (Redmond, WA) and Analytical Resources, Inc., (ARI; Tukwila, WA) for analysis. The samples were accompanied by three trip blanks.

The samples were analyzed for a combination of gas-extended, BTEX, diesel-extended, total and dissolved lead, dissolved manganese, chloride, alkalinity, sulfate, nitrate, dissolved methane, ferrous iron, and BOD.

Final laboratory data were submitted to Parametrix via a Tier II-type data report (On-Site Laboratory Reference Numbers 1008-096, 1008-087, 1008-077, and ARI Reference Numbers RI51, RI23, RI02). All data and analytical QC elements were reviewed against laboratory and method QC criteria, and qualifiers were applied where judged appropriate.

DATA REVIEW SUMMARY

All samples collected were prepared and analyzed using standard methods. All method holding times were met. All analyses requested on the COC were conducted.

No laboratory method or trip blank contamination was observed, with the exception of methane in TB-2. TB-2 had a detection of methane at 0.78 ug/L. All associated samples had detections of methane at levels greater than five times the trip blank detection; therefore, no results were qualified.

Field duplicate results were acceptable, with the exception of total lead. The total lead relative percent difference (RPD) was 58% (limit 25%); therefore, all associated total lead results were qualified as estimated "J".

The case narrative did not note any issues. The lab qualified some diesel results as "M" based on gasoline interference, and some gasoline results as "O" for heavier fuel interference. The lab also qualified some results with "U1", indicating an elevated practical quantitation limit. One gasoline result was qualified as "T", indicating that the sample chromatogram is not similar to typical gas. These results were not qualified based on this data review.

The RPD for nitrate's laboratory duplicate in report 1008-077 was slightly high (16%, limit of 14%). However, all other QC results associated with nitrate in this report were acceptable. Therefore, no results were qualified.

All other analytical QC results were in control, indicating acceptable analytical accuracy and precision. Table 1 summarizes all data qualified based on this review (i.e., does not include laboratory qualified data).

Table 1. Qualified Chevron Groundwater Data

Sample ID	Analyte	Result	Qualifier	Reason
CHEV-GW-MW9R-0140	Total Lead	21 µg/L	J	Field duplicate RPD out of control.
CHEV-GW-MW21R-0140	Total Lead	10 µg/L	J	Field duplicate RPD out of control.
CHEV-GW-MW21-0140	Total Lead	5.5 µg/L	J	Field duplicate RPD out of control.

J Analyte was detected; the reported concentration should be considered an estimate due to the reason noted above.

As an editorial note, the report #1008-077 had a typo related to one of the sample IDs. The gasoline results for CHEV-GW-MW**1**8R-0130 were missing a 1 (CHEV-GW-MW8R-0130).

CONCLUSION

All samples were analyzed within holding times, and appropriate standard methods were used. No laboratory method blank contamination was observed. Some trip blank contamination was observed; however, the associated samples did not appear to be impacted. Analytical accuracy and precision were determined to be generally acceptable based on this review. Field duplicate results were acceptable, with the exception of total lead as noted. All data reported should be considered valid as qualified and acceptable for further use.

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TECHNICAL MEMORANDUM

Date:	May 19, 2011
To:	Project File
From:	Mike Baxter
Subject:	Quality Assurance/Quality Control Review for Chevron
cc:	David Dinkuhn
Project Number:	255-1896-063 (04/1304)
Project Name:	Chevron 2Q2011 Groundwater Monitoring

INTRODUCTION

This technical memorandum summarizes the results of an internal quality assurance/quality control (QA/QC) review of analytical results for groundwater samples collected on April 5 through 7, 2011. Thirteen groundwater samples, including three duplicates (CHEV-GW-MW11-1130, CHEV-GW-MW4R-1120 [PAHs only], and CHEV-GW-MW21R-1140 [total and dissolved lead only]), were submitted to OnSite Environmental, Inc. (Redmond, WA) and Analytical Resources, Inc., (Tukwila, WA) for analysis. The samples were accompanied by three gasoline/BTEX trip blanks.

All samples were analyzed for gasoline/BTEX, diesel/lube oil, nitrate, sulfate, alkalinity, chloride, dissolved methane, total ferrous iron, and dissolved manganese, except for the above mentioned duplicates and trip blanks. Samples MW-4R and MW-13R were additionally analyzed for PAHs. Samples MW-9R and MW-21R were additionally analyzed for total and dissolved lead.

Final laboratory data were submitted to Parametrix via a Tier II-type data report and EIM EDD (On-Site Laboratory Reference Numbers 1104-036, 1104-046, 1104-051, and ARI Reference Numbers SQ56, SQ76, SR00). All data and analytical QC elements were reviewed against laboratory and method QC criteria, and qualifiers were applied where judged appropriate.

DATA REVIEW SUMMARY

All samples collected were prepared and analyzed using standard methods. All sample temperature requirements and method holding times were met. All analyses requested on the COC were conducted.

No laboratory method or trip blank contamination was reported.

Field duplicate results were acceptable (<20% RPD).

The following QA/QC issues were noted in the lab report case narratives:

<u>PAHs EPA 8270D/SIM Analysis</u>

The sample and field duplicate for MW-4R (CHEV-GW-MW4R-0120 and CHEV-GW-MW4R-1120) formed a thick precipitate upon extraction that prevented concentrating the extracts down completely and resulted in elevated PQLs.

Sulfate ASTM D516-02 Analysis

The PQL for MW-4R was increased to due matrix interference.

The following data qualifiers were applied by the lab to results in the reports:

The diesel range organics results for MW-10R and MW-21R were flagged “U1”, indicating that the PQLs are elevated due to matrix interference.

The diesel range organics results for MW-4R, MW-13R, MW-25, and MW-9R are flagged “M”, indicating that hydrocarbons in the gasoline range are impacting the diesel range results.

All analytical QC results were in control, indicating acceptable analytical accuracy and precision. No data is further qualified based on this review.

CONCLUSION

All samples were analyzed within holding times, and appropriate standard methods were used. No laboratory method blank contamination was observed. Analytical accuracy and precision were determined to be acceptable based on this review. Field duplicate results were acceptable. All data reported should be considered valid as qualified and acceptable for further use.

APPENDIX J

Analytical Laboratory Reports

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 26, 2008

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255 1896 063 04/1301
Laboratory Reference No. 0803-043

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on March 7, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

Case Narrative

Samples were collected on March 5, 2008 and received by the laboratory on March 6, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

PAHs EPA 8270D/SIM Analysis

Sample CHEV-S0-SS09-1000 had one surrogate outside of control limits. This is allowed by the method as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx

Date Extracted:	3-10-08
Date Analyzed:	3-10-08
Matrix: Soil	
Units: mg/kg (ppm)	
Client ID:	**CHEV-SO-PP01-0080**
Lab ID:	03-043-01

	Result	Flags	PQL
TPH-Gas	**ND**		8.1
Surrogate Recovery:			
Fluorobenzene	92%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP02-0140**			**CHEV-SO-PP03-0170**		
Lab ID:	03-043-02			03-043-03		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.042	**ND**		0.094
Ethyl Benzene	**ND**		0.042	**ND**		0.094
m,p-Xylene	**ND**		0.042	**ND**		0.094
o-Xylene	**ND**		0.042	**ND**		0.094
TPH-Gas	**ND**		4.2	**ND**		9.4
Surrogate Recovery:						
Fluorobenzene	95%			95%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP04-0140**			**CHEV-SO-PP05-0160**		
Lab ID:	03-043-04			03-043-05		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**	**U1**	0.093	**ND**		0.020
Toluene	**ND**	**U1**	0.47	**ND**		0.097
Ethyl Benzene	**ND**	**U1**	0.47	**ND**		0.097
m,p-Xylene	**0.33**		0.093	**ND**		0.097
o-Xylene	**ND**	**U1**	0.47	**ND**		0.097
TPH-Gas	**ND**		9.3	**ND**		9.7
Surrogate Recovery:						
Fluorobenzene	95%			87%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7&11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP06-0160**			**CHEV-SO-PP07-0100**		
Lab ID:	03-043-06			03-043-07		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.022	**ND**		0.022
Toluene	**ND**		0.11	**ND**		0.11
Ethyl Benzene	**ND**		0.11	**ND**		0.11
m,p-Xylene	**ND**		0.11	**ND**		0.11
o-Xylene	**ND**		0.11	**ND**		0.11
TPH-Gas	**ND**		11	**ND**		11
Surrogate Recovery:						
Fluorobenzene	95%			96%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP08-0080**			**CHEV-SO-PP08-1080**		
Lab ID:	03-043-08			03-043-09		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**---**			**0.17**		0.11
Toluene	**---**			**ND**	**U1**	5.4
Ethyl Benzene	**---**			**ND**	**U1**	11
m,p-Xylene	**---**			**17**		1.1
o-Xylene	**---**			**ND**	**U1**	11
TPH-Gas	**ND**		130	**ND**		110
Surrogate Recovery:						
Fluorobenzene	93%			96%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7,10&12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP09-0060**			**CHEV-SO-PP09-0100**		
Lab ID:	03-043-10			03-043-11		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**---**			**ND**		0.020
Toluene	**---**			**ND**		0.080
Ethyl Benzene	**---**			**ND**		0.080
m,p-Xylene	**---**			**ND**		0.080
o-Xylene	**---**			**ND**		0.080
TPH-Gas	**ND**		12	**ND**		8.0
Surrogate Recovery: Fluorobenzene	97%			90%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SS09-0000**			**CHEV-SO-SS09-1000**		
Lab ID:	03-043-12			03-043-13		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.076	**ND**		0.077
Ethyl Benzene	**ND**		0.076	**ND**		0.077
m,p-Xylene	**ND**		0.076	**ND**		0.077
o-Xylene	**ND**		0.076	**ND**		0.077
TPH-Gas	**ND**		7.6	**ND**		7.7
Surrogate Recovery:						
Fluorobenzene	86%			88%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SS04-0000**			**CHEV-SO-SS20-0000**		
Lab ID:	03-043-14			03-043-15		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.065	**ND**		0.051
Ethyl Benzene	**ND**		0.065	**ND**		0.051
m,p-Xylene	**ND**		0.065	**ND**		0.051
o-Xylene	**ND**		0.065	**ND**		0.051
TPH-Gas	**ND**		6.5	**ND**		5.1
Surrogate Recovery:						
Fluorobenzene	97%			86%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
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NWTPH-Gx/BTEX

Date Extracted: 3-7-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SS23-0000**
Lab ID: 03-043-16

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.053
Ethyl Benzene	**ND**		0.053
m,p-Xylene	**ND**		0.053
o-Xylene	**ND**		0.053
TPH-Gas	**ND**		5.3
Surrogate Recovery:			
Fluorobenzene	112%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0307S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	101%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0307S2

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	94%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0310S1

	Result	Flags	PQL
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	104%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-7&10-8

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-043-02 **Original**	03-043-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	95%	105%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-043-16 **Original**	03-043-16 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	112%	112%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-055-09 **Original**	03-055-09 **Duplicate**	**RPD**	**Flags**
Benzene	**0.284**	**0.288**	1	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**0.445**	**0.540**	19	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**78.8**	**89.4**	13	
Surrogate Recovery:				
Fluorobenzene	97%	93%		

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 1.93

Lab ID:	03-043-02 **MS**	Percent Recovery	03-043-02 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**1.94**	**100**	**1.90**	**98**	2	
Toluene	**1.95**	**101**	**1.95**	**101**	0	
Ethyl Benzene	**1.95**	**101**	**1.91**	**99**	2	
m,p-Xylene	**1.96**	**102**	**1.92**	**99**	2	
o-Xylene	**1.96**	**102**	**1.91**	**99**	3	

Surrogate Recovery:

Fluorobenzene	101%	98%

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-PP01-0080**	**CHEV-S0-PP02-0140**	**CHEV-S0-PP03-0170**
Lab ID:	03-043-01	03-043-02	03-043-03
Diesel Range:	**300**	**ND**	**ND**
PQL:	28	28	28
Identification:	Diesel Fuel#2	---	---
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	55	55	55
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	78%	79%	78%
Flags:	Y	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-PP04-0140**	**CHEV-S0-PP05-0160**	**CHEV-S0-PP06-0160**
Lab ID:	03-043-04	03-043-05	03-043-06
Diesel Range:	**82**	**ND**	**ND**
PQL:	27	28	28
Identification:	Diesel Fuel#2	---	---
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	54	56	55
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	81%	91%	85%
Flags:	Y	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-PP07-0100**	**CHEV-S0-PP08-0080**	**CHEV-S0-PP08-1080**
Lab ID:	03-043-07	03-043-08	03-043-09
Diesel Range:	**1400**	**2000**	**2000**
PQL:	28	29	28
Identification:	Diesel Fuel#1	Diesel Fuel#1	Diesel Fuel#1
Lube Oil Range:	**64**	**84**	**98**
PQL:	56	58	57
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	101%	98%	102%
Flags:	Y	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-PP09-0060**	**CHEV-S0-PP09-0100**	**CHEV-S0-SS09-0000**
Lab ID:	03-043-10	03-043-11	03-043-12
Diesel Range:	**230**	**28**	**40**
PQL:	28	28	33
Identification:	Diesel Fuel#2	Diesel Fuel#2	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**260**
PQL:	55	55	65
Identification:	---	---	Lube Oil
Surrogate Recovery			
o-Terphenyl:	82%	86%	76%
Flags:	Y	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-SS09-1000**	**CHEV-S0-SS04-0000**	**CHEV-S0-SS20-0000**
Lab ID:	03-043-13	03-043-14	03-043-15
Diesel Range:	**ND**	**91**	**ND**
PQL:	33	29	29
Identification:	---	Diesel Range Organics	---
Lube Oil Range:	**83**	**490**	**70**
PQL:	65	58	57
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	84%	80%	79%
Flags:	Y	Y	Y

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Laboratory Reference: 0803-043
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NWTPH-Dx

Date Extracted:	3-7-08
Date Analyzed:	3-7-08
Matrix:	Soil
Units:	mg/kg (ppm)
Client ID:	**CHEV-S0-SS23-0000**
Lab ID:	03-043-16
Diesel Range:	**ND**
PQL:	27
Identification:	---
Lube Oil Range:	**ND**
PQL:	54
Identification:	---
Surrogate Recovery	
o-Terphenyl:	83%
Flags:	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-7-08
Date Analyzed:	3-7-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0307S2
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	85%
Flags:	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
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NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	3-7-08
Date Analyzed:	3-7-08
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	03-043-16	03-043-16 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	83%	90%
Flags:	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-7-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-047-01	03-047-01 DUP
Diesel Range:	**4400**	**2820**
PQL:	25	25
RPD:	44	
Surrogate Recovery		
o-Terphenyl:	87%	72%
Flags:	Y	Y

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-01
Client ID:	**CHEV-S0-PP01-0080**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.0073
2-Methylnaphthalene	ND		0.0073
1-Methylnaphthalene	0.25		0.0073
Acenaphthylene	ND		0.0073
Acenaphthene	0.020		0.0073
Fluorene	0.12		0.0073
Phenanthrene	0.067		0.0073
Anthracene	ND		0.0073
Fluoranthene	ND		0.0073
Pyrene	ND		0.0073
Benzo[a]anthracene	ND		0.0073
Chrysene	ND		0.0073
Benzo[b]fluoranthene	ND		0.0073
Benzo[k]fluoranthene	ND		0.0073
Benzo[a]pyrene	ND		0.0073
Indeno(1,2,3-c,d)pyrene	ND		0.0073
Dibenz[a,h]anthracene	ND		0.0073
Benzo[g,h,i]perylene	ND		0.0073

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	76	44 - 115
2-Fluorobiphenyl	67	52 - 100
Terphenyl-d14	77	66 - 123

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11&12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-08
Client ID:	**CHEV-S0-PP08-0080**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	0.11		0.0078
2-Methylnaphthalene	ND		0.0078
1-Methylnaphthalene	3.7		0.078
Acenaphthylene	ND		0.0078
Acenaphthene	0.10		0.0078
Fluorene	0.58		0.0078
Phenanthrene	0.41		0.0078
Anthracene	ND		0.0078
Fluoranthene	0.012		0.0078
Pyrene	0.012		0.0078
Benzo[a]anthracene	ND		0.0078
Chrysene	ND		0.0078
Benzo[b]fluoranthene	ND		0.0078
Benzo[k]fluoranthene	ND		0.0078
Benzo[a]pyrene	ND		0.0078
Indeno(1,2,3-c,d)pyrene	ND		0.0078
Dibenz[a,h]anthracene	ND		0.0078
Benzo[g,h,i]perylene	ND		0.0078

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	68	44 - 115
2-Fluorobiphenyl	69	52 - 100
Terphenyl-d14	85	66 - 123

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-12
Client ID:	**CHEV-S0-SS09-0000**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.0087
2-Methylnaphthalene	ND		0.0087
1-Methylnaphthalene	ND		0.0087
Acenaphthylene	ND		0.0087
Acenaphthene	ND		0.0087
Fluorene	ND		0.0087
Phenanthrene	ND		0.0087
Anthracene	ND		0.0087
Fluoranthene	ND		0.0087
Pyrene	ND		0.0087
Benzo[a]anthracene	ND		0.0087
Chrysene	0.0092		0.0087
Benzo[b]fluoranthene	0.013		0.0087
Benzo[k]fluoranthene	ND		0.0087
Benzo[a]pyrene	ND		0.0087
Indeno(1,2,3-c,d)pyrene	ND		0.0087
Dibenz[a,h]anthracene	ND		0.0087
Benzo[g,h,i]perylene	0.010		0.0087

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	56	44 - 115
2-Fluorobiphenyl	56	52 - 100
Terphenyl-d14	77	66 - 123

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-13
Client ID:	**CHEV-S0-SS09-1000**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.0087
2-Methylnaphthalene	ND		0.0087
1-Methylnaphthalene	ND		0.0087
Acenaphthylene	ND		0.0087
Acenaphthene	ND		0.0087
Fluorene	ND		0.0087
Phenanthrene	ND		0.0087
Anthracene	ND		0.0087
Fluoranthene	ND		0.0087
Pyrene	ND		0.0087
Benzo[a]anthracene	ND		0.0087
Chrysene	0.0091		0.0087
Benzo[b]fluoranthene	0.015		0.0087
Benzo[k]fluoranthene	ND		0.0087
Benzo[a]pyrene	0.0093		0.0087
Indeno(1,2,3-c,d)pyrene	ND		0.0087
Dibenz[a,h]anthracene	ND		0.0087
Benzo[g,h,i]perylene	0.0099		0.0087

Surrogate :	**Percent Recovery**		**Control Limits**
Nitrobenzene-d5	51		44 - 115
2-Fluorobiphenyl	50	Q	52 - 100
Terphenyl-d14	69		66 - 123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-14
Client ID:	**CHEV-S0-SS04-0000**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.0078
2-Methylnaphthalene	ND		0.0078
1-Methylnaphthalene	ND		0.0078
Acenaphthylene	ND		0.0078
Acenaphthene	ND		0.0078
Fluorene	ND		0.0078
Phenanthrene	ND		0.0078
Anthracene	ND		0.0078
Fluoranthene	0.0095		0.0078
Pyrene	0.011		0.0078
Benzo[a]anthracene	ND		0.0078
Chrysene	0.0094		0.0078
Benzo[b]fluoranthene	0.014		0.0078
Benzo[k]fluoranthene	ND		0.0078
Benzo[a]pyrene	0.0094		0.0078
Indeno(1,2,3-c,d)pyrene	0.019		0.0078
Dibenz[a,h]anthracene	ND		0.0078
Benzo[g,h,i]perylene	0.054		0.0078

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	77	44 - 115
2-Fluorobiphenyl	73	52 - 100
Terphenyl-d14	75	66 - 123

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0311S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	75	44 - 115
2-Fluorobiphenyl	71	52 - 100
Terphenyl-d14	82	66 - 123

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Date Extracted: 3-11-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-059-04

Compound:	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
Naphthalene	ND	0.0833	0.0435	52	0.0523	63	45-101	
Acenaphthylene	ND	0.0833	0.0468	56	0.0592	71	50-109	
Acenaphthene	ND	0.0833	0.0477	57	0.0564	68	52-103	
Fluorene	ND	0.0833	0.0487	58	0.0568	68	56-107	
Phenanthrene	ND	0.0833	0.0522	63	0.0586	70	52-109	
Anthracene	ND	0.0833	0.0492	59	0.0549	66	58-107	
Fluoranthene	ND	0.0833	0.0587	70	0.0638	77	42-128	
Pyrene	ND	0.0833	0.0588	71	0.0635	76	51-121	
Benzo[a]anthracene	ND	0.0833	0.0529	64	0.0570	68	60-121	
Chrysene	ND	0.0833	0.0575	69	0.0612	73	42-147	
Benzo[b]fluoranthene	ND	0.0833	0.0589	71	0.0635	76	50-123	
Benzo[k]fluoranthene	ND	0.0833	0.0575	69	0.0614	74	58-117	
Benzo[a]pyrene	ND	0.0833	0.0511	61	0.0553	66	54-115	
Indeno(1,2,3-c,d)pyrene	ND	0.0833	0.0585	70	0.0636	76	54-117	
Dibenz[a,h]anthracene	ND	0.0833	0.0607	73	0.0654	79	48-145	
Benzo[g,h,i]perylene	ND	0.0833	0.0566	68	0.0622	75	52-115	

	RPD	RPD Limit	Flags
Naphthalene	19	24	
Acenaphthylene	23	25	
Acenaphthene	17	21	
Fluorene	15	19	
Phenanthrene	12	17	
Anthracene	11	14	
Fluoranthene	8	27	
Pyrene	8	27	
Benzo[a]anthracene	8	18	
Chrysene	6	19	
Benzo[b]fluoranthene	8	26	
Benzo[k]fluoranthene	7	17	
Benzo[a]pyrene	8	18	
Indeno(1,2,3-c,d)pyrene	8	20	
Dibenz[a,h]anthracene	8	15	
Benzo[g,h,i]perylene	9	21	

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B

Date Extracted:	3-7&10-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID	Lab ID	Result	PQL
CHEV-SO-PP01-0080	03-043-01	**ND**	5.5
CHEV-SO-PP02-0140	03-043-02	**ND**	5.5
CHEV-SO-PP03-0170	03-043-03	**ND**	5.5
CHEV-SO-PP04-0140	03-043-04	**ND**	5.4
CHEV-SO-PP05-0160	03-043-05	**ND**	5.6
CHEV-SO-PP06-0160	03-043-06	**ND**	5.5
CHEV-SO-PP07-0100	03-043-07	**ND**	5.6
CHEV-SO-PP08-0080	03-043-08	**ND**	5.8
CHEV-SO-PP08-1080	03-043-09	**ND**	5.7
CHEV-SO-SS09-0000	03-043-12	**160**	6.5
CHEV-SO-SS09-1000	03-043-13	**170**	6.5
CHEV-SO-SS04-0000	03-043-14	**310**	5.8
CHEV-SO-SS20-0000	03-043-15	**220**	5.7
CHEV-SO-SS23-0000	03-043-16	**ND**	5.4

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-7-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0307S1

Analyte	Method	Result	PQL
Lead	6010B	**ND**	5.0

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-10-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0310S1

Analyte	Method	Result	PQL
Lead	6010B	**ND**	5.0

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-043-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-039-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 3-7-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-043-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**229**	92	**228**	91	1	

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-039-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**229**	92	**230**	92	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-043-01
CHEV-SO-PP01-0080

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	ND	5.0	
Aliphatic C8-C10	ND	5.0	
Aliphatic C10-C12	70	5.0	
Total Aliphatic:	70		
Aromatic C8-C10	22	5.0	
Aromatic C10-C12	73	5.0	
Aromatic C12-C13	110	5.0	
Total Aromatic:	200		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	ND	0.020	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylene	ND	0.50	
o-Xylene	ND	0.50	

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	92	60-119

Flags:

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-11-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-043-08
Client ID: **CHEV-SO-PP08-0080**

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	310	5.0	
Aliphatic C8-C10	790	5.0	
Aliphatic C10-C12	1500	5.0	
Total Aliphatic:	2600		
Aromatic C8-C10	1600	5.0	
Aromatic C10-C12	1300	5.0	
Aromatic C12-C13	870	5.0	
Total Aromatic:	3800		
Target Analytes:			
Methyl t-butyl ether	ND	0.64	
Benzene	0.17	0.13	
Toluene	ND	3.2	U1
Ethylbenzene	ND	6.4	U1
m,p-Xylene	18	0.64	
o-Xylene	ND	6.4	U1

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	100	60-119

Flags:

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-11-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-043-10
Client ID: **CHEV-SO-PP09-0060**

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	7.2	5.0	
Aliphatic C8-C10	9.5	5.0	
Aliphatic C10-C12	140	5.0	
Total Aliphatic:	160		
Aromatic C8-C10	60	5.0	
Aromatic C10-C12	150	5.0	
Aromatic C12-C13	160	5.0	
Total Aromatic:	370		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	ND	0.024	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylene	ND	0.50	
o-Xylene	ND	0.50	

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	97	60-119

Flags:

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0310S1

VPH:	Results	PQL	Flags
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	ND	5.0	
Aliphatic C8-C10	ND	5.0	
Aliphatic C10-C12	ND	5.0	
Total Aliphatic:	NA		
Aromatic C8-C10	ND	5.0	
Aromatic C10-C12	ND	5.0	
Aromatic C12-C13	ND	5.0	
Total Aromatic:	NA		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	ND	0.020	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylene	ND	0.50	
o-Xylene	ND	0.50	

Surrogate:	Percent Recovery	Control Limits
Fluorobenzene	104	60-119

Flags:

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
MS/MSD QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 2.69

Lab ID: 03-055-09 MS 03-055-09 MSD

	Result	Percent Recovery	Result	Percent Recovery	PQL	RPD
Benzene	3.14	117	3.04	113	0.020	3
Toluene	3.08	114	3.00	112	0.50	3
Ethylbenzene	3.06	114	2.99	111	0.50	2
m,p-Xylene	3.35	108	3.29	106	0.50	2
o-Xylene	2.93	109	2.87	107	0.50	2

Surrogate:	Percent Recovery	Percent Recovery	Control Limits
Fluorobenzene	99	96	60-119

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
SPIKE BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 1.00

Lab ID: SB0310S1

	Result	Percent Recovery	PQL
Benzene	0.898	90	0.020
Toluene	0.912	91	0.50
Ethylbenzene	0.911	91	0.50
m,p-Xylene	0.921	92	0.50
o-Xylene	0.921	92	0.50

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	99	60-119

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

EDB, EDC, and MTBE
by EPA 8260B

Date Extracted:	3-12-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-12
Client ID:	**CHEV-SO-SS09-0000**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.0011
1,2-Dichloroethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	91	70-118
Toluene-d8	97	70-121
4-Bromofluorobenzene	85	70-130

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

EDB, EDC, and MTBE
by EPA 8260B

Date Extracted:	3-12-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-043-13
Client ID:	**CHEV-SO-SS09-1000**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.0012
1,2-Dichloroethane	ND		0.0012
1,2-Dibromoethane	ND		0.0012

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	89	70-118
Toluene-d8	104	70-121
4-Bromofluorobenzene	93	70-130

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

EDB, EDC, and MTBE
by EPA 8260B

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-043-14
Client ID: CHEV-SO-SS04-0000

Compound	Results	Flags	PQL
Methyl t-Butyl Ether	ND		0.0014
1,2-Dichloroethane	ND		0.0014
1,2-Dibromoethane	ND		0.0014

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	94	70-118
Toluene-d8	109	70-121
4-Bromofluorobenzene	91	70-130

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

EDB, EDC, and MTBE
by EPA 8260B
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0312S1

Compound	Results	Flags	PQL
Methyl t-Butyl Ether	ND		0.0010
1,2-Dichloroethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	92	70-118
Toluene-d8	97	70-121
4-Bromofluorobenzene	99	70-130

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

EDB, EDC, and MTBE
by EPA 8260B
SB/SBD QUALITY CONTROL

Date Extracted: 3-12-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB0312S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0531	106	0.0519	104	70-130	
Benzene	0.0500	0.0457	91	0.0436	87	70-127	
Trichloroethene	0.0500	0.0393	79	0.0386	77	73-117	
Toluene	0.0500	0.0443	89	0.0415	83	78-115	
Chlorobenzene	0.0500	0.0401	80	0.0411	82	80-117	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	2	10	
Benzene	5	11	
Trichloroethene	2	13	
Toluene	7	12	
Chlorobenzene	2	10	

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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B

Date Extracted:	3-14-08
Date Analyzed:	3-17-08
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID	Lab ID	Result	PQL
CHEV-SO-PP09-0060	03-043-10	**ND**	5.5

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-14-08
Date Analyzed:	3-17-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0314S2

Analyte	Method	Result	PQL
Lead	6010B	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-14-08
Date Analyzed: 3-17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Sample Result	Duplicate Result	RPD	Flags	PQL
Lead	**13.5**	**15.1**	12		5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 3-14-08
Date Analyzed: 3-17-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-087-19

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**244**	92	**267**	102	9	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 7, 2008
Laboratory Reference: 0803-043
Project: 255 1896 063 04/1301

% MOISTURE

Date Analyzed: 3-7-08

Client ID	Lab ID	% Moisture
CHEV-SO-PP01-0080	03-043-01	9
CHEV-SO-PP02-0140	03-043-02	9
CHEV-SO-PP03-0170	03-043-03	9
CHEV-SO-PP04-0140	03-043-04	8
CHEV-SO-PP05-0160	03-043-05	11
CHEV-SO-PP06-0160	03-043-06	9
CHEV-SO-PP07-0100	03-043-07	10
CHEV-SO-PP08-0080	03-043-08	14
CHEV-SO-PP09-1080	03-043-09	12
CHEV-SO-PP09-0060	03-043-10	9
CHEV-SO-PP09-0100	03-043-11	9
CHEV-SO-SS09-0000	03-043-12	23
CHEV-SO-SS09-1000	03-043-13	23
CHEV-SO-SS04-0000	03-043-14	14
CHEV-SO-SS20-0000	03-043-15	13
CHEV-SO-SS23-0000	03-043-16	8

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255 1896 063 04/1301
Project Name: Park Remedial Design, Chevron
Project Manager: David Dinkuhn
Sampled by: David Dinkuhn & Lily Isenhart

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ _____ (other)

Laboratory Number: 03-043

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	cPAHs by 8270c	TOC	EPH	VPH	Lead		% Moisture
1	CHEV-SO-PP01-0080	3/5/08	0830	Soil	6		X	X											X	X	X	X	X		X
2	CHEV-SO-PP02-0140	3/5/08	0940	Soil	3		X	X															X		
3	CHEV-SO-PP03-0170	3/5/08	1030	Soil	3		X	X															X		
4	CHEV-SO-PP04-0140	3/5/08	1130	Soil	3		X	X															X		
5	CHEV-SO-PP05-0160	3/5/08	1200	Soil	3		X	X															X		
6	CHEV-SO-PP06-0160	3/5/08	1300	Soil	3		X	X															X		
7	CHEV-SO-PP07-0100	3/5/08	1330	Soil	3		X	X															X		
8	CHEV-SO-PP08-0080	3/5/08	1400	Soil	6		X	X											X	X	X	X	X		
9	CHEV-SO-PP09-1090	3/5/08	1415	Soil	3		X	X															X		
10	CHEV-SO-PP09-0060	3/5/08	1500	Soil	3		X	X													X	X	⊗		

	Signature	Company	Date	Time
Relinquished by	Lily Isenhart	Parametrix	03/06/08	1245
Received by	MCVan	ORE	3/7/08	915
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
Please archive CHEV-SO-PP09-0100 for lead. May request analysis later. VPH was added after collection for CHEV-SO-PP09-0060. Please take out of NWTPHGX/BTEX container. Please call me when samples arrive if there are any ?s 360 650-6333 Lily

Chromatograms with final report ☐

⊗ Added 3/10/08 · DJ

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 256 1896 063 04/1301
Project Name: Park Remedial Design, Chevron
Project Manager: David Dinkuhn
Sampled by: David Dinkuhn, Lily Isenhart

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 03-043

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	cPAH by 8270C (LVI)	Lead	EDB, EDC, MTBE				% Moisture
11	CHEV-SO-PP09-0100	3/5/08	1515	Soil	3		X	X																	X
12	CHEV-SO-SS09-0000	3/5/08	1311	Soil	6		X	X											X	X	X				
13	CHEV-SO-SS09-1000	3/5/08	1311	Soil	6		X	X											X	X	X				
14	CHEV-SO-SS04-0000	3/5/08	1234	Soil	6		X	X											X	X	X				
15	CHEV-SO-SS20-0000	3/5/08	1252	Soil	3		X	X												X					
16	CHEV-SO-SS23-0000	3/5/08	1326	Soil	3		X	X												X					

	Signature	Company	Date	Time
Relinquished by	Lily Isenhart	Parametrix	03/06/08	1245
Received by	M. Vom	OSE	3/7/08	915
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Please archive lead volume for CHEV-SO-PP09-0100.

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Analytical Resources, Incorporated
Analytical Chemists and Consultants

21 March 2008

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: 255-1896-063-04/1301
ARI Job Nos: ML85, MM03

Dear David:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for samples from the project referenced above. Analytical Resources, Inc. accepted three soil samples on March 7, 2008. The samples were received intact. The samples were analyzed for TOC and EPH as requested.

There were no problems with these analyses.

An electronic copy of this package will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: files ML85, MM03

MDH/mdh

ARI Data Reporting Qualifiers

Effective 11/22/04

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
NR	Spiked compound recovery is not reported due to chromatographic interference
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
S	Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
NA	The flagged analyte was not analyzed for
NS	The flagged analyte was not spiked into the sample
M	Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
Y	The analyte reporting limit is raised due to a positive chromatographic interference. The compound is not detected above the raised limit but may be present at or below the limit
C	The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
P	The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: MB-031108
METHOD BLANK

Lab Sample ID: MB-031108
LIMS ID: 08-4626
Matrix: Soil
Data Release Authorized:
Reported: 03/19/08

QC Report No: ML85-OnSite Environmental, Inc.
Project: 255 1896 063 04/1307

Date Sampled: NA
Date Received: NA

Date Extracted: 03/11/08
Percent Moisture: NA

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,000	< 2,000 U
C10-C12 Aliphatics	2,000	< 2,000 U
C12-C16 Aliphatics	2,000	< 2,000 U
C16-C21 Aliphatics	2,000	< 2,000 U
C21-C34 Aliphatics	2,000	< 2,000 U
C8-C10 Aromatics	2,000	< 2,000 U
C10-C12 Aromatics	2,000	< 2,000 U
C12-C16 Aromatics	2,000	< 2,000 U
C16-C21 Aromatics	2,000	< 2,000 U
C21-C34 Aromatics	2,000	< 2,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	57.4%
Aromatic	Ortho-terphenyl	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: CHEV-SO-PP01-0080
SAMPLE

Lab Sample ID: ML85A
LIMS ID: 08-4626
Matrix: Soil
Data Release Authorized:
Reported: 03/19/08

QC Report No: ML85-OnSite Environmental, Inc.
Project: 255 1896 063 04/1307

Date Sampled: 03/05/08
Date Received: 03/07/08

Date Extracted: 03/11/08
Percent Moisture: 8.2%

Sample Amount: 9.18 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 21:37
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 21:37
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	**2,200**	**2,900**
C10-C12 Aliphatics	**2,200**	**15,000**
C12-C16 Aliphatics	**2,200**	**110,000**
C16-C21 Aliphatics	**2,200**	**55,000**
C21-C34 Aliphatics	**2,200**	**6,000**
C8-C10 Aromatics	2,200	< 2,200 U
C10-C12 Aromatics	2,200	< 2,200 U
C12-C16 Aromatics	**2,200**	**30,000**
C16-C21 Aromatics	**2,200**	**46,000**
C21-C34 Aromatics	**2,200**	**4,400**

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	59.9%
Aromatic	Ortho-terphenyl	79.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH
Page 1 of 1

Sample ID: CHEV-SO-PP08-0080
SAMPLE

Lab Sample ID: ML85B
LIMS ID: 08-4627
Matrix: Soil
Data Release Authorized:
Reported: 03/19/08

QC Report No: ML85-OnSite Environmental, Inc.
Project: 255 1896 063 04/1307

Date Sampled: 03/05/08
Date Received: 03/07/08

Date Extracted: 03/11/08
Percent Moisture: 13.9%

Sample Amount: 8.68 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 21:59
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 21:59
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	**2,300**	**25,000**
C10-C12 Aliphatics	**2,300**	**210,000**
C12-C16 Aliphatics	**2,300**	**580,000**
C16-C21 Aliphatics	**2,300**	**180,000**
C21-C34 Aliphatics	**2,300**	**38,000**
C8-C10 Aromatics	2,300	< 2,300 U
C10-C12 Aromatics	**2,300**	**22,000**
C12-C16 Aromatics	**2,300**	**120,000**
C16-C21 Aromatics	**2,300**	**110,000**
C21-C34 Aromatics	**2,300**	**11,000**

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	58.1%
Aromatic	Ortho-terphenyl	77.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH
Page 1 of 1

Sample ID: LCS-031108
LCS/LCSD

Lab Sample ID: LCS-031108
LIMS ID: 08-4626
Matrix: Soil
Data Release Authorized:
Reported: 03/19/08

QC Report No: ML85-OnSite Environmental, Inc.
Project: 255 1896 063 04/1307

Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 03/11/08

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Aliphatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4B/JGR
LCSD: FID4B/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Aromatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4A/JGR
LCSD: FID4A/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
C8-C10 Aliphatics	9700	15000	64.7%	11000	15000	73.3%	12.6%
C10-C12 Aliphatics	9200	15000	61.3%	9500	15000	63.3%	3.2%
C12-C16 Aliphatics	11000	15000	73.3%	11100	15000	74.0%	0.9%
C16-C21 Aliphatics	11000	15000	73.3%	10800	15000	72.0%	1.8%
C10-C12 Aromatics	10900	15000	72.7%	10000	15000	66.7%	8.6%
C12-C16 Aromatics	11700	15000	78.0%	11500	15000	76.7%	1.7%
C16-C21 Aromatics	24000	30000	80.0%	22900	30000	76.3%	4.7%
C21-C34 Aromatics	23300	30000	77.7%	24400	30000	81.3%	4.6%

EPH Surrogate Recovery

		LCS	LCSD
Aliphatic	1-Chlorooctadecane	60.0%	60.8%
Aromatic	Ortho-terphenyl	77.5%	77.6%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: MB-031108
METHOD BLANK

Lab Sample ID: MB-031108
LIMS ID: 08-4719
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM03-OnSite Environmental, Inc.
Project: 255 1896 063 04/1301

Date Sampled: NA
Date Received: NA

Date Extracted: 03/11/08
Percent Moisture: NA

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,000	< 2,000 U
C10-C12 Aliphatics	2,000	< 2,000 U
C12-C16 Aliphatics	2,000	< 2,000 U
C16-C21 Aliphatics	2,000	< 2,000 U
C21-C34 Aliphatics	2,000	< 2,000 U
C8-C10 Aromatics	2,000	< 2,000 U
C10-C12 Aromatics	2,000	< 2,000 U
C12-C16 Aromatics	2,000	< 2,000 U
C16-C21 Aromatics	2,000	< 2,000 U
C21-C34 Aromatics	2,000	< 2,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	57.4%
Aromatic	Ortho-terphenyl	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: CHEV-SO-PP09-0060
SAMPLE

Lab Sample ID: MM03A
LIMS ID: 08-4719
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM03-OnSite Environmental, Inc.
Project: 255 1896 063 04/1301

Date Sampled: 03/05/08
Date Received: 03/07/08

Date Extracted: 03/11/08
Percent Moisture: 8.3%

Sample Amount: 9.21 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 22:20
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 22:20
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,200	< 2,200 U
C10-C12 Aliphatics	**2,200**	**9,400**
C12-C16 Aliphatics	**2,200**	**53,000**
C16-C21 Aliphatics	**2,200**	**21,000**
C21-C34 Aliphatics	**2,200**	**2,800**
C8-C10 Aromatics	2,200	< 2,200 U
C10-C12 Aromatics	2,200	< 2,200 U
C12-C16 Aromatics	**2,200**	**17,000**
C16-C21 Aromatics	**2,200**	**19,000**
C21-C34 Aromatics	2,200	< 2,200 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	61.6%
Aromatic	Ortho-terphenyl	89.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: LCS-031108
LCS/LCSD

Lab Sample ID: LCS-031108
LIMS ID: 08-4719
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM03-OnSite Environmental, Inc.
Project: 255 1896 063 04/1301

Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 03/11/08

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Aliphatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4B/JGR
LCSD: FID4B/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Aromatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4A/JGR
LCSD: FID4A/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
C8-C10 Aliphatics	9700	15000	64.7%	11000	15000	73.3%	12.6%
C10-C12 Aliphatics	9200	15000	61.3%	9500	15000	63.3%	3.2%
C12-C16 Aliphatics	11000	15000	73.3%	11100	15000	74.0%	0.9%
C16-C21 Aliphatics	11000	15000	73.3%	10800	15000	72.0%	1.8%
C10-C12 Aromatics	10900	15000	72.7%	10000	15000	66.7%	8.6%
C12-C16 Aromatics	11700	15000	78.0%	11500	15000	76.7%	1.7%
C16-C21 Aromatics	24000	30000	80.0%	22900	30000	76.3%	4.7%
C21-C34 Aromatics	23300	30000	77.7%	24400	30000	81.3%	4.6%

EPH Surrogate Recovery

		LCS	LCSD
Aliphatic	1-Chlorooctadecane	60.0%	60.8%
Aromatic	Ortho-terphenyl	77.5%	77.6%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

METHOD BLANK RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	03/10/08	Percent	< 0.01 U
	03/10/08		< 0.01 U
Total Organic Carbon	03/19/08	Percent	< 0.020 U

SAMPLE RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: 03/05/08
Date Received: 03/07/08

Client ID: CHEV-SO-PP01-0080
ARI ID: 08-4626 ML85A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/08 031008#1	EPA 160.3	Percent	0.01	90.90
Total Organic Carbon	03/19/08 031908#1	Plumb,1981	Percent	0.020	0.090

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: 03/05/08
Date Received: 03/07/08

Client ID: CHEV-SO-PP08-0080
ARI ID: 08-4627 ML85B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/08 031008#1	EPA 160.3	Percent	0.01	85.70
Total Organic Carbon	03/19/08 031908#1	Plumb,1981	Percent	0.020	0.124

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: 03/05/08
Date Received: 03/07/08

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: ML85A Client ID: CHEV-SO-PP01-0080					
Total Solids	03/10/08	Percent	90.90	91.60 91.10	0.4%
Total Organic Carbon	03/19/08	Percent	0.090	0.065 0.077	16.2%

MS/MSD RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: 03/05/08
Date Received: 03/07/08

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: ML85A Client ID: CHEV-SO-PP01-0080						
Total Organic Carbon	03/19/08	Percent	0.090	0.763	0.587	114.6%

LAB CONTROL RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon	03/19/08	Percent	0.476	0.500	95.2%

STANDARD REFERENCE RESULTS-CONVENTIONALS
ML85-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 255 1896 063 04/1307
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST #8704	03/19/08	Percent	3.60	3.35	107.5%

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 25, 2008

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255 1896 063 04/1301
Laboratory Reference No. 0803-055

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on March 8, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

Case Narrative

Samples were collected on March 6 and 7, 2008 and received by the laboratory on March 8, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

PAHs EPA 8270D/SIM Analysis

Sample CHEV-S0-PP14-0090 had one surrogate outside of control limits. This is allowed by the method as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-10&11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP10-0100**			**CHEV-SO-PP11-0100**		
Lab ID:	03-055-01			03-055-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.25**		0.020	**4.0**		0.12
Toluene	**ND**		0.099	**9.7**		0.59
Ethyl Benzene	**ND**	**U1**	0.49	**23**		0.59
m,p-Xylene	**0.96**		0.099	**110**		1.2
o-Xylene	**ND**	**U1**	0.49	**40**		0.59
TPH-Gas	**140**	**O**	9.9	**1600**		59
Surrogate Recovery: Fluorobenzene	86%			96%		

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-10&11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP12-0100**			**CHEV-SO-PP13-0100**		
Lab ID:	03-055-03			03-055-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**3.9**		0.11	**21**		0.20
Toluene	**ND**		0.54	**39**		0.99
Ethyl Benzene	**12**		0.54	**120**	**E**	0.99
m,p-Xylene	**35**		0.54	**350**	**E**	0.99
o-Xylene	**3.1**		0.54	**130**	**E**	0.99
TPH-Gas	**1000**		54	**5100**		99
Surrogate Recovery: Fluorobenzene	94%			88%		

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Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Gx

Date Extracted:	3-10-08	
Date Analyzed:	3-10-08	
Matrix: Soil		
Units: mg/kg (ppm)		
Client ID:	**CHEV-SO-PP14-0090**	**CHEV-SO-PP15-0100**
Lab ID:	03-055-05	03-055-06

	Result	Flags	PQL	**Result**	Flags	PQL
TPH-Gas	**ND**		31	**110**		30
Surrogate Recovery:						
Fluorobenzene	109%			104%		

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Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-10&11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP16-0100**			**CHEV-SO-PP17-0100**		
Lab ID:	03-055-07			03-055-08		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**5.8**		0.16	**37**		0.23
Toluene	**ND**	**U1**	4.0	**2.3**		1.1
Ethyl Benzene	**ND**	**U1**	4.0	**70**		1.1
m,p-Xylene	**4.6**		0.80	**190**	**E**	1.1
o-Xylene	**ND**	**U1**	4.0	**40**		1.1
TPH-Gas	**ND**		80	**3900**		110
Surrogate Recovery: Fluorobenzene	98%			84%		

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NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP18-0100**			**CHEV-SO-PP19-0100**		
Lab ID:	03-055-09			03-055-10		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.33**		0.020	**---**		
Toluene	**ND**	**U1**	0.31	**---**		
Ethyl Benzene	**ND**	**U1**	0.31	**---**		
m,p-Xylene	**0.52**		0.062	**---**		
o-Xylene	**ND**	**U1**	0.31	**---**		
TPH-Gas	**92**	**O**	6.2	**ND**		25
Surrogate Recovery: Fluorobenzene	97%			93%		

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Date of Report: March 25, 2008
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NWTPH-Gx/BTEX

Date Extracted: 3-10-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-MW25-0100**			**CHEV-SO-MW26-0095**		
Lab ID:	03-055-11			03-055-12		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.021	**ND**		0.028
Toluene	**ND**		0.10	**ND**		0.14
Ethyl Benzene	**ND**		0.10	**ND**		0.14
m,p-Xylene	**0.18**		0.10	**ND**		0.14
o-Xylene	**ND**		0.10	**ND**		0.14
TPH-Gas	**55**		10	**ND**		14
Surrogate Recovery: Fluorobenzene	85%			79%		

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0310S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	104%		

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0310S2

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	98%		

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Date of Report: March 25, 2008
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Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-055-09 **Original**	03-055-09 **Duplicate**	**RPD**	**Flags**
Benzene	**0.284**	**0.288**	1	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**0.445**	**0.540**	19	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**78.8**	**89.4**	13	
Surrogate Recovery:				
Fluorobenzene	97%	93%		

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Date of Report: March 25, 2008
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NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10&11-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	03-055-03 **Original**	03-055-03 **Duplicate**	**RPD**	**Flags**
Benzene	**2.80**	**2.72**	3	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**8.79**	**9.69**	10	
m,p-Xylene	**24.9**	**26.7**	7	
o-Xylene	**2.23**	**2.40**	7	
TPH-Gas	**727**	**771**	6	
Surrogate Recovery:				
Fluorobenzene	94%	98%		

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Date of Report: March 25, 2008
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NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.69

Lab ID:	03-055-09 **MS**	Percent Recovery	03-055-09 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**3.13**	**106**	**3.04**	**102**	3	
Toluene	**3.08**	**115**	**3.00**	**112**	3	
Ethyl Benzene	**3.06**	**114**	**2.99**	**111**	2	
m,p-Xylene	**3.34**	**108**	**3.29**	**106**	2	
o-Xylene	**2.93**	**109**	**2.87**	**107**	2	

Surrogate Recovery:

Fluorobenzene	99%	96%

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-11-08
Date Analyzed: 3-11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP10-0100**	**CHEV-SO-PP11-0100**	**CHEV-SO-PP12-0100**
Lab ID:	03-055-01	03-055-02	03-055-03
Diesel Range:	**120**	**940**	**580**
PQL:	29	29	29
Identification:	Diesel Fuel#2	Diesel Fuel#2	Diesel Fuel#2
Lube Oil Range:	**61**	**450**	**130**
PQL:	57	57	59
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	76%	72%	79%
Flags:	Y	M,Y	M,Y

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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-11-08
Date Analyzed: 3-11&12-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP13-0100**	**CHEV-SO-PP14-0090**	**CHEV-SO-PP15-0100**
Lab ID:	03-055-04	03-055-05	03-055-06
Diesel Range:	**410**	**2100**	**110**
PQL:	29	150	29
Identification:	Diesel Fuel#2	Diesel Fuel#2	Diesel Fuel#2
Lube Oil Range:	**98**	**3800**	**ND**
PQL:	58	300	59
Identification:	Lube Oil	Lube Oil	---
Surrogate Recovery			
o-Terphenyl:	78%	78%	85%
Flags:	M,Y	Y	Y

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NWTPH-Dx

Date Extracted: 3-11-08
Date Analyzed: 3-11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP16-0100**	**CHEV-SO-PP17-0100**	**CHEV-SO-PP18-0100**
Lab ID:	03-055-07	03-055-08	03-055-09
Diesel Range:	**2316**	**790**	**130**
PQL:	33	29	29
Identification:	Diesel Fuel#2	Diesel Fuel#2	Diesel Fuel#2
Lube Oil Range:	**ND**	**100**	**68**
PQL:	240	57	58
Identification:	---	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	82%	93%	83%
Flags:	U1,Y	M,Y	Y

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NWTPH-Dx

Date Extracted: 3-11-08
Date Analyzed: 3-11-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP19-0100**	**CHEV-SO-MW25-0100**	**CHEV-SO-MW26-0095**
Lab ID:	03-055-10	03-055-11	03-055-12
Diesel Range:	**370**	**ND**	**920**
PQL:	28	29	31
Identification:	Diesel Fuel#1	---	Diesel Fuel#2
Lube Oil Range:	**ND**	**ND**	**240**
PQL:	56	57	62
Identification:	---	---	Lube Oil
Surrogate Recovery			
o-Terphenyl:	86%	87%	89%
Flags:	Y	Y	Y

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NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0311S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	83%
Flags:	Y

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Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	03-059-02	03-059-02 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	75%	73%
Flags:	Y	Y

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Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B

Date Extracted:	3-11-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID	Lab ID	Result	PQL
CHEV-SO-PP10-0100	03-055-01	**53**	5.7
CHEV-SO-PP11-0100	03-055-02	**28**	5.7
CHEV-SO-PP12-0100	03-055-03	**19**	5.9
CHEV-SO-PP13-0100	03-055-04	**32**	5.8
CHEV-SO-PP14-0090	03-055-05	**92**	6.0
CHEV-SO-PP15-0100	03-055-06	**13**	5.9
CHEV-SO-PP16-0100	03-055-07	**ND**	6.7
CHEV-SO-PP17-0100	03-055-08	**11**	5.7
CHEV-SO-PP18-0100	03-055-09	**13**	5.8
CHEV-SO-PP19-0100	03-055-10	**ND**	5.6
CHEV-SO-MW25-0100	03-055-11	**ND**	5.7
CHEV-SO-MW26-0095	03-055-12	**26**	6.2

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TOTAL LEAD
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-11-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0311S1

Analyte	Method	Result	PQL
Lead	6010B	**ND**	5.0

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Date of Report: March 25, 2008
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TOTAL LEAD
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-11-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-058-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

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Date of Report: March 25, 2008
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TOTAL LEAD
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 3-11-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-058-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**229**	92	**221**	88	4	

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PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-055-05
Client ID:	**CHEV-S0-PP14-0090**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	0.038		0.0079
2-Methylnaphthalene	0.20		0.0079
1-Methylnaphthalene	0.30		0.0079
Acenaphthylene	ND		0.0079
Acenaphthene	0.24		0.0079
Fluorene	0.18		0.0079
Phenanthrene	0.32		0.0079
Anthracene	0.076		0.0079
Fluoranthene	0.25		0.0079
Pyrene	0.59		0.0079
Benzo[a]anthracene	0.067		0.0079
Chrysene	0.14		0.0079
Benzo[b]fluoranthene	0.12		0.0079
Benzo[k]fluoranthene	0.048		0.0079
Benzo[a]pyrene	0.083		0.0079
Indeno(1,2,3-c,d)pyrene	0.038		0.0079
Dibenz[a,h]anthracene	0.012		0.0079
Benzo[g,h,i]perylene	0.043		0.0079

Surrogate :	**Percent Recovery**		**Control Limits**
Nitrobenzene-d5	39	Q	44 - 115
2-Fluorobiphenyl	75		52 - 100
Terphenyl-d14	73		66 - 123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-11-08
Date Analyzed:	3-12-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	03-055-06
Client ID:	**CHEV-S0-PP15-0100**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	0.50		0.0078
2-Methylnaphthalene	0.97		0.039
1-Methylnaphthalene	0.61		0.0078
Acenaphthylene	0.10		0.0078
Acenaphthene	0.30		0.0078
Fluorene	0.28		0.0078
Phenanthrene	0.91		0.0078
Anthracene	0.27		0.0078
Fluoranthene	0.35		0.0078
Pyrene	0.62		0.0078
Benzo[a]anthracene	0.18		0.0078
Chrysene	0.17		0.0078
Benzo[b]fluoranthene	0.14		0.0078
Benzo[k]fluoranthene	0.040		0.0078
Benzo[a]pyrene	0.20		0.0078
Indeno(1,2,3-c,d)pyrene	0.076		0.0078
Dibenz[a,h]anthracene	0.028		0.0078
Benzo[g,h,i]perylene	0.093		0.0078

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	66	44 - 115
2-Fluorobiphenyl	67	52 - 100
Terphenyl-d14	76	66 - 123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-11-08
Date Analyzed:	3-11-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0311S1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.0067
2-Methylnaphthalene	ND		0.0067
1-Methylnaphthalene	ND		0.0067
Acenaphthylene	ND		0.0067
Acenaphthene	ND		0.0067
Fluorene	ND		0.0067
Phenanthrene	ND		0.0067
Anthracene	ND		0.0067
Fluoranthene	ND		0.0067
Pyrene	ND		0.0067
Benzo[a]anthracene	ND		0.0067
Chrysene	ND		0.0067
Benzo[b]fluoranthene	ND		0.0067
Benzo[k]fluoranthene	ND		0.0067
Benzo[a]pyrene	ND		0.0067
Indeno(1,2,3-c,d)pyrene	ND		0.0067
Dibenz[a,h]anthracene	ND		0.0067
Benzo[g,h,i]perylene	ND		0.0067

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	75	44 - 115
2-Fluorobiphenyl	71	52 - 100
Terphenyl-d14	82	66 - 123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Date Extracted: 3-11-08
Date Analyzed: 3-12-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-059-04

Compound:	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
Naphthalene	ND	0.0833	0.0435	52	0.0523	63	45-101	
Acenaphthylene	ND	0.0833	0.0468	56	0.0592	71	50-109	
Acenaphthene	ND	0.0833	0.0477	57	0.0564	68	52-103	
Fluorene	ND	0.0833	0.0487	58	0.0568	68	56-107	
Phenanthrene	ND	0.0833	0.0522	63	0.0586	70	52-109	
Anthracene	ND	0.0833	0.0492	59	0.0549	66	58-107	
Fluoranthene	ND	0.0833	0.0587	70	0.0638	77	42-128	
Pyrene	ND	0.0833	0.0588	71	0.0635	76	51-121	
Benzo[a]anthracene	ND	0.0833	0.0529	64	0.0570	68	60-121	
Chrysene	ND	0.0833	0.0575	69	0.0612	73	42-147	
Benzo[b]fluoranthene	ND	0.0833	0.0589	71	0.0635	76	50-123	
Benzo[k]fluoranthene	ND	0.0833	0.0575	69	0.0614	74	58-117	
Benzo[a]pyrene	ND	0.0833	0.0511	61	0.0553	66	54-115	
Indeno(1,2,3-c,d)pyrene	ND	0.0833	0.0585	70	0.0636	76	54-117	
Dibenz[a,h]anthracene	ND	0.0833	0.0607	73	0.0654	79	48-145	
Benzo[g,h,i]perylene	ND	0.0833	0.0566	68	0.0622	75	52-115	

	RPD	RPD Limit	Flags
Naphthalene	19	24	
Acenaphthylene	23	25	
Acenaphthene	17	21	
Fluorene	15	19	
Phenanthrene	12	17	
Anthracene	11	14	
Fluoranthene	8	27	
Pyrene	8	27	
Benzo[a]anthracene	8	18	
Chrysene	6	19	
Benzo[b]fluoranthene	8	26	
Benzo[k]fluoranthene	7	17	
Benzo[a]pyrene	8	18	
Indeno(1,2,3-c,d)pyrene	8	20	
Dibenz[a,h]anthracene	8	15	
Benzo[g,h,i]perylene	9	21	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-055-05
Client ID: **CHEV-SO-PP14-0090**

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	120	5.0	
Aliphatic C8-C10	120	5.0	
Aliphatic C10-C12	380	5.0	
Total Aliphatic:	630		
Aromatic C8-C10	400	5.0	
Aromatic C10-C12	320	5.0	
Aromatic C12-C13	230	5.0	
Total Aromatic:	950		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	0.46	0.062	
Toluene	ND	2.5	U1
Ethylbenzene	ND	2.5	U1
m,p-Xylene	5.6	0.50	
o-Xylene	ND	2.5	U1

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	109	60-119

Flags:

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-055-06
Client ID: **CHEV-SO-PP15-0100**

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	15	5.0	
Aliphatic C6-C8	92	5.0	
Aliphatic C8-C10	13	5.0	
Aliphatic C10-C12	26	5.0	
Total Aliphatic:	150		
Aromatic C8-C10	33	5.0	
Aromatic C10-C12	26	5.0	
Aromatic C12-C13	20	5.0	
Total Aromatic:	80		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	2.1	0.059	
Toluene	ND	0.50	
Ethylbenzene	4.0	0.50	
m,p-Xylene	0.69	0.50	
o-Xylene	ND	0.50	

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	104	60-119

Flags:

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: 03-055-10
Client ID: **CHEV-SO-PP19-0100**

VPH:	**Results**	**PQL**	**Flags**
Aliphatic C5-C6	11	5.0	
Aliphatic C6-C8	230	5.0	
Aliphatic C8-C10	200	5.0	
Aliphatic C10-C12	320	5.0	
Total Aliphatic:	760		
Aromatic C8-C10	360	5.0	
Aromatic C10-C12	250	5.0	
Aromatic C12-C13	190	5.0	
Total Aromatic:	810		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	0.22	0.050	
Toluene	ND	2.5	U1
Ethylbenzene	ND	2.5	U1
m,p-Xylene	4.1	0.50	
o-Xylene	ND	2.5	U1

Surrogate:	**Percent Recovery**	**Control Limits**
Fluorobenzene	93	60-119

Flags:

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Lab ID: MB0310S1

VPH:	Results	PQL	Flags
Aliphatic C5-C6	ND	5.0	
Aliphatic C6-C8	ND	5.0	
Aliphatic C8-C10	ND	5.0	
Aliphatic C10-C12	ND	5.0	
Total Aliphatic:	NA		
Aromatic C8-C10	ND	5.0	
Aromatic C10-C12	ND	5.0	
Aromatic C12-C13	ND	5.0	
Total Aromatic:	NA		
Target Analytes:			
Methyl t-butyl ether	ND	0.50	
Benzene	ND	0.020	
Toluene	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylene	ND	0.50	
o-Xylene	ND	0.50	

Surrogate:	Percent Recovery	Control Limits
Fluorobenzene	104	60-119

Flags:

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
MS/MSD QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 2.69

Lab ID: 03-055-09 MS 03-055-09 MSD

	Result	Percent Recovery	Result	Percent Recovery	PQL	RPD
Benzene	3.14	117	3.04	113	0.020	3
Toluene	3.08	114	3.00	112	0.50	3
Ethylbenzene	3.06	114	2.99	111	0.50	2
m,p-Xylene	3.35	108	3.29	106	0.50	2
o-Xylene	2.93	109	2.87	107	0.50	2

Surrogate:	Percent Recovery	Percent Recovery	Control Limits
Fluorobenzene	99	96	60-119

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

VOLATILE PETROLEUM HYDROCARBONS
SPIKE BLANK QUALITY CONTROL

Date Extracted: 3-10-08
Date Analyzed: 3-10-08

Matrix: Soil
Units: mg/Kg (ppm)

Spike Level: 1.00

Lab ID: SB0310S1

	Result	Percent Recovery	PQL
Benzene	0.898	90	0.020
Toluene	0.912	91	0.50
Ethylbenzene	0.911	91	0.50
m,p-Xylene	0.921	92	0.50
o-Xylene	0.921	92	0.50

Surrogate:	Percent Recovery	Control Limits
Fluorobenzene	99	60-119

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 25, 2008
Samples Submitted: March 8, 2008
Laboratory Reference: 0803-055
Project: 255 1896 063 04/1301

% MOISTURE

Date Analyzed: 3-10-08

Client ID	Lab ID	% Moisture
CHEV-SO-PP10-0100	03-055-01	13
CHEV-SO-PP11-0100	03-055-02	13
CHEV-SO-PP12-0100	03-055-03	15
CHEV-SO-PP13-0100	03-055-04	14
CHEV-SO-PP14-0090	03-055-05	16
CHEV-SO-PP15-0100	03-055-06	15
CHEV-SO-PP16-0100	03-055-07	25
CHEV-SO-PP17-0100	03-055-08	13
CHEV-SO-PP18-0100	03-055-09	14
CHEV-SO-PP19-0100	03-055-10	11
CHEV-SO-MW25-0100	03-055-11	13
CHEV-SO-MW26-0095	03-055-12	19

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255 1896 063 04/1361
Project Name: Park Remedial Design, Chemon
Project Manager: David DiKuhn
Sampled by: David DiKuhn

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ _____ (other)

Laboratory Number: 03-055

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Lead	cPAH by 8270C	TOC	EPH	VPH		% Moisture
1	CHEV-SO-PP10-0100	3/6/08	0900	Soil	3		X	X											X						X
2	CHEV-SO-PP11-0100	3/6/08	0930	Soil	3		X	X											X						
3	CHEV-SO-PP12-0100	3/6/08	1000	Soil	3		X	X											X						
4	CHEV-SO-PP13-0100	3/6/08	1030	Soil	3		X	X											X						
5	CHEV-SO-PP14-0090	3/6/08	1100	Soil	6		X	X											X	X	X	X	X		
6	CHEV-SO-PP15-0100	3/6/08	1200	Soil	6		X	X											X	X	X	X	X		
7	CHEV-SO-PP16-0100	3/6/08	1230	Soil	3		X	X											X						
8	CHEV-SO-PP17-0100	3/6/08	1300	Soil	5		X	X											X						
9	CHEV-SO-PP18-0100	3/6/08	1400	Soil	3		X	X											X						
10	CHEV-SO-PP19-0100	3/6/08	1430	Soil	5		X	X											X			X	X		

	Signature	Company	Date	Time
Relinquished by	Lily Leonhart	Parametrix	3/7/08	1409
Received by		CCS Ice Inc	3/8/08	1205
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
Please archive additional Sample volume for CHEV-SO-PP17-0100

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255 1896 063 04/1301
Project Name: Park Remedial Design, Chevron
Project Manager: David DinKuhn
Sampled by: David DinKuhn

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 03-055

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Lead						% Moisture
11	CHEV-SO-MW25-0100	3/7/08	1000	Soil	3		X	X											X						X
12	CHEV-SO-MW26-0095	3/7/08	1300	Soil	3		X	X											X						↓

	Signature	Company	Date	Time
Relinquished by	[signature]	Parametrix	3/7/08	1405
Received by	[signature]	Cas Site Ev	3/8/08	1205
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Analytical Resources, Incorporated
Analytical Chemists and Consultants

21 March 2008

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: 255-1896-063-04/1301
ARI Job No: MM16

Dear David:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for samples from the project referenced above. Analytical Resources, Inc. accepted three soil samples on March 10, 2008. The samples were received intact. The samples were analyzed for TOC and EPH as requested.

There were no problems with these analyses.

An electronic copy of this package will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file MM16

MDH/mdh

ARI Data Reporting Qualifiers

Effective 11/22/04

Inorganic Data

U Indicates that the target analyte was not detected at the reported concentration

* Duplicate RPD is not within established control limits

B Reported value is less than the CRDL but ≥ the Reporting Limit

N Matrix Spike recovery not within established control limits

NA Not Applicable, analyte not spiked

H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible

L Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U Indicates that the target analyte was not detected at the reported concentration

* Flagged value is not within established control limits

B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.

J Estimated concentration when the value is less than ARI's established reporting limits

D The spiked compound was not detected due to sample extract dilution

NR Spiked compound recovery is not reported due to chromatographic interference

E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte reporting limit is raised due to a positive chromatographic interference. The compound is not detected above the raised limit but may be present at or below the limit

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: MB-031108
METHOD BLANK

Lab Sample ID: MB-031108
LIMS ID: 08-4771
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM16-OnSite Environmental, Inc.
Project: 2551896063 04/1301

Date Sampled: NA
Date Received: NA

Date Extracted: 03/11/08
Percent Moisture: NA

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/17/08 20:33
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,000	< 2,000 U
C10-C12 Aliphatics	2,000	< 2,000 U
C12-C16 Aliphatics	2,000	< 2,000 U
C16-C21 Aliphatics	2,000	< 2,000 U
C21-C34 Aliphatics	2,000	< 2,000 U
C8-C10 Aromatics	2,000	< 2,000 U
C10-C12 Aromatics	2,000	< 2,000 U
C12-C16 Aromatics	2,000	< 2,000 U
C16-C21 Aromatics	2,000	< 2,000 U
C21-C34 Aromatics	2,000	< 2,000 U

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	57.4%
Aromatic	Ortho-terphenyl	76.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: CHEV-SO-PP14-0090
SAMPLE

Lab Sample ID: MM16A
LIMS ID: 08-4771
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM16-OnSite Environmental, Inc.
Project: 2551896063 04/1301

Date Sampled: 03/06/08
Date Received: 03/10/08

Date Extracted: 03/11/08
Percent Moisture: 16.8%

Sample Amount: 8.34 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/18/08 00:49
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/18/08 00:49
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	**2,400**	**92,000**
C10-C12 Aliphatics	**2,400**	**170,000**
C12-C16 Aliphatics	**2,400**	**480,000**
C16-C21 Aliphatics	**2,400**	**400,000**
C21-C34 Aliphatics	**2,400**	**1,200,000**
C8-C10 Aromatics	2,400	< 2,400 U
C10-C12 Aromatics	**2,400**	**3,100**
C12-C16 Aromatics	**2,400**	**43,000**
C16-C21 Aromatics	**2,400**	**210,000**
C21-C34 Aromatics	**2,400**	**310,000**

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	59.9%
Aromatic	Ortho-terphenyl	69.1%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: CHEV-SO-PP15-0100
SAMPLE

Lab Sample ID: MM16B
LIMS ID: 08-4772
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM16-OnSite Environmental, Inc.
Project: 2551896063 04/1301

Date Sampled: 03/06/08
Date Received: 03/10/08

Date Extracted: 03/11/08
Percent Moisture: 15.2%

Sample Amount: 8.53 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/18/08 01:11
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/18/08 01:11
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	2,300	21,000
C10-C12 Aliphatics	2,300	12,000
C12-C16 Aliphatics	2,300	31,000
C16-C21 Aliphatics	2,300	26,000
C21-C34 Aliphatics	2,300	21,000
C8-C10 Aromatics	2,300	7,500
C10-C12 Aromatics	2,300	15,000
C12-C16 Aromatics	2,300	23,000
C16-C21 Aromatics	2,300	42,000
C21-C34 Aromatics	2,300	19,000

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	56.9%
Aromatic	Ortho-terphenyl	88.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: CHEV-SO-PP19-0100
SAMPLE

Lab Sample ID: MM16C
LIMS ID: 08-4773
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM16-OnSite Environmental, Inc.
Project: 2551896063 04/1301

Date Sampled: 03/06/08
Date Received: 03/10/08

Date Extracted: 03/11/08
Percent Moisture: 18.8%

Sample Amount: 8.18 g-dry-wt
Final Extract Volume: 1.0 mL

Aliphatic
Date Analyzed: 03/18/08 01:32
Instrument/Analyst: FID4B/JGR

Dilution Factor: 1.00

Aromatic
Date Analyzed: 03/18/08 01:32
Instrument/Analyst: FID4A/JGR

Dilution Factor: 1.00

Range	RL	Result
C8-C10 Aliphatics	**2,400**	**39,000**
C10-C12 Aliphatics	**2,400**	**39,000**
C12-C16 Aliphatics	**2,400**	**76,000**
C16-C21 Aliphatics	**2,400**	**17,000**
C21-C34 Aliphatics	**2,400**	**8,000**
C8-C10 Aromatics	2,400	< 2,400 U
C10-C12 Aromatics	**2,400**	**4,900**
C12-C16 Aromatics	**2,400**	**14,000**
C16-C21 Aromatics	**2,400**	**11,000**
C21-C34 Aromatics	**2,400**	**2,800**

Reported in µg/kg (ppb)

EPH Surrogate Recovery

Aliphatic	1-Chlorooctadecane	50.0%
Aromatic	Ortho-terphenyl	75.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Aliphatic/Aromatic GC-EPH

Sample ID: LCS-031108
LCS/LCSD

Lab Sample ID: LCS-031108
LIMS ID: 08-4771
Matrix: Soil
Data Release Authorized:
Reported: 03/20/08

QC Report No: MM16-OnSite Environmental, Inc.
Project: 2551896063 04/1301

Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 03/11/08

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Aliphatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4B/JGR
LCSD: FID4B/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Aromatic
Date Analyzed LCS: 03/17/08 20:54
LCSD: 03/17/08 21:16
Instrument/Analyst LCS: FID4A/JGR
LCSD: FID4A/JGR

Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
C8-C10 Aliphatics	9700	15000	64.7%	11000	15000	73.3%	12.6%
C10-C12 Aliphatics	9200	15000	61.3%	9500	15000	63.3%	3.2%
C12-C16 Aliphatics	11000	15000	73.3%	11100	15000	74.0%	0.9%
C16-C21 Aliphatics	11000	15000	73.3%	10800	15000	72.0%	1.8%
C10-C12 Aromatics	10900	15000	72.7%	10000	15000	66.7%	8.6%
C12-C16 Aromatics	11700	15000	78.0%	11500	15000	76.7%	1.7%
C16-C21 Aromatics	24000	30000	80.0%	22900	30000	76.3%	4.7%
C21-C34 Aromatics	23300	30000	77.7%	24400	30000	81.3%	4.6%

EPH Surrogate Recovery

		LCS	LCSD
Aliphatic	1-Chlorooctadecane	60.0%	60.8%
Aromatic	Ortho-terphenyl	77.5%	77.6%

Results reported in µg/kg
RPD calculated using sample concentrations per SW846.

METHOD BLANK RESULTS-CONVENTIONALS
MM16-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 2551896063 04/1301
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	03/10/08	Percent	< 0.01 U
	03/10/08		< 0.01 U
Total Organic Carbon	03/19/08	Percent	< 0.020 U

SAMPLE RESULTS-CONVENTIONALS
MM16-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 2551896063 04/1301
Event: NA
Date Sampled: 03/06/08
Date Received: 03/10/08

Client ID: CHEV-SO-PP14-0090
ARI ID: 08-4771 MM16A

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/08 031008#1	EPA 160.3	Percent	0.01	81.20
Total Organic Carbon	03/19/08 031908#1	Plumb,1981	Percent	0.020	3.29

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MM16-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 2551896063 04/1301
Event: NA
Date Sampled: 03/06/08
Date Received: 03/10/08

Client ID: CHEV-SO-PP15-0100
ARI ID: 08-4772 MM16B

Analyte	Date	Method	Units	RL	Sample
Total Solids	03/10/08 031008#1	EPA 160.3	Percent	0.01	84.40
Total Organic Carbon	03/19/08 031908#1	Plumb,1981	Percent	0.020	1.14

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
MM16-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 2551896063 04/1301
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon	03/19/08	Percent	0.476	0.500	95.2%

STANDARD REFERENCE RESULTS-CONVENTIONALS
MM16-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Soil
Data Release Authorized:
Reported: 03/21/08

Project: 2551896063 04/1301
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST #8704	03/19/08	Percent	3.60	3.35	107.5%

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 26, 2008

Dave Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255 1896 063 04/1301
Laboratory Reference No. 0803-097

Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on March 14, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

Case Narrative

Samples were collected on March 12 and 13, 2008 and received by the laboratory on March 14, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Sample CHEV-GW-MW19-0150 had one surrogate recovery out of control limits. This is within allowance of our standard operation procedure as long as the recovery is above 10%.

The sample RINSATE was extracted 10 days outside of holding time. The Spike Blank/Duplicate associated with this sample batch had one compound fail quality control criteria. There was insufficient sample for re-extraction and so no further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-17&19-08
Date Analyzed: 3-17&19-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-MW23-0380**			**CHEV-GW-MW19-0150**		
Lab ID:	03-097-01			03-097-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**1.1**		1.0	**ND**		4.0
Toluene	**ND**		1.0	**ND**		4.0
Ethyl Benzene	**ND**		1.0	**ND**		4.0
m,p-Xylene	**ND**		1.0	**ND**		4.0
o-Xylene	**ND**		1.0	**ND**		4.0
TPH-Gas	**530**		100	**ND**		400
Surrogate Recovery:						
Fluorobenzene	98%			114%		

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-MW11-0100**			**CHEV-GW-MW20-0110**		
Lab ID:	03-097-03			03-097-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1.0
Toluene	**ND**		1.0	**ND**		1.0
Ethyl Benzene	**ND**		1.0	**ND**		1.0
m,p-Xylene	**ND**		1.0	**ND**		1.0
o-Xylene	**ND**		1.0	**ND**		1.0
TPH-Gas	**ND**		100	**ND**		100
Surrogate Recovery:						
Fluorobenzene	98%			98%		

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**RINSATE**			**TRIP BLANK**		
Lab ID:	03-097-08			03-097-09		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		1.0	**ND**		1.0
Toluene	**ND**		1.0	**ND**		1.0
Ethyl Benzene	**ND**		1.0	**ND**		1.0
m,p-Xylene	**ND**		1.0	**ND**		1.0
o-Xylene	**ND**		1.0	**ND**		1.0
TPH-Gas	**ND**		100	**ND**		100
Surrogate Recovery:						
Fluorobenzene	96%			95%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0317W1

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 93%

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-19-08
Date Analyzed: 3-19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0319W1

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 113%

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	03-100-01 **Original**	03-100-01 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	88%	88%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	03-100-01 **MS**	Percent Recovery	03-100-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**50.4**	**101**	**47.8**	**96**	5	
Toluene	**50.4**	**101**	**47.6**	**95**	6	
Ethyl Benzene	**50.1**	**100**	**47.3**	**95**	6	
m,p-Xylene	**50.4**	**101**	**47.5**	**95**	6	
o-Xylene	**50.2**	**100**	**47.4**	**95**	6	

Surrogate Recovery:			
Fluorobenzene	104%		104%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: mg/L (ppm)

Client ID:	**CHEV-GW-MW23-0380**	**CHEV-GW-MW19-0150**	**CHEV-GW-MW11-0100**
Lab ID:	03-097-01	03-097-02	03-097-03
Diesel Range:	**ND**	**8.1**	**0.27**
PQL:	0.26	0.26	0.25
Identification:	---	Diesel Fuel#1	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	0.42	0.42	0.40
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	83%	85%	98%
Flags:	Y	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: mg/L (ppm)

Client ID:	**CHEV-GW-MW20-0110**	**RINSATE**
Lab ID:	03-097-04	03-097-08
Diesel Range:	**ND**	**ND**
PQL:	0.27	0.25
Identification:	---	---
Lube Oil Range:	**ND**	**ND**
PQL:	0.44	0.40
Identification:	---	---
Surrogate Recovery		
o-Terphenyl:	94%	89%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-20-08
Date Analyzed:	3-20-08
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0320W1
Diesel Range:	**ND**
PQL:	0.10
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.16
Identification:	---
Surrogate Recovery	
o-Terphenyl:	101%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-20-08
Date Analyzed: 3-20-08

Matrix: Water
Units: mg/L (ppm)

Lab ID:	03-100-22	03-100-22 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.26	0.27
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	99%	102%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-01
Client ID:	**CHEV-GW-MW23-0380**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	87	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-02
Client ID:	**CHEV-GW-MW19-0150**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0097	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	43	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-03
Client ID:	**CHEV-GW-MW11-0100**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0095	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	87	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-04
Client ID:	**CHEV-GW-MW20-0110**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0095	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	73	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-09
Client ID:	**TRIP BLANK**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	79	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-21-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0321W1

Analyte	Result	PQL	Flags
1,2-Dibromoethane (EDB)	ND	0.010	

Surrogate	Percent Recovery	Control Limits
TCMX	105	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDB by EPA 8011
SB/SBD QUALITY CONTROL

Date Extracted: 3-21-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0321W1

Analyte	SB Spike Level	SB	Percent Recovery	SBD	Percent Recovery	RPD
EDB	0.100	0.0941	94	0.101	101	7

Surrogate	Percent Recovery	Percent Recovery	Control Limits
TCMX	93	107	26 - 159

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B

Date Extracted:	3-17-08
Date Analyzed:	3-17-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-01
Client ID:	**CHEV-GW-MW23-0380**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	1.0		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	85	70-123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B

Date Extracted:	3-17-08
Date Analyzed:	3-17-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-02
Client ID:	**CHEV-GW-MW19-0150**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	ND		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	95	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	85	70-123

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B

Date Extracted:	3-17-08
Date Analyzed:	3-17-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-03
Client ID:	**CHEV-GW-MW11-0100**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	84	70-123

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B

Date Extracted:	3-17-08
Date Analyzed:	3-17-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-04
Client ID:	**CHEV-GW-MW20-0110**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	85	70-123

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B

Date Extracted:	3-17-08
Date Analyzed:	3-17-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-09
Client ID:	**TRIP BLANK**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	88	76-116
4-Bromofluorobenzene	83	70-123

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0317W1

Compound	Results	Flags	PQL
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	95	71-126
Toluene-d8	87	76-116
4-Bromofluorobenzene	83	70-123

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

EDC, MTBE by EPA 8260B
SB/SBD QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-17-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0317W1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	10.3	103	10.4	104	70-130	
Benzene	10.0	11.0	110	11.1	111	70-130	
Trichloroethene	10.0	9.00	90	8.95	90	70-116	
Toluene	10.0	10.2	102	10.2	102	76-119	
Chlorobenzene	10.0	9.25	93	8.99	90	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	2	20	
Benzene	2	16	
Trichloroethene	1	16	
Toluene	1	15	
Chlorobenzene	3	15	

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8

Date Extracted:	3-17-08
Date Analyzed:	3-18-08
Matrix:	Water
Units:	ug/L (ppb)

Client ID	Lab ID	Result	PQL
CHEV-GW-MW19-0150	03-097-02	**4.5**	1.1
CHEV-GW-MW20-0110	03-097-04	**15**	1.1
RINSATE	03-097-08	**ND**	1.1

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-17-08
Date Analyzed:	3-18-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0317W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-076-13

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 3-17-08
Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-076-13

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**112**	102	**112**	102	0	

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

DISSOLVED LEAD
EPA 200.8

Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Client ID	Lab ID	Result	PQL
CHEV-GW-MW19-2015	03-097-06	**ND**	1.0
CHEV-GW-MW20-2110	03-097-07	**ND**	1.0

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

DISSOLVED LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0317D1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

DISSOLVED LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-077-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

DISSOLVED LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 3-18-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-077-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**197**	99	**196**	98	1	

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-14-08
Date Analyzed:	3-19&20-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-02
Client ID:	**CHEV-GW-MW19-0150**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	0.88		0.11
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	15		1.1
Acenaphthylene	0.42		0.11
Acenaphthene	0.96		0.11
Fluorene	5.2		1.1
Phenanthrene	2.9		0.11
Anthracene	0.15		0.11
Fluoranthene	ND		0.11
Pyrene	ND		0.11
Benzo[a]anthracene	ND		0.011
Chrysene	0.021		0.011
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno(1,2,3-c,d)pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	**Percent Recovery**		**Control Limits**
Nitrobenzene-d5	150	Q	36 - 99
2-Fluorobiphenyl	71		34 - 100
Terphenyl-d14	82		48 - 112

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-14-08
Date Analyzed:	3-19-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-04
Client ID:	**CHEV-GW-MW20-0110**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.12
2-Methylnaphthalene	ND		0.12
1-Methylnaphthalene	ND		0.12
Acenaphthylene	ND		0.12
Acenaphthene	0.38		0.12
Fluorene	ND		0.12
Phenanthrene	ND		0.12
Anthracene	ND		0.12
Fluoranthene	ND		0.12
Pyrene	ND		0.12
Benzo[a]anthracene	0.015		0.012
Chrysene	0.013		0.012
Benzo[b]fluoranthene	ND		0.012
Benzo[k]fluoranthene	ND		0.012
Benzo[a]pyrene	ND		0.012
Indeno(1,2,3-c,d)pyrene	ND		0.012
Dibenz[a,h]anthracene	ND		0.012
Benzo[g,h,i]perylene	ND		0.012

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	97	36 - 99
2-Fluorobiphenyl	68	34 - 100
Terphenyl-d14	76	48 - 112

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-14-08
Date Analyzed:	3-19-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0314W1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10
Acenaphthylene	ND		0.10
Acenaphthene	ND		0.10
Fluorene	ND		0.10
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Fluoranthene	ND		0.10
Pyrene	ND		0.10
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno(1,2,3-c,d)pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	75	36 - 99
2-Fluorobiphenyl	61	34 - 100
Terphenyl-d14	75	48 - 112

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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Date Extracted: 3-14-08
Date Analyzed: 3-19-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0314W1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Naphthalene	0.500	0.402	80	0.343	69	60-130	
Acenaphthylene	0.500	0.417	83	0.368	74	60-130	
Acenaphthene	0.500	0.388	78	0.343	69	60-130	
Fluorene	0.500	0.408	82	0.370	74	60-130	
Phenanthrene	0.500	0.390	78	0.357	71	60-130	
Anthracene	0.500	0.391	78	0.351	70	60-130	
Fluoranthene	0.500	0.419	84	0.382	76	60-130	
Pyrene	0.500	0.430	86	0.386	77	60-130	
Benzo[a]anthracene	0.500	0.448	90	0.406	81	60-130	
Chrysene	0.500	0.447	89	0.410	82	60-130	
Benzo[b]fluoranthene	0.500	0.407	81	0.373	75	60-130	
Benzo[k]fluoranthene	0.500	0.419	84	0.382	76	60-130	
Benzo[a]pyrene	0.500	0.386	77	0.341	68	60-130	
Indeno(1,2,3-c,d)pyrene	0.500	0.422	84	0.387	77	60-130	
Dibenz[a,h]anthracene	0.500	0.411	82	0.377	75	60-130	
Benzo[g,h,i]perylene	0.500	0.401	80	0.366	73	60-130	

	RPD	RPD Limit	Flags
Naphthalene	16	30	
Acenaphthylene	12	32	
Acenaphthene	12	29	
Fluorene	10	22	
Phenanthrene	9	16	
Anthracene	11	17	
Fluoranthene	10	15	
Pyrene	11	20	
Benzo[a]anthracene	10	15	
Chrysene	9	15	
Benzo[b]fluoranthene	9	15	
Benzo[k]fluoranthene	9	15	
Benzo[a]pyrene	12	15	
Indeno(1,2,3-c,d)pyrene	9	15	
Dibenz[a,h]anthracene	9	15	
Benzo[g,h,i]perylene	9	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-24-08
Date Analyzed:	3-25-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-097-08
Client ID:	**RINSATE**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.097
2-Methylnaphthalene	ND		0.097
1-Methylnaphthalene	ND		0.097
Acenaphthylene	ND		0.097
Acenaphthene	ND		0.097
Fluorene	ND		0.097
Phenanthrene	ND		0.097
Anthracene	ND		0.097
Fluoranthene	ND		0.097
Pyrene	ND		0.097
Benzo[a]anthracene	ND		0.0097
Chrysene	ND		0.0097
Benzo[b]fluoranthene	ND		0.0097
Benzo[k]fluoranthene	ND		0.0097
Benzo[a]pyrene	ND		0.0097
Indeno(1,2,3-c,d)pyrene	ND		0.0097
Dibenz[a,h]anthracene	ND		0.0097
Benzo[g,h,i]perylene	ND		0.0097

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	96	36 - 99
2-Fluorobiphenyl	91	34 - 100
Terphenyl-d14	97	48 - 112

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-24-08
Date Analyzed:	3-25-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0324W1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10
Acenaphthylene	ND		0.10
Acenaphthene	ND		0.10
Fluorene	ND		0.10
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Fluoranthene	ND		0.10
Pyrene	ND		0.10
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno(1,2,3-c,d)pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	93	36 - 99
2-Fluorobiphenyl	89	34 - 100
Terphenyl-d14	90	48 - 112

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Date Extracted: 3-24-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0324W1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Naphthalene	0.500	0.432	86	0.360	72	60-130	
Acenaphthylene	0.500	0.425	85	0.246	49	60-130	I
Acenaphthene	0.500	0.425	85	0.370	74	60-130	
Fluorene	0.500	0.436	87	0.393	79	60-130	
Phenanthrene	0.500	0.420	84	0.385	77	60-130	
Anthracene	0.500	0.396	79	0.341	68	60-130	
Fluoranthene	0.500	0.423	85	0.394	79	60-130	
Pyrene	0.500	0.428	86	0.408	82	60-130	
Benzo[a]anthracene	0.500	0.434	87	0.402	80	60-130	
Chrysene	0.500	0.462	92	0.435	87	60-130	
Benzo[b]fluoranthene	0.500	0.426	85	0.412	82	60-130	
Benzo[k]fluoranthene	0.500	0.428	86	0.399	80	60-130	
Benzo[a]pyrene	0.500	0.386	77	0.339	68	60-130	
Indeno(1,2,3-c,d)pyrene	0.500	0.419	84	0.408	82	60-130	
Dibenz[a,h]anthracene	0.500	0.421	84	0.408	82	60-130	
Benzo[g,h,i]perylene	0.500	0.414	83	0.406	81	60-130	

	RPD	RPD Limit	Flags
Naphthalene	18	30	
Acenaphthylene	53	32	L
Acenaphthene	14	29	
Fluorene	10	22	
Phenanthrene	9	16	
Anthracene	15	17	
Fluoranthene	7	15	
Pyrene	5	20	
Benzo[a]anthracene	8	15	
Chrysene	6	15	
Benzo[b]fluoranthene	3	15	
Benzo[k]fluoranthene	7	15	
Benzo[a]pyrene	13	15	
Indeno(1,2,3-c,d)pyrene	3	15	
Dibenz[a,h]anthracene	3	15	
Benzo[g,h,i]perylene	2	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

ALKALINITY
EPA 310.2

Date Analyzed: 3-17-08

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW23-0380	03-097-01	**230**	40
CHEV-GW-MW19-0150	03-097-02	**160**	20
CHEV-GW-MW11-0100	03-097-03	**170**	20
CHEV-GW-MW20-0110	03-097-04	**180**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 3-17-08

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0317W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0317W1	87.7	100	88	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-097-01	227				
Matrix Spike	390	200	82	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
03-097-01	227	226	0	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 3-14-08

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW23-0380	03-097-01	**0.051**	0.050
CHEV-GW-MW19-0150	03-097-02	**ND**	0.050
CHEV-GW-MW11-0100	03-097-03	**ND**	0.050
CHEV-GW-MW20-0110	03-097-04	**ND**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 3-14-08

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0314W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0314W1	1.96	2.00	98	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-097-01	0.0505				
Matrix Spike	2.02	2.00	98	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
03-097-01	0.0505	0.0506	0	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

SULFATE
EPA 375.4

Date Analyzed: 3-18-08

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW23-0380	03-097-01	**ND**	5.0
CHEV-GW-MW19-0150	03-097-02	**ND**	5.0
CHEV-GW-MW11-0100	03-097-03	**ND**	5.0
CHEV-GW-MW20-0110	03-097-04	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

SULFATE
EPA 375.4
QUALITY CONTROL

Date Analyzed: 3-18-08

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0318W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0318W1	10.5	10.0	105	81-113	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-097-02	ND				
Matrix Spike	10.9	10.0	109	81-113	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
03-097-02	ND	ND	NA	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

CHLORIDE
EPA 325.2

Date Analyzed: 3-17-08

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW23-0380	03-097-01	**3.0**	2.0
CHEV-GW-MW19-0150	03-097-02	**3.4**	2.0
CHEV-GW-MW11-0100	03-097-03	**5.2**	2.0
CHEV-GW-MW20-0110	03-097-04	**11**	2.0
CHEV-SW-COVE-000	03-097-05	**16000**	400

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 26, 2008
Samples Submitted: March 14, 2008
Laboratory Reference: 0803-097
Project: 255 1896 063 04/1301

CHLORIDE
EPA 325.2
QUALITY CONTROL

Date Analyzed: 3-17-08

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0317W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0317W1	53.7	50.0	107	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-097-01	2.95				
Matrix Spike	55.5	50.0	105	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
03-097-01	2.95	2.98	1	20	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255 1896 063 04/1301
Project Name: Chevron RI/FS
Project Manager: David Dinkuhn
Sampled by: David Dinkuhn, Lily Isenhart

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 03-097

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	EDB by EPA 8011	EDC, MTBE by EPA 8260B	Pb	cPAHs by EPA 8270C SIM	Alkalinity, Nitrate, Sulfate	Chloride	% Moisture — COD
1	CHEV-GW-MW23-0380	3/12/08	1400	H_2O	10		X	X											X	X		Total X	X	X	X
2	CHEV-GW-MW19-0150	3/12/08	1500	H_2O	14		X	X											X	X	X	X	X	X	X
3	CHEV-GW-MW11-0100	3/13/08	0830	H_2O	9		X	X											X	X		TOTAL X	X	X	X
4	CHEV-GW-MW20-0110	3/13/08	1100	H_2O	14		X	X											X	X	X	X	X	X	X
5	CHEV-SW-COVE-0000	3/12/08	1530	H_2O	1																			X	
6	CHEV-GW-MW19-2015	3/12/08	1500	H_2O	1																X	- Dissolved			
7	CHEV-GW-MW20-2110	3/13/08	1100	H_2O	1																X	- Dissolved			
8	RINSATE	3/7/08	1330	H_2O	5		X	X													X	X			
9	TRIP BLANK	3/13/08	1414	H_2O	7		X												X	X		TOTAL			

	Signature	Company	Date	Time
Relinquished by	Lily Isenhart	Parametrix	03/13/2008	1423
Received by	[signature]	OSE	3/14/08	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

RINSATE: One bottle broke for NWTPH-Dx analyses. Only 1 L collected for cPAH. Please call if this is a problem.
360 850-5333.
Lily
2 coolers total

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Analytical Resources, Incorporated
Analytical Chemists and Consultants

24 March 2008

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: 255 1896 063 04/1301
ARI Job No: MN41

Dear David:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. accepted four water samples on March 14, 2008. The samples were received intact. The samples were analyzed for COD as requested.

There were no problems with these analyses.

An electronic copy of this package will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file MN41

MDH/mdh

METHOD BLANK RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank
Chemical Oxygen Demand	EPA 410.4	03/20/08	mg/L	< 5.00 U

SAMPLE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/12/08
Date Received: 03/14/08

Client ID: CHEV-GW-MW23-0380
ARI ID: 08-5453 MN41A

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	32.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/12/08
Date Received: 03/14/08

Client ID: CHEV-GW-MW19-0150
ARI ID: 08-5454 MN41B

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	101

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/13/08
Date Received: 03/14/08

Client ID: CHEV-GW-MW11-0100
ARI ID: 08-5455 MN41C

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	26.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/13/08
Date Received: 03/14/08

Client ID: CHEV-GW-MW20-0110
ARI ID: 08-5456 MN41D

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	24.2

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/12/08
Date Received: 03/14/08

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: MN41A Client ID: CHEV-GW-MW23-0380						
Chemical Oxygen Demand	EPA 410.4	03/20/08	mg/L	32.5	31.2	4.1%

MS/MSD RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: 03/12/08
Date Received: 03/14/08

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: MN41A Client ID: CHEV-GW-MW23-0380							
Chemical Oxygen Demand	EPA 410.4	03/20/08	mg/L	32.5	67.8	38.0	92.9%

STANDARD REFERENCE RESULTS-CONVENTIONALS
MN41-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 0411301
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Chemical Oxygen Demand Thermo Orion #I01	EPA 410.4	03/20/08	mg/L	89.8	90.0	99.8%

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 28, 2008

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255 1896 063 04/1301
Laboratory Reference No. 0803-146

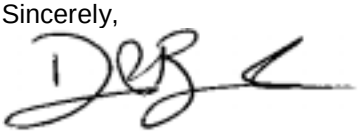
Dear Dave:

Enclosed are the analytical results and associated quality control data for samples submitted on March 20, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

Case Narrative

Samples were collected on March 17, 18, and 19, 2008 and received by the laboratory on March 20, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Sample CHEV-GW-MW19-0150 had one surrogate recovery out of control limits. This is within allowance of our standard operation procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Nitrate EPA 353.2 Analysis

Sample CHEV-GW-MW21-0100 (03-146-01) was analyzed for Nitrate out of holding time.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-MW21-0100**			**CHEV-GW-MW22-0100**		
Lab ID:	03-146-01			03-146-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**15**		10	**ND**		4.0
Toluene	**91**		10	**ND**		4.0
Ethyl Benzene	**620**		10	**ND**		4.0
m,p-Xylene	**910**		10	**ND**		4.0
o-Xylene	**110**		10	**ND**		4.0
TPH-Gas	**9200**		1000	**ND**		400
Surrogate Recovery:						
Fluorobenzene	117%			106%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-MW10-0150**			**CHEV-GW-MW25-0120**		
Lab ID:	03-146-03			03-146-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		4.0	**ND**		4.0
Toluene	**ND**		4.0	**ND**		4.0
Ethyl Benzene	**ND**		4.0	**56**		4.0
m,p-Xylene	**6.8**		4.0	**4.2**		4.0
o-Xylene	**ND**		4.0	**ND**		4.0
TPH-Gas	**ND**		400	**1600**		400
Surrogate Recovery:						
Fluorobenzene	105%			113%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-MW26-0130**			**CHEV-GW-MW25-1120**		
Lab ID:	03-146-05			03-146-06		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**17**		4.0	**ND**		4.0
Toluene	**ND**		4.0	**ND**		4.0
Ethyl Benzene	**ND**		4.0	**56**		4.0
m,p-Xylene	**ND**		4.0	**4.1**		4.0
o-Xylene	**ND**		4.0	**ND**		4.0
TPH-Gas	**1300**		400	**1700**		400
Surrogate Recovery:						
Fluorobenzene	106%			113%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**RINSATE**			**CHEV-GW-MW04-0120**		
Lab ID:	03-146-07			03-146-13		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		4.0	**160**		10
Toluene	**ND**		4.0	**ND**		10
Ethyl Benzene	**ND**		4.0	**45**		10
m,p-Xylene	**ND**		4.0	**86**		10
o-Xylene	**ND**		4.0	**12**		10
TPH-Gas	**ND**		400	**5400**		1000
Surrogate Recovery:						
Fluorobenzene	105%			107%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **TRIP BLANK**
Lab ID: 03-146-14

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 105%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0325W2

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 106%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	03-148-02 **Original**	03-148-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	108%	108%		

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	03-148-01 **MS**	Percent Recovery	03-148-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**46.8**	**94**	**46.2**	**92**	1	
Toluene	**47.0**	**94**	**46.3**	**93**	1	
Ethyl Benzene	**46.9**	**94**	**46.2**	**93**	1	
m,p-Xylene	**46.9**	**94**	**46.2**	**93**	2	
o-Xylene	**47.1**	**94**	**46.6**	**93**	1	

Surrogate Recovery:			
Fluorobenzene	99%		98%

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-26-08
Date Analyzed: 3-26&28-08

Matrix: Water
Units: mg/L (ppm)

Client ID:	**CHEV-GW-MW21-0100**	**CHEV-GW-MW22-0100**	**CHEV-GW-MW10-0150**
Lab ID:	03-146-01	03-146-02	03-146-03
Diesel Range:	**1.7**	**ND**	**160**
PQL:	0.25	0.26	5.5
Identification:	Diesel Range Organics	---	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	0.40	0.41	8.8
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	79%	110%	---
Flags:	Y,M	Y	Y,S

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-26-08
Date Analyzed: 3-26-08

Matrix: Water
Units: mg/L (ppm)

Client ID:	**CHEV-GW-MW25-0120**	**CHEV-GW-MW26-0130**	**CHEV-GW-MW25-1120**
Lab ID:	03-146-04	03-146-05	03-146-06
Diesel Range:	**1.2**	**1.3**	**1.0**
PQL:	0.3	0.25	0.29
Identification:	Diesel Range Organics	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	0.48	0.40	0.46
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	91%	84%	80%
Flags:	Y,M	Y,M	Y,M

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted: 3-26-08
Date Analyzed: 3-26&27-08

Matrix: Water
Units: mg/L (ppm)

Client ID:	**RINSATE**	**CHEV-GW-MW04-0120**
Lab ID:	03-146-07	03-146-13
Diesel Range:	**0.34**	**27**
PQL:	0.26	0.22
Identification:	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**ND**	**2.3**
PQL:	0.41	0.36
Identification:	---	Lube Oil
Surrogate Recovery		
o-Terphenyl:	76%	105%
Flags:	Y	Y

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-26-08
Date Analyzed:	3-26-08
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0326W1
Diesel Range:	**ND**
PQL:	0.13
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.20
Identification:	---
Surrogate Recovery	
o-Terphenyl:	65%
Flags:	Y

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 3-26-08
Date Analyzed: 3-26-08

Matrix: Water
Units: mg/L (ppm)

Lab ID:	03-177-01	03-177-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	72%	88%
Flags:	Y	Y

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL DISSOLVED SOLIDS
EPA 160.1

Date Analyzed: 3-24-08

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0100	03-146-01	**200**	13
CHEV-GW-MW25-0120	03-146-04	**2000**	13
CHEV-GW-MW25-1120	03-146-06	**2000**	13

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL DISSOLVED SOLIDS
EPA 160.1
QUALITY CONTROL

Date Analyzed: 3-24-08

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0320W1	ND	13

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0320W1	476	500	95	80-120	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
03-146-06	1950	1950	0	20	

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-01
Client ID:	**CHEV-GW-MW21-0100**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	61	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-02
Client ID:	**CHEV-GW-MW22-0100**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0095	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	103	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-03
Client ID:	**CHEV-GW-MW10-0150**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	114	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-04
Client ID:	**CHEV-GW-MW25-0120**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	56	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-05
Client ID:	**CHEV-GW-MW26-0130**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0095	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	84	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-06
Client ID:	**CHEV-GW-MW25-1120**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0096	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	62	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-07
Client ID:	**RINSATE**

Analyte	**Result**	**PQL**	**Flags**
1,2-Dibromoethane (EDB)	**ND**	0.0097	

Surrogate	**Percent Recovery**	**Control Limits**
TCMX	60	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-21-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0321W1

Analyte	Result	PQL	Flags
1,2-Dibromoethane (EDB)	ND	0.010	

Surrogate	Percent Recovery	Control Limits
TCMX	105	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

EDB by EPA 8011
SB/SBD QUALITY CONTROL

Date Extracted: 3-21-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0321W1

Analyte	SB Spike Level	SB	Percent Recovery	SBD	Percent Recovery	RPD
EDB	0.100	0.0941	94	0.101	101	7

Surrogate	Percent Recovery	Percent Recovery	Control Limits
TCMX	93	107	26 - 159

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted:	3-24-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-01
Client ID:	**CHEV-GW-MW21-0100**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		2.0
1,2-Dichloroethane	ND		2.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	96	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	85	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-146-02
Client ID: CHEV-GW-MW22-0100

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.40
1,2-Dichloroethane	ND		0.40

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	98	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	80	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-146-03
Client ID: CHEV-GW-MW10-0150

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	ND		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	92	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	86	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted:	3-24-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-04
Client ID:	**CHEV-GW-MW25-0120**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	ND		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	95	71-126
Toluene-d8	89	76-116
4-Bromofluorobenzene	86	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted:	3-24-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-05
Client ID:	**CHEV-GW-MW26-0130**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	ND		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	87	76-116
4-Bromofluorobenzene	84	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted:	3-24-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-06
Client ID:	**CHEV-GW-MW25-1120**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		1.0
1,2-Dichloroethane	ND		1.0

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	94	71-126
Toluene-d8	87	76-116
4-Bromofluorobenzene	87	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B

Date Extracted:	3-24-08
Date Analyzed:	3-24-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-07
Client ID:	**RINSATE**

Compound	**Results**	**Flags**	**PQL**
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	**Percent Recovery**	**Control Limits**
Dibromofluoromethane	99	71-126
Toluene-d8	87	76-116
4-Bromofluorobenzene	84	70-123

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0324W1

Compound	Results	Flags	PQL
Methyl t-Butyl Ether	ND		0.20
1,2-Dichloroethane	ND		0.20

Surrogate	Percent Recovery	Control Limits
Dibromofluoromethane	102	71-126
Toluene-d8	87	76-116
4-Bromofluorobenzene	76	70-123

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

VOLATILES by EPA 8260B
SB/SBD QUALITY CONTROL

Date Extracted: 3-24-08
Date Analyzed: 3-24-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0324W1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	10.0	9.07	91	8.90	89	70-130	
Benzene	10.0	11.2	112	11.0	110	70-130	
Trichloroethene	10.0	8.81	88	8.38	84	70-116	
Toluene	10.0	10.3	103	9.88	99	76-119	
Chlorobenzene	10.0	8.69	87	8.32	83	77-112	

	RPD	RPD Limit	Flags
1,1-Dichloroethene	2	20	
Benzene	2	16	
Trichloroethene	5	16	
Toluene	4	15	
Chlorobenzene	4	15	

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8

Date Extracted:	3-25-08
Date Analyzed:	3-25-08
Matrix:	Water
Units:	ug/L (ppb)

Client ID	Lab ID	Result	PQL
CHEV-GW-MW21-0100	03-146-01	**10**	1.1
CHEV-GW-MW22-0100	03-146-02	**ND**	1.1
CHEV-GW-MW25-0120	03-146-04	**1.2**	1.1
CHEV-GW-MW26-0130	03-146-05	**3.3**	1.1
CHEV-GW-MW25-1120	03-146-06	**1.3**	1.1
RINSATE	03-146-07	**ND**	1.1

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-25-08
Date Analyzed:	3-25-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0325W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-146-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**10.0**	**10.0**	0	1.1	

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 3-25-08
Date Analyzed: 3-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-146-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**121**	101	**122**	102	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-01
Client ID:	**CHEV-GW-MW21-0100**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	18		1.9
2-Methylnaphthalene	32		1.9
1-Methylnaphthalene	20		1.9
Acenaphthylene	0.099		0.095
Acenaphthene	1.1		0.095
Fluorene	0.96		0.095
Phenanthrene	0.65		0.095
Anthracene	ND		0.095
Fluoranthene	0.11		0.095
Pyrene	ND		0.095
Benzo[a]anthracene	0.012		0.0095
Chrysene	0.011		0.0095
Benzo[b]fluoranthene	0.010		0.0095
Benzo[k]fluoranthene	0.011		0.0095
Benzo[a]pyrene	0.012		0.0095
Indeno(1,2,3-c,d)pyrene	0.0099		0.0095
Dibenz[a,h]anthracene	ND		0.0095
Benzo[g,h,i]perylene	0.013		0.0095

Surrogate :	**Percent Recovery**		**Control Limits**
Nitrobenzene-d5	33	Q	36 - 99
2-Fluorobiphenyl	35		34 - 100
Terphenyl-d14	55		48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03146-02
Client ID:	**CHEV-GW-MW22-0100**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.098
2-Methylnaphthalene	ND		0.098
1-Methylnaphthalene	ND		0.098
Acenaphthylene	ND		0.098
Acenaphthene	0.52		0.098
Fluorene	ND		0.098
Phenanthrene	ND		0.098
Anthracene	ND		0.098
Fluoranthene	ND		0.098
Pyrene	ND		0.098
Benzo[a]anthracene	ND		0.0098
Chrysene	ND		0.0098
Benzo[b]fluoranthene	ND		0.0098
Benzo[k]fluoranthene	ND		0.0098
Benzo[a]pyrene	ND		0.0098
Indeno(1,2,3-c,d)pyrene	ND		0.0098
Dibenz[a,h]anthracene	ND		0.0098
Benzo[g,h,i]perylene	ND		0.0098

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	75	36 - 99
2-Fluorobiphenyl	70	34 - 100
Terphenyl-d14	88	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22&23-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-04
Client ID:	**CHEV-GW-MW25-0120**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	1.2		0.11
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	22		2.2
Acenaphthylene	0.17		0.11
Acenaphthene	0.98		0.11
Fluorene	1.6		0.11
Phenanthrene	ND		0.11
Anthracene	ND		0.11
Fluoranthene	ND		0.11
Pyrene	ND		0.11
Benzo[a]anthracene	ND		0.011
Chrysene	ND		0.011
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno(1,2,3-c,d)pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	72	36 - 99
2-Fluorobiphenyl	62	34 - 100
Terphenyl-d14	86	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
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PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22&23-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-05
Client ID:	**CHEV-GW-MW26-0130**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	0.80		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	69		2.1
Acenaphthylene	0.45		0.10
Acenaphthene	23		2.1
Fluorene	4.8		2.1
Phenanthrene	10		2.1
Anthracene	2.4		0.10
Fluoranthene	0.88		0.10
Pyrene	1.2		0.10
Benzo[a]anthracene	0.10		0.010
Chrysene	0.098		0.010
Benzo[b]fluoranthene	0.022		0.010
Benzo[k]fluoranthene	0.027		0.010
Benzo[a]pyrene	0.051		0.010
Indeno(1,2,3-c,d)pyrene	0.017		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	0.020		0.010

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	81	36 - 99
2-Fluorobiphenyl	71	34 - 100
Terphenyl-d14	83	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
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PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22&23-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-06
Client ID:	**CHEV-GW-MW25-1120**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	1.4		0.11
2-Methylnaphthalene	ND		0.11
1-Methylnaphthalene	25		1.1
Acenaphthylene	0.17		0.11
Acenaphthene	0.96		0.11
Fluorene	1.7		0.11
Phenanthrene	ND		0.11
Anthracene	ND		0.11
Fluoranthene	ND		0.11
Pyrene	ND		0.11
Benzo[a]anthracene	ND		0.011
Chrysene	ND		0.011
Benzo[b]fluoranthene	ND		0.011
Benzo[k]fluoranthene	ND		0.011
Benzo[a]pyrene	ND		0.011
Indeno(1,2,3-c,d)pyrene	ND		0.011
Dibenz[a,h]anthracene	ND		0.011
Benzo[g,h,i]perylene	ND		0.011

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	81	36 - 99
2-Fluorobiphenyl	62	34 - 100
Terphenyl-d14	87	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
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PAHs by EPA 8270D/SIM

Date Extracted:	3-21-08
Date Analyzed:	3-22-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	03-146-07
Client ID:	**RINSATE**

Compound:	**Results**	**Flags**	**PQL**
Naphthalene	ND		0.099
2-Methylnaphthalene	ND		0.099
1-Methylnaphthalene	0.13		0.099
Acenaphthylene	ND		0.099
Acenaphthene	ND		0.099
Fluorene	ND		0.099
Phenanthrene	ND		0.099
Anthracene	ND		0.099
Fluoranthene	ND		0.099
Pyrene	ND		0.099
Benzo[a]anthracene	ND		0.0099
Chrysene	ND		0.0099
Benzo[b]fluoranthene	ND		0.0099
Benzo[k]fluoranthene	ND		0.0099
Benzo[a]pyrene	ND		0.0099
Indeno(1,2,3-c,d)pyrene	ND		0.0099
Dibenz[a,h]anthracene	ND		0.0099
Benzo[g,h,i]perylene	ND		0.0099

Surrogate :	**Percent Recovery**	**Control Limits**
Nitrobenzene-d5	75	36 - 99
2-Fluorobiphenyl	64	34 - 100
Terphenyl-d14	82	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-21-08
Date Analyzed:	3-21-08
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0321W1

Compound:	Results	Flags	PQL
Naphthalene	ND		0.10
2-Methylnaphthalene	ND		0.10
1-Methylnaphthalene	ND		0.10
Acenaphthylene	ND		0.10
Acenaphthene	ND		0.10
Fluorene	ND		0.10
Phenanthrene	ND		0.10
Anthracene	ND		0.10
Fluoranthene	ND		0.10
Pyrene	ND		0.10
Benzo[a]anthracene	ND		0.010
Chrysene	ND		0.010
Benzo[b]fluoranthene	ND		0.010
Benzo[k]fluoranthene	ND		0.010
Benzo[a]pyrene	ND		0.010
Indeno(1,2,3-c,d)pyrene	ND		0.010
Dibenz[a,h]anthracene	ND		0.010
Benzo[g,h,i]perylene	ND		0.010

Surrogate :	Percent Recovery	Control Limits
Nitrobenzene-d5	68	36 - 99
2-Fluorobiphenyl	66	34 - 100
Terphenyl-d14	87	48 - 112

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
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PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Date Extracted: 3-21-08
Date Analyzed: 3-21-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB0321W1

Compound:	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
Naphthalene	0.500	0.296	59	0.285	57	43-89	
Acenaphthylene	0.500	0.331	66	0.305	61	32-96	
Acenaphthene	0.500	0.324	65	0.298	60	46-95	
Fluorene	0.500	0.372	74	0.335	67	51-95	
Phenanthrene	0.500	0.378	76	0.344	69	54-93	
Anthracene	0.500	0.378	76	0.345	69	50-93	
Fluoranthene	0.500	0.415	83	0.399	80	59-99	
Pyrene	0.500	0.423	85	0.399	80	58-99	
Benzo[a]anthracene	0.500	0.409	82	0.410	82	52-108	
Chrysene	0.500	0.433	87	0.434	87	54-121	
Benzo[b]fluoranthene	0.500	0.407	81	0.413	83	59-104	
Benzo[k]fluoranthene	0.500	0.406	81	0.394	79	58-104	
Benzo[a]pyrene	0.500	0.371	74	0.367	73	48-107	
Indeno(1,2,3-c,d)pyrene	0.500	0.382	76	0.400	80	63-103	
Dibenz[a,h]anthracene	0.500	0.386	77	0.403	81	54-130	
Benzo[g,h,i]perylene	0.500	0.337	67	0.355	71	60-104	

	RPD	RPD Limit	Flags
Naphthalene	4	30	
Acenaphthylene	8	32	
Acenaphthene	9	29	
Fluorene	11	22	
Phenanthrene	9	16	
Anthracene	9	17	
Fluoranthene	4	15	
Pyrene	6	20	
Benzo[a]anthracene	0	15	
Chrysene	0	15	
Benzo[b]fluoranthene	2	15	
Benzo[k]fluoranthene	3	15	
Benzo[a]pyrene	1	15	
Indeno(1,2,3-c,d)pyrene	5	15	
Dibenz[a,h]anthracene	4	15	
Benzo[g,h,i]perylene	5	15	

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ALKALINITY
EPA 310.2

Date Analyzed: 3-25-08

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0100	03-146-01	**150**	20
CHEV-GW-MW22-0100	03-146-02	**340**	20
CHEV-GW-MW10-0150	03-146-03	**220**	20
CHEV-GW-MW25-0120	03-146-04	**420**	20
CHEV-GW-MW26-0130	03-146-05	**190**	20
CHEV-GW-MW25-1120	03-146-06	**410**	20

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ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 3-25-08

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0325W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0325W1	100	100	100	70-130	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
03-146-01	146	148	1	8	

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NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 3-24-08

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0100	03-146-01	**ND**	0.050
CHEV-GW-MW22-0100	03-146-02	**ND**	0.050
CHEV-GW-MW10-0150	03-146-03	**ND**	0.050
CHEV-GW-MW25-0120	03-146-04	**0.052**	0.050
CHEV-GW-MW26-0130	03-146-05	**ND**	0.050
CHEV-GW-MW25-1120	03-146-06	**ND**	0.050

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NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 3-24-08

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0324W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0324W1	2.07	2.00	104	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-116-01	0.469				
Matrix Spike	2.66	2.00	110	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
03-116-01	0.469	0.461	2	20	

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SULFATE
EPA 375.4

Date Analyzed: 3-26-08

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0100	03-146-01	**ND**	5.0
CHEV-GW-MW22-0100	03-146-02	**22**	5.0
CHEV-GW-MW10-0150	03-146-03	**ND**	5.0
CHEV-GW-MW25-0120	03-146-04	**36**	10
CHEV-GW-MW26-0130	03-146-05	**1400**	500
CHEV-GW-MW25-1120	03-146-06	**36**	10

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SULFATE
EPA 375.4
QUALITY CONTROL

Date Analyzed: 3-26-08

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0326W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0326W1	10.5	10.0	105	81-113	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-116-02	ND				
Matrix Spike	10.6	10.0	106	81-113	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
03-116-02	ND	ND	NA	15	

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CHLORIDE
EPA 325.2

Date Analyzed: 3-26-08

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0100	03-146-01	**28**	2.0
CHEV-GW-MW22-0100	03-146-02	**370**	10
CHEV-GW-MW10-0150	03-146-03	**2.5**	2.0
CHEV-GW-MW25-0120	03-146-04	**980**	20
CHEV-GW-MW26-0130	03-146-05	**9400**	200
CHEV-GW-MW25-1120	03-146-06	**910**	20

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CHLORIDE
EPA 325.2
QUALITY CONTROL

Date Analyzed: 3-26-08

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0326W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0326W1	56.3	50.0	113	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
03-146-01	27.8				
Matrix Spike	87.9	50.0	120	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
03-146-01	27.8	27.2	2	20	

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DISSOLVED LEAD
EPA 200.8

Date Analyzed: 3-21-08

Matrix: Water
Units: ug/L (ppb)

Client ID	Lab ID	Result	PQL
CHEV-GW-MW21-2100	03-146-08	**8.9**	1.0
CHEV-GW-MW25-2120	03-146-09	**ND**	1.0
CHEV-GW-MW25-3120	03-146-10	**ND**	1.0
CHEV-GW-MW26-1130	03-146-11	**ND**	1.0
CHEV-GW-MW22-1100	03-146-12	**ND**	1.0

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Date of Report: March 28, 2008
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DISSOLVED LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 3-21-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0319D2

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0

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DISSOLVED LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 3-21-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-058-07

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	

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Date of Report: March 28, 2008
Samples Submitted: March 20, 2008
Laboratory Reference: 0803-146
Project: 255 1896 063 04/1301

DISSOLVED LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 3-21-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: 03-058-07

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**197**	99	**197**	98	0	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: PARAMETRIX
Project Number: 255 1896 063 04/1301
Project Name: CHEVRON RI
Project Manager: DAVID DINKUHN
Sampled by: ~~L.~~ L. ISENHART, W. HARVEY

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 03-146

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	~~HEM by 1664~~ TDS	EDB by EPA 8011	EDC, MTBE by EPA 8260B	Pb, TOTAL	CPAH by EPA 8270C SIM	ALKALINITY, NITRATE SULFATE, CHLORIDE	COD	% Moisture Pb DISSOLVED
1	CHEV-GW-MW21-0100	3-18-08	1030	H20	~~16~~ 15		X	X										X	X	X	X	X	X	X	X
2	CHEV-GW-MW22-0100	3-17-08	1444	H20	14		X	X											X	X	X	X	X	X	
3	CHEV-GW-MW10-0150	3-17-08	1715	H20	11		X	X											X	X			X	X	
4	CHEV-GW-MW25-0120	3-18-08	1330	H20	15		X	X										X	X	X	X	X	X	X	
5	CHEV-GW-MW26-0130	3-18-08	1615	H20	14		X	X											X	X	X	X	X	X	
6	CHEV-GW-MW25-1120	3-18-08 ~~33~~	1330	H20	15		X	X										X	X	X	X	X	X	X	
7	RINSATE	3-18-08	1415	H20	12		X	X											X	X	X	X			
8	CHEV-GW-MW21-2100	3-18-08	1030	H20	1																				X
9	CHEV-GW-MW25-2120	3-18-08	1330	H20	1																				X
10	CHEV-GW-MW25-3120	3-18-08	1330	H20	1																				X

	Signature	Company	Date	Time
Relinquished by	Lily Isenhart	Parametrix	3-19-08	14:00
Received by	M. Van	OSE	3/20/08	1010
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

MW10 Dx sample bottle lid broke, volume transfered to non-preserved 1L amber.

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: PARAMETRIX
Project Number: 255-1896-063 04/1301
Project Name: CHEVRON RI
Project Manager: DAVID DINKUHN
Sampled by: L. ISENHART, W. HARVEY

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☑ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 03-146

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Pb DISSOLVED						% Moisture
11	CHEV-GW-MW26-1130	3-18-08	1615	H2O	1														X						
12	CHEV-GW-MW22-1100	3-17-08	1444	H2O	1														X						
13	CHEV-GW-MW04-0120	3-19-08	1330	H2O	4		X	X																	
14	TRIP BLANK	3-19-08	1400	H2O	2		X																		

	Signature	Company	Date	Time
Relinquished by	Lily Isenhart	Parametrix	3-19-08	14:00
Received by	[signature]	OSE	3/20/08	1010
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

MW04 sample highly turbid. Only running NWTPH_Gx, NWTPH_Dx and BTEX as a screening level sample.

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Analytical Resources, Incorporated
Analytical Chemists and Consultants

24 March 2008

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: 255 1896 063 04/1301
ARI Job No: MO25

Dear David:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. accepted six water samples on March 20, 2008. The samples were received intact. The samples were analyzed for COD as requested.

There were no problems with these analyses.

An electronic copy of this package will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file MO25

MDH/mdh

METHOD BLANK RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank
Chemical Oxygen Demand	EPA 410.4	03/20/08	mg/L	< 5.00 U
		03/21/08		< 5.00 U

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/18/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW21-0100
ARI ID: 08-5821 MO25A

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	22.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/17/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW22-0100
ARI ID: 08-5822 MO25B

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	25.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/17/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW10-0150
ARI ID: 08-5823 MO25C

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/21/08 032108#1	EPA 410.4	mg/L	25.0	149

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/18/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW25-0120
ARI ID: 08-5824 MO25D

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	24.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/18/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW26-0130
ARI ID: 08-5825 MO25E

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/21/08 032108#1	EPA 410.4	mg/L	25.0	110

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: 03/18/08
Date Received: 03/20/08

Client ID: CHEV-GW-MW25-1120
ARI ID: 08-5826 MO25F

Analyte	Date Batch	Method	Units	RL	Sample
Chemical Oxygen Demand	03/20/08 032008#1	EPA 410.4	mg/L	5.00	10.6

RL Analytical reporting limit
U Undetected at reported detection limit

STANDARD REFERENCE RESULTS-CONVENTIONALS
MO25-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 03/24/08

Project: NA
Event: 255 1896 063 04/130
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Chemical Oxygen Demand	EPA 410.4	03/20/08	mg/L	89.8	90.0	99.8%
Thermo Orion #I01		03/21/08		89.2	90.0	99.1%

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

July 8, 2008

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063
Laboratory Reference No. 0806-187

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 25, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

Case Narrative

Samples were collected on June 23, 2008 and received by the laboratory on June 25, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX (soil) Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP20-0090**			**CHEV-SO-PP20-0100**		
Lab ID:	06-187-01			06-187-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.091	**ND**		0.086
Ethyl Benzene	**ND**		0.091	**ND**		0.086
m,p-Xylene	**ND**		0.091	**ND**		0.086
o-Xylene	**ND**		0.091	**ND**		0.086
TPH-Gas	**12**	**O**	9.1	**ND**		8.6
Surrogate Recovery: Fluorobenzene	85%			83%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP21-0090**			**CHEV-SO-PP21-1090**		
Lab ID:	06-187-04			06-187-05		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.043	**ND**		0.038
Ethyl Benzene	**ND**		0.043	**ND**		0.038
m,p-Xylene	**ND**		0.043	**ND**		0.038
o-Xylene	**ND**		0.043	**ND**		0.038
TPH-Gas	**ND**		4.3	**ND**		3.8
Surrogate Recovery: Fluorobenzene	81%			80%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP21-0100**			**CHEV-SO-PP22-0080**		
Lab ID:	06-187-06			06-187-07		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.055	**ND**		0.043
Ethyl Benzene	**ND**		0.055	**ND**		0.043
m,p-Xylene	**ND**		0.055	**ND**		0.043
o-Xylene	**ND**		0.055	**ND**		0.043
TPH-Gas	**ND**		5.5	**ND**		4.3
Surrogate Recovery: Fluorobenzene	77%			84%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP22-0100**			**CHEV-SO-PP23-0080**		
Lab ID:	06-187-08			06-187-09		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.13**		0.020	**ND**		0.020
Toluene	**ND**	**U1**	0.29	**ND**		0.095
Ethyl Benzene	**ND**	**U1**	0.29	**ND**		0.095
m,p-Xylene	**0.78**		0.059	**ND**		0.095
o-Xylene	**ND**	**U1**	0.29	**ND**		0.095
TPH-Gas	**100**		5.9	**ND**		9.5
Surrogate Recovery: Fluorobenzene	77%			83%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-PP23-0090**
Lab ID: 06-187-10

	Result	Flags	PQL
Benzene	**4.0**		0.21
Toluene	**ND**	**U1**	10
Ethyl Benzene	**20**		1.0
m,p-Xylene	**40**		1.0
o-Xylene	**ND**	**U1**	21
TPH-Gas	**ND**		100
Surrogate Recovery:			
Fluorobenzene	112%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0627S2

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	83%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-195-01 **Original**	06-195-01 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	79%	79%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 1.96

Lab ID:	06-187-04 **MS**	Percent Recovery	06-187-04 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**1.74**	**89**	**1.82**	**93**	5	
Toluene	**1.78**	**91**	**1.86**	**95**	4	
Ethyl Benzene	**1.79**	**91**	**1.87**	**95**	4	
m,p-Xylene	**1.81**	**93**	**1.89**	**96**	4	
o-Xylene	**1.80**	**92**	**1.87**	**96**	4	

Surrogate Recovery:

Fluorobenzene	87%		88%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-26-08
Date Analyzed: 6-26-08

Matrix: Water
Units: ug/L (ppb)

Client ID: **CHEV-GW-PP20-0130**
Lab ID: 06-187-03

	Result	Flags	PQL
Benzene	**62**		4.0
Toluene	**4.2**		4.0
Ethyl Benzene	**52**		4.0
m,p-Xylene	**12**		4.0
o-Xylene	**ND**		4.0
TPH-Gas	**1600**		400
Surrogate Recovery:			
Fluorobenzene	93%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-26-08
Date Analyzed: 6-26-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0626W1

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 88%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-26-08
Date Analyzed: 6-26-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	06-189-08 **Original**	06-189-08 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	92%	89%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-26-08
Date Analyzed: 6-26-08

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	06-189-08 **MS**	Percent Recovery	06-189-08 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**45.0**	**90**	**48.8**	**98**	8	
Toluene	**45.3**	**91**	**48.8**	**98**	8	
Ethyl Benzene	**45.1**	**90**	**48.8**	**98**	8	
m,p-Xylene	**45.5**	**91**	**49.1**	**98**	8	
o-Xylene	**45.1**	**90**	**48.6**	**97**	8	

Surrogate Recovery:			
Fluorobenzene	92%		93%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx

Date Extracted: 6-26-08
Date Analyzed: 7-1-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP20-0090**	**CHEV-SO-PP20-0100**	**CHEV-SO-PP21-0090**
Lab ID:	06-187-01	06-187-02	06-187-04
Diesel Range:	**82**	**180**	**ND**
PQL:	28	27	27
Identification:	Diesel Fuel#1	Diesel Fuel#1	---
Lube Oil Range:	**63**	**ND**	**ND**
PQL:	55	54	54
Identification:	Lube Oil	---	---
Surrogate Recovery			
o-Terphenyl:	104%	90%	95%
Flags:	Y	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx

Date Extracted: 6-26-08
Date Analyzed: 7-1-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP21-1090**	**CHEV-SO-PP21-0100**	**CHEV-SO-PP22-0080**
Lab ID:	06-187-05	06-187-06	06-187-07
Diesel Range:	**ND**	**ND**	**ND**
PQL:	28	28	28
Identification:	---	---	---
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	55	55	56
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	101%	82%	95%
Flags:	Y	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx

Date Extracted: 6-26-08
Date Analyzed: 7-1&2-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP22-0100**	**CHEV-SO-PP23-0080**	**CHEV-SO-PP23-0090**
Lab ID:	06-187-08	06-187-09	06-187-10
Diesel Range:	**ND**	**110**	**6900**
PQL:	30	28	150
Identification:	---	Diesel Range Organics	Diesel Fuel#1
Lube Oil Range:	**190**	**420**	**1100**
PQL:	60	56	290
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	74%	78%	94%
Flags:	Y	Y	Y

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-26-08
Date Analyzed:	6-26-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0626S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	82%
Flags:	Y

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-26-08
Date Analyzed: 6-26-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-156-13	06-156-13 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	80%	77%
Flags:	Y	Y

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx

Date Extracted:	6-27-08
Date Analyzed:	6-27-08
Matrix:	Water
Units:	mg/L (ppm)

Client ID:	**CHEV-GW-PP20-0130**
Lab ID:	06-187-03
Diesel Range:	**ND**
PQL:	0.26
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.42
Identification:	---
Surrogate Recovery	
o-Terphenyl:	80%
Flags:	Y

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-27-08
Date Analyzed:	6-27-08
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0627W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	117%
Flags:	Y

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-27-08
Date Analyzed: 6-27-08

Matrix: Water
Units: mg/L (ppm)

Lab ID:	06-166-02	06-166-02 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.23	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	121%	128%
Flags:	Y	Y

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP20-0090**					
Laboratory ID:	06-187-01					
Naphthalene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
2-Methylnaphthalene	**0.021**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
1-Methylnaphthalene	**0.039**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Acenaphthylene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Acenaphthene	**0.031**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Fluorene	**0.027**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Phenanthrene	**0.048**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Anthracene	**0.0084**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Fluoranthene	**0.052**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Pyrene	**0.049**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Benzo[a]anthracene	**0.011**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Chrysene	**0.0095**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Benzo[k]fluoranthene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Benzo[g,h,i]perylene	**ND**	0.0073	EPA 8270/SIM	7-1-08	7-2-08	
Surrogate:	*Percent Recovery*	*Control Limits*				
Nitrobenzene-d5	*69*	*39 - 110*				
2-Fluorobiphenyl	*61*	*41 - 107*				
Terphenyl-d14	*92*	*54 - 126*				

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0701S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Fluorene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Anthracene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Pyrene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Chrysene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	7-1-08	7-1-08	
Surrogate:	*Percent Recovery*	*Control Limits*				
Nitrobenzene-d5	*78*	*39 - 110*				
2-Fluorobiphenyl	*70*	*41 - 107*				
Terphenyl-d14	*97*	*54 - 126*				

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Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

PAHs by EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
Laboratory ID:	06-225-04										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0500**	**0.0470**	0.0833	0.0833	ND	60	56	45 - 94	6	24	
Acenaphthylene	**0.0731**	**0.0703**	0.0833	0.0833	ND	88	84	51 - 104	4	25	
Acenaphthene	**0.0601**	**0.0580**	0.0833	0.0833	ND	72	70	53 - 103	4	21	
Fluorene	**0.0657**	**0.0657**	0.0833	0.0833	ND	79	79	57 - 107	0	19	
Phenanthrene	**0.0640**	**0.0650**	0.0833	0.0833	ND	77	78	61 - 104	2	17	
Anthracene	**0.0762**	**0.0777**	0.0833	0.0833	ND	91	93	58 - 102	2	14	
Fluoranthene	**0.0753**	**0.0764**	0.0833	0.0833	ND	90	92	69 - 109	1	27	
Pyrene	**0.0747**	**0.0750**	0.0833	0.0833	ND	90	90	71 - 114	0	27	
Benzo[a]anthracene	**0.0816**	**0.0818**	0.0833	0.0833	ND	98	98	61 - 123	0	18	
Chrysene	**0.0717**	**0.0729**	0.0833	0.0833	ND	86	88	66 - 124	2	19	
Benzo[b]fluoranthene	**0.0782**	**0.0781**	0.0833	0.0833	ND	94	94	72 - 114	0	26	
Benzo[k]fluoranthene	**0.0712**	**0.0738**	0.0833	0.0833	ND	85	89	70 - 115	4	17	
Benzo[a]pyrene	**0.0647**	**0.0665**	0.0833	0.0833	ND	78	80	57 - 104	3	18	
Indeno(1,2,3-c,d)pyrene	**0.0766**	**0.0772**	0.0833	0.0833	ND	92	93	63 - 121	1	20	
Dibenz[a,h]anthracene	**0.0867**	**0.0876**	0.0833	0.0833	ND	104	105	62 - 125	1	15	
Benzo[g,h,i]perylene	**0.0799**	**0.0803**	0.0833	0.0833	ND	96	96	64 - 117	0	21	
Surrogate:											
Nitrobenzene-d5						*73*	*69*	*39 - 110*			
2-Fluorobiphenyl						*65*	*62*	*41 - 107*			
Terphenyl-d14						*89*	*90*	*54 - 126*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 8, 2008
Samples Submitted: June 25, 2008
Laboratory Reference: 0806-187
Project: 255-1896-063

% MOISTURE

Date Analyzed: 6-26-08

Client ID	Lab ID	% Moisture
CHEV-SO-PP20-0090	06-187-01	9
CHEV-SO-PP20-0100	06-187-02	7
CHEV-SO-PP21-0090	06-187-04	8
CHEV-SO-PP21-1090	06-187-05	9
CHEV-SO-PP21-0100	06-187-06	9
CHEV-SO-PP22-0080	06-187-07	10
CHEV-SO-PP22-0100	06-187-08	17
CHEV-SO-PP23-0080	06-187-09	10
CHEV-SO-PP23-0090	06-187-10	15

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

Page 1 of 1

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063

Project Name: Bfe FORMER CHEVRON PROP.

Project Manager: David Dinkuhn

Sampled by: Same

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☑ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-187

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-PP20-0090	6/23/08	1030	So	3		X	X				X							X
2	CHEV-SO-PP20-0100		1045	So	2		X	X											X
3	CHEV-EW-PP20-0130		1100	EW	5		X	X											
4	CHEV-SO-PP21-0090		1115	SO	2		X	X											X
5	CHEV-SO-PP21-0090		1130	SO	2		X	X											X
6	CHEV-SO-PP21-0100		1145	SO	2		X	X											X
7	CHEV-SO-PP22-0080		1200	SO	2		X	X											X
8	CHEV-SO-PP22-0100		1215	SO	2		X	X											X
9	CHEV-SO-PP23-0080		1230	SO	2		X	X											X
10	CHEV-SO-PP23-0090	↓	1245	SO	2		X	X											X

	Signature	Company	Date	Time
Relinquished by	David Dinkuhn	PMX	6/24/08	0900
Received by		OnSite Env	6/25/08	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 3, 2008

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063
Laboratory Reference No. 0808-164

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 22, 2008.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

Case Narrative

Samples were collected on August 20, 2008 and received by the laboratory on August 22, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 8-26-08
Date Analyzed: 8-26&28-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP24-0100**			**CHEV-SO-PP25-0100**		
Lab ID:	08-164-01			08-164-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.062**		0.020	**0.33**		0.020
Toluene	**ND**		0.059	**ND**		0.095
Ethyl Benzene	**ND**		0.059	**ND**		0.095
m,p-Xylene	**0.088**		0.059	**0.12**		0.095
o-Xylene	**ND**		0.059	**ND**		0.095
TPH-Gas	**9.2**	**O**	5.9	**11**	**O**	9.5
Surrogate Recovery:						
Fluorobenzene	67%			77%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 8-26-08
Date Analyzed: 8-28&29-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP26-0100**			**CHEV-SO-PP27-0105**		
Lab ID:	08-164-03			08-164-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**	**U1**	1.6	**0.042**		0.020
Toluene	**ND**		0.32	**ND**		0.052
Ethyl Benzene	**7.6**		0.32	**0.11**		0.052
m,p-Xylene	**24**		0.32	**0.080**		0.052
o-Xylene	**0.48**		0.32	**ND**		0.052
TPH-Gas	**400**		32	**5.2**		5.2
Surrogate Recovery:						
Fluorobenzene	93%			89%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 8-26-08
Date Analyzed: 8-27&28-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP28-0100**			**CHEV-SO-BULK-0110**		
Lab ID:	08-164-05			08-164-06		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**	**U1**	21	**1.6**		0.19
Toluene	**ND**	**U1**	5.2	**ND**	**U1**	4.7
Ethyl Benzene	**ND**	**U1**	5.2	**3.5**		0.94
m,p-Xylene	**9.2**		1.0	**4.9**		0.94
o-Xylene	**ND**	**U1**	5.2	**ND**	**U1**	4.7
TPH-Gas	**5100**	**O**	100	**ND**		94
Surrogate Recovery:						
Fluorobenzene	91%			120%		

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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 8-26-08
Date Analyzed: 8-26-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0826S4

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	109%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 8-26-08
Date Analyzed: 8-26&27-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	08-187-12 **Original**	08-187-12 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	93%	87%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 8-26-08
Date Analyzed: 8-27&28-08

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.64

Lab ID:	08-187-02 **MS**	Percent Recovery	08-187-02 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.42**	**92**	**2.26**	**86**	7	
Toluene	**2.53**	**96**	**2.34**	**89**	8	
Ethyl Benzene	**2.57**	**98**	**2.35**	**89**	9	
m,p-Xylene	**2.60**	**99**	**2.37**	**90**	9	
o-Xylene	**2.62**	**99**	**2.38**	**91**	9	

Surrogate Recovery:

Fluorobenzene	79%	108%

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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 8-25-08
Date Analyzed: 8-25-08

Matrix: Water
Units: ug/L (ppb)

Client ID:	**CHEV-GW-PP29-0140**			**TRIP BLANK**		
Lab ID:	08-164-07			08-164-08		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**4.6**		4.0	**ND**		1.0
Toluene	**ND**		4.0	**ND**		1.0
Ethyl Benzene	**ND**		4.0	**ND**		1.0
m,p-Xylene	**5.1**		4.0	**ND**		1.0
o-Xylene	**ND**		4.0	**ND**		1.0
TPH-Gas	**1600**		400	**ND**		100
Surrogate Recovery:						
Fluorobenzene	89%			87%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 8-25-08
Date Analyzed: 8-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0825W2

	Result	Flags	PQL
Benzene	**ND**		1.0
Toluene	**ND**		1.0
Ethyl Benzene	**ND**		1.0
m,p-Xylene	**ND**		1.0
o-Xylene	**ND**		1.0
TPH-Gas	**ND**		100

Surrogate Recovery:
Fluorobenzene 88%

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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 8-25-08
Date Analyzed: 8-25-08

Matrix: Water
Units: ug/L (ppb)

Lab ID:	08-155-08 **Original**	08-155-08 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	87%	87%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 8-25-08
Date Analyzed: 8-25-08

Matrix: Water
Units: ug/L (ppb)

Spike Level: 50.0 ppb

Lab ID:	08-154-01 **MS**	Percent Recovery	08-154-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**44.2**	**88**	**44.7**	**89**	1	
Toluene	**45.5**	**91**	**45.9**	**92**	1	
Ethyl Benzene	**46.2**	**93**	**46.6**	**93**	1	
m,p-Xylene	**46.2**	**93**	**46.5**	**93**	0	
o-Xylene	**46.6**	**93**	**46.8**	**94**	0	

Surrogate Recovery:			
Fluorobenzene	90%		89%

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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx

Date Extracted: 8-27-08
Date Analyzed: 8-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP24-0100**	**CHEV-SO-PP25-0100**	**CHEV-SO-PP26-0100**
Lab ID:	08-164-01	08-164-02	08-164-03
Diesel Range:	**680**	**110**	**320**
PQL:	31	29	29
Identification:	Diesel Fuel#2	Diesel Fuel#2	Diesel Range Organics
Lube Oil Range:	**68**	**120**	**380**
PQL:	62	59	58
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	85%	77%	96%
Flags:	Y	Y	M,Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx

Date Extracted: 8-27-08
Date Analyzed: 8-27-08

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-PP27-0105**	**CHEV-SO-PP28-0100**	**CHEV-SO-BULK-0110**
Lab ID:	08-164-04	08-164-05	08-164-06
Diesel Range:	**230**	**2200**	**700**
PQL:	30	29	30
Identification:	Diesel Range Organics	Diesel Fuel#1	Diesel Fuel#1
Lube Oil Range:	**97**	**150**	**170**
PQL:	60	59	60
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	81%	106%	87%
Flags:	Y	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-27-08
Date Analyzed:	8-27-08
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0827S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	92%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 8-27-08
Date Analyzed: 8-27-08

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	08-187-02	08-187-02 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	90%	94%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx

Date Extracted:	8-27-08
Date Analyzed:	8-27-08
Matrix:	Water
Units:	mg/L (ppm)

Client ID:	**CHEV-GW-PP29-0140**
Lab ID:	08-164-07
Diesel Range:	**ND**
PQL:	0.26
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.42
Identification:	---
Surrogate Recovery	
o-Terphenyl:	71%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-27-08
Date Analyzed:	8-27-08
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0827W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	128%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 8-27-08
Date Analyzed: 8-27-08

Matrix: Water
Units: mg/L (ppm)

Lab ID:	08-146-02	08-146-02 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	81%	82%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: September 3, 2008
Samples Submitted: August 22, 2008
Laboratory Reference: 0808-164
Project: 255-1896-063

% MOISTURE

Date Analyzed: 8-26-08

Client ID	Lab ID	% Moisture
CHEV-SO-PP24-0100	08-164-01	19
CHEV-SO-PP25-0100	08-164-02	15
CHEV-SO-PP26-0100	08-164-03	14
CHEV-SO-PP27-0105	08-164-04	16
CHEV-SO-PP28-0100	08-164-05	15
CHEV-SO-BULK-0110	08-164-06	16

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063

Project Name: CHEVRON PROPERTY

Project Manager: David Dinkuhn

Sampled by: Same

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☑ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 08-164

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-PP24-0100	8/20/08	12:00	SO	2		X	X											
2	CHEV-SO-PP25-0100		12:15	SO	2		X	X											
3	CHEV-SO-PP26-0100		12:25	SO	2		X	X											
4	CHEV-SO-PP27-0105		12:50	SO	2		X	X											
5	CHEV-SO-PP28-0100		1:15	SO	2		X	X											
6	CHEV-SO-BULK-0110		12:20	SO	2		X	X											
7	CHEV-GW-PP29-0140		2:30	GW	5		X	X											
8	TRIP BLANK	↓	0800	WT	2		X												

	Signature	Company	Date	Time
Relinquished by	David Dinkuhn	Parametrix	8/21/08	11:12
Received by		CQE	8/22/08	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Please: log temp

Provide EDDs For EIM

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 5, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255 1896 063 04/1301
Laboratory Reference No. 0906-029

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 3, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

Case Narrative

Samples were collected on June 2, 2009, and received by the laboratory on June 3, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-3-09
Date Analyzed: 6-4&5-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-S0-SB01-0000**			**CHEV-S0-SB02-0000**		
Lab ID:	06-029-01			06-029-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**4.3**		0.041	**1.5**		0.057
Toluene	**4.8**		0.21	**2.7**		0.28
Ethyl Benzene	**11**		0.21	**6.2**		0.28
m,p-Xylene	**68**	**E**	0.21	**18**		0.28
o-Xylene	**24**	**E**	0.21	**7.3**		0.28
TPH-Gas	**2100**	**O,E**	21	**1600**	**O**	28
Surrogate Recovery: Fluorobenzene	80%			83%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-3-09
Date Analyzed: 6-3-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0603S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	75%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-3-09
Date Analyzed: 6-4-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-029-02 **Original**	06-029-02 **Duplicate**	**RPD**	**Flags**
Benzene	**1.37**	**1.31**	5	
Toluene	**2.37**	**2.32**	2	
Ethyl Benzene	**5.52**	**5.41**	2	
m,p-Xylene	**16.0**	**15.8**	1	
o-Xylene	**6.51**	**6.46**	1	
TPH-Gas	**1440**	**1520**	5	
Surrogate Recovery:				
Fluorobenzene	83%	80%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-3-09
Date Analyzed: 6-4-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 12.6

Lab ID:	06-029-02 **MS**	Percent Recovery	06-029-02 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**13.7**	**98**	**13.6**	**97**	1	
Toluene	**14.0**	**93**	**14.0**	**92**	0	
Ethyl Benzene	**17.5**	**95**	**17.4**	**94**	1	
m,p-Xylene	**27.3**	**90**	**27.1**	**88**	1	
o-Xylene	**19.3**	**100**	**19.2**	**100**	1	

Surrogate Recovery:

Fluorobenzene	90%	87%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Dx

Date Extracted:	6-4-09
Date Analyzed:	6-4-09
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**CHEV-SO-SB01-0000**	**CHEV-SO-SB02-0000**
Lab ID:	06-029-01	06-029-02
Diesel Range:	**660**	**5200**
PQL:	28	140
Identification:	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**330**	**2100**
PQL:	56	280
Identification:	Lube Oil	Lube Oil
Surrogate Recovery		
o-Terphenyl:	80%	89%
Flags:	Y,M	Y,M

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-4-09
Date Analyzed:	6-4-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0604S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	81%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-4-09
Date Analyzed:	6-4-09
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	06-033-01	06-033-01 DUP
Diesel Range:	**1870**	**1780**
PQL:	25	25
RPD:	5	
Surrogate Recovery		
o-Terphenyl:	81%	87%
Flags:	Y	Y

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Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B

Date Extracted:	6-3-09
Date Analyzed:	6-4-09
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID	Lab ID	Result	PQL
CHEV-SO-SB01-0000	06-029-01	**40**	5.6
CHEV-SO-SB02-0000	06-029-02	**44**	5.6

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Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-3-09
Date Analyzed:	6-4-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0603S1

Analyte	Method	Result	PQL
Lead	6010B	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Extracted: 6-3-09
Date Analyzed: 6-4-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-179-09

Analyte	Sample Result	Duplicate Result	RPD	Flags	PQL
Lead	**ND**	**ND**	NA		5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Laboratory Reference: 0906-029
Project: 255 1896 063 04/1301

TOTAL LEAD
EPA 6010B
MS/MSD QUALITY CONTROL

Date Extracted: 6-3-09
Date Analyzed: 6-4-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-179-09

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**204**	82	**204**	82	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2009
Samples Submitted: June 3, 2009
Lab Traveler: 0906-029
Project: 255 1896 063 04/1301

% MOISTURE

Date Analyzed: 6-5-09

Client ID	Lab ID	% Moisture
CHEV-SO-SB01-0000	06-029-01	11
CHEV-SO-SB02-0000	06-029-02	11

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Laboratory Number: 06-029

Company: Parametrix
Project Number: 255 1896 063 04/1301
Project Name: Chevron Property
Project Manager: David Dinkuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☒ 2 Day ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total Lead						% Moisture
1	CHEV-SO-SB01-0000	6/2/09	0948	Soil	2		X	X											X						X
2	CHEV-SO-SB02-0000	6/2/09	0952	Soil	2		X	X											X						↓

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	6/2/09	1201
Received by			6/3/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 16, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1301
Laboratory Reference No. 0906-069

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 10, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

Case Narrative

Samples were collected on June 4 and 5, 2009, and received by the laboratory on June 10, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Please note, EPA 5035A vials were not provided for the samples; therefore, the samples were extracted from a four ounce jar.

Per client's request, the samples were stored at room temperature prior to extraction and analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted:	6-11-09
Date Analyzed:	6-11-09
Matrix: Soil	
Units: mg/kg (ppm)	
Client ID:	**CHEV-S0-SBB7-0100**
Lab ID:	06-069-01

	Result	Flags	PQL
Benzene	**1.4**		0.063
Toluene	**ND**		0.31
Ethyl Benzene	**2.6**		0.31
m,p-Xylene	**7.0**		0.31
o-Xylene	**1.4**		0.31
TPH-Gas	**190**		31
Surrogate Recovery:			
Fluorobenzene	74%		

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-11-09
Date Analyzed: 6-11-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0611S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	80%		

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-11-09
Date Analyzed: 6-11-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-069-01 **Original**	06-069-01 **Duplicate**	**RPD**	**Flags**
Benzene	**1.15**	**1.22**	6	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**2.18**	**2.30**	5	
m,p-Xylene	**5.95**	**6.31**	6	
o-Xylene	**1.16**	**1.21**	4	
TPH-Gas	**158**	**173**	9	
Surrogate Recovery:				
Fluorobenzene	74%	78%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-11-09
Date Analyzed: 6-11-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 13.3

Lab ID:	06-069-01 **MS**	Percent Recovery	06-069-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**13.0**	**89**	**13.2**	**91**	2	
Toluene	**11.8**	**88**	**11.9**	**89**	1	
Ethyl Benzene	**14.8**	**94**	**14.5**	**92**	2	
m,p-Xylene	**18.4**	**94**	**18.6**	**95**	1	
o-Xylene	**13.3**	**91**	**13.2**	**90**	1	

Surrogate Recovery:

Fluorobenzene	78%		85%

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-12-09
Date Analyzed: 6-12&15-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBC2-0100**			**CHEV-SO-SBH2-0100**		
Lab ID:	06-069-02			06-069-03		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**1.3**		0.064	**0.18**		0.014
Toluene	**ND**		0.32	**ND**		0.072
Ethyl Benzene	**1.9**		0.32	**0.20**		0.072
m,p-Xylene	**4.7**		0.32	**0.38**		0.072
o-Xylene	**1.1**		0.32	**ND**		0.072
TPH-Gas	**150**	**O**	32	**ND**		7.2
Surrogate Recovery: Fluorobenzene	74%			66%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0612S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	83%		

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-086-02 **Original**	06-086-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	69%	70%		

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.87

Lab ID:	06-086-02 **MS**	Percent Recovery	06-086-02 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.57**	**90**	**2.72**	**95**	6	
Toluene	**2.57**	**90**	**2.72**	**95**	6	
Ethyl Benzene	**2.64**	**92**	**2.78**	**97**	5	
m,p-Xylene	**2.66**	**92**	**2.78**	**97**	4	
o-Xylene	**2.62**	**91**	**2.72**	**94**	4	

Surrogate Recovery:
Fluorobenzene 73% 76%

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-11-09
Date Analyzed:	6-11-09
Matrix:	Soil
Units:	mg/kg (ppm)
Client ID:	**CHEV-SO-SBB7-0100**
Lab ID:	06-069-01
Diesel Range:	**ND**
PQL:	68
Identification:	---
Lube Oil Range:	**ND**
PQL:	59
Identification:	---
Surrogate Recovery	
o-Terphenyl:	81%
Flags:	Y,U1

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-11-09
Date Analyzed:	6-11-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0611S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	85%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-11-09
Date Analyzed: 6-11-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-069-01	06-069-01 DUP
Diesel Range:	**57.8**	**41.0**
PQL:	25	25
RPD:	34	
Surrogate Recovery		
o-Terphenyl:	81%	77%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBC2-0100**	**CHEV-SO-SBH2-0100**
Lab ID:	06-069-02	06-069-03
Diesel Range:	**63**	**250**
PQL:	29	31
Identification:	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**95**	**170**
PQL:	58	62
Identification:	Lube Oil	Lube Oil
Surrogate Recovery		
o-Terphenyl:	72%	80%
Flags:	Y,M	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-12-09
Date Analyzed:	6-12-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0612S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	87%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-054-02	06-054-02 DUP
Diesel Range:	**96.2**	**80.5**
PQL:	25	25
RPD:	18	
Surrogate Recovery		
o-Terphenyl:	70%	73%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBB7-0100**					
Laboratory ID:	06-069-01					
Naphthalene	**0.18**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
2-Methylnaphthalene	**0.46**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
1-Methylnaphthalene	**0.23**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Acenaphthylene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Acenaphthene	**0.022**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Fluorene	**0.033**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Phenanthrene	**0.069**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Anthracene	**0.0095**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Fluoranthene	**0.031**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Pyrene	**0.026**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[a]anthracene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Chrysene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[b]fluoranthene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[k]fluoranthene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[a]pyrene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[g,h,i]perylene	**ND**	0.0078	EPA 8270/SIM	6-11-09	6-12-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*39 - 103*				
Pyrene-d10	*92*	*39 - 115*				
Terphenyl-d14	*89*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0611S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-11-09	6-12-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*55*	*39 - 103*				
Pyrene-d10	*83*	*39 - 115*				
Terphenyl-d14	*75*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0611S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0470**	**0.0459**	0.0833	0.0833	56	55	31 - 102	2	30	
Acenaphthylene	**0.0629**	**0.0651**	0.0833	0.0833	76	78	48 - 104	3	26	
Acenaphthene	**0.0564**	**0.0598**	0.0833	0.0833	68	72	46 - 105	6	26	
Fluorene	**0.0661**	**0.0659**	0.0833	0.0833	79	79	52 - 107	0	25	
Phenanthrene	**0.0619**	**0.0620**	0.0833	0.0833	74	74	58 - 104	0	21	
Anthracene	**0.0744**	**0.0735**	0.0833	0.0833	89	88	56 - 103	1	21	
Fluoranthene	**0.0773**	**0.0768**	0.0833	0.0833	93	92	65 - 111	1	20	
Pyrene	**0.0767**	**0.0770**	0.0833	0.0833	92	92	65 - 115	0	20	
Benzo[a]anthracene	**0.0785**	**0.0763**	0.0833	0.0833	94	92	55 - 111	3	19	
Chrysene	**0.0682**	**0.0682**	0.0833	0.0833	82	82	58 - 121	0	19	
Benzo[b]fluoranthene	**0.0701**	**0.0692**	0.0833	0.0833	84	83	57 - 120	1	20	
Benzo[k]fluoranthene	**0.0770**	**0.0784**	0.0833	0.0833	92	94	52 - 123	2	21	
Benzo[a]pyrene	**0.0720**	**0.0696**	0.0833	0.0833	86	84	49 - 106	3	22	
Indeno(1,2,3-c,d)pyrene	**0.0725**	**0.0700**	0.0833	0.0833	87	84	56 - 125	4	22	
Dibenz[a,h]anthracene	**0.0720**	**0.0697**	0.0833	0.0833	86	84	55 - 129	3	24	
Benzo[g,h,i]perylene	**0.0681**	**0.0647**	0.0833	0.0833	82	78	55 - 122	5	23	
Surrogate:										
2-Fluorobiphenyl					*64*	*68*	*39 - 103*			
Pyrene-d10					*99*	*98*	*39 - 115*			
Terphenyl-d14					*91*	*88*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-S0-SBC2-0100**					
Laboratory ID:	06-069-02					
Naphthalene	**0.23**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
2-Methylnaphthalene	**0.33**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
1-Methylnaphthalene	**0.31**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Acenaphthylene	**0.054**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Acenaphthene	**0.098**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Fluorene	**0.087**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Phenanthrene	**0.26**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Anthracene	**0.072**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Fluoranthene	**0.11**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Pyrene	**0.21**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[a]anthracene	**0.065**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Chrysene	**0.062**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[b]fluoranthene	**0.035**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[k]fluoranthene	**0.044**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[a]pyrene	**0.082**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.043**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Dibenz[a,h]anthracene	**0.012**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[g,h,i]perylene	**0.077**	0.0078	EPA 8270/SIM	6-12-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*39 - 103*				
Pyrene-d10	*91*	*39 - 115*				
Terphenyl-d14	*94*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBH2-0100**					
Laboratory ID:	06-069-03					
Naphthalene	**0.12**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
2-Methylnaphthalene	**0.73**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
1-Methylnaphthalene	**0.75**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthylene	**0.14**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthene	**0.16**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Fluorene	**0.25**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Phenanthrene	**0.93**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Anthracene	**0.34**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Fluoranthene	**0.53**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Pyrene	**0.93**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]anthracene	**0.27**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Chrysene	**0.22**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[b]fluoranthene	**0.10**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[k]fluoranthene	**0.13**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]pyrene	**0.26**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Indeno(1,2,3-c,d)pyrene	**0.098**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Dibenz[a,h]anthracene	**ND**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[g,h,i]perylene	**0.15**	0.082	EPA 8270/SIM	6-12-09	6-12-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*39 - 103*				
Pyrene-d10	*80*	*39 - 115*				
Terphenyl-d14	*76*	*50 - 118*				

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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0612S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*39 - 103*				
Pyrene-d10	*95*	*39 - 115*				
Terphenyl-d14	*88*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Laboratory Reference: 0906-069
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0612S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0501**	**0.0551**	0.0833	0.0833	60	66	31 - 102	10	30	
Acenaphthylene	**0.0652**	**0.0695**	0.0833	0.0833	78	83	48 - 104	6	26	
Acenaphthene	**0.0587**	**0.0610**	0.0833	0.0833	70	73	46 - 105	4	26	
Fluorene	**0.0641**	**0.0667**	0.0833	0.0833	77	80	52 - 107	4	25	
Phenanthrene	**0.0591**	**0.0611**	0.0833	0.0833	71	73	58 - 104	3	21	
Anthracene	**0.0714**	**0.0763**	0.0833	0.0833	86	92	56 - 103	7	21	
Fluoranthene	**0.0742**	**0.0763**	0.0833	0.0833	89	92	65 - 111	3	20	
Pyrene	**0.0742**	**0.0759**	0.0833	0.0833	89	91	65 - 115	2	20	
Benzo[a]anthracene	**0.0725**	**0.0753**	0.0833	0.0833	87	90	55 - 111	4	19	
Chrysene	**0.0655**	**0.0676**	0.0833	0.0833	79	81	58 - 121	3	19	
Benzo[b]fluoranthene	**0.0658**	**0.0683**	0.0833	0.0833	79	82	57 - 120	4	20	
Benzo[k]fluoranthene	**0.0740**	**0.0757**	0.0833	0.0833	89	91	52 - 123	2	21	
Benzo[a]pyrene	**0.0653**	**0.0699**	0.0833	0.0833	78	84	49 - 106	7	22	
Indeno(1,2,3-c,d)pyrene	**0.0660**	**0.0692**	0.0833	0.0833	79	83	56 - 125	5	22	
Dibenz[a,h]anthracene	**0.0638**	**0.0661**	0.0833	0.0833	77	79	55 - 129	4	24	
Benzo[g,h,i]perylene	**0.0630**	**0.0664**	0.0833	0.0833	76	80	55 - 122	5	23	
Surrogate:										
2-Fluorobiphenyl					*69*	*72*	*39 - 103*			
Pyrene-d10					*93*	*95*	*39 - 115*			
Terphenyl-d14					*83*	*85*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 10, 2009
Lab Traveler: 0906-069
Project: 255-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-11&12-09

Client ID	Lab ID	% Moisture
CHEV-SO-SBB7-0100	06-069-01	15
CHEV-SO-SBC2-0100	06-069-02	14
CHEV-SO-SBH2-0100	06-069-03	19

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063 04/1301

Project Name: Chevron Property Interim Action

Project Manager: David Dinkuhn

Sampled by: L. Vagelatos & D. Dinkuhn

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☒ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-069

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SBB7-0100	6/4/09	1400	Soil	2		X	X				X							X
2	CHEV-SO-SBC2-0100	6/5/09	1300	Soil	2														
3	CHEV-SO-SBH2-0100	6/5/09	1350	Soil	2														
4	CHEV-SO-SBG4-0100	6/5/09	1510	Soil	2		ND DB	ND DB				ND DB	ND DB						ND DB

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	5/9/2009	1500
Received by			6/10/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:

Please analyze CHEV-SO-SBB7-0100 on 6/11/2009 DB and the other 3 samples on 6/12/2009 DB. Also please store at room temperature.

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 18, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 235-1896-063 04/1301
Laboratory Reference No. 0906-122

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 17, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

Case Narrative

Samples were collected on June 16, 2009, and received by the laboratory on June 17, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT01-0120**			**CHEV-SO-SW01-0200**		
Lab ID:	06-122-01			06-122-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.086	**ND**		0.040
Ethyl Benzene	**0.12**		0.086	**ND**		0.040
m,p-Xylene	**0.26**		0.22	**ND**		0.040
o-Xylene	**0.67**		0.22	**ND**		0.040
TPH-Gas	**ND**		22	**ND**		4.0
Surrogate Recovery: Fluorobenzene	77%			72%		

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT03-0140**			**CHEV-SO-SW03-0120**		
Lab ID:	06-122-03			06-122-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.035	**ND**		0.038
Ethyl Benzene	**ND**		0.035	**ND**		0.038
m,p-Xylene	**ND**		0.035	**ND**		0.038
o-Xylene	**ND**		0.035	**ND**		0.038
TPH-Gas	**ND**		3.5	**ND**		3.8
Surrogate Recovery:						
Fluorobenzene	73%			74%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0617S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	82%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-07 **Original**	06-084-07 **Duplicate**	**RPD**	**Flags**
Benzene	**0.0349**	**0.0370**	6	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**0.437**	**0.428**	2	
m,p-Xylene	**0.678**	**0.688**	2	
o-Xylene	**0.651**	**0.625**	4	
TPH-Gas	**194**	**184**	5	
Surrogate Recovery:				
Fluorobenzene	68%	71%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.93

Lab ID:	06-084-07 **MS**	Percent Recovery	06-084-07 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.93**	**99**	**2.96**	**100**	1	
Toluene	**2.93**	**100**	**2.98**	**100**	2	
Ethyl Benzene	**3.40**	**100**	**3.47**	**100**	2	
m,p-Xylene	**4.05**	**110**	**3.73**	**100**	8	
o-Xylene	**3.56**	**99**	**3.66**	**100**	3	

Surrogate Recovery:

Fluorobenzene	71%	74%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT01-0120**	**CHEV-SO-SW01-0200**	**CHEV-SO-BT03-0140**
Lab ID:	06-122-01	06-122-02	06-122-03
Diesel Range:	**900**	**44**	**ND**
PQL:	27	28	27
Identification:	Diesel Range Organics	Diesel Range Organics	---
Lube Oil Range:	**160**	**ND**	**ND**
PQL:	54	56	54
Identification:	Lube Oil	---	---
Surrogate Recovery			
o-Terphenyl:	108%	82%	90%
Flags:	Y, Z	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-17-09
Date Analyzed:	6-17-09
Matrix:	Soil
Units:	mg/kg (ppm)
Client ID:	**CHEV-SO-SW03-0120**
Lab ID:	06-122-04
Diesel Range:	**ND**
PQL:	28
Identification:	---
Lube Oil Range:	**ND**
PQL:	55
Identification:	---
Surrogate Recovery	
o-Terphenyl:	75%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-17-09
Date Analyzed:	6-17-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0617S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	94%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Laboratory Reference: 0906-122
Project: 235-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-122-01	06-122-01 DUP
Diesel Range:	**834**	**648**
PQL:	25	25
RPD:	25	
Surrogate Recovery		
o-Terphenyl:	108%	87%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 18, 2009
Samples Submitted: June 17, 2009
Lab Traveler: 0906-122
Project: 235-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-17-09

Client ID	Lab ID	% Moisture
CHEV-SO-BT01-0120	06-122-01	7
CHEV-SO-SW01-0200	06-122-02	10
CHEV-SO-BT03-0140	06-122-03	8
CHEV-SO-SW03-0120	06-122-04	9

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z - Hydrocarbons in the diesel range are impacting the lube oil results.

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone. (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 235-1896-063 04/1301
Project Name: Chevron
Project Manager: David Dinkuhn
Sampled by: L. Vagelatos

Turnaround Request (in working days)
(Check One)
- [X] Same Day
- [ ] 1 Day
- [ ] 2 Day
- [ ] 3 Day
- [ ] Standard (7 working days) (TPH analysis 5 working days)
- [ ] _____ (other)

Laboratory Number: 06-122

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-BT01-0120	6/16/09	1145	Soil	2		X	X											X
2	CHEV-SO-SW01-0200	"	1150	"	"		X	X											"
3	CHEV-SO-BT03-0140	"	1205	"	"		X	X											"
4	CHEV-SO-SW03-0120	"	1212	"	"		X	X											"

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	6/16/09	1345
Received by	Tara Linde	PMX	6/16/09	1345
Relinquished by	Tara Linde	PMX	6/16/09	1445
Received by	M. Dan	OSE	6/17/09	940
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
1. Return coolers and blue ice (big & little coolers)
2. Send custody seals

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 18, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1301
Laboratory Reference No. 0906-084

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 11, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

Case Narrative

Samples were collected on June 8, 9, and 10, 2009, and received by the laboratory on June 11, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Method 5035 VOA vials were not provided for the samples. The samples were therefore extracted from 4-ounce jars.

Per client's request, the samples were stored at room temperature prior to extraction and analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-15-09
Date Analyzed: 6-15&16-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBJ7-0100**			**CHEV-SO-SBK5-0100**		
Lab ID:	06-084-01			06-084-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**1.5**		0.020	**0.63**		0.020
Toluene	**1.4**		0.070	**0.11**		0.063
Ethyl Benzene	**3.5**		0.070	**0.58**		0.063
m,p-Xylene	**11**		0.35	**1.3**		0.063
o-Xylene	**4.2**		0.070	**0.27**		0.063
TPH-Gas	**390**	**O**	7.0	**190**	**O**	6.3
Surrogate Recovery: Fluorobenzene	70%			68%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-15-09
Date Analyzed: 6-15&16-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBL5-0100**			**CHEV-SO-SBL8-0090**		
Lab ID:	06-084-03			06-084-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**1.8**		0.064	**0.26**		0.020
Toluene	**2.2**		0.32	**ND**		0.060
Ethyl Benzene	**7.8**		0.32	**1.0**		0.060
m,p-Xylene	**37**		1.3	**1.8**		0.060
o-Xylene	**14**		0.32	**1.5**		0.060
TPH-Gas	**1300**	**O**	32	**350**	**O**	6.0
Surrogate Recovery: Fluorobenzene	78%			79%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-15-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0615S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	75%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-15-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-01 **Original**	06-084-01 **Duplicate**	**RPD**	**Flags**
Benzene	**1.22**	**0.957**	24	
Toluene	**1.12**	**0.991**	12	
Ethyl Benzene	**2.89**	**2.55**	12	
m,p-Xylene	**11.0**	**9.98**	10	
o-Xylene	**3.47**	**3.16**	10	
TPH-Gas	**317**	**285**	11	
Surrogate Recovery:				
Fluorobenzene	70%	57%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-15-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.89

Lab ID:	06-084-01 **MS**	Percent Recovery	06-084-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**4.08**	**99**	**4.04**	**98**	1	
Toluene	**3.93**	**97**	**3.61**	**86**	8	
Ethyl Benzene	**5.74**	**99**	**5.47**	**89**	5	
m,p-Xylene	**13.9**	**99**	**13.3**	**79**	4	
o-Xylene	**6.37**	**100**	**6.01**	**88**	6	

Surrogate Recovery:
Fluorobenzene 69% 66%

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-16-09
Date Analyzed: 6-16-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SB D13-0100**			**CHEV-SO-SB H10-0100**		
Lab ID:	06-084-05			06-084-06		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.12**		0.020	**0.67**		0.020
Toluene	**ND**		0.065	**0.29**		0.083
Ethyl Benzene	**0.097**		0.065	**2.3**		0.083
m,p-Xylene	**0.19**		0.065	**4.8**		0.083
o-Xylene	**ND**		0.065	**1.1**		0.083
TPH-Gas	**29**	**O**	6.5	**180**	**O**	8.3
Surrogate Recovery: Fluorobenzene	65%			66%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-16-09
Date Analyzed: 6-16-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0616S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	74%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-16-09
Date Analyzed: 6-16-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-05 **Original**	06-084-05 **Duplicate**	**RPD**	**Flags**
Benzene	**0.103**	**0.102**	1	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**0.0838**	**0.106**	23	
m,p-Xylene	**0.160**	**0.198**	21	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**24.8**	**31.8**	25	
Surrogate Recovery:				
Fluorobenzene	65%	74%		

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-16-09
Date Analyzed: 6-16-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.81

Lab ID:	06-084-05 **MS**	Percent Recovery	06-084-05 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.84**	**98**	**2.66**	**91**	7	
Toluene	**2.81**	**100**	**2.63**	**94**	6	
Ethyl Benzene	**2.90**	**100**	**2.74**	**94**	6	
m,p-Xylene	**2.97**	**100**	**2.80**	**94**	6	
o-Xylene	**2.79**	**99**	**2.58**	**92**	8	

Surrogate Recovery:

Fluorobenzene	73%		77%

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SB R7-0800**
Lab ID: 06-084-07

	Result	Flags	PQL
Benzene	**0.043**		0.020
Toluene	**ND**	**U1**	0.36
Ethyl Benzene	**0.53**		0.072
m,p-Xylene	**0.83**		0.072
o-Xylene	**0.79**		0.072
TPH-Gas	**240**	**O**	7.2

Surrogate Recovery:
Fluorobenzene 68%

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0617S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	82%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-07 **Original**	06-084-07 **Duplicate**	**RPD**	**Flags**
Benzene	**0.0349**	**0.0370**	6	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**0.437**	**0.428**	2	
m,p-Xylene	**0.678**	**0.688**	2	
o-Xylene	**0.651**	**0.625**	4	
TPH-Gas	**194**	**184**	5	
Surrogate Recovery:				
Fluorobenzene	68%	71%		

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-17-09
Date Analyzed: 6-17-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.93

Lab ID:	06-084-07 **MS**	Percent Recovery	06-084-07 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.93**	**99**	**2.96**	**100**	1	
Toluene	**2.93**	**100**	**2.98**	**100**	2	
Ethyl Benzene	**3.40**	**100**	**3.47**	**100**	2	
m,p-Xylene	**4.05**	**110**	**3.73**	**100**	8	
o-Xylene	**3.56**	**99**	**3.66**	**100**	3	

Surrogate Recovery:

Fluorobenzene	71%	74%

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-15-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBJ7-0100**	**CHEV-SO-SBK5-0100**	**CHEV-SO-SBL5-0100**
Lab ID:	06-084-01	06-084-02	06-084-03
Diesel Range:	**160**	**210**	**230**
PQL:	31	30	30
Identification:	Diesel Range Organics	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**140**	**130**	**200**
PQL:	61	60	60
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	73%	96%	86%
Flags:	Y,M	Y,M	Y,M

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-15-09
Date Analyzed:	6-15-09
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**CHEV-SO-SBL8-0090**
Lab ID:	06-084-04
Diesel Range:	**120**
PQL:	29
Identification:	Diesel Range Organics
Lube Oil Range:	**73**
PQL:	58
Identification:	Lube Oil
Surrogate Recovery	
o-Terphenyl:	83%
Flags:	Y,M

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-15-09
Date Analyzed:	6-15-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0615S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	80%
Flags:	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-15-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-01	06-084-01 DUP
Diesel Range:	**135**	**114**
PQL:	25	25
RPD:	17	
Surrogate Recovery		
o-Terphenyl:	73%	83%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-16-09
Date Analyzed:	6-16-09
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**CHEV-SO-SB D13-0100**	**CHEV-SO-SB H10-0100**
Lab ID:	06-084-05	06-084-06
Diesel Range:	**78**	**100**
PQL:	29	33
Identification:	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**180**	**110**
PQL:	58	67
Identification:	Lube Oil	Lube Oil
Surrogate Recovery		
o-Terphenyl:	86%	77%
Flags:	Y	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-16-09
Date Analyzed:	6-16-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0616S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	99%
Flags:	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-16-09
Date Analyzed: 6-16-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-084-05	06-084-05 DUP
Diesel Range:	**67.2**	**36.3**
PQL:	25	25
RPD:	60	
Surrogate Recovery		
o-Terphenyl:	86%	77%
Flags:	Y	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-17-09
Date Analyzed:	6-17-09
Matrix:	Soil
Units:	mg/kg (ppm)

Client ID:	**CHEV-SO-SBR7-0080**
Lab ID:	06-084-07
Diesel Range:	**96**
PQL:	31
Identification:	Diesel Range Organics
Lube Oil Range:	**ND**
PQL:	61
Identification:	---
Surrogate Recovery	
o-Terphenyl:	82%
Flags:	Y,M

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-17-09
Date Analyzed:	6-17-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0617S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	94%
Flags:	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-17-09
Date Analyzed:	6-17-09
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	06-126-02	06-126-02 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	77%	87%
Flags:	Y	Y

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBJ7-0100**					
Laboratory ID:	06-084-01					
Naphthalene	**1.1**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
2-Methylnaphthalene	**2.0**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
1-Methylnaphthalene	**1.2**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthylene	**0.54**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthene	**0.18**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Fluorene	**0.35**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Phenanthrene	**1.4**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Anthracene	**0.46**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Fluoranthene	**1.3**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Pyrene	**2.6**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]anthracene	**0.90**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Chrysene	**0.84**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[b]fluoranthene	**0.43**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[k]fluoranthene	**0.55**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]pyrene	**0.99**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.37**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Dibenz[a,h]anthracene	**0.12**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[g,h,i]perylene	**0.46**	0.081	EPA 8270/SIM	6-15-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*78*	*39 - 103*				
Pyrene-d10	*85*	*39 - 115*				
Terphenyl-d14	*84*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBK5-0100**					
Laboratory ID:	06-084-02					
Naphthalene	**1.8**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
2-Methylnaphthalene	**0.88**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
1-Methylnaphthalene	**0.77**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthylene	**0.039**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthene	**2.3**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Fluorene	**2.0**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Phenanthrene	**5.9**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Anthracene	**1.4**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Fluoranthene	**3.8**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Pyrene	**2.7**	0.080	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]anthracene	**0.78**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Chrysene	**0.64**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[b]fluoranthene	**0.40**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[k]fluoranthene	**0.38**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]pyrene	**0.44**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.15**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Dibenz[a,h]anthracene	**0.059**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[g,h,i]perylene	**0.16**	0.0080	EPA 8270/SIM	6-15-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*39 - 103*				
Pyrene-d10	*84*	*39 - 115*				
Terphenyl-d14	*90*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBL5-0100**					
Laboratory ID:	06-084-03					
Naphthalene	**1.9**	0.079	EPA 8270/SIM	6-15-09	6-16-09	
2-Methylnaphthalene	**2.9**	0.079	EPA 8270/SIM	6-15-09	6-16-09	
1-Methylnaphthalene	**1.6**	0.079	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthylene	**0.014**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthene	**0.13**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Fluorene	**0.14**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Phenanthrene	**0.27**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Anthracene	**0.15**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Fluoranthene	**0.14**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Pyrene	**0.12**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]anthracene	**0.040**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Chrysene	**0.044**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[b]fluoranthene	**0.022**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[k]fluoranthene	**0.021**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]pyrene	**0.030**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.012**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[g,h,i]perylene	**0.016**	0.0079	EPA 8270/SIM	6-15-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*39 - 103*				
Pyrene-d10	*85*	*39 - 115*				
Terphenyl-d14	*91*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBL8-0090**					
Laboratory ID:	06-084-04					
Naphthalene	**0.021**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
2-Methylnaphthalene	**0.087**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
1-Methylnaphthalene	**0.15**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthylene	**0.030**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthene	**0.45**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Fluorene	**0.44**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Phenanthrene	**1.3**	0.078	EPA 8270/SIM	6-15-09	6-16-09	
Anthracene	**0.18**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Fluoranthene	**0.68**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Pyrene	**0.53**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]anthracene	**0.16**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Chrysene	**0.15**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[b]fluoranthene	**0.076**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[k]fluoranthene	**0.080**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]pyrene	**0.099**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.037**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Dibenz[a,h]anthracene	**0.014**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[g,h,i]perylene	**0.041**	0.0078	EPA 8270/SIM	6-15-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*39 - 103*				
Pyrene-d10	*84*	*39 - 115*				
Terphenyl-d14	*87*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0615S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-15-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*39 - 103*				
Pyrene-d10	*86*	*39 - 115*				
Terphenyl-d14	*89*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0615S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0538**	**0.0566**	0.0833	0.0833	65	68	31 - 102	5	30	
Acenaphthylene	**0.0670**	**0.0704**	0.0833	0.0833	80	85	48 - 104	5	26	
Acenaphthene	**0.0635**	**0.0659**	0.0833	0.0833	76	79	46 - 105	4	26	
Fluorene	**0.0683**	**0.0699**	0.0833	0.0833	82	84	52 - 107	2	25	
Phenanthrene	**0.0677**	**0.0689**	0.0833	0.0833	81	83	58 - 104	2	21	
Anthracene	**0.0658**	**0.0685**	0.0833	0.0833	79	82	56 - 103	4	21	
Fluoranthene	**0.0701**	**0.0713**	0.0833	0.0833	84	86	65 - 111	2	20	
Pyrene	**0.0694**	**0.0704**	0.0833	0.0833	83	85	65 - 115	1	20	
Benzo[a]anthracene	**0.0669**	**0.0679**	0.0833	0.0833	80	82	55 - 111	1	19	
Chrysene	**0.0694**	**0.0704**	0.0833	0.0833	83	85	58 - 121	1	19	
Benzo[b]fluoranthene	**0.0689**	**0.0696**	0.0833	0.0833	83	84	57 - 120	1	20	
Benzo[k]fluoranthene	**0.0714**	**0.0718**	0.0833	0.0833	86	86	52 - 123	1	21	
Benzo[a]pyrene	**0.0611**	**0.0644**	0.0833	0.0833	73	77	49 - 106	5	22	
Indeno(1,2,3-c,d)pyrene	**0.0678**	**0.0684**	0.0833	0.0833	81	82	56 - 125	1	22	
Dibenz[a,h]anthracene	**0.0682**	**0.0692**	0.0833	0.0833	82	83	55 - 129	1	24	
Benzo[g,h,i]perylene	**0.0670**	**0.0676**	0.0833	0.0833	80	81	55 - 122	1	23	
Surrogate:										
2-Fluorobiphenyl					*72*	*75*	*39 - 103*			
Pyrene-d10					*85*	*86*	*39 - 115*			
Terphenyl-d14					*86*	*88*	*50 - 118*			

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SB D13-0100**					
Laboratory ID:	06-084-05					
Naphthalene	**0.0087**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
2-Methylnaphthalene	**0.036**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
1-Methylnaphthalene	**0.027**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthylene	**0.029**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthene	**0.0098**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Fluorene	**0.024**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Phenanthrene	**0.099**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Anthracene	**0.028**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Fluoranthene	**0.074**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Pyrene	**0.14**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]anthracene	**0.050**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Chrysene	**0.053**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[b]fluoranthene	**0.035**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[k]fluoranthene	**0.040**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]pyrene	**0.073**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.034**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Dibenz[a,h]anthracene	**0.011**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[g,h,i]perylene	**0.043**	0.0078	EPA 8270/SIM	6-16-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*39 - 103*				
Pyrene-d10	*84*	*39 - 115*				
Terphenyl-d14	*84*	*50 - 118*				

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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SB H10-0100**					
Laboratory ID:	06-084-06					
Naphthalene	**0.14**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
2-Methylnaphthalene	**0.34**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
1-Methylnaphthalene	**0.19**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthylene	**ND**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthene	**0.014**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Fluorene	**0.027**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Phenanthrene	**0.068**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Anthracene	**0.012**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Fluoranthene	**0.046**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Pyrene	**0.047**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]anthracene	**0.016**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Chrysene	**0.018**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[b]fluoranthene	**0.013**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[k]fluoranthene	**0.012**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]pyrene	**0.013**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Dibenz[a,h]anthracene	**ND**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[g,h,i]perylene	**0.0094**	0.0089	EPA 8270/SIM	6-16-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*39 - 103*				
Pyrene-d10	*83*	*39 - 115*				
Terphenyl-d14	*85*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0616S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-16-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*39 - 103*				
Pyrene-d10	*83*	*39 - 115*				
Terphenyl-d14	*86*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0616S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0542**	**0.0545**	0.0833	0.0833	65	65	31 - 102	1	30	
Acenaphthylene	**0.0661**	**0.0621**	0.0833	0.0833	79	75	48 - 104	6	26	
Acenaphthene	**0.0635**	**0.0642**	0.0833	0.0833	76	77	46 - 105	1	26	
Fluorene	**0.0665**	**0.0678**	0.0833	0.0833	80	81	52 - 107	2	25	
Phenanthrene	**0.0649**	**0.0678**	0.0833	0.0833	78	81	58 - 104	4	21	
Anthracene	**0.0616**	**0.0654**	0.0833	0.0833	74	79	56 - 103	6	21	
Fluoranthene	**0.0664**	**0.0707**	0.0833	0.0833	80	85	65 - 111	6	20	
Pyrene	**0.0658**	**0.0698**	0.0833	0.0833	79	84	65 - 115	6	20	
Benzo[a]anthracene	**0.0634**	**0.0667**	0.0833	0.0833	76	80	55 - 111	5	19	
Chrysene	**0.0668**	**0.0701**	0.0833	0.0833	80	84	58 - 121	5	19	
Benzo[b]fluoranthene	**0.0658**	**0.0697**	0.0833	0.0833	79	84	57 - 120	6	20	
Benzo[k]fluoranthene	**0.0695**	**0.0708**	0.0833	0.0833	83	85	52 - 123	2	21	
Benzo[a]pyrene	**0.0568**	**0.0606**	0.0833	0.0833	68	73	49 - 106	6	22	
Indeno(1,2,3-c,d)pyrene	**0.0642**	**0.0671**	0.0833	0.0833	77	81	56 - 125	4	22	
Dibenz[a,h]anthracene	**0.0649**	**0.0681**	0.0833	0.0833	78	82	55 - 129	5	24	
Benzo[g,h,i]perylene	**0.0634**	**0.0665**	0.0833	0.0833	76	80	55 - 122	5	23	
Surrogate:										
2-Fluorobiphenyl					*73*	*76*	*39 - 103*			
Pyrene-d10					*81*	*86*	*39 - 115*			
Terphenyl-d14					*83*	*88*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBR7-0080**					
Laboratory ID:	06-084-07					
Naphthalene	**0.0097**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
2-Methylnaphthalene	**0.021**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
1-Methylnaphthalene	**0.054**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Acenaphthylene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Acenaphthene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Fluorene	**0.025**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Phenanthrene	**0.026**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Anthracene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Fluoranthene	**0.0098**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Pyrene	**0.0096**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Chrysene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[k]fluoranthene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270/SIM	6-17-09	6-17-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*39 - 103*				
Pyrene-d10	*88*	*39 - 115*				
Terphenyl-d14	*91*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0617S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-17-09	6-17-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*39 - 103*				
Pyrene-d10	*92*	*39 - 115*				
Terphenyl-d14	*95*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Laboratory Reference: 0906-084
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0617S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0542**	**0.0528**	0.0833	0.0833	65	63	31 - 102	3	30	
Acenaphthylene	**0.0590**	**0.0599**	0.0833	0.0833	71	72	48 - 104	2	26	
Acenaphthene	**0.0571**	**0.0622**	0.0833	0.0833	69	75	46 - 105	9	26	
Fluorene	**0.0628**	**0.0696**	0.0833	0.0833	75	84	52 - 107	10	25	
Phenanthrene	**0.0636**	**0.0694**	0.0833	0.0833	76	83	58 - 104	9	21	
Anthracene	**0.0641**	**0.0686**	0.0833	0.0833	77	82	56 - 103	7	21	
Fluoranthene	**0.0670**	**0.0717**	0.0833	0.0833	80	86	65 - 111	7	20	
Pyrene	**0.0696**	**0.0744**	0.0833	0.0833	84	89	65 - 115	7	20	
Benzo[a]anthracene	**0.0642**	**0.0679**	0.0833	0.0833	77	82	55 - 111	6	19	
Chrysene	**0.0678**	**0.0713**	0.0833	0.0833	81	86	58 - 121	5	19	
Benzo[b]fluoranthene	**0.0665**	**0.0706**	0.0833	0.0833	80	85	57 - 120	6	20	
Benzo[k]fluoranthene	**0.0688**	**0.0735**	0.0833	0.0833	83	88	52 - 123	7	21	
Benzo[a]pyrene	**0.0597**	**0.0631**	0.0833	0.0833	72	76	49 - 106	6	22	
Indeno(1,2,3-c,d)pyrene	**0.0633**	**0.0678**	0.0833	0.0833	76	81	56 - 125	7	22	
Dibenz[a,h]anthracene	**0.0643**	**0.0687**	0.0833	0.0833	77	82	55 - 129	7	24	
Benzo[g,h,i]perylene	**0.0632**	**0.0673**	0.0833	0.0833	76	81	55 - 122	6	23	
Surrogate:										
2-Fluorobiphenyl					*65*	*70*	*39 - 103*			
Pyrene-d10					*82*	*89*	*39 - 115*			
Terphenyl-d14					*83*	*90*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2009
Samples Submitted: June 11, 2009
Lab Traveler: 0906-084
Project: 255-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-15&16-09

Client ID	Lab ID	% Moisture
CHEV-SO-SBJ7-0100	06-084-01	18
CHEV-SO-SBK5-0100	06-084-02	17
CHEV-SO-SBL5-0100	06-084-03	16
CHEV-SO-SBL8-0090	06-084-04	14
CHEV-SO-SBD13-0100	06-084-05	14
CHEV-SO-SBH10-0100	06-084-06	25
CHEV-SO-SBR7-0080	06-084-07	18

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063 04/1301

Project Name: Chevron Property Interim Action

Project Manager: David DinKuhn

Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☒ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-084

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SB J7-0100	6/9/09	1430	Soil	2		X	X				X							X
2	CHEV-SO-SB K5-0100	↓	1015	↓	↓		↓	↓				↓							↓
3	CHEV-SO-SB L5-0100		1030																
4	CHEV-SO-SB L8-0090		1445																
5	CHEV-SO-SB D13-0100	6/9/09	1530																
6	CHEV-SO-SB H10-0100	↓	1500																
7	CHEV-SO-SB R7-0080	6/10/09	1350	↓	↓		↓	↓				↓							↓

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	6/10/09	1600
Received by		CORE	6/10/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Samples J7, K5, L5 and L8 Extract Date: 6/15/2009 Due Date: 6/16 ~~or 6/17/2009~~ Samples D13 and H10 Extract Date: 6/16/2009. Due Date 6/17 ~~or 6/18/2009~~ Sample R7 Extract Date: 6/17/2009, Due Date

☐ Chromatograms with final report 6/18 ~~or 6/19/09~~

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DB

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 24, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1301
Laboratory Reference No. 0906-147

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 19, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

Case Narrative

Samples were collected on June 18, 2009, and received by the laboratory on June 19, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW07-0180**			**CHEV-SO-SW08-0150**		
Lab ID:	06-147-01			06-147-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.087	**ND**		0.072
Ethyl Benzene	**ND**		0.087	**ND**		0.072
m,p-Xylene	**0.090**		0.087	**ND**		0.072
o-Xylene	**ND**		0.087	**ND**		0.072
TPH-Gas	**ND**		8.7	**ND**		7.2
Surrogate Recovery: Fluorobenzene	74%			78%		

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT09-0110**			**CHEV-SO-SW10-0100**		
Lab ID:	06-147-03			06-147-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.085	**ND**		0.088
Ethyl Benzene	**0.11**		0.085	**ND**		0.088
m,p-Xylene	**0.27**		0.085	**ND**		0.088
o-Xylene	**ND**		0.085	**ND**		0.088
TPH-Gas	**ND**		8.5	**ND**		8.8
Surrogate Recovery: Fluorobenzene	75%			76%		

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW11-0100**			**CHEV-SO-SW12-0090**		
Lab ID:	06-147-05			06-147-06		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.091	**ND**		0.085
Ethyl Benzene	**ND**		0.091	**0.16**		0.085
m,p-Xylene	**0.12**		0.091	**0.47**		0.085
o-Xylene	**ND**		0.091	**0.57**		0.085
TPH-Gas	**ND**		9.1	**ND**		8.5
Surrogate Recovery: Fluorobenzene	79%			75%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW13-0150**			**CHEV-SO-BT14-0170**		
Lab ID:	06-147-07			06-147-08		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**0.032**		0.020	**ND**		0.020
Toluene	**ND**		0.089	**ND**		0.096
Ethyl Benzene	**0.59**		0.089	**ND**		0.096
m,p-Xylene	**0.68**		0.089	**ND**		0.096
o-Xylene	**0.74**		0.089	**ND**		0.096
TPH-Gas	**ND**		8.9	**ND**		9.6
Surrogate Recovery: Fluorobenzene	71%			73%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT15-0170**			**CHEV-SO-SW16-0150**		
Lab ID:	06-147-09			06-147-10		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.093	**ND**		0.097
Ethyl Benzene	**0.44**		0.093	**0.26**		0.097
m,p-Xylene	**0.58**		0.093	**0.27**		0.097
o-Xylene	**0.58**		0.093	**0.22**		0.097
TPH-Gas	**ND**		9.3	**ND**		9.7
Surrogate Recovery: Fluorobenzene	75%			71%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW17-0160**			**CHEV-SO-SW18-0150**		
Lab ID:	06-147-11			06-147-12		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.077	**ND**		0.091
Ethyl Benzene	**ND**		0.077	**ND**		0.091
m,p-Xylene	**ND**		0.077	**ND**		0.091
o-Xylene	**ND**		0.077	**ND**		0.091
TPH-Gas	**ND**		7.7	**ND**		9.1
Surrogate Recovery: Fluorobenzene	70%			83%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SP19-0000**			**CHEV-SO-SP20-0000**		
Lab ID:	06-147-13			06-147-14		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.045	**ND**		0.088
Ethyl Benzene	**ND**		0.045	**ND**		0.088
m,p-Xylene	**ND**		0.045	**ND**		0.088
o-Xylene	**ND**		0.045	**ND**		0.088
TPH-Gas	**ND**		4.5	**ND**		8.8
Surrogate Recovery:						
Fluorobenzene	82%			76%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SP21-0000**			**CHEV-SO-SP22-0000**		
Lab ID:	06-147-15			06-147-16		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.048	**ND**		0.042
Ethyl Benzene	**ND**		0.048	**ND**		0.042
m,p-Xylene	**ND**		0.048	**ND**		0.042
o-Xylene	**ND**		0.048	**ND**		0.042
TPH-Gas	**ND**		4.8	**ND**		4.2
Surrogate Recovery:						
Fluorobenzene	77%			73%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
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NWTPH-Gx/BTEX

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SP23-0000**
Lab ID: 06-147-17

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.044
Ethyl Benzene	**ND**		0.044
m,p-Xylene	**ND**		0.044
o-Xylene	**ND**		0.044
TPH-Gas	**ND**		4.4
Surrogate Recovery:			
Fluorobenzene	76%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0619S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	75%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0919S2

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	80%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-147-15 **Original**	06-147-15 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	77%	73%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-147-16 **Original**	06-147-16 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	73%	76%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19&22-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.20

Lab ID:	06-147-15 **MS**	Percent Recovery	06-147-15 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.12**	**97**	**2.27**	**100**	7	
Toluene	**2.13**	**97**	**2.27**	**100**	7	
Ethyl Benzene	**2.20**	**100**	**2.33**	**110**	6	
m,p-Xylene	**2.21**	**100**	**2.35**	**110**	6	
o-Xylene	**2.14**	**98**	**2.29**	**100**	7	

Surrogate Recovery:

Fluorobenzene	79%	75%

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW07-0180**	**CHEV-SO-SW08-0150**	**CHEV-SO-BT09-0110**
Lab ID:	06-147-01	06-147-02	06-147-03
Diesel Range:	**580**	**ND**	**170**
PQL:	28	27	28
Identification:	Diesel Range Organics	---	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	56	54	55
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	72%	73%	67%
Flags:	Y	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW10-0100**	**CHEV-SO-SW11-0100**	**CHEV-SO-SW12-0090**
Lab ID:	06-147-04	06-147-05	06-147-06
Diesel Range:	**300**	**270**	**1700**
PQL:	28	29	28
Identification:	Diesel Range Organics	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**57**	**ND**	**ND**
PQL:	56	57	89
Identification:	Lube Oil	---	---
Surrogate Recovery			
o-Terphenyl:	79%	86%	88%
Flags:	Y	Y	Y,U1

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW13-0150**	**CHEV-SO-BT14-0170**	**CHEV-SO-BT15-0170**
Lab ID:	06-147-07	06-147-08	06-147-09
Diesel Range:	**150**	**ND**	**290**
PQL:	28	27	28
Identification:	Diesel Range Organics	---	Diesel Range Organics
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	56	54	55
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	89%	91%	96%
Flags:	Y	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SW16-0150**	**CHEV-SO-SW17-0160**	**CHEV-SO-SW18-0150**
Lab ID:	06-147-10	06-147-11	06-147-12
Diesel Range:	**ND**	**ND**	**ND**
PQL:	28	28	28
Identification:	---	---	---
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	56	56	56
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	92%	106%	94%
Flags:	Y	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SP19-0000**	**CHEV-SO-SP20-0000**	**CHEV-SO-SP21-0000**
Lab ID:	06-147-13	06-147-14	06-147-15
Diesel Range:	**ND**	**33**	**ND**
PQL:	25	27	28
Identification:	---	Diesel Range Organics	---
Lube Oil Range:	**ND**	**ND**	**ND**
PQL:	50	54	55
Identification:	---	---	---
Surrogate Recovery			
o-Terphenyl:	94%	107%	95%
Flags:	Y	Y	Y

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Samples Submitted: June 19, 2009
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NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SP22-0000**	**CHEV-SO-SP23-0000**
Lab ID:	06-147-16	06-147-17
Diesel Range:	**ND**	**30**
PQL:	26	27
Identification:	---	Diesel Range Organics
Lube Oil Range:	**ND**	**89**
PQL:	53	54
Identification:	---	Lube Oil
Surrogate Recovery		
o-Terphenyl:	125%	101%
Flags:	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-19-09
Date Analyzed:	6-19-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0619S2
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	89%
Flags:	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-147-13	06-147-13 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	94%	97%
Flags:	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
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NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-147-16	06-147-16 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	125%	105%
Flags:	Y	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
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Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SW07-0180**					
Laboratory ID:	06-147-01					
Naphthalene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
2-Methylnaphthalene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthylene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Fluorene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Phenanthrene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Anthracene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Fluoranthene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Pyrene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Chrysene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0074	EPA 8270/SIM	6-22-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*39 - 103*				
Pyrene-d10	*86*	*39 - 115*				
Terphenyl-d14	*94*	*50 - 118*				

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-BT15-0170**					
Laboratory ID:	06-147-09					
Naphthalene	**0.013**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
2-Methylnaphthalene	**0.059**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
1-Methylnaphthalene	**0.28**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthylene	**0.0095**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthene	**0.025**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Fluorene	**0.13**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Phenanthrene	**0.13**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Anthracene	**0.0096**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Chrysene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*39 - 103*				
Pyrene-d10	*89*	*39 - 115*				
Terphenyl-d14	*100*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0622S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*39 - 103*				
Pyrene-d10	*90*	*39 - 115*				
Terphenyl-d14	*94*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-147
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0622S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0543**	**0.0578**	0.0833	0.0833	65	69	31 - 102	6	30	
Acenaphthylene	**0.0582**	**0.0595**	0.0833	0.0833	70	71	48 - 104	2	26	
Acenaphthene	**0.0578**	**0.0639**	0.0833	0.0833	69	77	46 - 105	10	26	
Fluorene	**0.0621**	**0.0677**	0.0833	0.0833	75	81	52 - 107	9	25	
Phenanthrene	**0.0619**	**0.0675**	0.0833	0.0833	74	81	58 - 104	9	21	
Anthracene	**0.0586**	**0.0657**	0.0833	0.0833	70	79	56 - 103	11	21	
Fluoranthene	**0.0659**	**0.0714**	0.0833	0.0833	79	86	65 - 111	8	20	
Pyrene	**0.0657**	**0.0750**	0.0833	0.0833	79	90	65 - 115	13	20	
Benzo[a]anthracene	**0.0630**	**0.0686**	0.0833	0.0833	76	82	55 - 111	9	19	
Chrysene	**0.0674**	**0.0734**	0.0833	0.0833	81	88	58 - 121	9	19	
Benzo[b]fluoranthene	**0.0664**	**0.0744**	0.0833	0.0833	80	89	57 - 120	11	20	
Benzo[k]fluoranthene	**0.0703**	**0.0748**	0.0833	0.0833	84	90	52 - 123	6	21	
Benzo[a]pyrene	**0.0546**	**0.0631**	0.0833	0.0833	66	76	49 - 106	14	22	
Indeno(1,2,3-c,d)pyrene	**0.0628**	**0.0693**	0.0833	0.0833	75	83	56 - 125	10	22	
Dibenz[a,h]anthracene	**0.0641**	**0.0701**	0.0833	0.0833	77	84	55 - 129	9	24	
Benzo[g,h,i]perylene	**0.0624**	**0.0686**	0.0833	0.0833	75	82	55 - 122	9	23	
Surrogate:										
2-Fluorobiphenyl					*66*	*74*	*39 - 103*			
Pyrene-d10					*82*	*90*	*39 - 115*			
Terphenyl-d14					*85*	*94*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Lab Traveler: 0906-147
Project: 255-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-19-09

Client ID	Lab ID	% Moisture
CHEV-SO-SW07-0180	06-147-01	10
CHEV-SO-SW08-0150	06-147-02	8
CHEV-SO-BT09-0110	06-147-03	9
CHEV-SO-SW10-0100	06-147-04	10
CHEV-SO-SW11-0100	06-147-05	13
CHEV-SO-SW12-0090	06-147-06	10
CHEV-SO-SW13-0150	06-147-07	11
CHEV-SO-BT14-0170	06-147-08	8
CHEV-SO-BT15-0170	06-147-09	9
CHEV-SO-SW16-0150	06-147-10	11
CHEV-SO-SW17-0160	06-147-11	10
CHEV-SO-SW18-0150	06-147-12	10
CHEV-SO-SP19-0000	06-147-13	0
CHEV-SO-SP20-0000	06-147-14	8
CHEV-SO-SP21-0000	06-147-15	9
CHEV-SO-SP22-0000	06-147-16	5
CHEV-SO-SP23-0000	06-147-17	7

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063 (068) 04/1301
Project Name: Chevron Prop. Interim Action
Project Manager: David DinKuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☒ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-147

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SW07-0140	6/18/09	0800	Soil	3		X	X				X							X
2	CHEV-SO-SW08-0150	6/18/09	0805	Soil	2		X	X											
3	CHEV-SO-BT09-0110	6/18/09	0830	Soil	2		X	X											
4	CHEV-SO-SW10-0100	6/18/09	0833		2														
5	CHEV-SO-SW11-0100	6/18/09	0838		2														
6	CHEV-SO-SW12-0090	6/18/09	0835		2														
7	CHEV-SO-SW13-0150	6/18/09	1020		2														
8	CHEV-SO-BT14-0170	6/18/09	1022		2														
9	CHEV-SO-BT15-0170	6/18/09	1024		3							X							
10	CHEV-SO-SW16-0150	6/18/09	1026		2														

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	6/18/09	1500
Received by		OSE	6/19/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions: EIM EDD

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Laboratory Number: 06-147

Company: Parametrix
Project Number: 255-1896-063 04/1301
Project Name: Chevron Prop. Interim Action
Project Manager: David Dinkuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☒ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
11	CHEV-SO-SW17-0160	6/18/09	1025	Soil	2		X	X											X
12	CHEV-SO-SW18-0150	6/18/09	1030																
13	CHEV-SO-SP19-0000	6/18/09	1105																
14	CHEV-SO-SP20-0000		1107																
15	CHEV-SO-SP21-0000		1114																
16	CHEV-SO-SP22-0000		1110																
17	CHEV-SO-SP23-0000		1120																

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	6/18/09	1500
Received by		OSE	6/18/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 24, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1301
Laboratory Reference No. 0906-148

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 19, 2009.

Please note that the data for the remaining analyses will follow in the final report.

Please note that the data for the Gx/BTEX analyses is *preliminary* pending QA/QC data.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

Case Narrative

Samples were collected on June 16 and 17, 2009, and received by the laboratory on June 19, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Please note, EPA 5035A vials were not provided for the samples; therefore, the samples were extracted from a four ounce jar.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-23-09
Date Analyzed: 6-23-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBC2-2095**			**CHEV-SO-SBH2-2100**		
Lab ID:	06-148-01			06-148-02		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**2.2**		0.030	**0.15**		0.026
Toluene	**0.63**		0.15	**ND**		0.13
Ethyl Benzene	**4.0**		0.15	**0.31**		0.13
m,p-Xylene	**12**		0.15	**0.46**		0.13
o-Xylene	**3.1**		0.15	**ND**		0.13
TPH-Gas	**340**	**O**	15	**120**	**O**	13
Surrogate Recovery: Fluorobenzene	76%			69%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-23-09
Date Analyzed: 6-23-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SBG4-2100**
Lab ID: 06-148-03

	Result	Flags	PQL
Benzene	**1.4**		0.025
Toluene	**0.16**		0.13
Ethyl Benzene	**1.1**		0.13
m,p-Xylene	**1.2**		0.13
o-Xylene	**0.41**		0.13
TPH-Gas	**150**	**O**	13
Surrogate Recovery:			
Fluorobenzene	74%		

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-23-09
Date Analyzed: 6-23-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-SBC2-2095**	**CHEV-SO-SBH2-2100**	**CHEV-SO-SBG4-2100**
Lab ID:	06-148-01	06-148-02	06-148-03
Diesel Range:	**120**	**260**	**240**
PQL:	32	29	28
Identification:	Diesel Range Organics	Diesel Range Organics	Diesel Range Organics
Lube Oil Range:	**87**	**190**	**190**
PQL:	63	57	57
Identification:	Lube Oil	Lube Oil	Lube Oil
Surrogate Recovery			
o-Terphenyl:	68%	74%	73%
Flags:	Y,M	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-23-09
Date Analyzed:	6-23-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0623S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	88%
Flags:	Y

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-23-09
Date Analyzed: 6-23-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-148-01	06-148-01 DUP
Diesel Range:	**93.1**	**85.2**
PQL:	25	25
RPD:	9	
Surrogate Recovery		
o-Terphenyl:	68%	84%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBC2-2095**					
Laboratory ID:	06-148-01					
Naphthalene	**0.25**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
2-Methylnaphthalene	**0.44**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
1-Methylnaphthalene	**0.32**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthylene	**0.033**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthene	**0.075**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Fluorene	**0.064**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Phenanthrene	**0.18**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Anthracene	**0.050**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Fluoranthene	**0.079**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Pyrene	**0.13**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]anthracene	**0.041**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Chrysene	**0.040**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[b]fluoranthene	**0.022**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[k]fluoranthene	**0.028**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]pyrene	**0.047**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Indeno(1,2,3-c,d)pyrene	**0.025**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[g,h,i]perylene	**0.044**	0.0084	EPA 8270/SIM	6-23-09	6-24-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*39 - 103*				
Pyrene-d10	*77*	*39 - 115*				
Terphenyl-d14	*82*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBH2-2100**					
Laboratory ID:	06-148-02					
Naphthalene	**0.063**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
2-Methylnaphthalene	**0.26**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
1-Methylnaphthalene	**0.50**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthylene	**0.15**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthene	**0.11**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Fluorene	**0.19**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Phenanthrene	**0.59**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Anthracene	**0.18**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Fluoranthene	**0.27**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Pyrene	**0.51**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]anthracene	**0.17**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Chrysene	**0.15**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[b]fluoranthene	**0.080**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[k]fluoranthene	**0.096**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]pyrene	**0.19**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Indeno(1,2,3-c,d)pyrene	**0.072**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Dibenz[a,h]anthracene	**0.024**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[g,h,i]perylene	**0.10**	0.0077	EPA 8270/SIM	6-23-09	6-24-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*39 - 103*				
Pyrene-d10	*83*	*39 - 115*				
Terphenyl-d14	*92*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBG4-2100**					
Laboratory ID:	06-148-03					
Naphthalene	**3.6**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
2-Methylnaphthalene	**5.3**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
1-Methylnaphthalene	**3.2**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthylene	**1.8**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Acenaphthene	**0.54**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Fluorene	**1.6**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Phenanthrene	**5.1**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Anthracene	**1.5**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Fluoranthene	**1.8**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Pyrene	**3.4**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]anthracene	**1.0**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Chrysene	**0.90**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[b]fluoranthene	**0.39**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[k]fluoranthene	**0.56**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[a]pyrene	**1.0**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Indeno(1,2,3-c,d)pyrene	**0.31**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Dibenz[a,h]anthracene	**0.11**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Benzo[g,h,i]perylene	**0.38**	0.076	EPA 8270/SIM	6-23-09	6-24-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*39 - 103*				
Pyrene-d10	*81*	*39 - 115*				
Terphenyl-d14	*83*	*50 - 118*				

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0623S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-23-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*39 - 103*				
Pyrene-d10	*91*	*39 - 115*				
Terphenyl-d14	*90*	*50 - 118*				

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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-148
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0623S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0453**	**0.0505**	0.0833	0.0833	54	61	31 - 102	11	30	
Acenaphthylene	**0.0589**	**0.0605**	0.0833	0.0833	71	73	48 - 104	3	26	
Acenaphthene	**0.0570**	**0.0595**	0.0833	0.0833	68	71	46 - 105	4	26	
Fluorene	**0.0632**	**0.0661**	0.0833	0.0833	76	79	52 - 107	4	25	
Phenanthrene	**0.0635**	**0.0645**	0.0833	0.0833	76	77	58 - 104	2	21	
Anthracene	**0.0616**	**0.0636**	0.0833	0.0833	74	76	56 - 103	3	21	
Fluoranthene	**0.0666**	**0.0669**	0.0833	0.0833	80	80	65 - 111	0	20	
Pyrene	**0.0695**	**0.0713**	0.0833	0.0833	83	86	65 - 115	3	20	
Benzo[a]anthracene	**0.0634**	**0.0635**	0.0833	0.0833	76	76	55 - 111	0	19	
Chrysene	**0.0669**	**0.0673**	0.0833	0.0833	80	81	58 - 121	1	19	
Benzo[b]fluoranthene	**0.0638**	**0.0649**	0.0833	0.0833	77	78	57 - 120	2	20	
Benzo[k]fluoranthene	**0.0702**	**0.0708**	0.0833	0.0833	84	85	52 - 123	1	21	
Benzo[a]pyrene	**0.0569**	**0.0575**	0.0833	0.0833	68	69	49 - 106	1	22	
Indeno(1,2,3-c,d)pyrene	**0.0627**	**0.0629**	0.0833	0.0833	75	76	56 - 125	0	22	
Dibenz[a,h]anthracene	**0.0632**	**0.0639**	0.0833	0.0833	76	77	55 - 129	1	24	
Benzo[g,h,i]perylene	**0.0620**	**0.0621**	0.0833	0.0833	74	75	55 - 122	0	23	
Surrogate:										
2-Fluorobiphenyl					*63*	*66*	*39 - 103*			
Pyrene-d10					*86*	*84*	*39 - 115*			
Terphenyl-d14					*88*	*87*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 24, 2009
Samples Submitted: June 19, 2009
Lab Traveler: 0906-148
Project: 255-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-23-09

Client ID	Lab ID	% Moisture
CHEV-SO-SBC2-2095	06-148-01	21
CHEV-SO-SBH2-2100	06-148-02	13
CHEV-SO-SBG4-2100	06-148-03	12

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page _____ of _____

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063 04/1301

Project Name: Chevron Property Interim Action

Project Manager: David Dinkuhn

Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☒ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-148

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SBC2-~~2095~~ 2 6100	6/16/09	1215	Soil	2		X	X				X							X
2	CHEV-SO-SBH2-~~6100~~ 2 6100	6/16/09	1210	Soil	2		↓	↓				↓							↓
3	CHEV-SO-SBG4-~~6100~~ 2 6100	6/16/09	1200	Soil	2														
4	CHEV-SO-SBL5-~~6100~~ 2 6100	6/17/09	1535	Soil	2														
5	CHEV-SO-SBL8-~~6080~~ 2 6090 REV 6/18/09	6/17/09	1540	Soil	2														
6	CHEV-SO-SBJ7-~~6100~~ 2 6100	6/17/09	1530	Soil	2		↓	↓				↓							↓

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	6/18/09	1500
Received by			6/18/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Samples C2, H2 and G4: Extract on 6/23, Due 6/24. Samples L5, L8 and J7: Extract on 6/24, Due 6/25. Please store at room temp.

EIM EDD please. Please change ~~First digit of last number set~~ from 0→2 for all samples.

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 23, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 235-1896-063 04/1301
Laboratory Reference No. 0906-146

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 19, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,



David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

Case Narrative

Samples were collected on June 16 and 19, 2009, and received by the laboratory on June 19 and 20, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Dry weight analysis for samples CHEV-SO-BT05-1120 and CHEV-SO-SW06-1110 are based on the original sampling on 6-16-09.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-22-09
Date Analyzed: 6-22-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT05-1120**			**CHEV-SO-SW06-1110**		
Lab ID:	06-146-03			06-146-04		
	Result	Flags	PQL	**Result**	Flags	PQL
Benzene	**ND**		0.020	**ND**		0.020
Toluene	**ND**		0.052	**ND**		0.058
Ethyl Benzene	**ND**		0.052	**ND**		0.058
m,p-Xylene	**ND**		0.052	**ND**		0.058
o-Xylene	**ND**		0.052	**ND**		0.058
TPH-Gas	**ND**		5.2	**ND**		5.8
Surrogate Recovery:						
Fluorobenzene	74%			75%		

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-22-09
Date Analyzed: 6-22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0622S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	83%		

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-22-09
Date Analyzed: 6-22-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-146-03 **Original**	06-146-03 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	74%	74%		

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-22-09
Date Analyzed: 6-22-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.28

Lab ID:	06-146-03 **MS**	Percent Recovery	06-146-03 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.32**	**100**	**2.10**	**92**	10	
Toluene	**2.31**	**100**	**2.09**	**92**	10	
Ethyl Benzene	**2.39**	**100**	**2.16**	**94**	10	
m,p-Xylene	**2.40**	**110**	**2.16**	**95**	10	
o-Xylene	**2.34**	**100**	**2.11**	**92**	10	

Surrogate Recovery:

Fluorobenzene	78%		78%

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Dx

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID:	**CHEV-SO-BT05-0120**	**CHEV-SO-SW06-0110**
Lab ID:	06-146-01	06-146-02
Diesel Range:	**ND**	**ND**
PQL:	29	28
Identification:	---	---
Lube Oil Range:	**ND**	**ND**
PQL:	57	55
Identification:	---	---
Surrogate Recovery		
o-Terphenyl:	83%	87%
Flags:	Y	Y

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-19-09
Date Analyzed:	6-19-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0619S2
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	89%
Flags:	Y

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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-19-09
Date Analyzed: 6-19-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-147-13	06-147-13 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	94%	97%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SW06-0110**					
Laboratory ID:	06-146-02					
Naphthalene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
2-Methylnaphthalene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
1-Methylnaphthalene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthylene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Fluorene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Phenanthrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Anthracene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Chrysene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0073	EPA 8270/SIM	6-22-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*39 - 103*				
Pyrene-d10	*86*	*39 - 115*				
Terphenyl-d14	*87*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0622S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-22-09	6-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*39 - 103*				
Pyrene-d10	*90*	*39 - 115*				
Terphenyl-d14	*94*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Laboratory Reference: 0906-146
Project: 235-1896-063 04/1301

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0622S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0543**	**0.0578**	0.0833	0.0833	65	69	31 - 102	6	30	
Acenaphthylene	**0.0582**	**0.0595**	0.0833	0.0833	70	71	48 - 104	2	26	
Acenaphthene	**0.0578**	**0.0639**	0.0833	0.0833	69	77	46 - 105	10	26	
Fluorene	**0.0621**	**0.0677**	0.0833	0.0833	75	81	52 - 107	9	25	
Phenanthrene	**0.0619**	**0.0675**	0.0833	0.0833	74	81	58 - 104	9	21	
Anthracene	**0.0586**	**0.0657**	0.0833	0.0833	70	79	56 - 103	11	21	
Fluoranthene	**0.0659**	**0.0714**	0.0833	0.0833	79	86	65 - 111	8	20	
Pyrene	**0.0657**	**0.0750**	0.0833	0.0833	79	90	65 - 115	13	20	
Benzo[a]anthracene	**0.0630**	**0.0686**	0.0833	0.0833	76	82	55 - 111	9	19	
Chrysene	**0.0674**	**0.0734**	0.0833	0.0833	81	88	58 - 121	9	19	
Benzo[b]fluoranthene	**0.0664**	**0.0744**	0.0833	0.0833	80	89	57 - 120	11	20	
Benzo[k]fluoranthene	**0.0703**	**0.0748**	0.0833	0.0833	84	90	52 - 123	6	21	
Benzo[a]pyrene	**0.0546**	**0.0631**	0.0833	0.0833	66	76	49 - 106	14	22	
Indeno(1,2,3-c,d)pyrene	**0.0628**	**0.0693**	0.0833	0.0833	75	83	56 - 125	10	22	
Dibenz[a,h]anthracene	**0.0641**	**0.0701**	0.0833	0.0833	77	84	55 - 129	9	24	
Benzo[g,h,i]perylene	**0.0624**	**0.0686**	0.0833	0.0833	75	82	55 - 122	9	23	
Surrogate:										
2-Fluorobiphenyl					*66*	*74*	*39 - 103*			
Pyrene-d10					*82*	*90*	*39 - 115*			
Terphenyl-d14					*85*	*94*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 23, 2009
Samples Submitted: June 19, 2009
Lab Traveler: 0906-146
Project: 235-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-19-09

Client ID	Lab ID	% Moisture
CHEV-SO-BT05-0120	06-146-01	13
CHEV-SO-SW06-0110	06-146-02	9

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 235-1896-063 04/1301
Project Name: Chevron Property Interim Action
Project Manager: David Dikuhn
Sampled by: L. Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☒ 2 Day ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-146

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-BT05-0120	6/16/09	1400	soil	2		X	X											X
2	CHEV-SO-SW06-0110	6/16/09	1445	soil	2		X	X				X							↓
						SEE PAGE 2 of COC													

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	6/16/09	1500
Received by	M. Ven	OSE	6/19/09	1000
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions: EIM EDD

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: PMX
Project Number: 255-1896-063
Project Name: CHEVRON PROPERTY
Project Manager: D. DINGUHN
Sampled by:

Turnaround Request (in working days)

(Check One)

- ☐ ~~Same Day~~
- ☐ ~~1 Day~~
- ☑ ~~2 Day~~ 1 DAY
- ☐ 3 Day
- ☐ Standard (7 working days)

(TPH analysis 5 working days)

- ☐ _____ (other)

Laboratory Number: ~~0906-146~~ 0906-146

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664						% Moisture
3	CHEV-SO-BTOS-1120	6/19/09	1430	SO	1		X																	X
4	CHEV-SO-SW06-1110	↓	1445	↓			X																	X

Please reference #1, 2 for dry weights

	Signature	Company	Date	Time
Relinquished by	David Dinguhn	PMX	6/19/09	1530
Received by	Chris Gibson	OSE	6.20.09	~~8:50~~
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions: EIM EDDs PLEASE

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 30, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1301
Laboratory Reference No. 0906-200

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 26, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

Case Narrative

Samples were collected on June 22, 2009, and received by the laboratory on June 26, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

A Method 5035 VOA vial was not provided for sample CHEV-SO-SBR7-2100. Therefore, the sample was extracted from a 4-ounce jar.

As per client's request, sample CHEV-SO-SBR7-2100 was extracted on 6-29-09 and received no refrigeration.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX

Date Extracted: 6-29-09
Date Analyzed: 6-29-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SBR7-2100**
Lab ID: 06-200-01

	Result	Flags	PQL
Benzene	**0.064**		0.028
Toluene	**ND**		0.14
Ethyl Benzene	**0.37**		0.14
m,p-Xylene	**0.84**		0.14
o-Xylene	**0.78**		0.14
TPH-Gas	**ND**		14
Surrogate Recovery:			
Fluorobenzene	74%		

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Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-29-09
Date Analyzed: 6-29-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0629S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	79%		

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Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-29-09
Date Analyzed: 6-29-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-201-02 **Original**	06-201-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	73%	71%		

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Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-29-09
Date Analyzed: 6-29-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.56

Lab ID:	06-201-01 **MS**	Percent Recovery	06-201-01 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.34**	**91**	**2.31**	**90**	1	
Toluene	**2.33**	**91**	**2.29**	**89**	2	
Ethyl Benzene	**2.37**	**93**	**2.33**	**91**	2	
m,p-Xylene	**2.38**	**93**	**2.34**	**91**	2	
o-Xylene	**2.32**	**91**	**2.29**	**90**	1	

Surrogate Recovery:
Fluorobenzene 71% 72%

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Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Dx

Date Extracted:	6-29-09
Date Analyzed:	6-29-09
Matrix:	Soil
Units:	mg/kg (ppm)
Client ID:	**CHEV-SO-SBR7-2100**
Lab ID:	06-200-01
Diesel Range:	**180**
PQL:	30
Identification:	Diesel Range Organics
Lube Oil Range:	**150**
PQL:	60
Identification:	Lube Oil
Surrogate Recovery	
o-Terphenyl:	75%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-29-09
Date Analyzed:	6-29-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0629S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	85%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-29-09
Date Analyzed: 6-29-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-215-01	06-215-01 DUP
Diesel Range:	**5420**	**5330**
PQL:	130	25
RPD:	2	
Surrogate Recovery		
o-Terphenyl:	79%	121%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-S0-SBR7-2100**					
Laboratory ID:	06-200-01					
Naphthalene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Acenaphthylene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Acenaphthene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Fluorene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Phenanthrene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Anthracene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Fluoranthene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Pyrene	**0.0086**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Chrysene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[k]fluoranthene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270/SIM	6-29-09	6-29-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*82*	*39 - 103*				
Pyrene-d10	*80*	*39 - 115*				
Terphenyl-d14	*87*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0629S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-29-09	6-29-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*86*	*39 - 103*				
Pyrene-d10	*82*	*39 - 115*				
Terphenyl-d14	*89*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Laboratory Reference: 0906-200
Project: 255-1896-063 04/1301

PAHs by EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	06-200-01										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0553**	**0.0520**	0.0833	0.0833	ND	66	62	29 - 104	6	27	
Acenaphthylene	**0.0706**	**0.0674**	0.0833	0.0833	ND	85	81	44 - 111	5	20	
Acenaphthene	**0.0706**	**0.0678**	0.0833	0.0833	ND	85	81	45 - 108	4	19	
Fluorene	**0.0724**	**0.0691**	0.0833	0.0833	ND	87	83	49 - 113	5	16	
Phenanthrene	**0.0679**	**0.0665**	0.0833	0.0833	ND	82	80	43 - 124	2	36	
Anthracene	**0.0683**	**0.0689**	0.0833	0.0833	ND	82	83	51 - 115	1	17	
Fluoranthene	**0.0725**	**0.0715**	0.0833	0.0833	ND	87	86	42 - 140	1	27	
Pyrene	**0.0727**	**0.0715**	0.0833	0.0833	0.00722	79	77	40 - 140	2	30	
Benzo[a]anthracene	**0.0704**	**0.0693**	0.0833	0.0833	ND	85	83	33 - 134	2	21	
Chrysene	**0.0689**	**0.0679**	0.0833	0.0833	ND	83	82	32 - 141	1	21	
Benzo[b]fluoranthene	**0.0733**	**0.0703**	0.0833	0.0833	ND	88	84	35 - 139	4	32	
Benzo[k]fluoranthene	**0.0703**	**0.0691**	0.0833	0.0833	ND	84	83	44 - 124	2	23	
Benzo[a]pyrene	**0.0703**	**0.0711**	0.0833	0.0833	ND	84	85	34 - 130	1	28	
Indeno(1,2,3-c,d)pyrene	**0.0783**	**0.0768**	0.0833	0.0833	ND	94	92	50 - 127	2	20	
Dibenz[a,h]anthracene	**0.0791**	**0.0777**	0.0833	0.0833	ND	95	93	58 - 122	2	15	
Benzo[g,h,i]perylene	**0.0790**	**0.0775**	0.0833	0.0833	ND	95	93	47 - 126	2	21	
Surrogate:											
2-Fluorobiphenyl						*83*	*76*	*39 - 103*			
Pyrene-d10						*82*	*79*	*39 - 115*			
Terphenyl-d14						*93*	*86*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 30, 2009
Samples Submitted: June 26, 2009
Lab Traveler: 0906-200
Project: 255-1896-063 04/1301

% MOISTURE

Date Analyzed: 6-29-09

Client ID	Lab ID	% Moisture
CHEV-SO-SBR7-2100	06-200-01	16

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063 04/1301
Project Name: Chevron Property
Project Manager: David DinKuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☒ 2 Day ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-200

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SBR7-2100	6/22/09	1145	Soil	2		X	X				X							X

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	6/25/09	1500
Received by		OnSite Env	6/26/09	1015
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:
Please extract on 6/29/2009 and analyze on 6/30/2009.
Store at room temp

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 30, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063
Laboratory Reference No. 0906-099

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 12, 2009.

Please note that the enclosed page number 3 has been *revised* due to a correction of the client's sample identification, and replaces the original sent on the June 17th.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

Case Narrative

Samples were collected on June 11, 2009, and received by the laboratory on June 12, 2009. They were maintained at the laboratory at room temperature until extracted.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

A Method 5035 VOA vial was not provided for sample CHEV-SO-SBG4-1100. The sample was therefore extracted from a 4-ounce jar.

Per client's request, sample CHEV-SO-SBG4-1100 was stored at room temperature prior to extraction and analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Gx/BTEX

Date Extracted: 6-12-09
Date Analyzed: 6-15-09

Matrix: Soil
Units: mg/kg (ppm)

Client ID: **CHEV-SO-SB B4-1100**
Lab ID: 06-099-01

	Result	Flags	PQL
Benzene	**0.21**		0.015
Toluene	**0.15**		0.075
Ethyl Benzene	**0.37**		0.075
m,p-Xylene	**0.56**		0.075
o-Xylene	**0.24**		0.075
TPH-Gas	**140**	**O**	7.5
Surrogate Recovery:			
Fluorobenzene	65%		

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0612S1

	Result	Flags	PQL
Benzene	**ND**		0.020
Toluene	**ND**		0.050
Ethyl Benzene	**ND**		0.050
m,p-Xylene	**ND**		0.050
o-Xylene	**ND**		0.050
TPH-Gas	**ND**		5.0
Surrogate Recovery:			
Fluorobenzene	83%		

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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Gx/BTEX
DUPLICATE QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-086-02 **Original**	06-086-02 **Duplicate**	**RPD**	**Flags**
Benzene	**ND**	**ND**	NA	
Toluene	**ND**	**ND**	NA	
Ethyl Benzene	**ND**	**ND**	NA	
m,p-Xylene	**ND**	**ND**	NA	
o-Xylene	**ND**	**ND**	NA	
TPH-Gas	**ND**	**ND**	NA	
Surrogate Recovery:				
Fluorobenzene	69%	70%		

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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Gx/BTEX
MS/MSD QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Spike Level (ppm): 2.87

Lab ID:	06-086-02 **MS**	Percent Recovery	06-086-02 **MSD**	Percent Recovery	**RPD**	**Flags**
Benzene	**2.57**	**90**	**2.72**	**95**	6	
Toluene	**2.57**	**90**	**2.72**	**95**	6	
Ethyl Benzene	**2.64**	**92**	**2.78**	**97**	5	
m,p-Xylene	**2.66**	**92**	**2.78**	**97**	4	
o-Xylene	**2.62**	**91**	**2.72**	**94**	4	

Surrogate Recovery:
Fluorobenzene 73% 76%

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Dx

Date Extracted:	6-12-09
Date Analyzed:	6-12-09
Matrix:	Soil
Units:	mg/kg (ppm)
Client ID:	**CHEV-SO-SB B4-1100**
Lab ID:	06-099-01
Diesel Range:	**220**
PQL:	31
Identification:	Diesel Range Organics
Lube Oil Range:	**180**
PQL:	63
Identification:	Lube Oil
Surrogate Recovery	
o-Terphenyl:	94%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-12-09
Date Analyzed:	6-12-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0612S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	87%
Flags:	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 6-12-09
Date Analyzed: 6-12-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	06-054-02	06-054-02 DUP
Diesel Range:	**96.2**	**80.5**
PQL:	25	25
RPD:	18	
Surrogate Recovery		
o-Terphenyl:	70%	73%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-SBB4-1100**					
Laboratory ID:	06-099-01					
Naphthalene	**0.35**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
2-Methylnaphthalene	**0.87**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
1-Methylnaphthalene	**1.2**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Acenaphthylene	**0.84**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Acenaphthene	**0.38**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Fluorene	**0.90**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Phenanthrene	**2.9**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Anthracene	**0.99**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Fluoranthene	**1.5**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Pyrene	**2.9**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[a]anthracene	**0.94**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Chrysene	**0.87**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[b]fluoranthene	**0.46**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[k]fluoranthene	**0.61**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[a]pyrene	**1.2**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Indeno(1,2,3-c,d)pyrene	**0.41**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Dibenz[a,h]anthracene	**0.14**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Benzo[g,h,i]perylene	**0.52**	0.083	EPA 8270/SIM	6-12-09	6-16-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*39 - 103*				
Pyrene-d10	*93*	*39 - 115*				
Terphenyl-d14	*92*	*50 - 118*				

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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0612S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	6-12-09	6-12-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*61*	*39 - 103*				
Pyrene-d10	*95*	*39 - 115*				
Terphenyl-d14	*88*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Laboratory Reference: 0906-099
Project: 255-1896-063

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0612S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0501**	**0.0551**	0.0833	0.0833	60	66	31 - 102	10	30	
Acenaphthylene	**0.0652**	**0.0695**	0.0833	0.0833	78	83	48 - 104	6	26	
Acenaphthene	**0.0587**	**0.0610**	0.0833	0.0833	70	73	46 - 105	4	26	
Fluorene	**0.0641**	**0.0667**	0.0833	0.0833	77	80	52 - 107	4	25	
Phenanthrene	**0.0591**	**0.0611**	0.0833	0.0833	71	73	58 - 104	3	21	
Anthracene	**0.0714**	**0.0763**	0.0833	0.0833	86	92	56 - 103	7	21	
Fluoranthene	**0.0742**	**0.0763**	0.0833	0.0833	89	92	65 - 111	3	20	
Pyrene	**0.0742**	**0.0759**	0.0833	0.0833	89	91	65 - 115	2	20	
Benzo[a]anthracene	**0.0725**	**0.0753**	0.0833	0.0833	87	90	55 - 111	4	19	
Chrysene	**0.0655**	**0.0676**	0.0833	0.0833	79	81	58 - 121	3	19	
Benzo[b]fluoranthene	**0.0658**	**0.0683**	0.0833	0.0833	79	82	57 - 120	4	20	
Benzo[k]fluoranthene	**0.0740**	**0.0757**	0.0833	0.0833	89	91	52 - 123	2	21	
Benzo[a]pyrene	**0.0653**	**0.0699**	0.0833	0.0833	78	84	49 - 106	7	22	
Indeno(1,2,3-c,d)pyrene	**0.0660**	**0.0692**	0.0833	0.0833	79	83	56 - 125	5	22	
Dibenz[a,h]anthracene	**0.0638**	**0.0661**	0.0833	0.0833	77	79	55 - 129	4	24	
Benzo[g,h,i]perylene	**0.0630**	**0.0664**	0.0833	0.0833	76	80	55 - 122	5	23	
Surrogate:										
2-Fluorobiphenyl					*69*	*72*	*39 - 103*			
Pyrene-d10					*93*	*95*	*39 - 115*			
Terphenyl-d14					*83*	*85*	*50 - 118*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 16, 2009
Samples Submitted: June 12, 2009
Lab Traveler: 0906-099
Project: 255-1896-063

% MOISTURE

Date Analyzed: 6-12-09

Client ID	Lab ID	% Moisture
CHEV-SO-SB G4-1100	06-099-01	20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: PARAMETRIX
Project Number: 255-1896-063
Project Name: CHEVRON PROPERTY IA
Project Manager: DANE DINKUHN
Sampled by:

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☑ 1 Day
- ☑ 2 Day
- ☐ 3 Day
- ☐ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 06-099

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-SO-SB B4-1100	6/11/09	1300	So	2		X	X			Z	X							X

	Signature	Company	Date	Time
Relinquished by		PMX	6/11/09	1415
Received by		COSE	6/12/09	1100
Relinquished by				
Received by				
Relinquished by				
Received by				

Reviewed by/Date

Reviewed by/Date

Comments/Special Instructions:

EDDS FOR EIM
EXTRACT 6/12/09
DUE 6/15/09
STORE @ ROOM TEMP

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 30, 2009

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063
Laboratory Reference No. 0912-107

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on December 16, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

Case Narrative

Samples were collected on December 14 and 15, 2009, and received by the laboratory on December 16, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-MW21R-0100**					
Laboratory ID:	12-107-03					
Benzene	**2.2**	0.020	NWTPH-G/BTEX	12-23-09	12-23-09	
Toluene	**0.11**	0.041	NWTPH-G/BTEX	12-23-09	12-23-09	
Ethyl Benzene	**3.7**	0.041	NWTPH-G/BTEX	12-23-09	12-23-09	
m,p-Xylene	**9.4**	0.82	NWTPH-G/BTEX	12-23-09	12-28-09	
o-Xylene	**0.088**	0.041	NWTPH-G/BTEX	12-23-09	12-23-09	
Gasoline	**270**	4.1	NWTPH-G/BTEX	12-23-09	12-23-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*110*	*53-126*				
Client ID:	**CHEV-SO-PP34-0100**					
Laboratory ID:	12-107-04					
Benzene	**0.27**	0.020	NWTPH-G/BTEX	12-23-09	12-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*53-126*				
Client ID:	**CHEV-SO-MW9R-0090**					
Laboratory ID:	12-107-05					
Benzene	**1.8**	0.020	NWTPH-G/BTEX	12-23-09	12-28-09	
Toluene	**0.22**	0.094	NWTPH-G/BTEX	12-23-09	12-28-09	
Ethyl Benzene	**8.2**	0.094	NWTPH-G/BTEX	12-23-09	12-28-09	
m,p-Xylene	**19**	0.23	NWTPH-G/BTEX	12-23-09	12-23-09	
o-Xylene	**0.23**	0.094	NWTPH-G/BTEX	12-23-09	12-28-09	
Gasoline	**540**	9.4	NWTPH-G/BTEX	12-23-09	12-28-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*53-126*				
Client ID:	**CHEV-SO-PP35-0100**					
Laboratory ID:	12-107-06					
Benzene	**1.5**	0.020	NWTPH-G/BTEX	12-23-09	12-23-09	
Toluene	**0.079**	0.046	NWTPH-G/BTEX	12-23-09	12-23-09	
Ethyl Benzene	**6.4**	0.23	NWTPH-G/BTEX	12-23-09	12-28-09	
m,p-Xylene	**8.0**	0.23	NWTPH-G/BTEX	12-23-09	12-28-09	
o-Xylene	**ND**	0.46	NWTPH-G/BTEX	12-23-09	12-23-09	U1
Gasoline	**330**	4.6	NWTPH-G/BTEX	12-23-09	12-23-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*53-126*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP33-0100**					
Laboratory ID:	12-107-07					
Benzene	**5.4**	0.020	NWTPH-G/BTEX	12-23-09	12-23-09	
Toluene	**2.5**	0.099	NWTPH-G/BTEX	12-23-09	12-23-09	
Ethyl Benzene	**20**	0.99	NWTPH-G/BTEX	12-23-09	12-28-09	
m,p-Xylene	**75**	0.99	NWTPH-G/BTEX	12-23-09	12-28-09	
o-Xylene	**19**	0.99	NWTPH-G/BTEX	12-23-09	12-28-09	
Gasoline	**1000**	99	NWTPH-G/BTEX	12-23-09	12-28-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*71*	*53-126*				
Client ID:	**CHEV-SO-PP30-0100**					
Laboratory ID:	12-107-08					
Benzene	**0.11**	0.020	NWTPH-G/BTEX	12-23-09	12-28-09	
Toluene	**ND**	0.049	NWTPH-G/BTEX	12-23-09	12-28-09	
Ethyl Benzene	**0.097**	0.049	NWTPH-G/BTEX	12-23-09	12-28-09	
m,p-Xylene	**0.17**	0.049	NWTPH-G/BTEX	12-23-09	12-28-09	
o-Xylene	**ND**	0.049	NWTPH-G/BTEX	12-23-09	12-28-09	
Gasoline	**26**	4.9	NWTPH-G/BTEX	12-23-09	12-28-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*53-126*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1223S1					
Benzene	**ND**	0.020	NWTPH-G/BTEX	12-23-09	12-23-09	
Toluene	**ND**	0.050	NWTPH-G/BTEX	12-23-09	12-23-09	
Ethyl Benzene	**ND**	0.050	NWTPH-G/BTEX	12-23-09	12-23-09	
m,p-Xylene	**ND**	0.050	NWTPH-G/BTEX	12-23-09	12-23-09	
o-Xylene	**ND**	0.050	NWTPH-G/BTEX	12-23-09	12-23-09	
Gasoline	**ND**	5.0	NWTPH-G/BTEX	12-23-09	12-23-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*53-126*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	12-151-01									
	ORIG	DUP								
Benzene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Surrogate:										
Fluorobenzene					*96*	*95*	*53-126*			
SPIKE BLANKS										
Laboratory ID:	SB1223S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	**0.864**	**0.904**	1.00	1.00	**86**	**90**	70-127	5	13	
Toluene	**0.896**	**0.937**	1.00	1.00	**90**	**94**	72-127	4	14	
Ethyl Benzene	**0.915**	**0.959**	1.00	1.00	**92**	**96**	73-126	5	13	
m,p-Xylene	**0.937**	**0.976**	1.00	1.00	**94**	**98**	75-127	4	15	
o-Xylene	**0.936**	**0.964**	1.00	1.00	**94**	**96**	76-124	3	14	
Surrogate:										
Fluorobenzene					*86*	*88*	*53-126*			

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Dx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	12-107-05				
Client ID:	**CHEV-SO-MW9R-0090**				
Diesel Range Organics	**270**	29	12-21-09	12-21-09	Y
Lube Oil	**460**	57	12-21-09	12-21-09	Y
Surrogate: o-terphenyl	85%	50-150			

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-21-09
Date Analyzed:	12-21-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1221S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	88%
Flags:	Y

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	12-21-09
Date Analyzed:	12-21-09
Matrix:	Soil
Units:	mg/kg (ppm)

Lab ID:	12-108-01	12-108-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	25	25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	83%	85%
Flags:	Y	Y

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-MW22R-0100**					
Laboratory ID:	12-107-01					
Naphthalene	**0.35**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
2-Methylnaphthalene	**0.25**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
1-Methylnaphthalene	**5.2**	0.083	EPA 8270/SIM	12-22-09	12-23-09	
Acenaphthylene	**0.27**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Acenaphthene	**1.2**	0.083	EPA 8270/SIM	12-22-09	12-23-09	
Fluorene	**1.3**	0.083	EPA 8270/SIM	12-22-09	12-23-09	
Phenanthrene	**3.5**	0.083	EPA 8270/SIM	12-22-09	12-23-09	
Anthracene	**0.67**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Fluoranthene	**0.84**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Pyrene	**1.5**	0.083	EPA 8270/SIM	12-22-09	12-23-09	
Benzo[a]anthracene	**0.50**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Chrysene	**0.42**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[b]fluoranthene	**0.16**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[k]fluoranthene	**0.21**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]pyrene	**0.40**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Indeno(1,2,3-c,d)pyrene	**0.12**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Dibenz[a,h]anthracene	**0.049**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[g,h,i]perylene	**0.14**	0.0083	EPA 8270/SIM	12-22-09	12-22-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*39 - 103*				
Pyrene-d10	*101*	*39 - 115*				
Terphenyl-d14	*88*	*50 - 118*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-MW9R-0090**					
Laboratory ID:	12-107-05					
Naphthalene	**0.99**	0.076	EPA 8270/SIM	12-22-09	12-23-09	
2-Methylnaphthalene	**3.8**	0.076	EPA 8270/SIM	12-22-09	12-23-09	
1-Methylnaphthalene	**2.0**	0.076	EPA 8270/SIM	12-22-09	12-23-09	
Acenaphthylene	**0.031**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Acenaphthene	**0.12**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Fluorene	**0.12**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Phenanthrene	**0.28**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Anthracene	**0.074**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Fluoranthene	**0.34**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Pyrene	**0.29**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]anthracene	**0.15**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Chrysene	**0.17**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[b]fluoranthene	**0.11**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[k]fluoranthene	**0.080**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]pyrene	**0.11**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Indeno(1,2,3-c,d)pyrene	**0.059**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Dibenz[a,h]anthracene	**0.023**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[g,h,i]perylene	**0.072**	0.0076	EPA 8270/SIM	12-22-09	12-22-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*39 - 103*				
Pyrene-d10	*84*	*39 - 115*				
Terphenyl-d14	*78*	*50 - 118*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP33-0100**					
Laboratory ID:	12-107-07					
Naphthalene	**2.6**	0.078	EPA 8270/SIM	12-22-09	12-23-09	
2-Methylnaphthalene	**2.1**	0.078	EPA 8270/SIM	12-22-09	12-23-09	
1-Methylnaphthalene	**1.2**	0.078	EPA 8270/SIM	12-22-09	12-23-09	
Acenaphthylene	**0.15**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Acenaphthene	**0.39**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Fluorene	**0.35**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Phenanthrene	**0.76**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Anthracene	**0.19**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Fluoranthene	**1.1**	0.078	EPA 8270/SIM	12-22-09	12-23-09	
Pyrene	**0.87**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]anthracene	**0.25**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Chrysene	**0.23**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[b]fluoranthene	**0.12**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[k]fluoranthene	**0.12**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]pyrene	**0.18**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Indeno(1,2,3-c,d)pyrene	**0.079**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Dibenz[a,h]anthracene	**0.027**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[g,h,i]perylene	**0.095**	0.0078	EPA 8270/SIM	12-22-09	12-22-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*39 - 103*				
Pyrene-d10	*90*	*39 - 115*				
Terphenyl-d14	*86*	*50 - 118*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP30-0100**					
Laboratory ID:	12-107-08					
Naphthalene	**1.3**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
2-Methylnaphthalene	**3.5**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
1-Methylnaphthalene	**3.5**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Acenaphthylene	**2.8**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Acenaphthene	**0.50**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Fluorene	**2.1**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Phenanthrene	**6.6**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Anthracene	**2.3**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Fluoranthene	**3.4**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Pyrene	**5.8**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Benzo[a]anthracene	**1.9**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Chrysene	**1.7**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Benzo[b]fluoranthene	**0.75**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[k]fluoranthene	**0.86**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]pyrene	**2.2**	0.15	EPA 8270/SIM	12-22-09	12-23-09	
Indeno(1,2,3-c,d)pyrene	**0.63**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Dibenz[a,h]anthracene	**0.22**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[g,h,i]perylene	**0.75**	0.0077	EPA 8270/SIM	12-22-09	12-22-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*39 - 103*				
Pyrene-d10	*86*	*39 - 115*				
Terphenyl-d14	*75*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1222S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Fluorene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Anthracene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Pyrene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Chrysene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	12-22-09	12-22-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*39 - 103*				
Pyrene-d10	*92*	*39 - 115*				
Terphenyl-d14	*85*	*50 - 118*				

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1222S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0620**	**0.0686**	0.0833	0.0833	74	82	31 - 102	10	30	
Acenaphthylene	**0.0716**	**0.0777**	0.0833	0.0833	86	93	48 - 104	8	26	
Acenaphthene	**0.0647**	**0.0708**	0.0833	0.0833	78	85	46 - 105	9	26	
Fluorene	**0.0671**	**0.0728**	0.0833	0.0833	81	87	52 - 107	8	25	
Phenanthrene	**0.0662**	**0.0710**	0.0833	0.0833	79	85	58 - 104	7	21	
Anthracene	**0.0705**	**0.0742**	0.0833	0.0833	85	89	56 - 103	5	21	
Fluoranthene	**0.0796**	**0.0820**	0.0833	0.0833	96	98	65 - 111	3	20	
Pyrene	**0.0759**	**0.0803**	0.0833	0.0833	91	96	65 - 115	6	20	
Benzo[a]anthracene	**0.0760**	**0.0783**	0.0833	0.0833	91	94	55 - 111	3	19	
Chrysene	**0.0745**	**0.0777**	0.0833	0.0833	89	93	58 - 121	4	19	
Benzo[b]fluoranthene	**0.0673**	**0.0738**	0.0833	0.0833	81	89	57 - 120	9	20	
Benzo[k]fluoranthene	**0.0676**	**0.0728**	0.0833	0.0833	81	87	52 - 123	7	21	
Benzo[a]pyrene	**0.0559**	**0.0562**	0.0833	0.0833	67	67	49 - 106	1	22	
Indeno(1,2,3-c,d)pyrene	**0.0770**	**0.0786**	0.0833	0.0833	92	94	56 - 125	2	22	
Dibenz[a,h]anthracene	**0.0766**	**0.0793**	0.0833	0.0833	92	95	55 - 129	3	24	
Benzo[g,h,i]perylene	**0.0736**	**0.0718**	0.0833	0.0833	88	86	55 - 122	2	23	
Surrogate:										
2-Fluorobiphenyl					*74*	*82*	*39 - 103*			
Pyrene-d10					*94*	*96*	*39 - 115*			
Terphenyl-d14					*76*	*85*	*50 - 118*			

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Date of Report: December 30, 2009
Samples Submitted: December 16, 2009
Laboratory Reference: 0912-107
Project: 255-1896-063

% MOISTURE

Date Analyzed: 12-21,23&28-09

Client ID	Lab ID	% Moisture
CHEV-SO-MW22R-0100	12-107-01	20
CHEV-SO-MW21R-0100	12-107-03	11
CHEV-SO-PP34-0100	12-107-04	12
CHEV-SO-MW9R-0090	12-107-05	12
CHEV-SO-PP35-0100	12-107-06	12
CHEV-SO-PP33-0100	12-107-07	14
CHEV-SO-PP30-0100	12-107-08	14

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063
Project Name: Chevron Prop. Interim Action
Project Manager: David DinKuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 12-107

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Benzene only	% Moisture
1	CHEV-SO-MW22R-0100	12/14/09	1415	Soil	3		X					X								X
~~2~~	~~CHEV-SO-MW20R-0095~~	~~12/14/09~~	~~1505~~	~~Soil~~	~~2~~		~~X~~									NOT	RECEIVED. DB			
3	CHEV-SO-MW21R-0100	12/15/09	0904	Soil	2		X													X
4	CHEV-SO-PP34-0100	12/15/09	1000	Soil	2		X												X	
5	CHEV-SO-MW9R-0090	12/15/09	1020	Soil	3		X	X				X								
6	CHEV-SO-PP35-0100	12/15/09	1212	Soil	2		X													
7	CHEV-SO-PP33-0100	12/15/09	1225	Soil	3		X					X								
8	CHEV-SO-PP30-0100	12/15/09	1235	Soil	3		X					X								

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	12/16/09	1345
Received by		OnSite Env	12/16/09	1755
Relinquished by				
Received by				
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions: EIM EDD

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 8, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063
Laboratory Reference No. 0912-190

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on December 30, 2009.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

Case Narrative

Samples were collected on December 29, 2009, and received by the laboratory on December 30, 2009. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-MW4R-0100**					
Laboratory ID:	12-190-01					
Benzene	**0.028**	0.020	EPA 8021	12-31-09	1-5-10	
Toluene	**ND**	0.047	EPA 8021	12-31-09	1-5-10	
Ethyl Benzene	**ND**	0.047	EPA 8021	12-31-09	1-5-10	
m,p-Xylene	**0.13**	0.047	EPA 8021	12-31-09	1-5-10	
o-Xylene	**ND**	0.047	EPA 8021	12-31-09	1-5-10	
Gasoline	**14**	4.7	NWTPH-Gx	12-31-09	1-5-10	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*78*	*53-126*				
Client ID:	**CHEV-SO-MW22R-0100**					
Laboratory ID:	12-190-03					
Benzene	**0.87**	0.023	EPA 8021	12-31-09	12-31-09	
Toluene	**0.12**	0.12	EPA 8021	12-31-09	12-31-09	
Ethyl Benzene	**0.69**	0.12	EPA 8021	12-31-09	12-31-09	
m,p-Xylene	**2.7**	0.12	EPA 8021	12-31-09	12-31-09	
o-Xylene	**ND**	0.60	EPA 8021	12-31-09	12-31-09	U1
Gasoline	**580**	12	NWTPH-Gx	12-31-09	12-31-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*53-126*				
Client ID:	**CHEV-SO-MW26R-0060**					
Laboratory ID:	12-190-04					
Benzene	**ND**	0.020	EPA 8021	12-31-09	12-31-09	
Toluene	**ND**	0.049	EPA 8021	12-31-09	12-31-09	
Ethyl Benzene	**ND**	0.049	EPA 8021	12-31-09	12-31-09	
m,p-Xylene	**ND**	0.049	EPA 8021	12-31-09	12-31-09	
o-Xylene	**ND**	0.049	EPA 8021	12-31-09	12-31-09	
Gasoline	**ND**	4.9	NWTPH-Gx	12-31-09	12-31-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*53-126*				

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP31-0100**					
Laboratory ID:	12-190-05					
Benzene	**0.50**	0.020	EPA 8021	12-31-09	12-31-09	
Toluene	**ND**	0.051	EPA 8021	12-31-09	12-31-09	
Ethyl Benzene	**ND**	0.26	EPA 8021	12-31-09	12-31-09	U1
m,p-Xylene	**0.43**	0.051	EPA 8021	12-31-09	12-31-09	
o-Xylene	**ND**	0.26	EPA 8021	12-31-09	12-31-09	U1
Gasoline	**130**	5.1	NWTPH-Gx	12-31-09	12-31-09	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*53-126*				
Client ID:	**CHEV-SO-PP32-0100**					
Laboratory ID:	12-190-06					
Benzene	**0.12**	0.020	EPA 8021	12-31-09	1-5-10	
Toluene	**ND**	0.087	EPA 8021	12-31-09	1-5-10	
Ethyl Benzene	**0.78**	0.087	EPA 8021	12-31-09	1-5-10	
m,p-Xylene	**1.3**	0.087	EPA 8021	12-31-09	1-5-10	
o-Xylene	**ND**	0.44	EPA 8021	12-31-09	1-5-10	U1
Gasoline	**140**	8.7	NWTPH-Gx	12-31-09	1-5-10	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*73*	*53-126*				
Client ID:	**CHEV-SO-PP36-0080**					
Laboratory ID:	12-190-07					
Benzene	**ND**	0.020	EPA 8021	12-31-09	12-31-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*53-126*				

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1231S2					
Benzene	**ND**	0.020	EPA 8021	12-31-09	12-31-09	
Toluene	**ND**	0.050	EPA 8021	12-31-09	12-31-09	
Ethyl Benzene	**ND**	0.050	EPA 8021	12-31-09	12-31-09	
m,p-Xylene	**ND**	0.050	EPA 8021	12-31-09	12-31-09	
o-Xylene	**ND**	0.050	EPA 8021	12-31-09	12-31-09	
Gasoline	**ND**	5.0	NWTPH-Gx	12-31-09	12-31-09	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*53-126*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	12-132-12									
	ORIG	DUP								
Benzene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA	NA		NA	NA	30	
Surrogate:										
Fluorobenzene					*97*	*97*	*53-126*			
SPIKE BLANKS										
Laboratory ID:	SB1231S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	**0.853**	**0.933**	1.00	1.00	**85**	**93**	70-127	9	13	
Toluene	**0.879**	**0.954**	1.00	1.00	**88**	**95**	72-127	8	14	
Ethyl Benzene	**0.890**	**0.967**	1.00	1.00	**89**	**97**	73-126	8	13	
m,p-Xylene	**0.907**	**0.983**	1.00	1.00	**91**	**98**	75-127	8	15	
o-Xylene	**0.901**	**0.971**	1.00	1.00	**90**	**97**	76-124	7	14	
Surrogate:										
Fluorobenzene					*86*	*94*	*53-126*			

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Dx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	12-190-02				
Client ID:	**CHEV-SO-MW10R-0070v**				
Diesel Range	**ND**	29	12-31-09	12-31-09	Y
Lube Oil	**260**	58	12-31-09	12-31-09	Y
Surrogate: o-terphenyl	99%	50-150			

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	12-31-09
Date Analyzed:	12-31-09
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1231S1
Diesel Range:	**ND**
PQL:	25
Identification:	---
Lube Oil Range:	**ND**
PQL:	50
Identification:	---
Surrogate Recovery	
o-Terphenyl:	96%
Flags:	Y

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 12-31-09
Date Analyzed: 12-31-09

Matrix: Soil
Units: mg/kg (ppm)

Lab ID:	12-188-06	12-188-06 DUP
Diesel Range:	**98.5**	**60.4**
PQL:	25	25
RPD:	48	
Surrogate Recovery		
o-Terphenyl:	104%	85%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-MW4R-0100V**					
Laboratory ID:	12-190-01					
Naphthalene	**0.55**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
2-Methylnaphthalene	**1.0**	0.038	EPA 8270/SIM	1-5-10	1-6-10	
1-Methylnaphthalene	**0.74**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Acenaphthylene	**0.027**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Acenaphthene	**0.17**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Fluorene	**0.18**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Phenanthrene	**0.33**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Anthracene	**0.047**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Fluoranthene	**0.15**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Pyrene	**0.17**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[a]anthracene	**0.043**	0.038	EPA 8270/SIM	1-5-10	1-6-10	
Chrysene	**0.044**	0.038	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[b]fluoranthene	**0.038**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[k]fluoranthene	**0.011**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[a]pyrene	**0.033**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Indeno(1,2,3-c,d)pyrene	**0.014**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[g,h,i]perylene	**0.019**	0.0077	EPA 8270/SIM	1-5-10	1-6-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*84*	*39 - 103*				
Pyrene-d10	*92*	*39 - 115*				
Terphenyl-d14	*100*	*50 - 118*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

PAHs by EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-SO-PP31-0100V**					
Laboratory ID:	12-190-05					
Naphthalene	**0.045**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
2-Methylnaphthalene	**0.076**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
1-Methylnaphthalene	**0.054**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Acenaphthylene	**0.010**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Acenaphthene	**0.047**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Fluorene	**0.054**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Phenanthrene	**0.14**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Anthracene	**0.065**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Fluoranthene	**0.083**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Pyrene	**0.091**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[a]anthracene	**0.025**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Chrysene	**0.038**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[b]fluoranthene	**0.034**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[k]fluoranthene	**0.012**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[a]pyrene	**0.026**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Indeno(1,2,3-c,d)pyrene	**0.014**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Dibenz[a,h]anthracene	**ND**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Benzo[g,h,i]perylene	**0.018**	0.0078	EPA 8270/SIM	1-5-10	1-6-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*90*	*39 - 103*				
Pyrene-d10	*97*	*39 - 115*				
Terphenyl-d14	*104*	*50 - 118*				

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0105S1					
Naphthalene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Acenaphthylene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Acenaphthene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Fluorene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Phenanthrene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Anthracene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Fluoranthene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Pyrene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Chrysene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Benzo[k]fluoranthene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270/SIM	1-5-10	1-5-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*39 - 103*				
Pyrene-d10	*97*	*39 - 115*				
Terphenyl-d14	*93*	*50 - 118*				

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

PAHs by EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	01-006-13										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0763**	**0.0708**	0.0833	0.0833	ND	92	85	29 - 104	7	27	
Acenaphthylene	**0.0836**	**0.0733**	0.0833	0.0833	ND	100	88	44 - 111	13	20	
Acenaphthene	**0.0835**	**0.0776**	0.0833	0.0833	ND	100	93	45 - 108	7	19	
Fluorene	**0.0850**	**0.0782**	0.0833	0.0833	ND	102	94	49 - 113	8	16	
Phenanthrene	**0.0820**	**0.0769**	0.0833	0.0833	ND	98	92	43 - 124	6	36	
Anthracene	**0.0828**	**0.0781**	0.0833	0.0833	ND	99	94	51 - 115	6	17	
Fluoranthene	**0.0857**	**0.0821**	0.0833	0.0833	ND	103	99	42 - 140	4	27	
Pyrene	**0.0846**	**0.0812**	0.0833	0.0833	ND	102	97	40 - 140	4	30	
Benzo[a]anthracene	**0.0765**	**0.0735**	0.0833	0.0833	ND	92	88	33 - 134	4	21	
Chrysene	**0.0792**	**0.0755**	0.0833	0.0833	ND	95	91	32 - 141	5	21	
Benzo[b]fluoranthene	**0.0806**	**0.0793**	0.0833	0.0833	ND	97	95	35 - 139	2	32	
Benzo[k]fluoranthene	**0.0800**	**0.0766**	0.0833	0.0833	ND	96	92	44 - 124	4	23	
Benzo[a]pyrene	**0.0790**	**0.0760**	0.0833	0.0833	ND	95	91	34 - 130	4	28	
Indeno(1,2,3-c,d)pyrene	**0.0773**	**0.0730**	0.0833	0.0833	ND	93	88	50 - 127	6	20	
Dibenz[a,h]anthracene	**0.0784**	**0.0740**	0.0833	0.0833	ND	94	89	58 - 122	6	15	
Benzo[g,h,i]perylene	**0.0768**	**0.0730**	0.0833	0.0833	ND	92	88	47 - 126	5	21	
Surrogate:											
2-Fluorobiphenyl						*96*	*87*	*39 - 103*			
Pyrene-d10						*103*	*97*	*39 - 115*			
Terphenyl-d14						*100*	*94*	*50 - 118*			

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Date of Report: January 8, 2010
Samples Submitted: December 30, 2009
Laboratory Reference: 0912-190
Project: 255-1896-063

% MOISTURE

Date Analyzed: 12-31-09

Client ID	Lab ID	% Moisture
CHEV-SO-MW4R-0100	12-190-01	13
CHEV-SO-MW10R-0070	12-190-02	14
CHEV-SO-MW22R-0100	12-190-03	16
CHEV-SO-MW26R-0060	12-190-04	8
CHEV-SO-PP31-0100	12-190-05	14
CHEV-SO-PP32-0100	12-190-06	12
CHEV-SO-PP36-0080	12-190-07	15

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063
Project Name: Chevron Prop. Interim Action
Project Manager: David Dinkuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 12-190

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Benzene					% Moisture
1	CHEV-SO-MW4R-0100 ✓	12/29/09	0900	Soil	3		X					X												X
2	CHEV-SO-MW10R-0070 ✓	12/29/09	1315	Soil	3			X																X
3	CHEV-SO-MW22R-0100 ✓	12/29/09	1030	Soil	3		X																	X
4	CHEV-SO-MW26R-0060 ✓	12/29/09	1215	Soil	3		X																	X
5	CHEV-SO-PP31-0100 ✓	12/29/09	1010	Soil	3		X					X												X
6	CHEV-SO-PP32-0100 ✓	12/29/09	~~0046~~ 0930	Soil	3		X																	J
7	CHEV-SO-PP36-~~0100~~ 0090 ✓	12/29/09	1310	Soil	3														X					X

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	12/30/09	1100
Received by			12/30/09	1600
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions: EIM EDDs

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 16, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1001-132

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on January 22, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on January 21, 2010, and received by the laboratory on January 22, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW25-0120**					
Laboratory ID:	01-132-01					
Benzene	**10**	1.0	EPA 8021	1-28-10	1-28-10	
Toluene	**7.2**	1.0	EPA 8021	1-28-10	1-28-10	
Ethyl Benzene	**74**	20	EPA 8021	1-28-10	1-28-10	
m,p-Xylene	**140**	20	EPA 8021	1-28-10	1-28-10	
o-Xylene	**ND**	200	EPA 8021	1-28-10	1-28-10	U1
Gasoline	**ND**	2000	NWTPH-Gx	1-28-10	1-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*74-121*				

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0127W2					
Benzene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Toluene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
o-Xylene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Gasoline	**ND**	100	NWTPH-Gx	1-27-10	1-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				
Laboratory ID:	MB0128W1					
Benzene	**ND**	1.0	EPA 8021	1-28-10	1-28-10	
Toluene	**ND**	1.0	EPA 8021	1-28-10	1-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-28-10	1-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	1-28-10	1-28-10	
o-Xylene	**ND**	1.0	EPA 8021	1-28-10	1-28-10	
Gasoline	**ND**	100	NWTPH-Gx	1-28-10	1-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	01-150-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*84*	*75*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	01-150-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**51.2**	**52.3**	50.0	50.0	ND	**102**	**105**	80-122	2	9	
Toluene	**53.0**	**53.9**	50.0	50.0	ND	**106**	**108**	81-121	2	10	
Ethyl Benzene	**54.1**	**54.9**	50.0	50.0	ND	**108**	**110**	82-120	1	10	
m,p-Xylene	**53.7**	**54.4**	50.0	50.0	ND	**107**	**109**	81-121	1	10	
o-Xylene	**54.0**	**54.6**	50.0	50.0	ND	**108**	**109**	81-121	1	10	
Surrogate:											
Fluorobenzene						*106*	*108*	*74-121*			

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	01-132-01				
Client ID:	**CHEV-GW-MW25-0120**				
Diesel Fuel#1	**0.49**	0.26	1-25-10	1-25-10	Y
Lube Oil Range	**ND**	0.42	1-25-10	1-25-10	Y
Surrogate: o-terphenyl	88%	50-150			

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-25-10
Date Analyzed:	1-25-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0125W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	72%
Flags:	Y

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	1-25-10
Date Analyzed:	1-25-10
Matrix:	Water
Units:	mg/L (ppm)

Lab ID:	01-141-01	01-141-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	103%	93%
Flags:	Y	Y

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW25-0120**					
Laboratory ID:	01-132-01					
Naphthalene	**0.27**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
1-Methylnaphthalene	**0.67**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Acenaphthene	**0.15**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Fluorene	**0.18**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*35 - 100*				
Pyrene-d10	*101*	*27 - 110*				
Terphenyl-d14	*96*	*36 - 125*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0125W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-25-10	1-25-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*35 - 100*				
Pyrene-d10	*95*	*27 - 110*				
Terphenyl-d14	*91*	*36 - 125*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0125W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.396**	**0.409**	0.500	0.500	79	82	35 - 111	3	30	
Acenaphthylene	**0.435**	**0.443**	0.500	0.500	87	89	30 - 109	2	30	
Acenaphthene	**0.405**	**0.416**	0.500	0.500	81	83	46 - 101	3	29	
Fluorene	**0.412**	**0.437**	0.500	0.500	82	87	50 - 104	6	25	
Phenanthrene	**0.408**	**0.430**	0.500	0.500	82	86	55 - 97	5	23	
Anthracene	**0.435**	**0.463**	0.500	0.500	87	93	49 - 103	6	32	
Fluoranthene	**0.446**	**0.476**	0.500	0.500	89	95	59 - 112	7	23	
Pyrene	**0.446**	**0.470**	0.500	0.500	89	94	62 - 112	5	22	
Benzo[a]anthracene	**0.422**	**0.447**	0.500	0.500	84	89	57 - 100	6	25	
Chrysene	**0.416**	**0.439**	0.500	0.500	83	88	58 - 103	5	25	
Benzo[b]fluoranthene	**0.436**	**0.447**	0.500	0.500	87	89	61 - 110	2	27	
Benzo[k]fluoranthene	**0.398**	**0.438**	0.500	0.500	80	88	53 - 110	10	30	
Benzo[a]pyrene	**0.409**	**0.436**	0.500	0.500	82	87	35 - 107	6	32	
Indeno(1,2,3-c,d)pyrene	**0.392**	**0.422**	0.500	0.500	78	84	47 - 105	7	34	
Dibenz[a,h]anthracene	**0.370**	**0.407**	0.500	0.500	74	81	39 - 108	10	33	
Benzo[g,h,i]perylene	**0.381**	**0.409**	0.500	0.500	76	82	41 - 104	7	40	
Surrogate:										
2-Fluorobiphenyl					*80*	*80*	*35 - 100*			
Pyrene-d10					*88*	*95*	*27 - 110*			
Terphenyl-d14					*87*	*92*	*36 - 125*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	01-132-01					
Client ID:	**CHEV-GW-MW25-0120**					
Lead	**ND**	1.1	200.8	1-27-10	1-27-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-27-10
Date Analyzed:	1-27-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0127W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	220	**195**	89	**196**	89	0	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Analyzed	Flags
Lab ID:	01-132-01				
Client ID:	**CHEV-GW-MW25-0120**				
Iron	**2000**	56	6010B	1-28-10	
Lead	**ND**	1.0	200.8	1-27-10	
Manganese	**120**	11	6010B	1-28-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
METHOD BLANK QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0127D1&MB0128D1

Analyte	Method	Result	PQL
Iron	6010B	**ND**	56
Lead	200.8	**ND**	1.0
Manganese	6010B	**ND**	11

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
DUPLICATE QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Iron	**33500**	**33600**	0	56	
Lead	**12.7**	**12.3**	3	1.0	
Manganese	**5020**	**5040**	0	100	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
MS/MSD QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Iron	22000	**52300**	85	**52500**	86	0	
Lead	200	**200**	93	**201**	94	1	
Manganese	2000	**25800**	104	**25700**	103	0	

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW25-0120**					
Laboratory ID:	01-132-01					
Methane	**220**	25	EPA 8015	1-26-10	1-26-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0126W1					
Methane	**ND**	0.50	EPA 8015	1-26-10	1-26-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0126W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.96**	**4.05**	4.42	4.42	N/A	**90**	**92**	70-130	2	25	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 1-22-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW25-0120	01-132-01	**3.4**	0.050

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 1-22-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0122W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0122W1	2.08	2.00	104	82-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-123-02	0.498				
Matrix Spike	2.74	2.00	112	81-121	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-123-02	0.498	0.514	3	12	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 1-29-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW25-0120	01-132-01	**13**	5.0

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 1-29-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0129W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0129W1	22.9	25.0	92	80-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-128-02	14.1				
Matrix Spike	25.0	25.0	100	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
01-128-02	14.1	14.4	2	20	

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 1-28-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW25-0120	01-132-01	**140**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 1-28-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	94.7	100	95	73-117	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-116-02	51.9				
Matrix Spike	245	200	97	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-116-02	51.9	54.9	6	18	

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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW25-0120	01-132-01	**38**	2.0

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 16, 2010
Samples Submitted: January 22, 2010
Laboratory Reference: 1001-132
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	55.7	50.0	111	91-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-128-03	5.84				
Matrix Spike	61.6	50.0	112	91-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-128-03	5.84	5.59	4	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 12 2010
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
Chev-GW-MW25-0120	Water	10-A000922	DEM

Your sample was received on Friday, January 22, 2010. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 255-1896-063

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project #: 255-1896-063
All results reported on an as received basis.

Date Received: 01/22/10
Date Reported: 2/12/10

AMTEST Identification Number **10-A000922**
Client Identification **Chev-GW-MW25-0120**
Sampling Date **01/21/10, 13:30**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	< 2	mg/l		2.00	SM 5210B	DC	01/22/10

Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample number: 10-A000922

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
BOD-low	mg/l	198.	172.	86.9 %

BLANKS

ANALYTE	UNITS	RESULT
BOD-low	mg/l	< 2

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 01-132

Subcontract Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (206) 695-6200

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 255-1896-063 04/1304

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
977	CHEV-GW-MW25-0120	1/21/10	1330	W	1	BOD5

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:		OnSite Env	1/22/10	1430	EIM
Received by:		AmTest	1/22/10	1430	
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Chevron Interim Action
Project Manager: David DinKuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 01-132

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total: Pb	Dissolved: Pb, Fe, Mn	Methane	BODs	Nitrate, Sulfate, Alkalinity	Chloride	% Moisture
~~CHEV-GW-MW13R-0120~~		1/21/10	1010	W	14		X	X				X							X	X	X	X	X	X	
~~CHEV-GW-MW1R-0120~~			1230																						
1	CHEV-GW-MW25-0120		1330																						
~~CHEV-GW-MW19R-0170~~			1430																						

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	1/22/2010	1000
Received by			1/22/10	1420
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions: EIM EDDs

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

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OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 5, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1001-123

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on January 21, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on January 20, 2010, and received by the laboratory on January 21, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Samples CHEV-GW-MW22R-0120, CHEV-GW-MW26R-0120 and method blank had one surrogate recovery out of control limits. This is within allowance of our standard operation procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW22R-0120**					
Laboratory ID:	01-123-02					
Benzene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Toluene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Ethyl Benzene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
m,p-Xylene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
o-Xylene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Gasoline	**ND**	400	NWTPH-Gx	1-27-10	1-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				
Client ID:	**CHEV-GW-MW26R-0120**					
Laboratory ID:	01-123-03					
Benzene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Toluene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Ethyl Benzene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
m,p-Xylene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
o-Xylene	**ND**	4.0	EPA 8021	1-27-10	1-27-10	
Gasoline	**ND**	400	NWTPH-Gx	1-27-10	1-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*74-121*				

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0127W2					
Benzene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Toluene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
o-Xylene	**ND**	1.0	EPA 8021	1-27-10	1-27-10	
Gasoline	**ND**	100	NWTPH-Gx	1-27-10	1-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	01-150-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*84*	*75*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	01-150-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**51.2**	**52.3**	50.0	50.0	ND	**102**	**105**	80-122	2	9	
Toluene	**53.0**	**53.9**	50.0	50.0	ND	**106**	**108**	81-121	2	10	
Ethyl Benzene	**54.1**	**54.9**	50.0	50.0	ND	**108**	**110**	82-120	1	10	
m,p-Xylene	**53.7**	**54.4**	50.0	50.0	ND	**107**	**109**	81-121	1	10	
o-Xylene	**54.0**	**54.6**	50.0	50.0	ND	**108**	**109**	81-121	1	10	
Surrogate:											
Fluorobenzene						*106*	*108*	*74-121*			

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	01-123-02				
Client ID:	**CHEV-GW-MW22R-0120**				
Diesel Range	**ND**	0.26	1-25-10	1-25-10	Y
Lube Oil Range	**ND**	0.41	1-25-10	1-25-10	Y
Surrogate: o-terphenyl	83%	50-150			
Lab ID:	01-123-03				
Client ID:	**CHEV-GW-MW26R-0120**				
Diesel Range	**ND**	0.27	1-25-10	1-25-10	Y
Lube Oil Range	**ND**	0.43	1-25-10	1-25-10	Y
Surrogate: o-terphenyl	91%	50-150			

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-25-10
Date Analyzed:	1-25-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0125W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	72%
Flags:	Y

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	1-25-10
Date Analyzed:	1-25-10
Matrix:	Water
Units:	mg/L (ppm)

Lab ID:	01-141-01	01-141-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	103%	93%
Flags:	Y	Y

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW22R-0120**					
Laboratory ID:	01-123-02					
Naphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*94*	*35 - 105*				
Pyrene-d10	*114*	*27 - 110*				Q
Terphenyl-d14	*103*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW26R-0120**					
Laboratory ID:	01-123-03					
Naphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthylene	**0.15**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthene	**0.17**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Anthracene	**0.17**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]anthracene	**0.016**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*101*	*35 - 105*				
Pyrene-d10	*116*	*27 - 110*				Q
Terphenyl-d14	*100*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0122W2					
Naphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-22-10	1-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*104*	*35 - 105*				
Pyrene-d10	*116*	*27 - 110*				Q
Terphenyl-d14	*102*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0122W2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.417**	**0.419**	0.500	0.500	83	84	35 - 111	0	30	
Acenaphthylene	**0.440**	**0.445**	0.500	0.500	88	89	30 - 109	1	30	
Acenaphthene	**0.452**	**0.458**	0.500	0.500	90	92	46 - 101	1	29	
Fluorene	**0.457**	**0.458**	0.500	0.500	91	92	50 - 104	0	25	
Phenanthrene	**0.454**	**0.457**	0.500	0.500	91	91	55 - 97	1	23	
Anthracene	**0.473**	**0.481**	0.500	0.500	95	96	49 - 103	2	32	
Fluoranthene	**0.491**	**0.495**	0.500	0.500	98	99	59 - 112	1	23	
Pyrene	**0.490**	**0.481**	0.500	0.500	98	96	62 - 112	2	22	
Benzo[a]anthracene	**0.395**	**0.402**	0.500	0.500	79	80	57 - 100	2	25	
Chrysene	**0.396**	**0.401**	0.500	0.500	79	80	58 - 103	1	25	
Benzo[b]fluoranthene	**0.474**	**0.482**	0.500	0.500	95	96	61 - 110	2	27	
Benzo[k]fluoranthene	**0.417**	**0.405**	0.500	0.500	83	81	53 - 110	3	30	
Benzo[a]pyrene	**0.432**	**0.419**	0.500	0.500	86	84	35 - 107	3	32	
Indeno(1,2,3-c,d)pyrene	**0.383**	**0.341**	0.500	0.500	77	68	47 - 105	12	34	
Dibenz[a,h]anthracene	**0.370**	**0.277**	0.500	0.500	74	55	39 - 108	29	33	
Benzo[g,h,i]perylene	**0.377**	**0.304**	0.500	0.500	75	61	41 - 104	21	40	
Surrogate:										
2-Fluorobiphenyl					*92*	*90*	*35 - 105*			
Pyrene-d10					*105*	*104*	*27 - 110*			
Terphenyl-d14					*97*	*95*	*36 - 125*			

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	01-123-02					
Client ID:	**CHEV-GW-MW22R-0120**					
Lead	**1.3**	1.1	200.8	1-27-10	1-27-10	
Lab ID:	01-123-03					
Client ID:	**CHEV-GW-MW26R-0120**					
Lead	**ND**	1.1	200.8	1-27-10	1-27-10	

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-27-10
Date Analyzed:	1-27-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0127W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	220	**195**	89	**196**	89	0	

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Analyzed	Flags
Lab ID:	01-123-02				
Client ID:	**CHEV-GW-MW22R-0120**				
Iron	**220**	56	6010B	1-28-10	
Lead	**ND**	1.0	200.8	1-27-10	
Manganese	**1400**	11	6010B	1-28-10	
Lab ID:	01-123-03				
Client ID:	**CHEV-GW-MW26R-0120**				
Iron	**ND**	56	6010B	1-28-10	
Lead	**ND**	1.0	200.8	1-27-10	
Manganese	**ND**	11	6010B	1-28-10	

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
METHOD BLANK QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0127D1&MB0128D1

Analyte	Method	Result	PQL
Iron	6010B	**ND**	56
Lead	200.8	**ND**	1.0
Manganese	6010B	**ND**	11

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
DUPLICATE QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Iron	**33500**	**33600**	0	56	
Lead	**12.7**	**12.3**	3	1.0	
Manganese	**5020**	**5040**	0	100	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B
MS/MSD QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Iron	22000	**52300**	85	**52500**	86	0	
Lead	200	**200**	93	**201**	94	1	
Manganese	2000	**25800**	104	**25700**	103	0	

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW22R-0120**					
Laboratory ID:	01-123-02					
Methane	**6.3**	0.50	EPA 8015	1-26-10	1-26-10	
Client ID:	**CHEV-GW-MW26R-0120**					
Laboratory ID:	01-123-03					
Methane	**3.0**	0.50	EPA 8015	1-26-10	1-26-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0126W1					
Methane	**ND**	0.50	EPA 8015	1-26-10	1-26-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0126W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.96**	**4.05**	4.42	4.42	N/A	**90**	**92**	70-130	2	25	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 1-22-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0120	01-123-02	**0.50**	0.050
CHEV-GW-MW26R-0120	01-123-03	**1.0**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 1-22-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0122W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0122W1	2.08	2.00	104	82-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-123-02	0.498				
Matrix Spike	2.74	2.00	112	81-121	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-123-02	0.498	0.514	3	12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 1-29-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0120	01-123-02	**1200**	500
CHEV-GW-MW26R-0120	01-123-03	**1200**	500

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 1-29-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0129W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0129W1	9.90	10.0	99	92-116	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-123-02	1230				
Matrix Spike	2210	1000	98	88-111	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
01-123-02	1230	1230	0	10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 1-28-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0120	01-123-02	**160**	20
CHEV-GW-MW26R-0120	01-123-03	**180**	20

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 1-28-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	94.7	100	95	73-117	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-116-02	51.9				
Matrix Spike	245	200	97	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-116-02	51.9	54.9	6	18	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0120	01-123-02	**9100**	200
CHEV-GW-MW26R-0120	01-123-03	**9100**	200

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Date of Report: February 5, 2010
Samples Submitted: January 21, 2010
Laboratory Reference: 1001-123
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	55.7	50.0	111	91-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-128-03	5.84				
Matrix Spike	61.6	50.0	112	91-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-128-03	5.84	5.59	4	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.

Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix

Project Number: 255-1896-063 04/1304

Project Name: Chevron Interim Action

Project Manager: David DinKuhn

Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☒ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 01-123

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D (SIM)	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total Pb	Dissolved: Pb, Fe, Mn	Methane	BODs	Nitrate, Sulfate, Alkalinity	Chloride	% Moisture
1	CHEV-GW-MW21R-0120	1/20/2010	1330	H_2O	14		X	X				X	Canceled 1/22/10. BB						X	X	X	X	X	X	
2	CHEV-GW-MW22R-0120	↓	1610	↓	↓		↓	↓				↓							↓	↓	↓	↓	↓	↓	
3	CHEV-GW-MW26R-0120	↓	1445	↓	↓		↓	↓				↓							↓	↓	↓	↓	↓	↓	

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	1/21/2010	1300
Received by			1/21/10	1530
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions: EIM EDD

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 3 2010
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
Chev-GW-MW21R-0120	Water	10-A000880	
Chev-GW-MW22R-0120	Water	10-A000881	DEM
Chev-GW-MW23R-0120	Water	10-A000882	DEM

Your samples were received on Friday, January 22, 2010. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 255-1896-063

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project #: 255-1896-063
All results reported on an as received basis.

Date Received: 01/22/10
Date Reported: 2/ 3/10

AMTEST Identification Number **10-A000880**
Client Identification **Chev-GW-MW21R-0120**
Sampling Date **01/20/10, 13:30**

AMTEST Identification Number **10-A000881**
Client Identification **Chev-GW-MW22R-0120**
Sampling Date **01/20/10, 16:10**

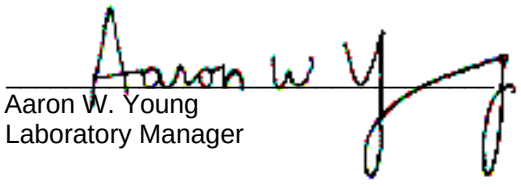
Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	< 2	mg/l		2.00	SM 5210B	DC	01/22/10

AMTEST Identification Number **10-A000882**
Client Identification **Chev-GW-MW23R-0120**
Sampling Date **01/20/10, 14:45**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	< 2	mg/l		2.00	SM 5210B	DC	01/22/10



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 10-A000880 to 10-A000882

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
BOD-low	mg/l	198.	172.	86.9 %

BLANKS

ANALYTE	UNITS	RESULT
BOD-low	mg/l	< 2

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 01-123

Subcontract Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (206) 695-6200

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 255-1896-063 04/1304

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
860	CHEV-GW-MW21R-0120	1/20/10	1330	w	1	BOD_5 (left via phone david canceled this 1/22/10 Sample 850)
61	CHEV-GW-MW22R-0120	↓	1610	↓	↓	↓
62	CHEV-GW-MW26R-0120	↓	1445	↓	↓	↓

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:		OnSite ~~Env.~~	1/22/10	830	EIM
Received by:	Sandra Hutchison	Amtest, Inc.	1/22/10	830	
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 5, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1001-116

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on January 20, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on January 20, 2010, and received by the laboratory on January 20, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

Sample CHEV-GW-MW10R-0120 and SB0121W1 DUP had one surrogate recovery out of control limits. This is within allowance of our standard operation procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0120**					
Laboratory ID:	01-116-01					
Benzene	**120**	4.0	EPA 8021	1-21-10	1-21-10	
Toluene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
Ethyl Benzene	**89**	4.0	EPA 8021	1-21-10	1-21-10	
m,p-Xylene	**170**	4.0	EPA 8021	1-21-10	1-21-10	
o-Xylene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
Gasoline	**1800**	400	NWTPH-Gx	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				
Client ID:	**CHEV-GW-MW11-0120**					
Laboratory ID:	01-116-02					
Benzene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Toluene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
m,p-Xylene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
o-Xylene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Gasoline	**ND**	100	NWTPH-Gx	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				
Client ID:	**CHEV-GW-MW10R-0120**					
Laboratory ID:	01-116-03					
Benzene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
Toluene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
Ethyl Benzene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
m,p-Xylene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
o-Xylene	**ND**	4.0	EPA 8021	1-21-10	1-21-10	
Gasoline	**ND**	400	NWTPH-Gx	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0121W1					
Benzene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Toluene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
m,p-Xylene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
o-Xylene	**ND**	1.0	EPA 8021	1-21-10	1-21-10	
Gasoline	**ND**	100	NWTPH-Gx	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	01-115-04										
	ORIG	DUP									
Benzene	**1.18**	**1.17**	NA	NA		NA		NA	1	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*91*	*74-121*			

MATRIX SPIKES											
Laboratory ID:	01-115-04										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**47.1**	**48.4**	50.0	50.0	1.18	**92**	**94**	80-122	3	9	
Toluene	**51.0**	**51.9**	50.0	50.0	ND	**102**	**104**	81-121	2	10	
Ethyl Benzene	**53.7**	**54.3**	50.0	50.0	ND	**107**	**109**	82-120	1	10	
m,p-Xylene	**52.9**	**53.5**	50.0	50.0	ND	**106**	**107**	81-121	1	10	
o-Xylene	**53.6**	**54.3**	50.0	50.0	ND	**107**	**109**	81-121	1	10	
Surrogate:											
Fluorobenzene						*98*	*98*	*74-121*			

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	01-116-01				
Client ID:	**CHEV-GW-MW9R-0120**				
Diesel Range	**ND**	0.31	1-21-10	1-21-10	Y
Lube Oil Range	**ND**	0.49	1-21-10	1-21-10	Y
Surrogate: o-terphenyl	87%	50-150			
Lab ID:	01-116-02				
Client ID:	**CHEV-GW-MW11-0120**				
Diesel Range	**ND**	0.17	1-21-10	1-21-10	Y
Lube Oil Range	**ND**	0.27	1-21-10	1-21-10	Y
Surrogate: o-terphenyl	91%	50-150			
Lab ID:	01-116-03				
Client ID:	**CHEV-GW-MW10R-0120**				
Diesel Range	**ND**	0.27	1-21-10	1-21-10	Y
Lube Oil Range	**ND**	0.44	1-21-10	1-21-10	Y
Surrogate: o-terphenyl	93%	50-150			

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-21-10
Date Analyzed:	1-21-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0121W1
Diesel Range:	**ND**
PQL:	0.13
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.20
Identification:	---
Surrogate Recovery	
o-Terphenyl:	89%
Flags:	Y

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 1-21-10
Date Analyzed: 1-21-10

Matrix: Water
Units: mg/L (ppm)

Lab ID:	01-116-01	01-116-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.31	0.33
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	87%	91%
Flags:	Y	Y,U1

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0120**					
Laboratory ID:	01-116-01					
Naphthalene	**6.4**	0.056	EPA 8270/SIM	1-21-10	1-22-10	
2-Methylnaphthalene	**2.8**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
1-Methylnaphthalene	**2.2**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthylene	**ND**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthene	**0.18**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Fluorene	**0.14**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Phenanthrene	**0.17**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Anthracene	**ND**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Fluoranthene	**ND**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Pyrene	**ND**	0.11	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]anthracene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Chrysene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[k]fluoranthene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]pyrene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270/SIM	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*35 - 105*				
Pyrene-d10	*110*	*27 - 110*				
Terphenyl-d14	*93*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW11-0120**					
Laboratory ID:	01-116-02					
Naphthalene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
2-Methylnaphthalene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
1-Methylnaphthalene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthylene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Fluorene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Phenanthrene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Anthracene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Fluoranthene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Pyrene	**ND**	0.13	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]anthracene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Chrysene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[b]fluoranthene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[k]fluoranthene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]pyrene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Dibenz[a,h]anthracene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[g,h,i]perylene	**ND**	0.013	EPA 8270/SIM	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*91*	*35 - 105*				
Pyrene-d10	*109*	*27 - 110*				
Terphenyl-d14	*77*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0120**					
Laboratory ID:	01-116-03					
Naphthalene	**0.14**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
2-Methylnaphthalene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
1-Methylnaphthalene	**21**	1.2	EPA 8270/SIM	1-21-10	1-22-10	
Acenaphthylene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthene	**0.23**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Fluorene	**0.32**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Phenanthrene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Anthracene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Fluoranthene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Pyrene	**ND**	0.12	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]anthracene	**0.014**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Chrysene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[b]fluoranthene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[k]fluoranthene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]pyrene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Dibenz[a,h]anthracene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[g,h,i]perylene	**ND**	0.012	EPA 8270/SIM	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*87*	*35 - 105*				
Pyrene-d10	*117*	*27 - 110*				Q
Terphenyl-d14	*95*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0121W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	1-21-10	1-21-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*88*	*35 - 105*				
Pyrene-d10	*102*	*27 - 108*				
Terphenyl-d14	*93*	*36 - 125*				

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0121W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.454**	**0.450**	0.500	0.500	91	90	35 - 111	1	30	
Acenaphthylene	**0.515**	**0.481**	0.500	0.500	103	96	30 - 109	7	30	
Acenaphthene	**0.491**	**0.492**	0.500	0.500	98	98	46 - 101	0	29	
Fluorene	**0.478**	**0.478**	0.500	0.500	96	96	50 - 104	0	25	
Phenanthrene	**0.485**	**0.497**	0.500	0.500	97	99	55 - 97	2	23	
Anthracene	**0.507**	**0.516**	0.500	0.500	101	103	49 - 103	2	32	
Fluoranthene	**0.533**	**0.553**	0.500	0.500	107	111	59 - 112	4	23	
Pyrene	**0.520**	**0.556**	0.500	0.500	104	111	62 - 112	7	22	
Benzo[a]anthracene	**0.425**	**0.443**	0.500	0.500	85	89	57 - 100	4	25	
Chrysene	**0.455**	**0.476**	0.500	0.500	91	95	58 - 103	5	25	
Benzo[b]fluoranthene	**0.517**	**0.547**	0.500	0.500	103	109	61 - 110	6	27	
Benzo[k]fluoranthene	**0.510**	**0.533**	0.500	0.500	102	107	53 - 110	4	30	
Benzo[a]pyrene	**0.493**	**0.515**	0.500	0.500	99	103	35 - 107	4	32	
Indeno(1,2,3-c,d)pyrene	**0.483**	**0.511**	0.500	0.500	97	102	47 - 105	6	34	
Dibenz[a,h]anthracene	**0.465**	**0.506**	0.500	0.500	93	101	39 - 108	8	33	
Benzo[g,h,i]perylene	**0.476**	**0.510**	0.500	0.500	95	102	41 - 104	7	40	
Surrogate:										
2-Fluorobiphenyl					*99*	*98*	*35 - 105*			
Pyrene-d10					*106*	*114*	*27 - 110*			Q
Terphenyl-d14					*98*	*103*	*36 - 125*			

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	01-116-01					
Client ID:	**CHEV-GW-MW9R-0120**					
Lead	**80**	1.1	200.8	1-27-10	1-27-10	
Lab ID:	01-116-02					
Client ID:	**CHEV-GW-MW11-0120**					
Lead	**4.7**	1.1	200.8	1-27-10	1-27-10	
Lab ID:	01-116-03					
Client ID:	**CHEV-GW-MW10R-0120**					
Lead	**3.8**	1.1	200.8	1-27-10	1-27-10	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-27-10
Date Analyzed:	1-27-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0127W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 1-27-10
Date Analyzed: 1-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-141-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	220	**195**	89	**196**	89	0	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B/200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Analyzed	Flags
Lab ID:	01-116-01				
Client ID:	**CHEV-GW-MW9R-0120**				
Iron	**34000**	56	6010B	1-28-10	
Lead	**13**	1.0	200.8	1-27-10	
Manganese	**5000**	100	6010B	1-28-10	
Lab ID:	01-116-02				
Client ID:	**CHEV-GW-MW11-0120**				
Iron	**270**	56	6010B	1-28-10	
Lead	**1.4**	1.0	200.8	1-27-10	
Manganese	**300**	11	6010B	1-28-10	
Lab ID:	01-116-03				
Client ID:	**CHEV-GW-MW10R-0120**				
Iron	**6400**	56	6010B	1-28-10	
Lead	**2.2**	1.0	200.8	1-27-10	
Manganese	**1100**	11	6010B	1-28-10	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B/200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0127D1&MB0128D1

Analyte	Method	Result	PQL
Iron	6010B	**ND**	56
Lead	200.8	**ND**	1.0
Manganese	6010B	**ND**	11

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B/200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Iron	**33500**	**33600**	0	56	
Lead	**12.7**	**12.3**	3	1.0	
Manganese	**5020**	**5040**	0	100	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B/200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 1-27&28-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 01-116-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Iron	22000	**52300**	85	**52500**	86	0	
Lead	200	**200**	93	**201**	94	1	
Manganese	2000	**25800**	104	**25700**	103	0	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0120**					
Laboratory ID:	01-116-01					
Methane	**2100**	500	EPA 8015	1-26-10	1-26-10	
Client ID:	**CHEV-GW-MW11-0120**					
Laboratory ID:	01-116-02					
Methane	**15**	1.0	EPA 8015	1-26-10	1-26-10	
Client ID:	**CHEV-GW-MW10R-0120**					
Laboratory ID:	01-116-03					
Methane	**170**	10	EPA 8015	1-26-10	1-26-10	

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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015 Mod.

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0126W1					
Methane	**ND**	0.50	EPA 8015	1-26-10	1-26-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0126W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.96**	**4.05**	4.42	4.42	N/A	**90**	**92**	70-130	2	25	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 1-21-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0120	01-116-01	**ND**	0.050
CHEV-GW-MW11-0120	01-116-02	**ND**	0.050
CHEV-GW-MW10R-0120	01-116-03	**0.77**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 1-21-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0121W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0121W1	2.11	2.00	106	82-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-116-02	ND				
Matrix Spike	2.20	2.00	110	81-121	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-116-02	ND	ND	NA	12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 1-21-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0120	01-116-01	**30**	10
CHEV-GW-MW11-0120	01-116-02	**8.8**	5.0
CHEV-GW-MW10R-0120	01-116-03	**10**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 1-21-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0122W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0122W1	9.93	10.0	99	92-116	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-116-02	8.77				
Matrix Spike	18.2	10.0	94	88-111	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
01-116-02	8.77	8.65	1	10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 1-28&29-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0120	01-116-01	**700**	100
CHEV-GW-MW11-0120	01-116-02	**52**	40
CHEV-GW-MW10R-0120	01-116-03	**190**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 1-28&29-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	20
MB0121F1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	94.7	100	95	73-117	
SB0121F1	91.1	100	91	73-117	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-116-02	51.9				
Matrix Spike	245	200	97	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-116-02	51.9	54.9	6	18	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0120	01-116-01	**77**	2.0
CHEV-GW-MW11-0120	01-116-02	**3.1**	2.0
CHEV-GW-MW10R-0120	01-116-03	**10**	2.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 5, 2010
Samples Submitted: January 20, 2010
Laboratory Reference: 1001-116
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 1-28-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0128W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0128W1	55.7	50.0	111	91-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
01-128-03	5.84				
Matrix Spike	61.6	50.0	112	91-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
01-128-03	5.84	5.59	4	15	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Laboratory Number: 01-116

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Chevron Interim Action
Project Manager: David Dinkuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D /SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total: Pb	Dissolved: Pb, Fe, Mn	Methane	BODs	Nitrate, Sulfate, Alkalinity	Chloride	% Moisture
1	CHEV-GW-MW89R-0120	1/20/10	1210	H_2O	~~12~~ 14		X	X				X							X	X	X	X	X	X	
2	CHEV-GW-MW11-0120	1/20/10	0920	↓	14		↓	↓				↓							↓	↓	↓	↓	↓	↓	
3	CHEV-GW-MW1DR-0120	1/20/10	1100	↓	14		↓	↓				↓							↓	↓	↓	↓	↓	↓	

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	PMX	1/20/10	1240
Received by	Sarah Sande	PMX	1/20/10	1240
Relinquished by	Sarah Sande	PMX	1/20/10	1300
Received by	Ben Iverson	ALPHA COURIER	"	1310
Relinquished by	Ben Iverson	"	"	1530
Received by		CORE	1/20/10	1530
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
EIM EDDs

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 3 2010
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
Chev-GW-MW9R-0120	Water	10-A000810	DEM
Chev-GW-MW11-0120	Water	10-A000811	DEM
Chev-GW-MW10R-0120	Water	10-A000812	DEM

Your samples were received on Thursday, January 21, 2010. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,



Aaron W. Young
Laboratory Manager

Project #: 255-1896-063-04

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project #: 255-1896-063-04
All results reported on an as received basis.

Date Received: 01/21/10
Date Reported: 2/ 3/10

AMTEST Identification Number **10-A000810**
Client Identification **Chev-GW-MW9R-0120**
Sampling Date **01/20/10, 12:10**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	5.46	mg/l		2.00	SM 5210B	DC	01/21/10

AMTEST Identification Number **10-A000811**
Client Identification **Chev-GW-MW11-0120**
Sampling Date **01/20/10, 09:20**

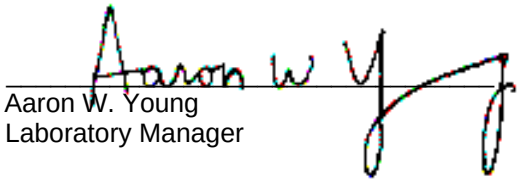
Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	3.36	mg/l		2.00	SM 5210B	DC	01/21/10

AMTEST Identification Number **10-A000812**
Client Identification **Chev-GW-MW10R-0120**
Sampling Date **01/20/10, 11:00**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	3.06	mg/l		2.00	SM 5210B	DC	01/21/10



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 10-A000810 to 10-A000812

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
BOD-low	mg/l	198.	184.	92.9 %

BLANKS

ANALYTE	UNITS	RESULT
BOD-low	mg/l	< 2

Temp 10.9

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 01-116

Subcontract Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (206) 695-6200

Date/Time: _____

Turnaround Request: 1 Day 2 Day 3 Day (Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 255-1896-063 04/1304

Project Name: _____

(1)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
810	CHEV-GW-MW9R-0120	1/20/10	1210	W	1	BOD_5
811	CHEV-GW-MW11-0120	↓	0920	↓	↓	↓
812	CHEV-GW-MW10R-0120	↓	1100	↓	↓	↓

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:		OnSite Env.	1/21/10	830	EIM
Received by:	Sandra Hutchison	Amtest, Inc.	1/21/10	8:30	
Relinquished by:					
Received by:					
Relinquished by:					
Received by:					

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 2, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1002-114

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on February 16, 2010.

Please note that this is a *revised* report and replaces the original dated February 26, 2010 due to the subcontracted data not being included.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on February 15 and 16, 2010, and received by the laboratory on February 16, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Nitrite EPA 353.2 Analysis

Sample CHEV-GW-MW21-0120 (02-114-01) was analyzed out of holding time.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Sulfate ASTM D516-02 Analysis

Sample CHEV-GW-MW19-0170 (02-114-04) PQL was increased due to sample interference.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21-0120**					
Laboratory ID:	02-114-01					
Benzene	**46**	4.0	EPA 8021	2-23-10	2-23-10	
Toluene	**5.0**	4.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**230**	4.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**190**	4.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**8.9**	4.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**4400**	400	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				
Client ID:	**CHEV-GW-MW13-0120**					
Laboratory ID:	02-114-02					
Benzene	**35**	4.0	EPA 8021	2-23-10	2-23-10	
Toluene	**ND**	4.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**13**	4.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**ND**	4.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**ND**	4.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**680**	400	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				
Client ID:	**CHEV-GW-MW4-0120**					
Laboratory ID:	02-114-03					
Benzene	**60**	1.0	EPA 8021	2-23-10	2-23-10	
Toluene	**2.0**	1.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**31**	1.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**15**	1.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**1.8**	1.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**1200**	100	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19-0170**					
Laboratory ID:	02-114-04					
Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Toluene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**640**	100	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				
Client ID:	**CHEV-GW-MW16-0120**					
Laboratory ID:	02-114-05					
Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Toluene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**ND**	100	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				
Client ID:	**CHEV-GW-MW18-0120**					
Laboratory ID:	02-114-06					
Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Toluene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**ND**	100	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223W3					
Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Toluene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
m,p-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
o-Xylene	**ND**	1.0	EPA 8021	2-23-10	2-23-10	
Gasoline	**ND**	100	NWTPH-Gx	2-23-10	2-23-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-114-06										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*97*	*97*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	02-155-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**49.1**	**50.5**	50.0	50.0	ND	**98**	**101**	80-122	3	9	
Toluene	**49.4**	**53.5**	50.0	50.0	ND	**99**	**107**	81-121	8	10	
Ethyl Benzene	**49.7**	**52.0**	50.0	50.0	ND	**99**	**104**	82-120	5	10	
m,p-Xylene	**49.2**	**52.9**	50.0	50.0	ND	**98**	**106**	81-121	7	10	
o-Xylene	**48.9**	**51.2**	50.0	50.0	ND	**98**	**102**	81-121	5	10	
Surrogate:											
Fluorobenzene						*93*	*91*	*74-121*			

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	02-114-01				
Client ID:	**CHEV-GW-MW21-0120**				
Diesel Range	**ND**	0.89	2-18-10	2-18-10	Y,U1
Lube Oil Range	**ND**	0.46	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	87%	50-150			
Lab ID:	02-114-02				
Client ID:	**CHEV-GW-MW13-0120**				
Diesel Range	**ND**	0.49	2-18-10	2-18-10	Y,U1
Lube Oil	**0.70**	0.47	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	61%	50-150			
Lab ID:	02-114-03				
Client ID:	**CHEV-GW-MW4-0120**				
Diesel Range Organics	**0.64**	0.28	2-18-10	2-18-10	Y,M
Lube Oil Range	**ND**	0.45	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	75%	50-150			
Lab ID:	02-114-04				
Client ID:	**CHEV-GW-MW19-0170**				
Diesel Range	**ND**	0.29	2-18-10	2-18-10	Y
Lube Oil Range	**ND**	0.46	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	78%	50-150			
Lab ID:	02-114-05				
Client ID:	**CHEV-GW-MW16-0120**				
Diesel Range	**ND**	0.28	2-18-10	2-18-10	Y
Lube Oil Range	**ND**	0.44	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	84%	50-150			

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	02-114-06				
Client ID:	**CHEV-GW-MW18-0120**				
Diesel Range	**ND**	0.27	2-18-10	2-18-10	Y
Lube Oil Range	**ND**	0.43	2-18-10	2-18-10	Y
Surrogate: o-terphenyl	85%	50-150			

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-18-10
Date Analyzed:	2-18-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0218W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	77%
Flags:	Y

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted: 2-18-10
Date Analyzed: 2-18-10

Matrix: Water
Units: mg/L (ppm)

Lab ID:	02-108-01	02-108-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	87%	85%
Flags:	Y	Y

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21-0120**					
Laboratory ID:	02-114-01					
Naphthalene	**18**	1.1	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**7.3**	1.1	EPA 8270/SIM	2-19-10	2-22-10	
1-Methylnaphthalene	**18**	1.1	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthylene	**ND**	1.1	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthene	**1.3**	1.1	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**0.61**	0.11	EPA 8270/SIM	2-19-10	2-20-10	
Phenanthrene	**0.44**	0.11	EPA 8270/SIM	2-19-10	2-20-10	
Anthracene	**0.26**	0.11	EPA 8270/SIM	2-19-10	2-20-10	
Fluoranthene	**0.12**	0.11	EPA 8270/SIM	2-19-10	2-20-10	
Pyrene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]anthracene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Chrysene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[k]fluoranthene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]pyrene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-20-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*35 - 100*				
Pyrene-d10	*85*	*27 - 110*				
Terphenyl-d14	*74*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13-0120**					
Laboratory ID:	02-114-02					
Naphthalene	**15**	1.0	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**1.1**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
1-Methylnaphthalene	**4.7**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Acenaphthylene	**1.1**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Acenaphthene	**48**	1.0	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**21**	1.0	EPA 8270/SIM	2-19-10	2-22-10	
Phenanthrene	**3.2**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Anthracene	**1.9**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Fluoranthene	**1.5**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Pyrene	**0.91**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]anthracene	**0.15**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Chrysene	**0.15**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[b]fluoranthene	**0.093**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[k]fluoranthene	**0.083**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]pyrene	**0.092**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Indeno(1,2,3-c,d)pyrene	**0.041**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Dibenz[a,h]anthracene	**0.013**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[g,h,i]perylene	**0.053**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*35 - 100*				
Pyrene-d10	*78*	*27 - 110*				
Terphenyl-d14	*70*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW4-0120**					
Laboratory ID:	02-114-03					
Naphthalene	**1.4**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**0.20**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
1-Methylnaphthalene	**3.2**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthylene	**0.23**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthene	**1.9**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**1.8**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Phenanthrene	**0.15**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Anthracene	**0.44**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluoranthene	**0.39**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Pyrene	**0.26**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]anthracene	**0.047**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Chrysene	**0.033**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[b]fluoranthene	**0.013**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[k]fluoranthene	**0.028**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]pyrene	**0.020**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*58*	*35 - 100*				
Pyrene-d10	*67*	*27 - 110*				
Terphenyl-d14	*58*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19-0170**					
Laboratory ID:	02-114-04					
Naphthalene	**0.43**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**0.17**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
1-Methylnaphthalene	**4.3**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthylene	**0.12**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthene	**0.58**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**1.5**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Phenanthrene	**0.31**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*82*	*35 - 100*				
Pyrene-d10	*102*	*27 - 110*				
Terphenyl-d14	*91*	*36 - 125*				

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Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW16-0120**					
Laboratory ID:	02-114-05					
Naphthalene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
1-Methylnaphthalene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthylene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Phenanthrene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Anthracene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Fluoranthene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Pyrene	**ND**	0.11	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]anthracene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Chrysene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[k]fluoranthene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]pyrene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270/SIM	2-19-10	2-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*35 - 100*				
Pyrene-d10	*87*	*27 - 110*				
Terphenyl-d14	*71*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW18-0120**					
Laboratory ID:	02-114-06					
Naphthalene	**1.0**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-22-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*35 - 100*				
Pyrene-d10	*81*	*27 - 110*				
Terphenyl-d14	*71*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0219W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Fluorene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Anthracene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Pyrene	**ND**	0.10	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	2-19-10	2-20-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*81*	*35 - 100*				
Pyrene-d10	*98*	*27 - 110*				
Terphenyl-d14	*91*	*36 - 125*				

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0219W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.282**	**0.381**	0.500	0.500	56	76	35 - 111	30	30	
Acenaphthylene	**0.374**	**0.431**	0.500	0.500	75	86	30 - 109	14	30	
Acenaphthene	**0.355**	**0.413**	0.500	0.500	71	83	46 - 101	15	29	
Fluorene	**0.391**	**0.421**	0.500	0.500	78	84	50 - 104	7	25	
Phenanthrene	**0.418**	**0.417**	0.500	0.500	84	83	55 - 97	0	23	
Anthracene	**0.435**	**0.434**	0.500	0.500	87	87	49 - 101	0	32	
Fluoranthene	**0.476**	**0.447**	0.500	0.500	95	89	59 - 102	6	23	
Pyrene	**0.488**	**0.445**	0.500	0.500	98	89	62 - 104	9	22	
Benzo[a]anthracene	**0.449**	**0.413**	0.500	0.500	90	83	57 - 100	8	25	
Chrysene	**0.439**	**0.405**	0.500	0.500	88	81	58 - 103	8	25	
Benzo[b]fluoranthene	**0.457**	**0.421**	0.500	0.500	91	84	61 - 100	8	27	
Benzo[k]fluoranthene	**0.468**	**0.434**	0.500	0.500	94	87	53 - 103	8	30	
Benzo[a]pyrene	**0.450**	**0.420**	0.500	0.500	90	84	35 - 107	7	32	
Indeno(1,2,3-c,d)pyrene	**0.431**	**0.402**	0.500	0.500	86	80	47 - 105	7	34	
Dibenz[a,h]anthracene	**0.418**	**0.391**	0.500	0.500	84	78	39 - 108	7	33	
Benzo[g,h,i]perylene	**0.420**	**0.391**	0.500	0.500	84	78	41 - 104	7	40	
Surrogate:										
2-Fluorobiphenyl					*64*	*79*	*35 - 100*			
Pyrene-d10					*98*	*91*	*27 - 110*			
Terphenyl-d14					*94*	*86*	*36 - 125*			

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-114-01					
Client ID:	**CHEV-GW-MW21-0120**					
Lead	**15**	1.1	200.8	2-23-10	2-23-10	
Lab ID:	02-114-02					
Client ID:	**CHEV-GW-MW13-0120**					
Lead	**5.2**	1.1	200.8	2-23-10	2-23-10	
Lab ID:	02-114-03					
Client ID:	**CHEV-GW-MW4-0120**					
Lead	**8.2**	1.1	200.8	2-23-10	2-23-10	
Lab ID:	02-114-04					
Client ID:	**CHEV-GW-MW19-0170**					
Lead	**5.7**	1.1	200.8	2-23-10	2-23-10	
Lab ID:	02-114-05					
Client ID:	**CHEV-GW-MW16-0120**					
Lead	**1.4**	1.1	200.8	2-23-10	2-23-10	
Lab ID:	02-114-06					
Client ID:	**CHEV-GW-MW18-0120**					
Lead	**1.6**	1.1	200.8	2-23-10	2-23-10	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-23-10
Date Analyzed:	2-23-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0223W2

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 2-23-10
Date Analyzed: 2-23-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-103-06

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 2-23-10
Date Analyzed: 2-23-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-103-06

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**111**	101	**113**	103	2	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8/6010B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-114-01					
Client ID:	**CHEV-GW-MW21-0120**					
Iron	**18000**	56	6010B		2-24-10	
Lead	**2.3**	1.0	200.8		2-24-10	
Manganese	**4100**	10	200.8		2-24-10	
Lab ID:	02-114-02					
Client ID:	**CHEV-GW-MW13-0120**					
Iron	**3600**	56	6010B		2-24-10	
Lead	**1.1**	1.0	200.8		2-24-10	
Manganese	**1500**	10	200.8		2-24-10	
Lab ID:	02-114-03					
Client ID:	**CHEV-GW-MW4-0120**					
Iron	**4200**	56	6010B		2-24-10	
Lead	**ND**	1.0	200.8		2-24-10	
Manganese	**3000**	10	200.8		2-24-10	
Lab ID:	02-114-04					
Client ID:	**CHEV-GW-MW19-0170**					
Iron	**5100**	56	6010B		2-24-10	
Lead	**ND**	1.0	200.8		2-24-10	
Manganese	**2200**	10	200.8		2-24-10	
Lab ID:	02-114-05					
Client ID:	**CHEV-GW-MW16-0120**					
Iron	**ND**	56	6010B		2-24-10	
Lead	**ND**	1.0	200.8		2-24-10	
Manganese	**ND**	10	200.8		2-24-10	
Lab ID:	02-114-06					
Client ID:	**CHEV-GW-MW18-0120**					
Iron	**830**	56	6010B		2-24-10	
Lead	**ND**	1.0	200.8		2-24-10	
Manganese	**1200**	10	200.8		2-24-10	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0224D1

Analyte	Method	Result	PQL
Iron	6010B	**ND**	56

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0222F1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0
Manganese	200.8	**ND**	10

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-152-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Iron	**ND**	**ND**	NA	56	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-154-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	
Manganese	**416**	**423**	2	10	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 6010B
MS/MSD QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-152-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Iron	22000	**21200**	96	**21300**	97	1	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 2-24-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 02-154-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**205**	102	**204**	102	0	
Manganese	200	**595**	89	**605**	94	2	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21-0120**					
Laboratory ID:	02-114-01					
Methane	**5700**	500	EPA 8015	2-23-10	2-23-10	
Client ID:	**CHEV-GW-MW13-0120**					
Laboratory ID:	02-114-02					
Methane	**280**	25	EPA 8015	2-23-10	2-23-10	
Client ID:	**CHEV-GW-MW4-0120**					
Laboratory ID:	02-114-03					
Methane	**710**	50	EPA 8015	2-23-10	2-23-10	
Client ID:	**CHEV-GW-MW19-0170**					
Laboratory ID:	02-114-04					
Methane	**32**	2.0	EPA 8015	2-23-10	2-23-10	
Client ID:	**CHEV-GW-MW16-0120**					
Laboratory ID:	02-114-05					
Methane	**0.83**	0.50	EPA 8015	2-23-10	2-23-10	
Client ID:	**CHEV-GW-MW18-0120**					
Laboratory ID:	02-114-06					
Methane	**420**	50	EPA 8015	2-23-10	2-23-10	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

DISSOLVED METHANE
by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0223W1					
Methane	**ND**	0.50	EPA 8015	2-23-10	2-23-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0223W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.38**	**4.00**	4.42	4.42	N/A	**99**	**90**	70-130	9	25	

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Date of Report: February 26, 2010
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Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 2-13-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0120	02-114-01	**ND**	0.050
CHEV-GW-MW13-0120	02-114-02	**ND**	0.050
CHEV-GW-MW4-0120	02-114-03	**ND**	0.050
CHEV-GW-MW19-0170	02-114-04	**ND**	0.050
CHEV-GW-MW16-0120	02-114-05	**0.087**	0.050
CHEV-GW-MW18-0120	02-114-06	**0.16**	0.050

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 2-13-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0217W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0217W1	1.98	2.00	99	82-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
02-114-05	0.0869				
Matrix Spike	2.08	2.00	100	81-121	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
02-114-05	0.0869	0.0907	4	12	

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Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 2-23-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0120	02-114-01	**230**	50
CHEV-GW-MW13-0120	02-114-02	**460**	100
CHEV-GW-MW4-0120	02-114-03	**250**	100
CHEV-GW-MW19-0170	02-114-04	**ND**	10
CHEV-GW-MW16-0120	02-114-05	**5.9**	5.0
CHEV-GW-MW18-0120	02-114-06	**26**	10

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Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 2-23-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0223W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0223W1	10.1	10.0	101	92-116	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
02-114-05	5.87				
Matrix Spike	16.0	10.0	101	88-111	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
02-114-05	5.87	5.79	1	10	

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Date of Report: February 26, 2010
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Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 2-19-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0120	02-114-01	**140**	20
CHEV-GW-MW13-0120	02-114-02	**1300**	200
CHEV-GW-MW4-0120	02-114-03	**190**	20
CHEV-GW-MW19-0170	02-114-04	**170**	20
CHEV-GW-MW16-0120	02-114-05	**ND**	20
CHEV-GW-MW18-0120	02-114-06	**200**	100

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Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 2-19-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0218W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0219W1	90.1	100	90	73-117	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
02-114-05	ND				
Matrix Spike	98.4	100	98	75-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
02-114-05	ND	ND	NA	18	

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 2-18-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21-0120	02-114-01	**140**	40
CHEV-GW-MW13-0120	02-114-02	**710**	100
CHEV-GW-MW4-0120	02-114-03	**290**	100
CHEV-GW-MW19-0170	02-114-04	**4.7**	2.0
CHEV-GW-MW16-0120	02-114-05	**4.2**	2.0
CHEV-GW-MW18-0120	02-114-06	**3.7**	2.0

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Date of Report: February 26, 2010
Samples Submitted: February 16, 2010
Laboratory Reference: 1002-114
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 2-18-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0218W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0218W1	59.7	50.0	119	91-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
02-114-05	4.19				
Matrix Spike	59.5	50.0	111	91-125	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
02-114-05	4.19	4.17	0	15	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in the diesel range are impacting the lube oil range result.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Phone: (425) 883-3881 • Fax: (425) 885-4603

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Chevron 1A
Project Manager: David DinKuhn
Sampled by: Lily Vagelatos

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Day
- ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 02-114

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total Pb	Dissolved Pb, Fe, Mn	Methane	BOD5	Nitrite, sulfate, Alkalinity	Chloride	% Moisture
1	CHEV-GW-MW21-0120	2/15/10	1640	H_2O	14		X	X				X							X	X	X	X	X	X	
2	CHEV-GW-MW13-0120		1400		12		X	X				X							X	X	X	X	X	X	
3	CHEV-GW-MW4-0120		1500		14		X	X				X							X	X	X	X	X	X	
4	CHEV-GW-MW19-0170	2/16/10	0930		11		X	X				X							X	X	X	X	X	X	
5	CHEV-GW-MW16-0120		1030		14		X	X				X							X	X	X	X	X	X	
6	CHEV-GW-MW18-0120		1145		13		X	X				X							X	X	X	X	X	X	

	Signature	Company	Date	Time
Relinquished by	Lily Vagelatos	Parametrix	2/16/10	1400
Received by			2/16/10	1700
Relinquished by				
Received by				
Relinquished by				
Received by				

Comments/Special Instructions:
MW13 } Reduced volume due
MW19 } to very low recovery in wells.
MW18 missing a VOA due to breakage.
EIM EDDs

Reviewed by/Date

Reviewed by/Date

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

Professional Analytical Services

Feb 26 2010
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
Chev-GW-MW21-0120	Water	10-A002705	DEM
Chev-GW-MW13-0120	Water	10-A002706	DEM
Chev-GW-MW4-0120	Water	10-A002707	DEM
Chev-GW-MW19-0120	Water	10-A002708	DEM
Chev-GW-MW16-0120	Water	10-A002709	DEM
Chev-GW-MW18-0120	Water	10-A002710	DEM

Your samples were received on Wednesday, February 17, 2010. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to conact me.

Sincerely,

Aaron W. Young
Laboratory Manager

Project #: 02-114
PO Number: 02-114

BACT = Bacteriological
CONV = Conventionals
MET = Metals
ORG = Organics
NUT=Nutrients
DEM=Demand
MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

ANALYSIS REPORT

On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project #: 02-114
PO Number: 02-114
All results reported on an as received basis.

Date Received: 02/17/10
Date Reported: 2/26/10

AMTEST Identification Number **10-A002705**
Client Identification **Chev-GW-MW21-0120**
Sampling Date **02/15/10, 10:40**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD	17.	mg/l		10.	SM 5210B	NG	02/17/10

AMTEST Identification Number **10-A002706**
Client Identification **Chev-GW-MW13-0120**
Sampling Date **02/15/10, 14:00**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	4.47	mg/l		2.00	SM 5210B	NG	02/17/10

AMTEST Identification Number **10-A002707**
Client Identification **Chev-GW-MW4-0120**
Sampling Date **02/15/10, 15:00**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	8.97	mg/l		2.00	SM 5210B	NG	02/17/10

AMTEST Identification Number **10-A002708**
Client Identification **Chev-GW-MW19-0120**
Sampling Date **02/16/10, 09:30**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	4.20	mg/l		2.00	SM 5210B	NG	02/17/10

AMTEST Identification Number **10-A002709**
Client Identification **Chev-GW-MW16-0120**
Sampling Date **02/16/10, 10:30**

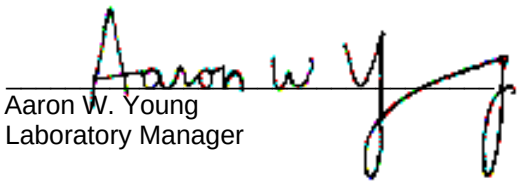
Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	< 2	mg/l		2.00	SM 5210B	NG	02/17/10

AMTEST Identification Number **10-A002710**
Client Identification **Chev-GW-MW18-0120**
Sampling Date **02/16/10, 11:45**

Demand

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
BOD-low	2.52	mg/l		2.00	SM 5210B	NG	02/17/10



Aaron W. Young
Laboratory Manager

Am Test Inc.
13600 NE 126th PL
Suite C
Kirkland, WA, 98034
(425) 885-1664
www.amtestlab.com

Professional Analytical Services

QC Summary for sample numbers: 10-A002705 to 10-A002710

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
10-A002666	BOD	mg/l	18.	18.	0.00

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
BOD	mg/l	200	190	95.0 %
BOD-low	mg/l	198.	186.	93.9 %

BLANKS

ANALYTE	UNITS	RESULT
BOD	mg/l	< 10
BOD-low	mg/l	< 2

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 02-114

Subcontract Laboratory: AmTest Laboratories

Attention: Aaron Young

13600 NE 126th Pl Kirkland, WA 98034

Phone Number: (206) 695-6200

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: 255-1896-063 04/1304

Project Name: _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
2704	CHEV-GW-MW21-0120	2/15/10	1040	W	1	BOD_5
06	CHEV-GW-MW13-0120	↓	1400	↓	↓	↓
07	CHEV-GW-MW4-0120	↓	1500			
08	CHEV-GW-MW19-0170	2/16/10	0930			
09	CHEV-GW-MW16-0120	↓	1030			
10	CHEV-GW-MW18-0120	↓	1145	↓	↓	↓

Signature	Company	Date	Time	Comments/Special Instructions
Relinquished by:	OSE	2/17/10	1230	EIM
Received by:	AmTest	2/17/10	1230	
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 4, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project Chevron Property
Laboratory Reference No. 1005-180

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on May 25, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2010
Samples Submitted: May 25, 2010
Laboratory Reference: 1005-180
Project: Chevron Property

Case Narrative

Samples were collected on May 25, 2010 and received by the laboratory on May 25, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2010
Samples Submitted: May 25, 2010
Laboratory Reference: 1005-180
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 5-26-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0120	05-180-01	**0.094**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 4, 2010
Samples Submitted: May 25, 2010
Laboratory Reference: 1005-180
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 5-26-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0526W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0526W1	2.06	2.00	103	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-180-01	0.0936				
Matrix Spike	2.03	2.00	97	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
05-180-01	0.0936	0.0919	2	14	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

26 May 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: QX84

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one water sample on May 25, 2010. The sample was analyzed for ferrous iron as requested.

There were no anomalies associated with this analysis.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file QX84

MDH/esj

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: QX84	Turn-around Requested: ASAP	Page: 1 of 1	
ARI Client Company: Onsite	Phone:	Date: 5/25/10	Ice Present? Y
Client Contact: D. Bannerister		No. of Coolers: 1	Cooler Temps: 1.3
Client Project Name: Chevron Property			
Client Project #:	Samplers: L. Linde		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Ferrous Iron	Notes/Comments
CHEV-GW-MW-10-0125	5/25/10	1215	GW	1	X	

Comments/Special Instructions: EIM EDDs	Relinquished by: (Signature) Lara Linde	Received by: (Signature) Dean H. Zavack	Relinquished by: (Signature) Melody Wright	Received by: (Signature) Terry Tavares
	Printed Name: Lara Linde	Printed Name: Dean H. Zavack	Printed Name: MELODY WRIGHT	Printed Name: TERRY TAVARES
	Company: PMX	Company: PMX	Company: PMX	Company: SPEEDY MSGR
	Date & Time: 5/25/10 1235	Date & Time: 5/25/10 12:35 pm	Date & Time: 5/25/10 1:05 pm	Date & Time: 5/25/10 1305

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

relinquished: Terry Tavares Speedy Msgr 1435

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

received: ARI 1435 5/25/10

2566.doc

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite Project Name: Cherron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: QX84 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 1.3 ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: JW Date: 5/25/10 Time: D. Banmeister

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		(YES)	NO
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	~~NO~~
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

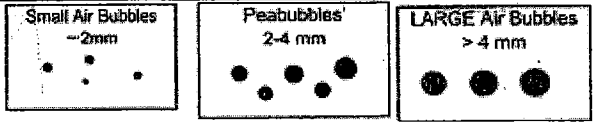
Samples Logged by: JW Date: 5/25/10 Time: 1455

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

QX84 : 00003

PRESERVATION VERIFICATION 05/25/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **QX84**

Inquiry Number: NONE
Analysis Requested: 05/25/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: JW
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Mark
VTSR: 05/25/10

Project #:
Project: Cherron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-12469 **QX84A**	CHEV-GW-MW-10-0120														pass							

Checked By JC Date 5/25/10

METHOD BLANK RESULTS-CONVENTIONALS
QX84-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/26/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	05/25/10	mg/L	< 0.040 U	

SAMPLE RESULTS-CONVENTIONALS
QX84-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/26/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/25/10

Client ID: CHEV-GW-MW-10-0120
ARI ID: 10-12469 QX84A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/25/10 052510#1	SM3500 FeD	mg/L	0.800	25.2

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
QX84-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/26/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/25/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QX84A Client ID: CHEV-GW-MW-10-0120						
Ferrous Iron	SM3500 FeD	05/25/10	mg/L	25.2	25.0	0.8%

MS/MSD RESULTS-CONVENTIONALS
QX84-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/26/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/25/10

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: QX84A Client ID: CHEV-GW-MW-10-0120							
Ferrous Iron	SM3500 FeD	05/25/10	mg/L	25.2	28.8	4.00	90.0%

LAB CONTROL RESULTS-CONVENTIONALS
QX84-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 05/26/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	05/25/10	mg/L	0.488	0.500	97.6%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

3 June 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: QY03

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted one water sample on May 26, 2010. The sample was analyzed for BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file QY03

MDH/esj

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 · (425) 883-3881

Laboratory Reference #: 05-180

Subcontract Laboratory: Analytical Resources, Inc.

Attention: Mark Harris

4611 S 134th Pl, Ste. 100 Tukwila, WA 98168

Phone Number: (206) 695-6200

Date/Time: _____

Turnaround Request:

1 Day 2 Day 3 Day

(Standard)

Other: _____

Project Manager: David Baumeister

email: dbaumeister@onsite-env.com

Project Number: _____

Project Name: Chevron Property

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	Requested Analysis
	CHEV-GW-MW10-0120	5/25/10	1215	W	1	BOD

	Signature	Company	Date	Time
Relinquished by:		OnSite Env	5/26/10	1055
Received by:	Art Garcia	~~ARI~~ Speedy	5/26/10	10.55
Relinquished by:				
Received by:	J. Peterson	ARI	5/26/10	1300
Relinquished by:				
Received by:				

Comments/Special Instructions

EIM

CY03 : 00052

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventional Analyses With Critical Holding Times

ARI Project ID: QY03 VTSR: 1302 Client ID: OnSite Environ. Client Project ID: Chevron Property ARI Analyst: JP

Date Sampled	Time Sampled	Matrix	QC Sample	Drinking Water?	ARI Sample ID	Client Sample ID	pH	NO_2	NO_3	NO_2-NO_3	NH_3	BOD	DO	*Ortho* - P	Fecal Coli	Total Coli	Turbidity	T-CN & WAD-CN	Settlable Solids	Cr^{+6}	Corrosivity	Redox Potential	Fe^{+3}	Other	Preservation Check	Parameter	Adjusted to	Amount Added	Analyst & Date
5/25/10	1215	W			A'	Chev-GW-MW10-D120						X																	

Form 00072F

Version 001
2/18/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: On Site Env. Project Name: Chevron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: QY Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.3 ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941697

Cooler Accepted by: JP Date: 5/20/10 Time: 1300

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap Wet Ice (Gel Packs) Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	(NO)
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JP Date: 5/20/10 Time: 1328

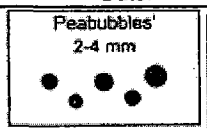
***** Notify Project Manager of discrepancies or concerns *****

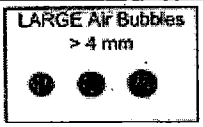
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:







Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

METHOD BLANK RESULTS-CONVENTIONALS
QY03-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/03/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Biological Oxygen Demand	EPA 405.1	05/27/10	mg/L	< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
QY03-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/03/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Client ID: Chev-GW-MW10R-0120
ARI ID: 10-12551 QY03A

Analyte	Date Batch	Method	Units	RL	Sample
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	2.0

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
QY03-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/03/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Biological Oxygen Demand EPA 405.1	ICVL	05/27/10	mg/L	179	198	90.4%

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number:
Project Name: Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 05-180

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Nitrate	BOD	Ferrous Iron (ARI)	Dissolved DB		% Moisture
1	CHEV-GW-MW10R-0120 DB	5/25/10	1215	GW	2														X	X	X			

	Signature	Company	Date	Time
Relinquished by	Lora Linde	PMX	5/25/10	1235
Received by	Dian A. Zavoral	PMX	5/25/10	1235
Relinquished by	Melody Udray			
Received by	Lora Linde Speedy		5/25/10	1302
Relinquished by	Lora Linde Speedy	Speedy	5/25/10	1510
Received by		OSE	5/25/10	1610
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

EIM EDDs

Ferrous Iron dropped off @ ARI

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 8, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project Chevron Property
Laboratory Reference No. 1006-006

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on June 1, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

Case Narrative

Samples were collected on June 1, 2010 and received by the laboratory on June 1, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21R-0120**					
Laboratory ID:	06-006-01					
Benzene	**34**	1.0	EPA 8021	6-3-10	6-3-10	
Toluene	**2.9**	1.0	EPA 8021	6-3-10	6-3-10	
Ethyl Benzene	**240**	4.0	EPA 8021	6-4-10	6-4-10	
m,p-Xylene	**210**	4.0	EPA 8021	6-4-10	6-4-10	
o-Xylene	**2.3**	1.0	EPA 8021	6-3-10	6-3-10	
Gasoline	**4400**	100	NWTPH-Gx	6-3-10	6-3-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*115*	*74-121*				
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	06-006-02					
Benzene	**58**	1.0	EPA 8021	6-3-10	6-3-10	
Toluene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Ethyl Benzene	**45**	1.0	EPA 8021	6-3-10	6-3-10	
m,p-Xylene	**7.6**	1.0	EPA 8021	6-3-10	6-3-10	
o-Xylene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Gasoline	**1100**	100	NWTPH-Gx	6-3-10	6-3-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*74-121*				
Client ID:	**TB-3**					
Laboratory ID:	06-006-05					
Benzene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Toluene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
m,p-Xylene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
o-Xylene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Gasoline	**ND**	100	NWTPH-Gx	6-3-10	6-3-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*74-121*				

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W2					
Benzene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Toluene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
m,p-Xylene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
o-Xylene	**ND**	1.0	EPA 8021	6-3-10	6-3-10	
Gasoline	**ND**	100	NWTPH-Gx	6-3-10	6-3-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*74-121*				
Laboratory ID:	MB0604W1					
Benzene	**ND**	1.0	EPA 8021	6-4-10	6-4-10	
Toluene	**ND**	1.0	EPA 8021	6-4-10	6-4-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	6-4-10	6-4-10	
m,p-Xylene	**ND**	1.0	EPA 8021	6-4-10	6-4-10	
o-Xylene	**ND**	1.0	EPA 8021	6-4-10	6-4-10	
Gasoline	**ND**	100	NWTPH-Gx	6-4-10	6-4-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-232-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*103*	*100*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	05-231-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.1**	**52.3**	50.0	50.0	ND	**104**	**105**	78-118	0	8	
Toluene	**50.9**	**51.0**	50.0	50.0	ND	**102**	**102**	81-119	0	8	
Ethyl Benzene	**51.3**	**51.1**	50.0	50.0	ND	**103**	**102**	81-121	0	8	
m,p-Xylene	**50.8**	**50.3**	50.0	50.0	ND	**102**	**101**	79-123	1	8	
o-Xylene	**51.0**	**50.3**	50.0	50.0	ND	**102**	**101**	79-121	1	8	
Surrogate:											
Fluorobenzene						*90*	*92*	*74-121*			

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	06-006-01				
Client ID:	**CHEV-GW-MW21R-0120**				
Diesel Range	**ND**	0.79	6-4-10	6-4-10	Y,U1
Lube Oil Range	**ND**	0.42	6-4-10	6-4-10	Y
Surrogate: o-terphenyl	63%	50-150			
Lab ID:	06-006-02				
Client ID:	**CHEV-GW-MW4R-0120**				
Diesel Range	**ND**	0.34	6-4-10	6-4-10	Y,U1
Lube Oil Range	**ND**	0.42	6-4-10	6-4-10	Y
Surrogate: o-terphenyl	58%	50-150			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-4-10
Date Analyzed:	6-4-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0604W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	81%
Flags:	Y

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-4-10	
Date Analyzed:	6-4-10	
Matrix:	Water	
Units:	mg/L (ppm)	
Lab ID:	06-017-01	06-017-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.26	0.26
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	65%	64%
Flags:	Y	Y

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

cPAHs by EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	06-006-02					
Benzo[a]anthracene	**0.032**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*104*	*47 - 105*				
Pyrene-d10	*106*	*35 - 129*				
Terphenyl-d14	*89*	*36 - 106*				
Client ID:	**CHEV-GW-MW4R-1120**					
Laboratory ID:	06-006-03					
Benzo[a]anthracene	**0.032**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*94*	*47 - 105*				
Pyrene-d10	*105*	*35 - 129*				
Terphenyl-d14	*68*	*36 - 106*				
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	06-006-04					
Benzo[a]anthracene	**0.057**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Chrysene	**0.040**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*84*	*47 - 105*				
Pyrene-d10	*87*	*35 - 129*				
Terphenyl-d14	*59*	*36 - 106*				

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

cPAHs by EPA 8270D/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	6-4-10	6-4-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*47 - 105*				
Pyrene-d10	*80*	*35 - 129*				
Terphenyl-d14	*75*	*36 - 106*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0604W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.425**	**0.476**	0.500	0.500	85	95	56 - 111	11	17	
Chrysene	**0.418**	**0.469**	0.500	0.500	84	94	55 - 102	11	19	
Benzo[b]fluoranthene	**0.395**	**0.444**	0.500	0.500	79	89	60 - 112	12	17	
Benzo[k]fluoranthene	**0.385**	**0.441**	0.500	0.500	77	88	45 - 114	14	21	
Benzo[a]pyrene	**0.385**	**0.447**	0.500	0.500	77	89	52 - 113	15	19	
Indeno(1,2,3-c,d)pyrene	**0.366**	**0.427**	0.500	0.500	73	85	34 - 124	15	21	
Dibenz[a,h]anthracene	**0.359**	**0.409**	0.500	0.500	72	82	26 - 129	13	31	
Surrogate:										
2-Fluorobiphenyl					*57*	*75*	*47 - 105*			
Pyrene-d10					*82*	*92*	*35 - 129*			
Terphenyl-d14					*75*	*85*	*36 - 106*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	06-006-01					
Client ID:	**CHEV-GW-MW21R-0120**					
Lead	**2.8**	1.1	200.8	6-4-10	6-4-10	

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-4-10
Date Analyzed:	6-4-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0604W3

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 6-4-10
Date Analyzed: 6-4-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-217-12

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 6-4-10
Date Analyzed: 6-4-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-217-12

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**110**	100	**111**	101	1	

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	06-006-01					
Client ID:	**CHEV-GW-MW21R-0120**					
Lead	**1.4**	1.0	200.8		6-3-10	
Manganese	**4500**	100	200.8		6-3-10	
Lab ID:	06-006-02					
Client ID:	**CHEV-GW-MW4R-0120**					
Manganese	**4600**	100	200.8		6-3-10	

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Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0603D2

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0
Manganese	200.8	**ND**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-006-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**1.43**	**1.36**	5	1.0	
Manganese	**4500**	**4440**	1	100	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 06-006-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**194**	96	**198**	98	2	
Manganese	2000	**6220**	86	**6260**	88	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

CHLORIDE
SM 4500-Cl E

Date Analyzed: 6-3-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0120	06-006-01	**120**	4.0
CHEV-GW-MW4R-0120	06-006-02	**250**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0603W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0603W1	54.2	50.0	108	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
06-006-02	250				
Matrix Spike	812	500	112	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
06-006-02	250	247	1	12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

ALKALINITY
EPA 310.2

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0120	06-006-01	**1400**	20
CHEV-GW-MW4R-0120	06-006-02	**1900**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0603W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0603W1	102	100	102	70-130	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-197-02	210	218	4	8	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

SULFATE
ASTM D516-02

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0120	06-006-01	**170**	50
CHEV-GW-MW4R-0120	06-006-02	**150**	50

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0602W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0602W1	10.7	10.0	107	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-219-06	8.00				
Matrix Spike	17.5	10.0	95	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-219-06	8.00	7.88	2	8	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 6-2-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0120	06-006-01	**ND**	0.050
CHEV-GW-MW4R-0120	06-006-02	**ND**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 6-2-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0602W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0602W1	1.98	2.00	99	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
06-006-02	ND				
Matrix Spike	2.04	2.00	102	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
06-006-02	ND	ND	NA	14	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21R-0120**					
Laboratory ID:	06-006-01					
Methane	**4200**	500	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	06-006-02					
Methane	**590**	50	EPA 8015	6-3-10	6-3-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: June 1, 2010
Laboratory Reference: 1006-006
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Methane	**ND**	0.50	EPA 8015	6-3-10	6-3-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0603W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.96**	**3.81**	4.42	4.42	N/A	**90**	**86**	70-130	4	25	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

8 June 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: QY61

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted two water samples on June 1, 2010. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file QY61

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: Q4161	Turn-around Requested:
ARI Client Company: Onsite	Phone:
Client Contact: D. Bannerman	
Client Project Name: Chevron Property	
Client Project #:	Samplers: L. Linde

Date: 6/1/10
Page: 1 of 1
No. of Coolers: Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Ferrous Iron	BODS							Notes/Comments
CHEV-GW-MW2IR-0120	6/1/10	0930	GW	2	X	X							
CHEV-GW-MW4R-0120	↓	1100	GW	2	X	X							

Analysis Requested

Comments/Special Instructions
EIM EDDs

Relinquished by: (Signature)	Lara Linde	Received by: (Signature)	Jen Jansen
Printed Name:	Lara Linde	Printed Name:	TERRY TAVARES
Company:	Pwx	Company:	SPEEDY MSGR
Date & Time:	6/1/10 1310	Date & Time:	6/1/10 1310
Relinquished by: (Signature)		Received by: (Signature)	
Printed Name:	TERRY TAVARES	Printed Name:	A-Volgardsen
Company:	SPEEDY MSGR	Company:	ARI
Date & Time:	6/1/10 1427	Date & Time:	6/1/10 1427

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Revised 12/09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite Project Name: Chevron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: QY6G1 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 3.4 ___ ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941609

Cooler Accepted by: AV Date: 6/1/10 Time: 1427

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	(Bubble Wrap) (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	(NO)
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	_____	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

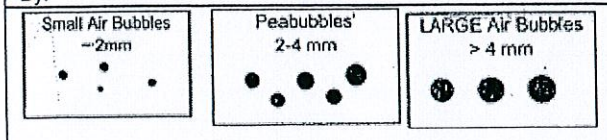
Samples Logged by: JP Date: 6/1/10 Time: 1430

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

METHOD BLANK RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	06/01/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	06/02/10	mg/L	< 1.0 U	

QY61:00004

SAMPLE RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: 06/01/10
Date Received: 06/01/10

Client ID: Chev-GW-MW21R-0120
ARI ID: 10-12905 QY61A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	06/01/10 060110#1	SM3500 FeD	mg/L	0.800	16.2
Biological Oxygen Demand	06/02/10 060210#1	EPA 405.1	mg/L	1.0	8.4

RL Analytical reporting limit
U Undetected at reported detection limit

QYG1:00005

SAMPLE RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: 06/01/10
Date Received: 06/01/10

Client ID: Chev-GW-MW4R-0120
ARI ID: 10-12906 QY61B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	06/01/10 060110#1	SM3500 FeD	mg/L	0.400	7.36
Biological Oxygen Demand	06/02/10 060210#1	EPA 405.1	mg/L	1.0	8.1

RL Analytical reporting limit
U Undetected at reported detection limit

QY61:00006

MS/MSD RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: 06/01/10
Date Received: 06/01/10

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: QY61B Client ID: Chev-GW-MW4R-0120							
Ferrous Iron	SM3500 FeD	06/01/10	mg/L	7.36	11.3	4.00	98.5%

QY61:00067

REPLICATE RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: 06/01/10
Date Received: 06/01/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QY61B Client ID: Chev-GW-MW4R-0120						
Ferrous Iron	SM3500 FeD	06/01/10	mg/L	7.36	7.56	2.7%

QY61:00000

LAB CONTROL RESULTS-CONVENTIONALS
QY61-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/08/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	06/01/10	mg/L	0.246	0.250	98.4%
Biological Oxygen Demand EPA 405.1	ICVL	06/02/10	mg/L	189	198	95.5%

QY61:00069

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number:
Project Name: Chevron Property
Project Manager: D. DinEhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ _____ (other)

Laboratory Number: 06-006

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM cPAHs	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total ~~RCRA Metals~~ & Diss Pb*	~~TCLP Metals~~ Diss Mn*	~~HEM by 1664~~ Chloride	Alkalinity, Sulfate	Nitrate/Nitrite, Methane	Ferrous Iron	BOD5			% Moisture
1	CHEV-GW-MW21R-0120	6/1/10	0930	GW	12		X	X								X	X	X	X	X	X	X			
2	CHEV-GW-MW4R-0120	↓	1107	↓	12		X	X				X					X	X	X	X	X	X			
3	CHEV-GW-MW4R-1120		1130		1							X													
4	CHEV-GW-MW18R-0130	↓	1140	↓	1							X													
5	TB-3	—	—	W	2		X																		

	Signature	Company	Date	Time
Relinquished by	Lara Linde	PMX	6/1/10	1310
Received by	Jeff Farmer	SPECTRA MSGR	6	1310
Relinquished by	"	"	"	1510
Received by		OnSite Env.	6/1/10	1510
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Elm EDDs
* Field-filtered
① Sent to ARI

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 8, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project Chevron Property
Laboratory Reference No. 1005-219

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on May 27, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

Case Narrative

Samples were collected on May 26 and 27, 2010 and received by the laboratory on May 27, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	05-219-01					
Benzene	**33**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**1.3**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**15**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**1.4**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**560**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*74-121*				
Client ID:	**CHEV-GW-MW22R-0130**					
Laboratory ID:	05-219-02					
Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**ND**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				
Client ID:	**CHEV-GW-MW-26R-0130**					
Laboratory ID:	05-219-03					
Benzene	**17**	4.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**530**	400	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TB-2**					
Laboratory ID:	05-219-04					
Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**ND**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*74-121*				
Client ID:	**CHEV-GW-MW16R-0130**					
Laboratory ID:	05-219-05					
Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**ND**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*74-121*				
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	05-219-06					
Benzene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**10**	4.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	4.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**1400**	400	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**ND**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-217-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*97*	*97*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	05-217-02										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.7**	**52.7**	50.0	50.0	ND	**105**	**105**	78-118	0	8	
Toluene	**52.9**	**53.1**	50.0	50.0	ND	**106**	**106**	81-119	0	8	
Ethyl Benzene	**54.0**	**54.0**	50.0	50.0	ND	**108**	**108**	81-121	0	8	
m,p-Xylene	**52.8**	**53.0**	50.0	50.0	ND	**106**	**106**	79-123	0	8	
o-Xylene	**53.0**	**52.5**	50.0	50.0	ND	**106**	**105**	79-121	1	8	
Surrogate:											
Fluorobenzene						*99*	*99*	*74-121*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	05-219-01				
Client ID:	**CHEV-GW-MW13R-0130**				
Diesel Range Organics	**0.43**	0.28	6-1-10	6-1-10	Y,M
Lube Oil Range	**ND**	0.45	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	59%	50-150			
Lab ID:	05-219-02				
Client ID:	**CHEV-GW-MW22R-0130**				
Diesel Range	**ND**	0.27	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.43	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	67%	50-150			
Lab ID:	05-219-03				
Client ID:	**CHEV-GW-MW26R-0130**				
Diesel Range	**ND**	0.26	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.41	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	65%	50-150			
Lab ID:	05-219-05				
Client ID:	**CHEV-GW-MW16R-0130**				
Diesel Range	**ND**	0.27	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.43	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	68%	50-150			
Lab ID:	05-219-06				
Client ID:	**CHEV-GW-MW25-0130**				
Diesel Fuel#1	**0.92**	0.26	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.42	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	76%	50-150			

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-1-10
Date Analyzed:	6-1-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0601W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	64%
Flags:	Y

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-1-10	
Date Analyzed:	6-1-10	
Matrix:	Water	
Units:	mg/L (ppm)	
Lab ID:	05-171-03	05-171-03 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.25	0.25
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	68%	71%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 5-28-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0130	05-219-02	**ND**	0.050
CHEV-GW-MW26R-0130	05-219-03	**0.16**	0.050
CHEV-GW-MW16R-0130	05-219-05	**0.25**	0.050
CHEV-GW-MW25-0130	05-219-06	**0.73**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 5-28-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0528W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0528W1	2.24	2.00	112	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-219-02	ND				
Matrix Spike	2.05	2.00	103	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
05-219-02	ND	ND	NA	14	

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

SULFATE
ASTM D516-02

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW13R-0130	05-219-01	**460**	100
CHEV-GW-MW22R-0130	05-219-02	**75**	25
CHEV-GW-MW26R-0130	05-219-03	**1400**	500
CHEV-GW-MW16R-0130	05-219-05	**ND**	5.0
CHEV-GW-MW25-0130	05-219-06	**8.0**	5.0

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0602W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0602W1	10.7	10.0	107	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-219-06	8.00				
Matrix Spike	17.5	10.0	95	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-219-06	8.00	7.88	2	8	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

ALKALINITY
EPA 310.2

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW22R-0130	05-219-02	**320**	20
CHEV-GW-MW26R-0130	05-219-03	**270**	20
CHEV-GW-MW16R-0130	05-219-05	**450**	20
CHEV-GW-MW25-0130	05-219-06	**190**	20

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0603W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0603W1	102	100	102	70-130	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-197-02	210	218	4	8	

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	05-219-01					
Methane	**580**	50	EPA 8015	6-4-10	6-4-10	
Client ID:	**CHEV-GW-MW22R-0130**					
Laboratory ID:	05-219-02					
Methane	**21**	1.0	EPA 8015	6-4-10	6-4-10	
Client ID:	**CHEV-GW-MW26R-0130**					
Laboratory ID:	05-219-03					
Methane	**68**	5.0	EPA 8015	6-4-10	6-4-10	
Client ID:	**CHEV-GW-MW16R-0130**					
Laboratory ID:	05-219-05					
Methane	**3100**	500	EPA 8015	6-4-10	6-4-10	
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	05-219-06					
Methane	**190**	10	EPA 8015	6-4-10	6-4-10	

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604W1					
Methane	**ND**	0.50	EPA 8015	6-4-10	6-4-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0604W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.20**	**4.01**	4.42	4.42	N/A	**95**	**91**	70-130	5	25	

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

CHLORIDE
SM 4500-Cl E

Date Analyzed: 6-1&4-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW13R-0130	05-219-01	**670**	20
CHEV-GW-MW22R-0130	05-219-02	**390**	10
CHEV-GW-MW26R-0130	05-219-03	**10000**	400
CHEV-GW-MW16R-0130	05-219-05	**8.3**	2.0
CHEV-GW-MW25-0130	05-219-06	**31**	2.0

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 6-1&4-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0604W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0604W1	56.1	50.0	112	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-219-06	31.3				
Matrix Spike	87.5	50.0	112	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
05-219-06	31.3	31.1	1	12	

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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED MANGANESE
EPA 6010B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-219-01					
Client ID:	**CHEV-GW-MW13R-0130**					
Manganese	**1300**	11	6010B		6-3-10	
Lab ID:	05-219-02					
Client ID:	**CHEV-GW-MW22R-0130**					
Manganese	**890**	11	6010B		6-3-10	
Lab ID:	05-219-03					
Client ID:	**CHEV-GW-MW26R-0130**					
Manganese	**66**	11	6010B		6-3-10	
Lab ID:	05-219-05					
Client ID:	**CHEV-GW-MW16R-0130**					
Manganese	**3800**	11	6010B		6-3-10	
Lab ID:	05-219-06					
Client ID:	**CHEV-FW-MW25-0130**					
Manganese	**220**	11	6010B		6-3-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED MANGANESE
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0603D1

Analyte	Method	Result	PQL
Manganese	6010B	**ND**	11

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED MANGANESE
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-190-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Manganese	**293**	**293**	0	11	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 27, 2010
Laboratory Reference: 1005-219
Project: Chevron Property

DISSOLVED MANGANESE
EPA 6010B
MS/MSD QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-190-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Manganese	2200	**2440**	98	**2450**	98	0	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

4 June 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: QY31

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted four water samples on May 27, 2010. It was noted upon receipt that one sample, CHEV-GW-MW13R-0130, listed on the COC was not included in the received sample set. For further details regarding sample receipt, please see the Cooler Receipt form. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.
Bob Congleton
– FOR –
Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file QY31

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 0931	Turn-around Requested:
ARI Client Company: Onsite	Phone:
Client Contact: D. Baumeister	
Client Project Name: Chevron Property	
Client Project #:	Samplers: L. Linde

Date: 5/27/10
Page: of
No. of Coolers:
Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Ferrous Iron	BOD 5							Notes/Comments
CHEV-GW-MW13R-0130	5/26/10	1230	GW		X	X							
CHEV-GW-MW22R-0130	↓	1345	↓		↓	↓							
CHEV-GW-MW26R-0130	↓	1530	↓		↓	↓							
CHEV-GW-MW16R-0130	5/27/10	0910	↓		↓	↓							
CHEV-GW-MW25-0130	↓	1135	↓		↓	↓							

Comments/Special Instructions: EIM EDDs	Relinquished by: (Signature) Lara Linde	Received by: (Signature) Dean Zavoli	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Lara Linde	Printed Name: Dean Zavoli	Printed Name: S. Union	Printed Name: S. Union Mikka Yuku
	Company: PMX	Company: PMX	Company: Speedy	Company: Speedy AR
	Date & Time: 5/27/10 1240	Date & Time: 5/27/10 1240	Date & Time: 5/27 2:10	Date & Time: 5/27 1:00 5/27/10

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

SAMPLE RECEIPT 14.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite

COC No(s): ~~NA~~

Assigned ARI Job No: _____

Project Name: Chevron Property

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: Speedy

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.1 ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90941619

Cooler Accepted by: [illegible] Date: 5/27/10 Time: 1410

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA		

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: MM Date: 5/27/10 Time: 1442

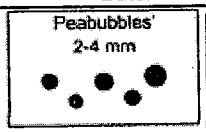
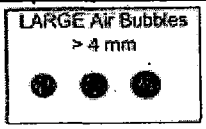
***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
CHEV-GW-MW22-0130	CHEV-GW-MW22R-0130		
CHEV-GW-MW26-0130	CHEV-GW-MW26R-0130		
CHEV-GW-MW16-0130	CHEV-GW-MW16R-0130		

Additional Notes, Discrepancies, & Resolutions:

CHEV-GW-MW13R-0130 not received

By: MM Date: 5/27/10

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

QY31 : 00003

PRESERVATION VERIFICATION 05/27/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **QY31**

Inquiry Number: NONE
Analysis Requested: 05/27/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: MM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Mark
VTSR: 05/27/10

Project #: Chevron Property
Project:
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-12693 **QY31A**	CHEV-GW-MW22R-0130														X							
10-12694 **QY31B**	CHEV-GW-MW26R-0130														X							
10-12695 **QY31C**	CHEV-GW-MW16R-0130														X							
10-12696 **QY31D**	CHEV-GW-MW25-0130														X							

QY31 : 10000

X Lab to determine Preservation

Checked By MM Date 5/27/10

METHOD BLANK RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	05/27/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	05/27/10	mg/L	< 1.0 U	
		05/28/10		< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/26/10
Date Received: 05/27/10

Client ID: CHEV-GW-MW22R-0130
ARI ID: 10-12693 QY31A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/27/10 052710#1	SM3500 FeD	mg/L	0.040	0.295
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	< 1.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/26/10
Date Received: 05/27/10

Client ID: CHEV-GW-MW26R-0130
ARI ID: 10-12694 QY31B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/27/10 052710#1	SM3500 FeD	mg/L	0.040	0.758
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	1.7

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/27/10
Date Received: 05/27/10

Client ID: CHEV-GW-MW16R-0130
ARI ID: 10-12695 QY31C

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/27/10 052710#1	SM3500 FeD	mg/L	0.040	1.66
Biological Oxygen Demand	05/28/10 052810#1	EPA 405.1	mg/L	1.0	< 1.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/27/10
Date Received: 05/27/10

Client ID: CHEV-GW-MW25-0130
ARI ID: 10-12696 QY31D

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/27/10 052710#1	SM3500 FeD	mg/L	0.040	0.352
Biological Oxygen Demand	05/28/10 052810#1	EPA 405.1	mg/L	1.0	1.9

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/26/10
Date Received: 05/27/10

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: QY31A Client ID: CHEV-GW-MW22R-0130							
Ferrous Iron	SM3500 FeD	05/27/10	mg/L	0.295	0.701	0.400	101.5%

REPLICATE RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: 05/26/10
Date Received: 05/27/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QY31A Client ID: CHEV-GW-MW22R-0130						
Ferrous Iron	SM3500 FeD	05/27/10	mg/L	0.295	0.323	9.1%

LAB CONTROL RESULTS-CONVENTIONALS
QY31-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/04/10

Project: NA
Event: Chevron Property
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	05/27/10	mg/L	0.795	0.800	99.4%
Biological Oxygen Demand	ICVL	05/27/10	mg/L	179	198	90.4%
EPA 405.1	ICVL	05/28/10		174	198	87.9%

Chain of Custody

Page 1 of _____

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number:
Project Name: Chevron Property
Project Manager: P. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ _____ (other)

Laboratory Number: 05-219

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Nitrate, Nitrite, Sulfate, Alkalinity (5)	Methane	Chloride	BOD5	Diss Mn*	Ferrous Iron (Fe)	% Moisture
1	CHEV-GW-MW13R-0130	5/26/10	1230	GW	10		X	X										X		X	X		X	X	
2	CHEV-GW-MW22R-0130		1345		11		X	X										X	X	X	X	X	X	X	
3	CHEV-GW-MW26R-0130		1530		11		X	X										X	X	X	X	X	X	X	
4	TB-2				2		X																		
5	CHEV-GW-MW16R-0130	5/27/10	0915		9		X	X										X	X	X	X	X	X	X	
6	CHEV-GW-MW25-0130	5/27/10	1135		11		X	X										X	X	X	X	X	X	X	

	Signature	Company	Date	Time
Relinquished by	Lara Linde	PMX	5/27/10	1240
Received by	Dean Zavoli	PMX	5/27/10	1240
Relinquished by	Amber Ellis	PMX	5/27/10	1:00
Received by		SPEEDY	5/27/10	1:00
Relinquished by		SPEEDY	5/27/10	3:00
Received by		OnSite Env	5/27/10	1500
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

Elm EDDs
Ferrous Iron
① ~~Nitrate~~ BOD for CHEV-GW-MW13-0130 shipped 5/26 to ARI to cover holding time
② Remaining Ferrous Iron & BOD shipped today to ARI
* Field filtered

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 8, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project Chevron Property
Laboratory Reference No. 1005-197

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on May 26, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

Case Narrative

Samples were collected on May 25 and 26, 2010 and received by the laboratory on May 26, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Sulfate by ASTM D516-02 Analysis

Samples CHEV-GW-MW10R-0120 and CHEV-GW-MW11-0100 (05-197-01 & 02) PQL's were increased due to sample interference.

Please note that any other QA/QC issues associated with these analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0120**					
Laboratory ID:	05-197-01					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**1100**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*74-121*				
Client ID:	**CHEV-GW-MW11-0100**					
Laboratory ID:	05-197-02					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**ND**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*74-121*				
Client ID:	**CHEV-GW-MW9R-0130**					
Laboratory ID:	05-197-03					
Benzene	**160**	4.0	EPA 8021	5-28-10	5-28-10	
Toluene	**3.2**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**89**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**120**	4.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**3.5**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**1500**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-1130**					
Laboratory ID:	05-197-04					
Benzene	**170**	4.0	EPA 8021	5-28-10	5-28-10	
Toluene	**3.6**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**97**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**140**	4.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**3.9**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**1700**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*103*	*74-121*				
Client ID:	**CHEV-GW-MW18R-0090**					
Laboratory ID:	05-197-05					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**ND**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*74-121*				
Client ID:	**TB-1**					
Laboratory ID:	05-197-06					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**ND**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0160**					
Laboratory ID:	05-197-07					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**380**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527W1					
Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Toluene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
o-Xylene	**ND**	1.0	EPA 8021	5-27-10	5-27-10	
Gasoline	**ND**	100	NWTPH-Gx	5-27-10	5-27-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*74-121*				
Laboratory ID:	MB0528W2					
Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Toluene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
m,p-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
o-Xylene	**ND**	1.0	EPA 8021	5-28-10	5-28-10	
Gasoline	**ND**	100	NWTPH-Gx	5-28-10	5-28-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-192-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*102*	*102*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	05-192-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**55.1**	**56.4**	50.0	50.0	ND	**110**	**113**	78-118	2	8	
Toluene	**54.5**	**55.8**	50.0	50.0	ND	**109**	**112**	81-119	2	8	
Ethyl Benzene	**55.2**	**56.6**	50.0	50.0	ND	**110**	**113**	81-121	3	8	
m,p-Xylene	**54.2**	**55.3**	50.0	50.0	ND	**108**	**111**	79-123	2	8	
o-Xylene	**54.5**	**55.2**	50.0	50.0	ND	**109**	**110**	79-121	1	8	
Surrogate:											
Fluorobenzene						*96*	*99*	*74-121*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	05-197-01				
Client ID:	**CHEV-GW-MW10R-0120**				
Diesel Range	**ND**	0.61	6-1-10	6-1-10	Y,U1
Lube Oil Range	**ND**	0.42	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	67%	50-150			
Lab ID:	05-197-02				
Client ID:	**CHEV-GW-MW11-0100**				
Diesel Range	**ND**	0.26	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.42	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	68%	50-150			
Lab ID:	05-197-03				
Client ID:	**CHEV-GW-MW9R-0130**				
Diesel Range	**ND**	0.29	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.47	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	71%	50-150			
Lab ID:	05-197-04				
Client ID:	**CHEV-GW-MW9R-1130**				
Diesel Range Organics	**0.69**	0.30	6-1-10	6-1-10	Y,M
Lube Oil	**0.66**	0.48	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	69%	50-150			
Lab ID:	05-197-05				
Client ID:	**CHEV-GW-MW18R-0090**				
Diesel Range	**ND**	0.26	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.42	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	71%	50-150			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Date Prepared	Date Analyzed	Flags
Lab ID:	05-197-07				
Client ID:	**CHEV-GW-MW19R-0160**				
Diesel Range	**ND**	0.26	6-1-10	6-1-10	Y
Lube Oil Range	**ND**	0.42	6-1-10	6-1-10	Y
Surrogate: o-terphenyl	140%	50-150			

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Dx
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-1-10
Date Analyzed:	6-1-10
Matrix:	Water
Units:	mg/L (ppm)
Lab ID:	MB0601W1
Diesel Range:	**ND**
PQL:	0.25
Identification:	---
Lube Oil Range:	**ND**
PQL:	0.40
Identification:	---
Surrogate Recovery	
o-Terphenyl:	64%
Flags:	Y

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NWTPH-Dx
DUPLICATE QUALITY CONTROL

Date Extracted:	6-1-10	
Date Analyzed:	6-1-10	
Matrix:	Water	
Units:	mg/L (ppm)	
Lab ID:	05-170-01	05-170-01 DUP
Diesel Range:	**ND**	**ND**
PQL:	0.26	0.26
RPD:	N/A	
Surrogate Recovery		
o-Terphenyl:	67%	69%
Flags:	Y	Y

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-197-03					
Client ID:	**CHEV-GW-MW9R-0130**					
Lead	**36**	1.1	200.8	5-27-10	5-27-10	
Lab ID:	05-197-04					
Client ID:	**CHEV-GW-MW9R-1130**					
Lead	**74**	1.1	200.8	5-27-10	5-27-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-27-10
Date Analyzed:	5-27-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0527W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted:	5-27-10
Date Analyzed:	5-27-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	05-194-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 5-27-10
Date Analyzed: 5-27-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-194-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**108**	98	**107**	97	0	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-197-01					
Client ID:	**CHEV-GW-MW10R-0120**					
Manganese	**1400**	10	200.8	5-26-10	6-1-10	
Lab ID:	05-197-02					
Client ID:	**CHEV-GW-MW11-0100**					
Manganese	**1400**	10	200.8	5-26-10	6-1-10	
Lab ID:	05-197-03					
Client ID:	**CHEV-GW-MW9R-0130**					
Lead	**12**	1.0	200.8		6-1-10	
Manganese	**3600**	10	200.8		6-1-10	
Lab ID:	05-197-04					
Client ID:	**CHEV-GW-MWPR-1130**					
Lead	**14**	1.0	200.8		6-1-10	
Manganese	**3900**	10	200.8		6-1-10	
Lab ID:	05-197-05					
Client ID:	**CHEV-GW-MW18R-0090**					
Manganese	**2800**	10	200.8	5-26-10	6-1-10	
Lab ID:	05-197-07					
Client ID:	**CHEV-GW-MW19R-0160**					
Manganese	**2400**	10	200.8	5-26-10	6-1-10	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Filtered:	5-26-10
Date Analyzed:	6-1-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0526F1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	0.50
Manganese	200.8	**ND**	5.0

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Filtered: 5-26-10
Date Analyzed: 6-1-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-192-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	
Manganese	**489**	**486**	1	10	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Filtered: 5-26-10
Date Analyzed: 6-1-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-192-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	400	**356**	89	**356**	89	0	
Manganese	400	**890**	100	**912**	106	2	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

SULFATE
ASTM D516-02

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0120	05-197-01	**ND**	10
CHEV-GW-MW11-0100	05-197-02	**ND**	10
CHEV-GW-MW9R-0130	05-197-03	**7.5**	5.0
CHEV-GW-MW9R-1130	05-197-04	**7.4**	5.0
CHEV-GW-MW18R-0090	05-197-05	**7.8**	5.0
CHEV-GW-MW19R-0160	05-197-07	**ND**	5.0

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 6-2-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0527F1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0527F1	10.7	10.0	107	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-219-06	8.00				
Matrix Spike	17.5	10.0	95	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-219-06	8.00	7.88	2	8	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

ALKALINITY
EPA 310.2

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0120	05-197-01	**200**	20
CHEV-GW-MW11-0100	05-197-02	**210**	20
CHEV-GW-MW9R-0130	05-197-03	**720**	20
CHEV-GW-MW9R-1130	05-197-04	**730**	20
CHEV-GW-MW18R-0090	05-197-05	**420**	20
CHEV-GW-MW19R-0160	05-197-07	**200**	20
CHEV-GW-MW13R-0130	05-197-08	**1400**	20

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 6-3-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0603W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0603W1	102	100	102	70-130	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
05-197-02	210	218	4	8	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 5-27-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW11-0100	05-197-02	**0.070**	0.050
CHEV-GW-MW9R-0130	05-197-03	**ND**	0.050
CHEV-GW-MW9R-1130	05-197-04	**ND**	0.050
CHEV-GW-MW18R-0090	05-197-05	**ND**	0.050
CHEV-GW-MW19R-0160	05-197-07	**ND**	0.050
MW-GW-MW13R-0130	05-197-08	**ND**	0.050

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 5-27-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0527F1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0527F1	2.05	2.00	103	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-197-02	0.0698				
Matrix Spike	2.01	2.00	97	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
05-197-02	0.0698	0.0709	2	14	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

CHLORIDE
SM 4500-Cl E

Date Analyzed: 6-1-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0120	05-197-01	**10**	2.0
CHEV-GW-MW11-0100	05-197-02	**7.9**	2.0
CHEV-GW-MW9R-0130	05-197-03	**120**	4.0
CHEV-GW-MW9R-1130	05-197-04	**120**	4.0
CHEV-GW-MW18R-0090	05-197-05	**4.3**	2.0
CHEV-GW-MW19R-0160	05-197-07	**2.5**	2.0

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 6-1-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0527F1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0527F1	56.5	50.0	113	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
05-197-01	10.3				
Matrix Spike	69.0	50.0	117	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
05-197-01	10.3	10.2	1	12	

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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0120**					
Laboratory ID:	05-197-01					
Methane	**510**	50	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW11-0100**					
Laboratory ID:	05-197-02					
Methane	**1200**	75	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW9R-0130**					
Laboratory ID:	05-197-03					
Methane	**8600**	500	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW9R-1130**					
Laboratory ID:	05-197-04					
Methane	**7800**	500	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW18R-0090**					
Laboratory ID:	05-197-05					
Methane	**2100**	500	EPA 8015	6-3-10	6-3-10	
Client ID:	**CHEV-GW-MW19R-0160**					
Laboratory ID:	05-197-07					
Methane	**44**	3.0	EPA 8015	6-3-10	6-3-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 8, 2010
Samples Submitted: May 26, 2010
Laboratory Reference: 1005-197
Project: Chevron Property

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Methane	**ND**	0.50	EPA 8015	6-3-10	6-3-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0603W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.96**	**3.81**	4.42	4.42	N/A	**90**	**86**	70-130	4	25	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

2 June 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: QY07

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted six water samples on May 26, 2010. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file QY07

MDH/esj

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

05-197

ARI Assigned Number: CYO7	Turn-around Requested: ASAP	Page: 1 of 1	
ARI Client Company: Onsite	Phone:	Date: 5/2	Ice Present?
Client Contact: D. Bannerman		No. of Coolers:	Cooler Temps:
Client Project Name: Chevron Property			
Client Project #:	Samplers: L. Linde		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Dissolved Metals	Analysis Requested: BTEX	Notes/Comments
CHEV-GW-MW11-0100	5/25/10	1425	GW		X	X	
CHEV-GW-MW9R-0130		1530					
CHEV-GW-MW9R-1130		1600					
CHEV-GW-MW18R-0090		1720					
CHEV-GW-MW19B-0160	5/26/10	1000					
CHEV-GW-~~MW85~~ MW13R-0130		1230					

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
EIM EDDs	Lara Linde	Dean Zavadil	Amber Ellis	
	Printed Name: Lara Linde	Printed Name: Dean H. Zavadil	Printed Name: Amber Ellis	Printed Name: TERRY TAVARES
	Company: PMX	Company: PMX	Company: PMX	Company: SPECTRA MSGR
	Date & Time: 5/26/10 1835	Date & Time: 5/26/10 12:35 PM	Date & Time: 5/26/10 1300	Date & Time: 5/26/10 1300

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Terry Tavares Spectra MSGR 5/26/10 1432

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

A Volgaardsen ARI 5/26/10 1432

CYO7: 00002

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite Project Name: Chevron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS (Courier) Hand Delivered Other: Speedy

Assigned ARI Job No: QY07 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 4.6 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 5/26/10 Time: ~~13~~ AV 1432

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	(Bubble Wrap) (Wet Ice) Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time:_____ Equipment:_____ Split by:_____

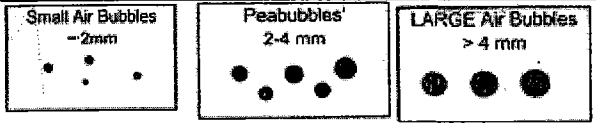
Samples Logged by: AV Date: 5/26/10 Time: 1510

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 06/09/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **QY07**

Inquiry Number: NONE
Analysis Requested: 05/26/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-482
Validatable Package: No
Deliverables:

PC: Mark
VTSR: 05/26/10

Project #:
Project: Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-12569 **QY07A**	CHEV-GW-MW11-0100														ASS							
10-12570 **QY07B**	CHEV-GW-MW9R-0130																					
10-12571 **QY07C**	CHEV-GW-MW9R-1130																					
10-12572 **QY07D**	CHEV-GW-MW18R-0090																					
10-12573 **QY07E**	CHEV-GW-MW19R-0160																					
10-12574 **QY07F**	CHEV-GW-MW13R-0130																					

QY07 : 00004

Checked By AV Date 5/26/10

METHOD BLANK RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	05/26/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	05/27/10	mg/L	< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW11-0100
ARI ID: 10-12569 QY07A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	2.00	19.0
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	3.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW9R-0130
ARI ID: 10-12570 QY07B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	4.00	46.2
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.1	3.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW9R-1130
ARI ID: 10-12571 QY07C

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	4.00	42.1
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.1	4.3

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW18R-0090
ARI ID: 10-12572 QY07D

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	0.800	12.1
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.1	8.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/26/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW19R-0160
ARI ID: 10-12573 QY07E

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	0.800	15.4
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	1.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/26/10
Date Received: 05/26/10

Client ID: CHEV-GW-MW13R-0130
ARI ID: 10-12574 QY07F

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	05/26/10 052610#1	SM3500 FeD	mg/L	0.800	15.2
Biological Oxygen Demand	05/27/10 052710#1	EPA 405.1	mg/L	1.0	2.2

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	05/26/10	mg/L	0.486	0.500	97.2%
Biological Oxygen Demand EPA 405.1	ICVL	05/27/10	mg/L	179	198	90.4%

REPLICATE RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: QY07A Client ID: CHEV-GW-MW11-0100						
Ferrous Iron	SM3500 FeD	05/26/10	mg/L	19.0	19.2	1.0%

MS/MSD RESULTS-CONVENTIONALS
QY07-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 06/02/10

Project: Chevron Property
Event: NA
Date Sampled: 05/25/10
Date Received: 05/26/10

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: QY07A Client ID: CHEV-GW-MW11-0100							
Ferrous Iron	SM3500 FeD	05/26/10	mg/L	19.0	27.7	10.0	87.0%

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number:
Project Name: Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 05-197

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total ~~RCRA Metals (8)~~ Lead (2)	TCLP Metals Dis Pb	HEM by 1664	Sulfate Nitrate	Alkalinity, Nitrate (2)	Chloride	methane	Dis Fe, Mn (3)	Ferrous Fe (ARI) (4)	% Moisture BOD 5 days
1	CHEV-GW-MW10R-0120	5/25/10	1215	GW	9		X	X											X	X	X	X	X	~~X~~	
2	CHEV-GW-MW11-0100	↓	1425	↓	10		X	X											X	X	X	X	X	X	X
3	CHEV-GW-MW9R-0130		1530		12		X	X								X	X		X	X	X	X	X	X	X
4	CHEV-GW-MW9R-0130		1600		12		X	X								X	X		X	X	X	X	X	X	X
5	CHEV-GW-MW18R-0090	↓	1720	↓	10		X	X											X	X	X	X	X	X	X
6	TB-1				2		X																		
7	CHEV-GW-MW19R-0160	5/26	1000		87		X	X											X	X	X	X	X		X
8	CHEV-GW-~~MW25~~ MW13R-0130	↓	1230	↓	01															X				X	X

	Signature	Company	Date	Time
Relinquished by	Sara Linde	PMX	5/26/10	1235
Received by	Dean Zavoch	PMX	5/26/10	1235
Relinquished by	Amber Ellis	PMX	5/26/10	1300
Received by	Ben Jansen	SPEEDY MSGR	5/26/10	1300
Relinquished by	Ben Jansen	" "	"	1525
Received by	B Wallace	OSE	5/26/10	1525
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:

EIM EDDs

(4) Ferrous iron #EDD delivered to ARI

* Field filtered on CHEV-GW-MW9-0130 & CHEV-GW-MW9-1130

(2) Sample CHEV-GW-MW10-0120 – BOD ~~Nitrate~~ shipped separate to cover holding time ~~CHEV-GW-MW25-0130~~

Chromatograms with final report ☐

(3) Lab to filter CHEV-MW10-0120 CHEV-MW11-0100 CHEV-GW-MW18-0090 for Mn only

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 24, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1008-096

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 13, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on August 12, 2010 and received by the laboratory on August 13, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	08-096-01					
Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Toluene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
o-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Gasoline	**620**	100	NWTPH-Gx	8-16-10	8-16-10	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*74-121*				
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	08-096-02					
Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Toluene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
o-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Gasoline	**ND**	100	NWTPH-Gx	8-16-10	8-16-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*74-121*				
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	08-096-03					
Benzene	**1.3**	1.0	EPA 8021	8-16-10	8-16-10	
Toluene	**2.1**	1.0	EPA 8021	8-16-10	8-16-10	
Ethyl Benzene	**6.1**	1.0	EPA 8021	8-16-10	8-16-10	
m,p-Xylene	**ND**	5.0	EPA 8021	8-16-10	8-16-10	U1
o-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Gasoline	**1300**	100	NWTPH-Gx	8-16-10	8-16-10	O
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TB-3**					
Laboratory ID:	08-096-04					
Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Toluene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
o-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Gasoline	**ND**	100	NWTPH-Gx	8-16-10	8-16-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*74-121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0816W1					
Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Toluene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
o-Xylene	**ND**	1.0	EPA 8021	8-16-10	8-16-10	
Gasoline	**ND**	100	NWTPH-Gx	8-16-10	8-16-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-096-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*88*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	08-096-02										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.3**	**49.1**	50.0	50.0	ND	**93**	**98**	78-118	6	8	
Toluene	**46.4**	**49.1**	50.0	50.0	ND	**93**	**98**	81-119	6	8	
Ethyl Benzene	**48.0**	**50.7**	50.0	50.0	ND	**96**	**101**	81-121	5	8	
m,p-Xylene	**47.7**	**49.9**	50.0	50.0	ND	**95**	**100**	79-123	5	8	
o-Xylene	**47.4**	**50.1**	50.0	50.0	ND	**95**	**100**	79-121	6	8	
Surrogate:											
Fluorobenzene						*86*	*87*	*74-121*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	08-096-01					
Diesel Range Organics	**0.42**	0.26	NWTPH-Dx	8-13-10	8-13-10	M
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	08-096-02					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	08-096-03					
Diesel Range Organics	**2.0**	0.26	NWTPH-Dx	8-13-10	8-13-10	M
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0813W1					
Diesel Range Organics	**ND**	0.13	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	08-077-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*85* *83*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-096-01					
Client ID:	**CHEV-GW-MW19R-0180**					
Manganese	**3500**	100	200.8	8-13-10	8-16-10	
Lab ID:	08-096-02					
Client ID:	**CHEV-GW-MW22R-0140**					
Manganese	**3200**	100	200.8		8-16-10	
Lab ID:	08-096-03					
Client ID:	**CHEV-GW-MW25-0130**					
Manganese	**130**	10	200.8		8-16-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Filtered:	8-13-10
Date Analyzed:	8-16-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0813F1

Analyte	Method	Result	PQL
Manganese	200.8	**ND**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Filtered: 8-13-10
Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-096-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Manganese	**3540**	**3490**	1	100	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 200.8
MS/MSD QUALITY CONTROL

Date Filtered: 8-13-10
Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-096-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Manganese	2000	**5340**	90	**5420**	94	1	

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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	08-096-01					
Methane	**350**	50	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	08-096-02					
Methane	**10**	0.50	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	08-096-03					
Methane	**330**	50	EPA 8015	8-17-10	8-17-10	
Client ID:	**TB-3**					
Laboratory ID:	08-096-04					
Methane	**ND**	0.50	EPA 8015	8-17-10	8-17-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0817W1					
Methane	**ND**	0.50	EPA 8015	8-17-10	8-17-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0817W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.12**	**4.29**	4.42	4.42	N/A	**93**	**97**	70-130	4	25	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 8-20-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	08-096-01	**3.1**	2.0
CHEV-GW-MW22R-0140	08-096-02	**1600**	40
CHEV-GW-MW25-0130	08-096-03	**610**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 8-20-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0820W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0820W1	57.0	50.0	114	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-107-01	6.74				
Matrix Spike	64.4	50.0	115	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-107-01	6.74	6.44	5	12	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	08-096-01	**190**	50
CHEV-GW-MW22R-0140	08-096-02	**240**	100
CHEV-GW-MW25-0130	08-096-03	**260**	50

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0817W1	ND	10

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0817W1	50.6	50.0	101	80-105	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-096-02	241				
Matrix Spike	772	500	106	72-133	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-096-02	241	254	5	27	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 8-13-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	08-096-01	**ND**	0.050
CHEV-GW-MW22R-0140	08-096-02	**0.17**	0.050
CHEV-GW-MW25R-0130	08-096-03	**ND**	0.050

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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 8-13-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0813W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0813W1	2.09	2.00	105	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-093-02	ND				
Matrix Spike	2.12	2.00	106	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-093-02	ND	ND	NA	14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 8-20-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	08-096-01	**ND**	5.0
CHEV-GW-MW22R-0140	08-096-02	**200**	100
CHEV-GW-MW25-0130	08-096-03	**26**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 13, 2010
Laboratory Reference: 1008-096
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 8-20-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0820W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0820W1	10.2	10.0	102	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-097-04	8.87				
Matrix Spike	18.6	10.0	97	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
08-097-04	8.87	9.19	4	8	

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

20 August 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: RI51

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted three water samples on August 13, 2010. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file RI51

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: R151	Turn-around Requested: 10 days	Date: 8/13/10	
ARI Client Company: Onsite/PMX	Phone:	Page: 1 of 1	
Client Contact: David B. / L. Linde		No. of Coolers: 1	Cooler Temps: 5.9
Client Project Name: Chevron Property			
Client Project #: 255-1896-063	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: BOD5	Analysis Requested: Ferrous Iron	Notes/Comments
CHEV-GW-MW19R-0180	8/12/10	0930	GW	2	X	X	
CHEV-GW-MW22R-0140	↓	1030	↓	↓	↓	↓	
CHEV-GW-MW25-0130	↓	1350	↓	↓	↓	↓	

Comments/Special Instructions
① Send COC to Onsite when samples arrive
② Eim EDDs

Relinquished by: (Signature) Lara Linde	Received by: (Signature) Terry Tavares	Relinquished by: (Signature) Terry Tavares	Received by: (Signature)
Printed Name: Lara Linde	Printed Name: TERRY TAVARES	Printed Name: TERRY TAVARES	Printed Name: Jennifer Millsap
Company: PMX	Company: SPECTRUM MSGR	Company: SPECTRUM MSGR	Company: ARI
Date & Time: 8/13/10 1010	Date & Time: 8/13/10 1010	Date & Time: 8/13/10 1136	Date & Time: 8/13/10 1140

R151:00002

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite/PMX Project Name: Chevron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS (Courier) Hand Delivered Other: _____

Assigned ARI Job No: RI51 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 5.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: JM Date: 8/13/10 Time: 1140

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ...	(Bubble Wrap) Wet Ice Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		_____

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

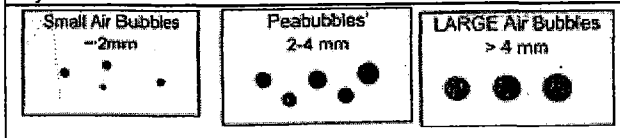
Samples Logged by: JM Date: 8/13/10 Time: 1145

*** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 08/13/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **RI51**

Inquiry Number: NONE
Analysis Requested: 08/13/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

PC: Mark
VTSR: 08/13/10

Project #: 255-1896-063
Project: Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-19736 **RI51A**	CHEV-GW-MW19R-0180														pass							
10-19737 **RI51B**	CHEV-GW-MW22R-0140														|							
10-19738 **RI51C**	CHEV-GW-MW25-0130														|							

RI51 09091

Checked By JM Date 8/13/10

METHOD BLANK RESULTS-CONVENTIONALS
RI51-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	08/13/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	08/13/10	mg/L	< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
RI51-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/12/10
Date Received: 08/13/10

Client ID: CHEV-GW-MW19R-0180
ARI ID: 10-19736 RI51A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/13/10 081310#1	SM3500 FeD	mg/L	0.400	17.4
Biological Oxygen Demand	08/13/10 081310#1	EPA 405.1	mg/L	1.5	2.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI51-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/12/10
Date Received: 08/13/10

Client ID: CHEV-GW-MW22R-0140
ARI ID: 10-19737 RI51B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/13/10 081310#1	SM3500 FeD	mg/L	0.040	1.29
Biological Oxygen Demand	08/13/10 081310#1	EPA 405.1	mg/L	1.2	< 1.2 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI51-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/12/10
Date Received: 08/13/10

Client ID: CHEV-GW-MW25-0130
ARI ID: 10-19738 RI51C

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/13/10 081310#1	SM3500 FeD	mg/L	0.200	3.78
Biological Oxygen Demand	08/13/10 081310#1	EPA 405.1	mg/L	1.3	4.3

RL Analytical reporting limit
U Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
RI51-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	08/13/10	mg/L	0.507	0.500	101.4%
Biological Oxygen Demand EPA 405.1	ICVL	08/13/10	mg/L	173	198	87.4%

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Day ☐ 3 Day
☒ Standard (7 working days)
(TPH analysis 5 working days)
☐ _____ (other)

Laboratory Number: 08-096

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	~~PCBs by 8082~~ Diss. Mn (LF)	~~Pesticides by 8081A~~ Methane	~~Herbicides by 8151A~~ Chloride	~~Total RCRA Metals~~ Alkalinity	~~TCLP Metals~~ Nitrate	~~HEM by 1664~~ Sulfate	Diss. Mn (LF)	% Moisture
1	CHEV-GW-MW19R-0180	8/12/10	0930	GW	8		X	X						X	X	X	X	X	X	
2	CHEV-GW-MW22R-0140	↓	1030	↓	11		X	X					X	X	X	X	X	X		
3	CHEV-GW-MW25-0130	↓	1350	↓	11		X	X					X	X	X	X	X	X		
4	TB-3	—	—	W	2		X							X						

	Signature	Company	Date	Time
Relinquished by	Laura Linde	PMX	8/13/10	1010
Received by	Jerry Sparrow	SPECTRUM ANALYSIS	8/13/10	1010
Relinquished by	Jerry Sparrow	"	"	1258
Received by		OSE	8/13/10	1258
Relinquished by				
Received by				
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions:
① EIM EDDs
② BOD5 & Ferrous Iron sent to ARI due to holding time
③ Diss Mn
FF = field filtered
LF = lab to filter (unpreserved)

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 24, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1008-087

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 12, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on August 11, 2010 and received by the laboratory on August 12, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	08-087-01					
Benzene	**360**	10	EPA 8021	8-13-10	8-13-10	
Toluene	**11**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**230**	10	EPA 8021	8-13-10	8-13-10	
m,p-Xylene	**400**	10	EPA 8021	8-13-10	8-13-10	
o-Xylene	**8.1**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**3100**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*117*	*74-121*				
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	08-087-02					
Benzene	**27**	10	EPA 8021	8-13-10	8-13-10	
Toluene	**1.7**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**120**	10	EPA 8021	8-13-10	8-13-10	
m,p-Xylene	**100**	10	EPA 8021	8-13-10	8-13-10	
o-Xylene	**1.9**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**2800**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*74-121*				
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	08-087-04					
Benzene	**3.9**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**240**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*74-121*				

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	08-087-05					
Benzene	**22**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**10**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**1.7**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**510**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	08-087-06					
Benzene	**52**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**40**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**4.7**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**1000**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*74-121*				
Client ID:	**TB-2**					
Laboratory ID:	08-087-08					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**ND**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0812W2					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**ND**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*74-121*				
Laboratory ID:	MB0813W1					
Benzene	**ND**	1.0	EPA 8021	8-13-10	8-13-10	
Toluene	**ND**	1.0	EPA 8021	8-13-10	8-13-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-13-10	8-13-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-13-10	8-13-10	
o-Xylene	**ND**	1.0	EPA 8021	8-13-10	8-13-10	
Gasoline	**ND**	100	NWTPH-Gx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-077-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*92*	*93*	*74-121*			
MATRIX SPIKES											
Laboratory ID:	08-077-05										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**48.7**	**49.8**	50.0	50.0	ND	**97**	**100**	78-118	2	8	
Toluene	**48.1**	**49.1**	50.0	50.0	ND	**96**	**98**	81-119	2	8	
Ethyl Benzene	**49.1**	**50.2**	50.0	50.0	ND	**98**	**100**	81-121	2	8	
m,p-Xylene	**49.5**	**50.6**	50.0	50.0	ND	**99**	**101**	79-123	2	8	
o-Xylene	**49.0**	**50.0**	50.0	50.0	ND	**98**	**100**	79-121	2	8	
Surrogate:											
Fluorobenzene						*89*	*96*	*74-121*			

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	08-087-01					
Diesel Range Organics	**0.45**	0.26	NWTPH-Dx	8-13-10	8-13-10	M
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	08-087-02					
Diesel Range Organics	**0.87**	0.26	NWTPH-Dx	8-13-10	8-13-10	M
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	08-087-04					
Diesel Range Organics	**ND**	0.31	NWTPH-Dx	8-13-10	8-13-10	U1
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	08-087-05					
Diesel Range Organics	**ND**	0.39	NWTPH-Dx	8-13-10	8-13-10	U1
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	08-087-06					
Diesel Range Organics	**0.62**	0.26	NWTPH-Dx	8-13-10	8-13-10	M
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0813W1					
Diesel Range Organics	**ND**	0.13	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	08-077-03						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*82* *82*	*50-150*			

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-087-01					
Client ID:	**CHEV-GW-MW9R-0140**					
Lead	**17**	1.0	200.8		8-16-10	
Manganese	**4200**	100	200.8		8-16-10	
Lab ID:	08-087-02					
Client ID:	**CHEV-GW-MW21R-0140**					
Lead	**1.4**	1.0	200.8		8-16-10	
Manganese	**3500**	100	200.8		8-16-10	
Lab ID:	08-087-03					
Client ID:	**CHEV-GW-MW21R-1140**					
Lead	**1.0**	1.0	200.8		8-16-10	
Lab ID:	08-087-04					
Client ID:	**CHEV-GW-MW26R-0115**					
Manganese	**560**	20	200.8		8-16-10	
Lab ID:	08-087-05					
Client ID:	**CHEV-GW-MW13R-0130**					
Manganese	**2000**	100	200.8		8-16-10	
Lab ID:	08-087-06					
Client ID:	**CHEV-GW-MW4R-0120**					
Manganese	**4400**	100	200.8		8-16-10	

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Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0813F1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0
Manganese	200.8	**ND**	10

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Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-096-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	
Manganese	**3540**	**3490**	1	100	

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-096-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**197**	99	**196**	98	0	
Manganese	2000	**5340**	90	**5420**	94	1	

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Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	08-087-01					
Methane	**6600**	500	EPA 8015	8-18-10	8-18-10	
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	08-087-02					
Methane	**4800**	500	EPA 8015	8-18-10	8-18-10	
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	08-087-04					
Methane	**5.0**	0.50	EPA 8015	8-18-10	8-18-10	
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	08-087-05					
Methane	**680**	50	EPA 8015	8-18-10	8-18-10	
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	08-087-06					
Methane	**670**	50	EPA 8015	8-18-10	8-18-10	
Client ID:	**TB-2**					
Laboratory ID:	08-087-08					
Methane	**0.78**	0.50	EPA 8015	8-18-10	8-18-10	

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Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0818W1					
Methane	**ND**	0.50	EPA 8015	8-18-10	8-18-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0818W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.21**	**4.55**	4.42	4.42	N/A	**95**	**103**	70-130	8	25	

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Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 8-16-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0140	08-087-01	**78**	2.0
CHEV-GW-MW21R-0140	08-087-02	**110**	4.0
CHEV-GW-MW26R-0115	08-087-04	**20000**	400
CHEV-GW-MW13R-0130	08-087-05	**750**	20
CHEV-GW-MW4R-0120	08-087-06	**250**	10

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Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0812F1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0812F1	58.7	50.0	117	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-083-03	6.64				
Matrix Spike	63.9	50.0	115	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-083-03	6.64	6.84	3	12	

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Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0140	08-087-01	**800**	100
CHEV-GW-MW21R-0140	08-087-02	**1500**	250
CHEV-GW-MW26R-0115	08-087-04	**210**	50
CHEV-GW-MW13R-0130	08-087-05	**1600**	250
CHEV-GW-MW4R-0120	08-087-06	**2100**	250

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Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0812F1	ND	10

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0812F1	48.4	50.0	97	80-105	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-096-02	241				
Matrix Spike	772	500	106	72-133	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-096-02	241	254	5	27	

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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 8-12-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0140	08-087-01	**0.14**	0.050
CHEV-GW-MW21R-0140	08-087-02	**0.057**	0.050
CHEV-GW-MW26R-0115	08-087-04	**ND**	0.050
CHEV-GW-MW13R-0130	08-087-05	**ND**	0.050
CHEV-GW-MW4R-0120	08-087-06	**ND**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 8-12-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0812F1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0812F1	2.17	2.00	109	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-083-03	0.134				
Matrix Spike	2.14	2.00	100	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-083-03	0.134	0.134	0	14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 8-16-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW9R-0140	08-087-01	**ND**	5.0
CHEV-GW-MW21R-0140	08-087-02	**120**	25
CHEV-GW-MW26R-0115	08-087-04	**2200**	500
CHEV-GW-MW13R-0130	08-087-05	**560**	130
CHEV-GW-MW4R-0120	08-087-06	**120**	50

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0812F1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0812F1	10.6	10.0	106	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-083-03	16.3				
Matrix Spike	34.8	20.0	93	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
08-083-03	16.3	16.3	0	8	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-087-01					
Client ID:	**CHEV-GW-MW9R-0140**					
Lead	**21**	1.1	200.8	8-16-10	8-16-10	
Lab ID:	08-087-02					
Client ID:	**CHEV-GW-MW21R-0140**					
Lead	**10**	1.1	200.8	8-16-10	8-16-10	
Lab ID:	08-087-03					
Client ID:	**CHEV-GW-MW21R-1140**					
Lead	**5.5**	1.1	200.8	8-16-10	8-16-10	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	8-16-10
Date Analyzed:	8-16-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0816W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted:	8-16-10
Date Analyzed:	8-16-10
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	08-083-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 8-16-10
Date Analyzed: 8-16-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-083-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**102**	93	**105**	96	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	08-087-05					
Benzo[a]anthracene	**0.061**	0.050	EPA 8270/SIM	8-13-10	8-13-10	
Chrysene	**ND**	0.050	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*47 - 105*				
Pyrene-d10	*73*	*35 - 129*				
Terphenyl-d14	*63*	*36 - 106*				
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	08-087-06					
Benzo[a]anthracene	**ND**	0.050	EPA 8270/SIM	8-13-10	8-13-10	
Chrysene	**ND**	0.050	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*47 - 105*				
Pyrene-d10	*84*	*35 - 129*				
Terphenyl-d14	*65*	*36 - 106*				
Client ID:	**CHEV-GW-MW4R-1120**					
Laboratory ID:	08-087-07					
Benzo[a]anthracene	**0.042**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Chrysene	**0.023**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*47 - 105*				
Pyrene-d10	*80*	*35 - 129*				
Terphenyl-d14	*58*	*36 - 106*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 24, 2010
Samples Submitted: August 12, 2010
Laboratory Reference: 1008-087
Project: 255-1896-063 04/1304

cPAHs by EPA 8270D/SIM
(with silica gel clean-up)
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0813W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Chrysene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*47 - 105*				
Pyrene-d10	*70*	*35 - 129*				
Terphenyl-d14	*77*	*36 - 106*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0813W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.311**	**0.361**	0.500	0.500	62	72	56 - 111	15	17	
Chrysene	**0.328**	**0.380**	0.500	0.500	66	76	55 - 102	15	19	
Benzo[b]fluoranthene	**0.337**	**0.389**	0.500	0.500	67	78	60 - 112	14	17	
Benzo[k]fluoranthene	**0.326**	**0.394**	0.500	0.500	65	79	45 - 114	19	21	
Benzo[a]pyrene	**0.336**	**0.384**	0.500	0.500	67	77	52 - 113	13	19	
Indeno(1,2,3-c,d)pyrene	**0.382**	**0.334**	0.500	0.500	76	67	34 - 124	13	21	
Dibenz[a,h]anthracene	**0.352**	**0.312**	0.500	0.500	70	62	26 - 129	12	31	
Surrogate:										
2-Fluorobiphenyl					*70*	*78*	*47 - 105*			
Pyrene-d10					*67*	*78*	*35 - 129*			
Terphenyl-d14					*74*	*84*	*36 - 106*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

20 August 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: RI23

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples on August 12, 2010. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file RI23

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: R1223	Turn-around Requested: 10 days	Date: 8/12/10	
ARI Client Company: Onsite / PMX	Phone:	Page: 1 of 1	
Client Contact: David B. / L. Linde		No. of Coolers:	Cooler Temps:
Client Project Name: Chevron Property			
Client Project #: 255-1896-063	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: BOD5	Analysis Requested: Ferrous Iron	Notes/Comments
CHEV-GW-MW9R-0140	8/11/10	0915	GW	2	X	X	
CHEV-GW-MW21R-0140		1050					
CHEV-GW-MW26R-0115		1230					
CHEV-GW-MW3R-0130		1440					
CHEV-GW-MW4R-0120		1540					

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
① Send COC to Onsite when samples arrive	Printed Name: Lara Linde	Printed Name: Blaine Hardy	Printed Name: Blaine Hardy	Printed Name: TONY TAVARES
② Elm EDDs	Company: PMX	Company: pmx	Company: PMX	Company: SPECTRUM WATER
	Date & Time: 8/12/10 0740	Date & Time: 8/12/10 0740	Date & Time: 8/12/10 0905	Date & Time: 8/12/10 905

R1223:00002

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

10:57

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

A. Valgardsen
ARI

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: ~~Courier~~ AV Onsite

Project Name: Chevron Property

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS (Courier) Hand Delivered Other: Speedy

Assigned ARI Job No: RI23

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	1.5	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90041617

Cooler Accepted by: AV Date: 8/12/10 Time: 1058

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other:			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		YES	(NO)
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time:_____ Equipment:_____ Split by:_____

Samples Logged by: AV Date: 8/12/10 Time: 1115

*** Notify Project Manager of discrepancies or concerns ***

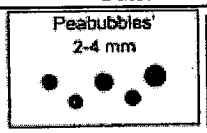
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
AV			
~~CHEMCHU~~			

AV

Additional Notes, Discrepancies, & Resolutions:

MW132-C130 bottle has time of 1420

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 08/12/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **RI23**

PC: Mark
VTSR: 08/12/10

Inquiry Number: NONE
Analysis Requested: 08/12/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-482
Validatable Package: No
Deliverables:

Project #: 255-1896-063
Project: Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-19546 **RI23A**	CHEV-GW-MW9R-0140														*							
10-19547 **RI23B**	CHEV-GW-MW21R-0140																					
10-19548 **RI23C**	CHEV-GW-MW26R-0115																					
10-19549 **RI23D**	CHEV-GW-MW13R-0130																					
10-19550 **RI23E**	CHEV-GW-MW4R-0120																					

* Unable to check preservation

'F' All checked before testing @ < 2.
8/12/10 AV

1009091 RI23

Checked By AV Date 8/12/10

METHOD BLANK RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	08/12/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	08/12/10	mg/L	< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Client ID: CHEV-GW-MW9R-0140
ARI ID: 10-19546 RI23A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/12/10 081210#1	SM3500 FeD	mg/L	0.800	29.2
Biological Oxygen Demand	08/12/10 081210#1	EPA 405.1	mg/L	1.2	12.3

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Client ID: CHEV-GW-MW21R-0140
ARI ID: 10-19547 RI23B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/12/10 081210#1	SM3500 FeD	mg/L	0.400	17.9
Biological Oxygen Demand	08/12/10 081210#1	EPA 405.1	mg/L	1.2	16.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Client ID: CHEV-GW-MW26R-0115
ARI ID: 10-19548 RI23C

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/12/10 081210#1	SM3500 FeD	mg/L	0.040	0.800
Biological Oxygen Demand	08/12/10 081210#1	EPA 405.1	mg/L	1.2	1.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Client ID: CHEV-GW-MW13R-0130
ARI ID: 10-19549 RI23D

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/12/10 081210#1	SM3500 FeD	mg/L	0.400	9.31
Biological Oxygen Demand	08/12/10 081210#1	EPA 405.1	mg/L	1.2	5.1

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Client ID: CHEV-GW-MW4R-0120
ARI ID: 10-19550 RI23E

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/12/10 081210#1	SM3500 FeD	mg/L	0.400	9.75
Biological Oxygen Demand	08/12/10 081210#1	EPA 405.1	mg/L	1.2	8.6

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/11/10
Date Received: 08/12/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: RI23A Client ID: CHEV-GW-MW9R-0140						
Ferrous Iron	SM3500 FeD	08/12/10	mg/L	29.2	29.0	0.7%

LAB CONTROL RESULTS-CONVENTIONALS
RI23-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 08/20/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	08/12/10	mg/L	0.517	0.500	103.4%
Biological Oxygen Demand EPA 405.1	ICVL	08/12/10	mg/L	178	198	89.9%

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days)
  (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 08-087

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	~~PCBs by 8082~~ Diss Mn*	~~Pesticides by 8081A~~ Methane	~~Herbicides by 8151A~~ Chloride	~~Total RCRA Metals (8)~~ Alkalinity	~~TCLP Metals~~ Nitrate	~~HEM by 1664~~ Sulfate	Diss Lead*	Total Lead	cPAHs				% Moisture
1	CHEV-GW-MW9R-0140	8/11/10	0915	GW	12		X	X					X	X	X	X	X	X	X	X					
2	CHEV-GW-MW21R-0140	↓	1050	↓	↓		X	X					X	X	X	X	X	X	X	X					
3	CHEV-GW-MW21R-1140		1110		2														X	X					
4	CHEV-GW-MW26R-0115		1230		11		X	X					X	X	X	X	X	X							
5	CHEV-GW-MW13R-0130		1440		10		X	X					X	X	X	X	X	X			X				
6	CHEV-GW-MW4R-0120		1540		12		X	X					X	X	X	X	X	X			X				
7	CHEV-GW-MW4R-1120	↓	1600	↓	1																X				
8	TB-2	—	—	W	2		X							X											

	Signature	Company	Date	Time
Relinquished by	Lara Linde	PMX	8/12/10	0740
Received by	Bri	PMX	8/12/10	0740
Relinquished by	Bri	PMX	8/12/10	0905
Received by	Ken Jansen	SPECTRA MSGR	8/12/10	0905
Relinquished by	Ken Jansen	" "	"	1145
Received by		OEC	8/12/10	1140
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions

① EIM EDDs

② BOD5 & Ferrous Iron sent to ARI due to holding time

* Field-filtered

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 25, 2010

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 255-1896-063 04/1304
Laboratory Reference No. 1008-077

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on August 11, 2010.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

Case Narrative

Samples were collected on August 10, 2010 and received by the laboratory on August 11, 2010. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW8R-0130**					
Laboratory ID:	08-077-01					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**3.7**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**180**	100	NWTPH-Gx	8-12-10	8-12-10	T
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	08-077-02					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**ND**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*74-121*				
Client ID:	**CHEV-GW-MW11-0170**					
Laboratory ID:	08-077-03					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**140**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*74-121*				

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW11-1170**					
Laboratory ID:	08-077-04					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**130**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	08-077-05					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**780**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*74-121*				
Client ID:	**TB-1**					
Laboratory ID:	08-077-06					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**ND**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0812W1					
Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Toluene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Ethyl Benzene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
m,p-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
o-Xylene	**ND**	1.0	EPA 8021	8-12-10	8-12-10	
Gasoline	**ND**	100	NWTPH-Gx	8-12-10	8-12-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*74-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-077-05										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**782**	**769**	NA	NA		NA		NA	2	30	
Surrogate:											
Fluorobenzene						*94*	*93*	*74-121*			

MATRIX SPIKES											
Laboratory ID:	08-077-05										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**48.7**	**49.8**	50.0	50.0	ND	**97**	**100**	78-118	2	8	
Toluene	**48.1**	**49.1**	50.0	50.0	ND	**96**	**98**	81-119	2	8	
Ethyl Benzene	**49.1**	**50.2**	50.0	50.0	ND	**98**	**100**	81-121	2	8	
m,p-Xylene	**49.5**	**50.6**	50.0	50.0	ND	**99**	**101**	79-123	2	8	
o-Xylene	**49.0**	**50.0**	50.0	50.0	ND	**98**	**100**	79-121	2	8	
Surrogate:											
Fluorobenzene						*89*	*96*	*74-121*			

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW18R-0130**					
Laboratory ID:	08-077-01					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	08-077-02					
Diesel Range Organics	**0.37**	0.24	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.39	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**CHEV-GW-MW11-0170**					
Laboratory ID:	08-077-03					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**CHEV-GW-MW11-1170**					
Laboratory ID:	08-077-04					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	08-077-05					
Diesel Range Organics	**ND**	0.42	NWTPH-Dx	8-13-10	8-13-10	U1
Lube Oil Range Organics	**ND**	0.45	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0813W1					
Diesel Range Organics	**ND**	0.13	NWTPH-Dx	8-13-10	8-13-10	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	8-13-10	8-13-10	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	08-077-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*85* *83*	*50-150*			

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 6010B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Analyzed	Flags
Lab ID:	08-077-01				
Client ID:	**CHEV-GW-MW18R-0130**				
Manganese	**9500**	220	6010B	8-11-10	
Lab ID:	08-077-02				
Client ID:	**CHEV-GW-MW16R-0140**				
Manganese	**11000**	220	6010B	8-11-10	
Lab ID:	08-077-03				
Client ID:	**CHEV-GW-MW11-0170**				
Manganese	**2600**	11	6010B	8-11-10	
Lab ID:	08-077-04				
Client ID:	**CHEV-GW-MW11-1170**				
Manganese	**2600**	11	6010B	8-11-10	
Lab ID:	08-077-05				
Client ID:	**CHEV-GW-MW10R-0140**				
Manganese	**2000**	11	6010B	8-11-10	

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 6010B
METHOD BLANK QUALITY CONTROL

Date Analyzed: 8-11-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0811D1

Analyte	Method	Result	PQL
Manganese	6010B	**ND**	11

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 6010B
DUPLICATE QUALITY CONTROL

Date Analyzed: 8-11-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-077-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Manganese	**9460**	**9500**	0	220	

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED MANGANESE
EPA 6010B
MS/MSD QUALITY CONTROL

Date Analyzed: 8-11-10

Matrix: Water
Units: ug/L (ppb)

Lab ID: 08-077-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Manganese	2200	**11600**	98	**11600**	97	0	

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW18R-0130**					
Laboratory ID:	08-077-01					
Methane	**5400**	500	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	08-077-02					
Methane	**590**	50	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW11-0170**					
Laboratory ID:	08-077-03					
Methane	**870**	50	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW11-1170**					
Laboratory ID:	08-077-04					
Methane	**730**	50	EPA 8015	8-17-10	8-17-10	
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	08-077-05					
Methane	**260**	25	EPA 8015	8-17-10	8-17-10	
Client ID:	**TB-1**					
Laboratory ID:	08-077-06					
Methane	**ND**	0.50	EPA 8015	8-17-10	8-17-10	

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0817W1					
Methane	**ND**	0.50	EPA 8015	8-17-10	8-17-10	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0817W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.12**	**4.29**	4.42	4.42	N/A	**93**	**97**	70-130	4	25	

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E

Date Analyzed: 8-16-10

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW18R-0130	08-077-01	**14**	2.0
CHEV-GW-MW16R-0140	08-077-02	**8.4**	2.0
CHEV-GW-MW11-0170	08-077-03	**8.8**	2.0
CHEV-GW-MW11-1170	08-077-04	**9.4**	2.0
CHEV-GW-MW10R-0140	08-077-05	**14**	2.0

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Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0811F1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0811F1	57.9	50.0	116	95-127	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-083-03	6.64				
Matrix Spike	63.9	50.0	115	97-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-083-03	6.64	6.84	3	12	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW18R-0130	08-077-01	**870**	100
CHEV-GW-MW16R-0140	08-077-02	**710**	100
CHEV-GW-MW11-0170	08-077-03	**120**	50
CHEV-GW-MW11-1170	08-077-04	**110**	50
CHEV-GW-MW10R-0140	08-077-05	**210**	50

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

ALKALINITY
EPA 310.2
QUALITY CONTROL

Date Analyzed: 8-17-10

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0811F1	ND	10

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0811F1	51.2	50.0	102	80-105	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-096-02	241				
Matrix Spike	772	500	106	72-133	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-096-02	241	254	5	27	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 8-11-10

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW18R-0130	08-077-01	**ND**	0.050
CHEV-GW-MW16R-0140	08-077-02	**ND**	0.050
CHEV-GW-MW11-0170	08-077-03	**0.086**	0.050
CHEV-GW-MW11-1170	08-077-04	**0.10**	0.050
CHEV-GW-MW10R-0140	08-077-05	**ND**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 8-11-10

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0811F1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0811F1	2.15	2.00	108	83-119	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-077-04	0.0994				
Matrix Spike	2.15	2.00	103	82-120	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
08-077-04	0.0994	0.0847	16	14	C

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02

Date Analyzed: 8-16-10

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW18R-0130	08-077-01	**ND**	5.0
CHEV-GW-MW16R-0140	08-077-02	**ND**	5.0
CHEV-GW-MW11-0170	08-077-03	**ND**	25
CHEV-GW-MW11-1170	08-077-04	**ND**	25
CHEV-GW-MW10R-0140	08-077-05	**ND**	5.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: August 25, 2010
Samples Submitted: August 11, 2010
Laboratory Reference: 1008-077
Project: 255-1896-063 04/1304

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 8-16-10

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0811F1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0811F1	10.8	10.0	108	90-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
08-083-03	16.3				
Matrix Spike	34.8	20.0	93	84-116	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
08-083-03	16.3	16.3	0	8	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical gas.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

24 August 2010

David Baumeister
OnSite Environmental, Inc.
14648 NE 95th
Redmond, WA 98052

RE: Client Project: Chevron Property
ARI Job No: RI02

Dear David:

Please find enclosed the chain-of-custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples on August 11, 2010. The samples were analyzed for ferrous iron and BOD as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file RI02

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: DICJ	Turn-around Requested: 10 days	Date: 8/11/10	
ARI Client Company: Onsite/PMX	Phone:	Page: 1 of 1	
Client Contact: David B./L. Linde		No. of Coolers:	Cooler Temps:
Client Project Name: Chevron Property			
Client Project #: 255-1896-0163	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: BDS	Analysis Requested: Ferrous Iron	Notes/Comments
CHEV-GW-MW18R-0130	8/10/10	0930	GW	2	X	X	
CHEV-GW-MW16R-0140		1045					
CHEV-GW-MW11-0170		1400					
CHEV-GW-MW11-1170		1430					
CHEV-GW-MW10R-0140		1540					

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
(1) Send COC to Onsite when samples arrive (2) EIM EDDs	Lara Linde	Blaine Hardy	Blaine Hardy	
	Printed Name: Lara Linde	Printed Name: Blaine Hardy	Printed Name: Blaine Hardy	Printed Name: JERRY THARPE
	Company: PMX	Company: PMX	Company: PMX	Company: SPECTRUM ANALYTICAL
	Date & Time: 8/11/10 0730	Date & Time: 8/11/10 0730	Date & Time: 8/11/10 0914	Date & Time: 8/11/10 0914

R102:0002

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

A. Volgardsen

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite Project Name: Chevron Property

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS (Courier) Hand Delivered Other: Speedy

Assigned ARI Job No: _____ Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 4.8 0.8 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 8/11/10 Time: 1045

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?			(NO)
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?			(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		_____

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

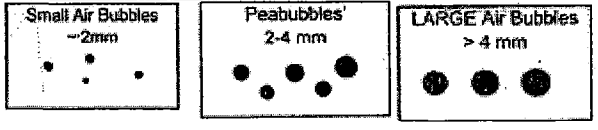
Samples Logged by: AV Date: 8/11/10 Time: 1050

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 08/11/10
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **RI02**

PC: Mark
VTSR: 08/11/10

Inquiry Number: NONE
Analysis Requested: 08/11/10
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 255-1896-063
Project: Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
10-19327 **RI02A**	CHEV-GW-MW18R-0130														*							
10-19328 **RI02B**	CHEV-GW-MW16R-0140																					
10-19329 **RI02C**	CHEV-GW-MW11-0170																					
10-19330 **RI02D**	CHEV-GW-MW11-1170																					
10-19331 **RI02E**	CHEV-GW-MW10R-0140																					

* unable to check preservation

RI02:00004

Checked By AV Date 8/11/10

METHOD BLANK RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Ferrous Iron	SM3500 FeD	08/11/10	mg/L	< 0.040 U	
Biological Oxygen Demand	EPA 405.1	08/11/10	mg/L	< 1.0 U	

SAMPLE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Client ID: CHEV-GW-MW18R-0130
ARI ID: 10-19327 RI02A

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/11/10 081110#1	SM3500 FeD	mg/L	4.00	17.8
Biological Oxygen Demand	08/11/10 081110#1	EPA 405.1	mg/L	12.0	< 12.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Client ID: CHEV-GW-MW16R-0140
ARI ID: 10-19328 RI02B

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/11/10 081110#1	SM3500 FeD	mg/L	0.040	0.336
Biological Oxygen Demand	08/11/10 081110#1	EPA 405.1	mg/L	12.0	< 12.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Client ID: CHEV-GW-MW11-0170
ARI ID: 10-19329 RI02C

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/11/10 081110#1	SM3500 FeD	mg/L	8.00	30.4
Biological Oxygen Demand	08/11/10 081110#1	EPA 405.1	mg/L	12.0	< 12.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Client ID: CHEV-GW-MW11-1170
ARI ID: 10-19330 RI02D

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/11/10 081110#1	SM3500 FeD	mg/L	8.00	30.0
Biological Oxygen Demand	08/11/10 081110#1	EPA 405.1	mg/L	12.0	< 12.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Client ID: CHEV-GW-MW10R-0140
ARI ID: 10-19331 RI02E

Analyte	Date Batch	Method	Units	RL	Sample
Ferrous Iron	08/11/10 081110#1	SM3500 FeD	mg/L	8.00	34.4
Biological Oxygen Demand	08/11/10 081110#1	EPA 405.1	mg/L	12.0	< 12.0 U

RL Analytical reporting limit
U Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: 08/10/10
Date Received: 08/11/10

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: RI02A Client ID: CHEV-GW-MW18R-0130						
Ferrous Iron	SM3500 FeD	08/11/10	mg/L	17.8	17.2	3.4%

LAB CONTROL RESULTS-CONVENTIONALS
RI02-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/10

Project: Chevron Property
Event: 255-1896-063
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Ferrous Iron SM3500 FeD	ICVL	08/11/10	mg/L	0.499	0.500	99.8%
Biological Oxygen Demand EPA 405.1	ICVL	08/11/10	mg/L	180	198	90.9%

Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Page 1 of 1

Company: Parametrix
Project Number: 255-1896-063 04/1304
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Day ☐ 3 Day
- ☒ Standard (7 working days) (TPH analysis 5 working days)
- ☐ _____ (other)

Laboratory Number: 08-077

Requested Analysis

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Dx	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	% Moisture
1	CHEV-GW-MW8R-0130	8/10/10	0930	GW	10		X	X					X	X	X	X	X	X	
2	CHEV-GW-MW16R-0140		1045		8														
3	CHEV-GW-MW11-0170		1400		11														
4	CHEV-GW-MW11-1170		1430		11														
5	CHEV-GW-MW10R-0140		1540		9														
6	TB-1	—	—	W	2														

Dissolved Mn; Methane; Chloride; Alkalinity; Nitrate; Sulfate

	Signature	Company	Date	Time
Relinquished by	Lisa Linde	PMX	8/11/10	0730
Received by		PMX	8/11/10	0730
Relinquished by		PMX	8/11/10	0914 ~~0730~~
Received by		Speedy Messr	8/11/10	0914
Relinquished by		IC CA	"	1130
Received by		OEC	8/11/10	1130
Reviewed by/Date		Reviewed by/Date		

Comments/Special Instructions

① EIM EDDs

② BOD5 Ferrous Iron sent to ARI due to holding time

Chromatograms with final report ☐

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Client Copy

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 15, 2011

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 233-1896-098
Laboratory Reference No. 1104-046

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on April 7, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

Case Narrative

Samples were collected on April 6, 2011 and received by the laboratory on April 7, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	04-046-01					
Benzene	**45**	4.0	EPA 8021	4-7-11	4-7-11	
Toluene	**6.7**	4.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**340**	4.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**290**	4.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**5100**	400	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*73-121*				
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	04-046-03					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	04-046-04					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	04-046-05					
Benzene	**11**	1.0	EPA 8021	4-8-11	4-8-11	
Toluene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Ethyl Benzene	**2.6**	1.0	EPA 8021	4-8-11	4-8-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
o-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Gasoline	**420**	100	NWTPH-Gx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*73-121*				
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	04-046-05*****					
Benzene	**17**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**3.3**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**1.3**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**1.1**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**470**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*73-121*				
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	04-046-06					
Benzene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**5.3**	4.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**8.4**	4.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**1500**	400	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*73-121*				

*Unpreserved Container

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Samples Submitted: April 7, 2011
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Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-TB2-0000**					
Laboratory ID:	04-046-07					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				

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Date of Report: April 15, 2011
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Project: 233-1896-098

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W2					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*73-121*				
Laboratory ID:	MB0408W1					
Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Toluene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
o-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Gasoline	**ND**	100	NWTPH-Gx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-036-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*88*	*73-121*			
Laboratory ID:	04-036-04										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*89*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	04-036-04										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.8**	**53.1**	50.0	50.0	ND	**106**	**106**	82-120	1	8	
Toluene	**56.5**	**56.4**	50.0	50.0	ND	**113**	**113**	84-119	0	8	
Ethyl Benzene	**57.0**	**56.8**	50.0	50.0	ND	**114**	**114**	84-122	0	9	
m,p-Xylene	**54.8**	**54.0**	50.0	50.0	ND	**110**	**108**	85-121	1	9	
o-Xylene	**54.5**	**53.6**	50.0	50.0	ND	**109**	**107**	84-121	2	9	
Surrogate:											
Fluorobenzene						*104*	*101*	*73-121*			
Laboratory ID:	04-036-05										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.1**	**47.2**	50.0	50.0	ND	**92**	**94**	82-120	2	8	
Toluene	**52.5**	**53.8**	50.0	50.0	ND	**105**	**108**	84-119	2	8	
Ethyl Benzene	**56.2**	**58.7**	50.0	50.0	ND	**112**	**117**	84-122	4	9	
m,p-Xylene	**54.3**	**56.2**	50.0	50.0	ND	**109**	**112**	85-121	3	9	
o-Xylene	**55.0**	**56.5**	50.0	50.0	ND	**110**	**113**	84-121	3	9	
Surrogate:											
Fluorobenzene						*105*	*104*	*73-121*			

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	04-046-01					
Diesel Range Organics	**ND**	0.68	NWTPH-Dx	4-8-11	4-8-11	U1
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*95*	*50-150*				
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	04-046-03					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	4-8-11	4-8-11	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*109*	*50-150*				
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	04-046-04					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	4-8-11	4-8-11	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	04-046-05					
Diesel Range Organics	**0.41**	0.26	NWTPH-Dx	4-8-11	4-8-11	M
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	04-046-06					
Diesel Range Organics	**7.0**	0.26	NWTPH-Dx	4-8-11	4-11-11	M
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-8-11	4-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				

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Date of Report: April 15, 2011
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Project: 233-1896-098

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0408W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	4-8-11	4-8-11	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*113*	*50-150*				

Analyte	Result		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-046-01							
	ORIG	DUP						
Diesel Range Organics	**ND**	**ND**				NA	NA	U1
Lube Oil Range Organics	**ND**	**ND**				NA	NA	
Surrogate:								
o-Terphenyl			*95*	*99*	*50-150*			

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

ALKALINITY
SM 2320B

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0140	04-046-01	**2000**	20
CHEV-GW-MW26R-0115	04-046-03	**300**	20
CHEV-GW-MW22R-0140	04-046-04	**310**	20
CHEV-GW-MW13R-0130	04-046-05	**1500**	20
CHEV-GW-MW25-0130	04-046-06	**200**	20

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

ALKALINITY
SM 2320B
QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0411W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0411W1	94.0	100	94	90-114	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-036-03	66.0	68.0	3	8	

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Date of Report: April 15, 2011
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Project: 233-1896-098

CHLORIDE
SM 4500-Cl E

Date Analyzed: 4-8-11

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0140	04-046-01	**100**	4.0
CHEV-GW-MW26R-0115	04-046-03	**8400**	200
CHEV-GW-MW22R-0140	04-046-04	**97**	4.0
CHEV-GW-MW13R-0130	04-046-05	**420**	20
CHEV-GW-MW25-0130	04-046-06	**24**	2.0

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Laboratory Reference: 1104-046
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 4-8-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0408W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0408W1	55.7	50.0	111	101-125	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-036-02	5.99				
Matrix Spike	60.3	50.0	109	99-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-036-02	5.99	6.24	4	11	

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NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 4-7-11

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0140	04-046-01	**0.27**	0.050
CHEV-GW-MW26R-0115	04-046-03	**ND**	0.050
CHEV-GW-MW22R-0140	04-046-04	**0.41**	0.050
CHEV-GW-MW13R-0130	04-046-05	**ND**	0.050
CHEV-GW-MW25-0130	04-046-06	**1.4**	0.050

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NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 4-7-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0407W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0407W1	2.13	2.00	107	86-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-036-03	ND				
Matrix Spike	2.18	2.00	109	84-123	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-036-03	ND	ND	NA	11	

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SULFATE
ASTM D516-02

Date Analyzed: 4-7-11

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW21R-0140	04-046-01	**110**	25
CHEV-GW-MW26R-0115	04-046-03	**1300**	500
CHEV-GW-MW22R-0140	04-046-04	**39**	10
CHEV-GW-MW13R-0130	04-046-05	**280**	100
CHEV-GW-MW25-0130	04-046-06	**ND**	5.0

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SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 4-7-11

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0407W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0407W1	10.1	10.0	101	89-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-006-02	10.9				
Matrix Spike	20.4	10.0	95	83-112	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-006-02	10.9	10.9	0	7	

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Project: 233-1896-098

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-046-01					
Client ID:	**CHEV-GW-MW21R-0140**					
Lead	**ND**	1.0	200.8		4-11-11	
Manganese	**4200**	20	200.8		4-11-11	
Lab ID:	04-046-02					
Client ID:	**CHEV-GW-MW21R-1140**					
Lead	**ND**	1.0	200.8		4-11-11	
Lab ID:	04-046-03					
Client ID:	**CHEV-GW-MW26R-0115**					
Manganese	**ND**	10	200.8		4-11-11	
Lab ID:	04-046-04					
Client ID:	**CHEV-GW-MW22R-0140**					
Manganese	**840**	10	200.8		4-11-11	
Lab ID:	04-046-05					
Client ID:	**CHEV-GW-MW13R-0130**					
Manganese	**1800**	10	200.8		4-11-11	
Lab ID:	04-046-06					
Client ID:	**CHEV-GW-MW25-0130**					
Manganese	**170**	10	200.8		4-11-11	

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DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0411D1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0
Manganese	200.8	**ND**	10

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DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	
Manganese	**1460**	**1500**	3	10	

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DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**194**	97	**195**	98	0	
Manganese	200	**1660**	102	**1660**	99	0	

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Date of Report: April 15, 2011
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TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-046-01					
Client ID:	**CHEV-GW-MW21R-0140**					
Lead	**1.1**	1.1	200.8	4-13-11	4-13-11	
Lab ID:	04-046-02					
Client ID:	**CHEV-GW-MW21R-1140**					
Lead	**ND**	1.1	200.8	4-13-11	4-13-11	

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Laboratory Reference: 1104-046
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	4-13-11
Date Analyzed:	4-13-11
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0413W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 4-13-11
Date Analyzed: 4-13-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-046-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**1.14**	**1.14**	0	1.1	

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 4-13-11
Date Analyzed: 4-13-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-046-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**114**	102	**110**	99	3	

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	04-046-05					
Naphthalene	**0.35**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
1-Methylnaphthalene	**0.38**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthylene	**0.40**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthene	**22**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Fluorene	**7.6**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Phenanthrene	**0.70**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Anthracene	**1.2**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Fluoranthene	**1.2**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Pyrene	**0.58**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]anthracene	**0.058**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Chrysene	**0.044**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[b]fluoranthene	**0.018**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[k]fluoranthene	**0.014**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]pyrene	**0.017**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*57*	*38 - 105*				
Pyrene-d10	*64*	*37 - 121*				
Terphenyl-d14	*54*	*32 - 112*				

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Fluorene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Chrysene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*38 - 105*				
Pyrene-d10	*101*	*37 - 121*				
Terphenyl-d14	*94*	*32 - 112*				

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0407W1 DUP									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.373**	**0.321**	0.500	0.500	75	64	38 - 110	15	35	
Acenaphthylene	**0.443**	**0.392**	0.500	0.500	89	78	47 - 120	12	30	
Acenaphthene	**0.412**	**0.370**	0.500	0.500	82	74	46 - 113	11	26	
Fluorene	**0.440**	**0.392**	0.500	0.500	88	78	60 - 104	12	25	
Phenanthrene	**0.429**	**0.387**	0.500	0.500	86	77	61 - 99	10	19	
Anthracene	**0.449**	**0.406**	0.500	0.500	90	81	55 - 122	10	19	
Fluoranthene	**0.484**	**0.448**	0.500	0.500	97	90	58 - 129	8	18	
Pyrene	**0.489**	**0.451**	0.500	0.500	98	90	57 - 126	8	22	
Benzo[a]anthracene	**0.478**	**0.443**	0.500	0.500	96	89	51 - 124	8	18	
Chrysene	**0.462**	**0.433**	0.500	0.500	92	87	53 - 123	6	20	
Benzo[b]fluoranthene	**0.459**	**0.437**	0.500	0.500	92	87	53 - 126	5	18	
Benzo[k]fluoranthene	**0.478**	**0.440**	0.500	0.500	96	88	51 - 126	8	23	
Benzo[a]pyrene	**0.476**	**0.442**	0.500	0.500	95	88	52 - 127	7	21	
Indeno(1,2,3-c,d)pyrene	**0.447**	**0.419**	0.500	0.500	89	84	49 - 123	6	26	
Dibenz[a,h]anthracene	**0.429**	**0.406**	0.500	0.500	86	81	39 - 125	6	31	
Benzo[g,h,i]perylene	**0.431**	**0.404**	0.500	0.500	86	81	40 - 125	6	30	
Surrogate:										
2-Fluorobiphenyl					*72*	*67*	*38 - 105*			
Pyrene-d10					*99*	*91*	*37 - 121*			
Terphenyl-d14					*91*	*84*	*32 - 112*			

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW21R-0140**					
Laboratory ID:	04-046-01					
Methane	**3200**	500	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW26R-0115**					
Laboratory ID:	04-046-03					
Methane	**29**	2.0	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW22R-0140**					
Laboratory ID:	04-046-04					
Methane	**6.8**	0.50	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW13R-0130**					
Laboratory ID:	04-046-05					
Methane	**290**	25	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW25-0130**					
Laboratory ID:	04-046-06					
Methane	**190**	15	EPA 8015	4-12-11	4-12-11	

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Date of Report: April 15, 2011
Samples Submitted: April 7, 2011
Laboratory Reference: 1104-046
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
Methane	**ND**	0.50	EPA 8015	4-12-11	4-12-11	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0412W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.76**	**4.13**	4.42	4.42	N/A	**85**	**93**	70-130	9	25	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Page 1 of 1

Company: Parametrix
Project Number: 233-1896-098
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 04-046

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (pres.)	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	Nitrate, Sulfate	Dis. Mn ②	Dis. Pb ②	Total Pb	PAHs	Dis. Methane	BTEX (unpres.)	% Moisture
1	CHEV-GW-MW21R-0140	4/6/11	0930	GW	10		X		X										X	X	X	X	X		X			
2	CHEV-GW-MW21R-1140		0945		2																	X	X					
3	CHEV-GW-MW26R-0115		1040		9		X		X										X	X	X				X			
4	CHEV-GW-MW22R-0140		1140		9		X		X										X	X	X				X			
5	CHEV-GW-MW13R-0130		1320		14		X		X										X	X	X			X	X	X		
6	CHEV-GW-MW25-0130		1450		9		X		X										X	X	X				X			
7	CHEV-TB2-0000		0000		2		X																					

	Signature	Company	Date	Time
Relinquished	Lara Linde	PMX	4/7/11	0910
Received	Dave Theimer	Thurdodog Del.	4/7/11	9:10
Relinquished	Dave Theimer	Thurdodog Del.	4/7/11	12:00
Received		OSE	4/7/11	1200
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
① field filtered
② on unpres. containers allow to sit overnight, avoid agitating, keep sediment undisturbed
③ EIM EDDs

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 15, 2011

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 233-1896-098
Laboratory Reference No. 1104-036

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on April 6, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

Case Narrative

Samples were collected on April 5, 2011 and received by the laboratory on April 6, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

PAHs EPA 8270D/SIM Analysis

The samples formed a thick precipitate upon extraction, which prevented concentrating the extracts down completely. The PQLs are therefore elevated.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	04-036-01					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**830**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*73-121*				
Client ID:	**CHEV-GW-MW11-0130**					
Laboratory ID:	04-036-02					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*73-121*				
Client ID:	**CHEV-GW-MW11-1130**					
Laboratory ID:	04-036-03					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*73-121*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW18R-0130**					
Laboratory ID:	04-036-04					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	04-036-05					
Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Toluene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
o-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Gasoline	**ND**	100	NWTPH-Gx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	04-036-05*					
Benzene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	400	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*73-121*				

*Unpreserved Container

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	04-036-06					
Benzene	**39**	4.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**17**	4.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**9.4**	4.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	4.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**960**	400	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*73-121*				
Client ID:	**CHEV-TB1-0000**					
Laboratory ID:	04-036-08					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W1					
Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Toluene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
o-Xylene	**ND**	1.0	EPA 8021	4-7-11	4-7-11	
Gasoline	**ND**	100	NWTPH-Gx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				
Laboratory ID:	MB0408W1					
Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Toluene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
o-Xylene	**ND**	1.0	EPA 8021	4-8-11	4-8-11	
Gasoline	**ND**	100	NWTPH-Gx	4-8-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*73-121*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-036-04										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*89*	*73-121*			
Laboratory ID:	04-036-05										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*86*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	04-036-04										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**52.8**	**53.1**	50.0	50.0	ND	**106**	**106**	82-120	1	8	
Toluene	**56.5**	**56.4**	50.0	50.0	ND	**113**	**113**	84-119	0	8	
Ethyl Benzene	**57.0**	**56.8**	50.0	50.0	ND	**114**	**114**	84-122	0	9	
m,p-Xylene	**54.8**	**54.0**	50.0	50.0	ND	**110**	**108**	85-121	1	9	
o-Xylene	**54.5**	**53.6**	50.0	50.0	ND	**109**	**107**	84-121	2	9	
Surrogate:											
Fluorobenzene						*104*	*101*	*73-121*			
Laboratory ID:	04-036-05										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.1**	**47.2**	50.0	50.0	ND	**92**	**94**	82-120	2	8	
Toluene	**52.5**	**53.8**	50.0	50.0	ND	**105**	**108**	84-119	2	8	
Ethyl Benzene	**56.2**	**58.7**	50.0	50.0	ND	**112**	**117**	84-122	4	9	
m,p-Xylene	**54.3**	**56.2**	50.0	50.0	ND	**109**	**112**	85-121	3	9	
o-Xylene	**55.0**	**56.5**	50.0	50.0	ND	**110**	**113**	84-121	3	9	
Surrogate:											
Fluorobenzene						*105*	*104*	*73-121*			

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	04-036-01					
Diesel Range Organics	**ND**	0.45	NWTPH-Dx	4-7-11	4-7-11	U1
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**CHEV-GW-MW11-0130**					
Laboratory ID:	04-036-02					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	4-7-11	4-7-11	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				
Client ID:	**CHEV-GW-MW11-1130**					
Laboratory ID:	04-036-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	4-7-11	4-7-11	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*109*	*50-150*				
Client ID:	**CHEV-GW-MW18R-0130**					
Laboratory ID:	04-036-04					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	4-7-11	4-7-11	
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	04-036-05					
Diesel Range Organics	**ND**	0.28	NWTPH-Dx	4-7-11	4-7-11	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	04-036-06					
Diesel Range Organics	**0.46**	0.26	NWTPH-Dx	4-7-11	4-7-11	M
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*119*	*50-150*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	4-7-11	4-7-11	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	04-036-01						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	U1
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*100* *102*	*50-150*			

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED MANGANESE
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-036-01					
Client ID:	**CHEV-GW-MW10R-0140**					
Manganese	**1500**	10	200.8		4-11-11	
Lab ID:	04-036-02					
Client ID:	**CHEV-GW-MW11-0130**					
Manganese	**400**	10	200.8		4-11-11	
Lab ID:	04-036-03					
Client ID:	**CHEV-GW-MW11-1130**					
Manganese	**400**	10	200.8		4-11-11	
Lab ID:	04-036-04					
Client ID:	**CHEV-GW-MW18R-0130**					
Manganese	**1900**	10	200.8		4-11-11	
Lab ID:	04-036-05					
Client ID:	**CHEV-GW-MW16R-0140**					
Manganese	**ND**	10	200.8		4-11-11	
Lab ID:	04-036-06					
Client ID:	**CHEV-GW-MW4R-0120**					
Manganese	**3400**	20	200.8		4-11-11	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED MANGANESE
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0411D1

Analyte	Method	Result	PQL
Manganese	200.8	**ND**	10

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED MANGANESE
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Manganese	**1460**	**1500**	3	10	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED MANGANESE
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Manganese	200	**1660**	102	**1660**	99	0	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW10R-0140**					
Laboratory ID:	04-036-01					
Methane	**590**	50	EPA 8015	4-11-11	4-11-11	
Client ID:	**CHEV-GW-MW11-0130**					
Laboratory ID:	04-036-02					
Methane	**310**	25	EPA 8015	4-11-11	4-11-11	
Client ID:	**CHEV-GW-MW11-1130**					
Laboratory ID:	04-036-03					
Methane	**340**	25	EPA 8015	4-11-11	4-11-11	
Client ID:	**CHEV-GW-MW18R-0130**					
Laboratory ID:	04-036-04					
Methane	**4300**	500	EPA 8015	4-11-11	4-11-11	
Client ID:	**CHEV-GW-MW16R-0140**					
Laboratory ID:	04-036-05					
Methane	**4.1**	0.50	EPA 8015	4-11-11	4-11-11	
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	04-036-06					
Methane	**740**	50	EPA 8015	4-11-11	4-11-11	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0411W1					
Methane	**ND**	0.50	EPA 8015	4-11-11	4-11-11	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0411W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**4.04**	**4.18**	4.42	4.42	N/A	**91**	**95**	70-130	3	25	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW4R-0120**					
Laboratory ID:	04-036-06					
Naphthalene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
2-Methylnaphthalene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
1-Methylnaphthalene	**4.7**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthylene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthene	**3.3**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Fluorene	**2.3**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Phenanthrene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Anthracene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Fluoranthene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Pyrene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Chrysene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[b]fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[k]fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Indeno(1,2,3-c,d)pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Dibenz[a,h]anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[g,h,i]perylene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*38 - 105*				
Pyrene-d10	*84*	*37 - 121*				
Terphenyl-d14	*81*	*32 - 112*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

PAHs by EPA 8270D/SIM
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW4R-1120**					
Laboratory ID:	04-036-07					
Naphthalene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
2-Methylnaphthalene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
1-Methylnaphthalene	**4.9**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthylene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Acenaphthene	**3.4**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Fluorene	**2.3**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Phenanthrene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Anthracene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Fluoranthene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Pyrene	**ND**	1.0	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Chrysene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[b]fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[k]fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[a]pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Indeno(1,2,3-c,d)pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Dibenz[a,h]anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Benzo[g,h,i]perylene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-8-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*38 - 105*				
Pyrene-d10	*85*	*37 - 121*				
Terphenyl-d14	*85*	*32 - 112*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

PAHs by EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W1					
Naphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
2-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
1-Methylnaphthalene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Acenaphthylene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Acenaphthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Fluorene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Phenanthrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Anthracene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Fluoranthene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Pyrene	**ND**	0.10	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[a]anthracene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Chrysene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[k]fluoranthene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[a]pyrene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270/SIM	4-7-11	4-7-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*38 - 105*				
Pyrene-d10	*101*	*37 - 121*				
Terphenyl-d14	*94*	*32 - 112*				

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

PAHs by EPA 8270D/SIM
SB/SBD QUALITY CONTROL
(with silica gel clean-up)

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0407W1 DUP									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.373**	**0.321**	0.500	0.500	75	64	38 - 110	15	35	
Acenaphthylene	**0.443**	**0.392**	0.500	0.500	89	78	47 - 120	12	30	
Acenaphthene	**0.412**	**0.370**	0.500	0.500	82	74	46 - 113	11	26	
Fluorene	**0.440**	**0.392**	0.500	0.500	88	78	60 - 104	12	25	
Phenanthrene	**0.429**	**0.387**	0.500	0.500	86	77	61 - 99	10	19	
Anthracene	**0.449**	**0.406**	0.500	0.500	90	81	55 - 122	10	19	
Fluoranthene	**0.484**	**0.448**	0.500	0.500	97	90	58 - 129	8	18	
Pyrene	**0.489**	**0.451**	0.500	0.500	98	90	57 - 126	8	22	
Benzo[a]anthracene	**0.478**	**0.443**	0.500	0.500	96	89	51 - 124	8	18	
Chrysene	**0.462**	**0.433**	0.500	0.500	92	87	53 - 123	6	20	
Benzo[b]fluoranthene	**0.459**	**0.437**	0.500	0.500	92	87	53 - 126	5	18	
Benzo[k]fluoranthene	**0.478**	**0.440**	0.500	0.500	96	88	51 - 126	8	23	
Benzo[a]pyrene	**0.476**	**0.442**	0.500	0.500	95	88	52 - 127	7	21	
Indeno(1,2,3-c,d)pyrene	**0.447**	**0.419**	0.500	0.500	89	84	49 - 123	6	26	
Dibenz[a,h]anthracene	**0.429**	**0.406**	0.500	0.500	86	81	39 - 125	6	31	
Benzo[g,h,i]perylene	**0.431**	**0.404**	0.500	0.500	86	81	40 - 125	6	30	
Surrogate:										
2-Fluorobiphenyl					*72*	*67*	*38 - 105*			
Pyrene-d10					*99*	*91*	*37 - 121*			
Terphenyl-d14					*91*	*84*	*32 - 112*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 4-7-11

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0140	04-036-01	**ND**	0.050
CHEV-GW-MW11-0130	04-036-02	**ND**	0.050
CHEV-GW-MW11-1130	04-036-03	**ND**	0.050
CHEV-GW-MW18R-0130	04-036-04	**0.35**	0.050
CHEV-GW-MW16R-0140	04-036-05	**ND**	0.050
CHEV-GW-MW4R-0120	04-036-06	**ND**	0.050

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 4-7-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0407W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0407W1	2.13	2.00	107	86-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-036-03	ND				
Matrix Spike	2.18	2.00	109	84-123	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-036-03	ND	ND	NA	11	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

SULFATE
ASTM D516-02

Date Analyzed: 4-7-11

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0140	04-036-01	**ND**	5.0
CHEV-GW-MW11-0130	04-036-02	**ND**	5.0
CHEV-GW-MW11-1130	04-036-03	**ND**	5.0
CHEV-GW-MW18R-0130	04-036-04	**7.4**	5.0
CHEV-GW-MW16R-0140	04-036-05	**ND**	5.0
CHEV-GW-MW4R-1120	04-036-06	**110**	25

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 4-7-11

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0407W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0407W1	10.1	10.0	101	89-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-006-02	10.9				
Matrix Spike	20.4	10.0	95	83-112	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-006-02	10.9	10.9	0	7	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

ALKALINITY
SM 2320B

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0140	04-036-01	**230**	20
CHEV-GW-MW11-0130	04-036-02	**70**	20
CHEV-GW-MW11-1130	04-036-03	**66**	20
CHEV-GW-MW18R-0130	04-036-04	**250**	20
CHEV-GW-MW16R-0140	04-036-05	**ND**	20
CHEV-GW-MW4R-0120	04-036-06	**2300**	20

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

ALKALINITY
SM 2320B
QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0411W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0411W1	94.0	100	94	90-114	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-036-03	66.0	68.0	3	8	

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E

Date Analyzed: 4-8-11

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW10R-0140	04-036-01	**6.8**	2.0
CHEV-GW-MW11-0130	04-036-02	**6.0**	2.0
CHEV-GW-MW11-1130	04-036-03	**5.5**	2.0
CHEV-GW-MW18R-0130	04-036-04	**2.4**	2.0
CHEV-GW-MW16R-0140	04-036-05	**8.7**	2.0
CHEV-GW-MW4R-0120	04-036-06	**230**	20

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Date of Report: April 15, 2011
Samples Submitted: April 6, 2011
Laboratory Reference: 1104-036
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 4-8-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0408W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0408W1	55.7	50.0	111	101-125	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-036-02	5.99				
Matrix Spike	60.3	50.0	109	99-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-036-02	5.99	6.24	4	11	

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number: 233-1896-098
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days)
(TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 04-036

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (pres.)	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	Dis. Mn ②	Dis. Methane	PAHs	Nitrate, Sulfate	Alk., Chloride	Gx/BTEX (unpres.) ②	% Moisture
1	CHEV-GW-MW10R-0140	4/5/11	0935	GW	9		X		X												X	X		X	X		
2	CHEV-GW-MW11-0130		1040				X		X												X	X		X	X		
3	CHEV-GW-MW11-1130		1100				X		X												X	X		X	X		
4	CHEV-GW-MW18R-0130		1235				X		X												X	X		X	X		
5	CHEV-GW-MW16R-0140		1335		14		X		X												X	X		X	X	X	
6	CHEV-GW-MW4R-0120		1510		10		X		X												X	X	X	X	X		
7	CHEV-GW-MW4R-1120		1520		1																		X				
8	CHEV-TB1-0000		0000		2		X																				

	Signature	Company	Date	Time
Relinquished	Lora Linde	PMX	4/6/11	0905
Received		Thunderbird	4/6/11	9:05
Relinquished		Thunderbird Dr.	4/6/11	13:45
Received		CDE	4/6/11	1345
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
① field filtered
② on unpres. containers allow to sit overnight, avoid agitating keep sediment settled during analysis
③ Eim EDDs

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 18, 2011

David Dinkuhn
Parametrix, Inc.
4660 Kitsap Way, Suite A
Bremerton, WA 98312

Re: Analytical Data for Project 233-1896-098
Laboratory Reference No. 1104-051

Dear David:

Enclosed are the analytical results and associated quality control data for samples submitted on April 8, 2011.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

Case Narrative

Samples were collected on April 7, 2011 and received by the laboratory on April 8, 2011. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Sulfate ASTM D516-02 Analysis

Sample CHEV-GW-MW27-0120 (04-051-03) PQL was increased due to sample interference.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	04-051-01					
Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Toluene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**130**	100	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*73-121*				
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	04-051-01*					
Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Toluene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**1.5**	1.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**280**	100	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*73-121*				
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	04-051-02					
Benzene	**280**	4.0	EPA 8021	4-12-11	4-12-11	
Toluene	**11**	4.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**220**	4.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**300**	4.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**11**	4.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**4800**	400	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*73-121*				

*Unpreserved Container

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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	04-051-02*					
Benzene	**170**	4.0	EPA 8021	4-12-11	4-12-11	
Toluene	**7.6**	4.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**120**	4.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**180**	4.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**6.7**	4.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**3100**	400	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*104*	*73-121*				
Client ID:	**CHEV-GW-MW27-0120**					
Laboratory ID:	04-051-03					
Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Toluene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**ND**	100	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*73-121*				
Client ID:	**CHEV-TB3-0000**					
Laboratory ID:	04-051-04					
Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Toluene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**ND**	100	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				

*Unpreserved Container

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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Toluene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
o-Xylene	**ND**	1.0	EPA 8021	4-12-11	4-12-11	
Gasoline	**ND**	100	NWTPH-Gx	4-12-11	4-12-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*73-121*				
Laboratory ID:	MB0413W1					
Benzene	**ND**	1.0	EPA 8021	4-13-11	4-13-11	
Toluene	**ND**	1.0	EPA 8021	4-13-11	4-13-11	
Ethyl Benzene	**ND**	1.0	EPA 8021	4-13-11	4-13-11	
m,p-Xylene	**ND**	1.0	EPA 8021	4-13-11	4-13-11	
o-Xylene	**ND**	1.0	EPA 8021	4-13-11	4-13-11	
Gasoline	**ND**	100	NWTPH-Gx	4-13-11	4-13-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*73-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-051-03										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*89*	*73-121*			
MATRIX SPIKES											
Laboratory ID:	04-051-03										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.9**	**45.0**	50.0	50.0	ND	**94**	**90**	82-120	4	8	
Toluene	**54.6**	**55.1**	50.0	50.0	ND	**109**	**110**	84-119	1	8	
Ethyl Benzene	**57.2**	**58.5**	50.0	50.0	ND	**114**	**117**	84-122	2	9	
m,p-Xylene	**57.8**	**59.0**	50.0	50.0	ND	**116**	**118**	85-121	2	9	
o-Xylene	**57.5**	**59.1**	50.0	50.0	ND	**115**	**118**	84-121	3	9	
Surrogate:											
Fluorobenzene						*102*	*106*	*73-121*			

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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NWTPH-Dx
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	04-051-01					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	4-11-11	4-11-11	
Lube Oil Range Organics	**ND**	0.42	NWTPH-Dx	4-11-11	4-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*124*	*50-150*				
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	04-051-02					
Diesel Range Organics	**0.82**	0.27	NWTPH-Dx	4-11-11	4-11-11	M
Lube Oil Range Organics	**ND**	0.43	NWTPH-Dx	4-11-11	4-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*108*	*50-150*				
Client ID:	**CHEV-GW-MW27-0120**					
Laboratory ID:	04-051-03					
Diesel Range Organics	**ND**	0.26	NWTPH-Dx	4-11-11	4-11-11	
Lube Oil Range Organics	**ND**	0.41	NWTPH-Dx	4-11-11	4-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*134*	*50-150*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NWTPH-Dx
QUALITY CONTROL
(with acid/silica gel clean-up)

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0411W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	4-11-11	4-11-11	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	4-11-11	4-11-11	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*134*	*50-150*				

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	04-051-03						
	ORIG	DUP					
Diesel Range Organics	**ND**	**ND**			NA	NA	
Lube Oil Range Organics	**ND**	**ND**			NA	NA	
Surrogate:							
o-Terphenyl			*134* *132*	*50-150*			

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

ALKALINITY
SM 2320B

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	04-051-01	**120**	20
CHEV-GW-MW9R-0140	04-051-02	**730**	20
CHEV-GW-MW27-0120	04-051-03	**310**	20

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

ALKALINITY
SM 2320B
QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: mg CaCO3/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0411W1	ND	20

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0411W1	94.0	100	94	90-114	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-036-03	66.0	68.0	3	8	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E

Date Analyzed: 4-12-11

Matrix: Water

Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	04-051-01	**ND**	2.0
CHEV-GW-MW9R-0140	04-051-02	**91**	2.0
CHEV-GW-MW27-0120	04-051-03	**9.8**	2.0

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 4-12-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0412W1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0412W1	54.3	50.0	109	101-125	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-051-03	9.77				
Matrix Spike	70.8	50.0	122	99-124	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-051-03	9.77	9.38	4	11	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Date Analyzed: 4-12-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0408F1	ND	2.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0408F1	56.8	50.0	114	95-127	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NITRATE (as Nitrogen)
EPA 353.2

Date Analyzed: 4-11-11

Matrix: Water
Units: mg /L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	04-051-01	**ND**	0.050
CHEV-GW-MW9R-0140	04-051-02	**ND**	0.050
CHEV-GW-MW27-0120	04-051-03	**ND**	0.050

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0411W1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0411W1	2.09	2.00	105	86-120	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-051-03	ND				
Matrix Spike	2.07	2.00	104	84-123	

DUPLICATE QUALITY CONTROL

Lab ID	Result	Duplicate Result	RPD	Control Limit	Flag
04-051-03	ND	ND	NA	11	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: mg /L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0408F1	ND	0.050

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0408F1	2.07	2.00	104	86-120	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

SULFATE
ASTM D516-02

Date Analyzed: 4-14-11

Matrix: Water
Units: mg/L

Client ID	Lab ID	**Result**	PQL
CHEV-GW-MW19R-0180	04-051-01	**ND**	5.0
CHEV-GW-MW9R-0140	04-051-02	**ND**	5.0
CHEV-GW-MW27-0120	04-051-03	**ND**	25

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 4-14-11

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0414W1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0414W1	10.8	10.0	108	89-114	

MATRIX SPIKE QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
04-068-02	ND				
Matrix Spike	11.0	10.0	110	83-112	

DUPLICATE QUALITY CONTROL

Lab ID	Sample Result	Duplicate Result	RPD	Control Limit	Flag
04-068-02	ND	ND	NA	7	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

SULFATE
ASTM D516-02
QUALITY CONTROL

Date Analyzed: 4-14-11

Matrix: Water
Units: mg/L

METHOD BLANK QUALITY CONTROL

Lab ID	Result	PQL
MB0414F1	ND	5.0

SPIKE BLANK QUALITY CONTROL

Lab ID	Result	Spiked Amount	Percent Recovery	Control Limit	Flag
SB0414F1	11.0	10.0	110	89-114	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METALS
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-051-01					
Client ID:	**CHEV-GW-MW19R-0180**					
Manganese	**1600**	10	200.8		4-11-11	
Lab ID:	04-051-02					
Client ID:	**CHEV-GW-MW9R-0140**					
Lead	**3.0**	1.0	200.8		4-11-11	
Manganese	**4500**	20	200.8		4-12-11	
Lab ID:	04-051-03					
Client ID:	**CHEV-GW-MW27-0120**					
Manganese	**3900**	20	200.8		4-12-11	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB0411D1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.0
Manganese	200.8	**ND**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	1.0	
Manganese	**1460**	**1500**	3	10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Analyzed: 4-11-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-036-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	**194**	97	**195**	98	0	
Manganese	200	**1660**	102	**1660**	99	0	

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

TOTAL LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-051-02					
Client ID:	**CHEV-GW-MW9R-0140**					
Lead	**170**	1.1	200.8	4-13-11	4-13-11	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	4-13-11
Date Analyzed:	4-13-11
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0413W1

Analyte	Method	Result	PQL
Lead	200.8	**ND**	1.1

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and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 4-13-11
Date Analyzed: 4-13-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-046-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**1.14**	**1.14**	0	1.1	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 4-13-11
Date Analyzed: 4-13-11

Matrix: Water
Units: ug/L (ppb)

Lab ID: 04-046-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	110	**114**	102	**110**	99	3	

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Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**CHEV-GW-MW19R-0180**					
Laboratory ID:	04-051-01					
Methane	**61**	5.0	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW9R-0140**					
Laboratory ID:	04-051-02					
Methane	**9900**	500	EPA 8015	4-12-11	4-12-11	
Client ID:	**CHEV-GW-MW27-0120**					
Laboratory ID:	04-051-03					
Methane	**8600**	500	EPA 8015	4-12-11	4-12-11	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: April 18, 2011
Samples Submitted: April 8, 2011
Laboratory Reference: 1104-051
Project: 233-1896-098

DISSOLVED METHANE by EPA 8015M
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
Methane	**ND**	0.50	EPA 8015	4-12-11	4-12-11	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0412W1										
	SB	SBD	SB	SBD		SB	SBD				
Methane	**3.76**	**4.13**	4.42	4.42	N/A	**85**	**93**	70-130	9	25	

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

Y - Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Parametrix
Project Number: 233-1896-098
Project Name: Former Chevron Property
Project Manager: D. Dinkuhn
Sampled by: L. Linde

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 04-051

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (pres.)	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	Nitrate, Sulfate	Dis. Mn ①	Dis. Pb ①	Tot. Pb ①	Dis. Methane ③	Gx/BTEX (vapors) ③		% Moisture
1	CHEV-GW-MW9R-0180	4/7/11	1000	GW	10		X		X										X	X	X				X	X		
2	CHEV-GW-MW9R-0140		1115		14		X		X										X	X	X	X	X	X	X	X		
3	CHEV-GW-MW27-0120		1350		9		X		X										X	X	X				X			
4	CHEV-TB3-0000		0000		2		X																					

	Signature	Company	Date	Time
Relinquished	Lara Linde	PMX	4/8/11	0825
Received		Thurdesday Del.	4/8/11	8:25
Relinquished		Thurdesday Del.	4/8/11	13:05
Received		OSE	4/8/11	1305
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

① field filtered
② on unpres. containers allow to sit overnight, avoid agitating, keep sediment undisturbed
③ Eim EDDs
④ Lab to preserve T. Pb from Conv. bottle

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
APR 14 2011
By Bremerton

12 April 2011

Lara Linde
Parametrix
4660 Kitsap Way, Suite A
Bremerton, WA 98312

RE: Client Project: 233-1896-098, Former Chevron Property
ARI Job No: SQ56

Dear Lara:

Please find enclosed the chain-of-custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted six water samples on April 6, 2011. The samples were analyzed for ferrous iron as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file SQ56

MDH/esj

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5056	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: Onsite Env.	Phone:	Date: 4/5/11	Ice Present?
Client Contact: David Baumeister		No. of Coolers:	Cooler Temps:
Client Project Name: Former Chevron Property			
Client Project #: 233-1896-098	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Total Ferrous Fe	Notes/Comments
CHEV-GW-MW10R-0140	4/5/11	0935	GW	1	X	
CHEV-GW-MW11-0130		1040				
CHEV-GW-MW11-1130		1100				
CHEV-GW-MW18R-0130		1235				
CHEV-GW-MW16R-0140		1335				
CHEV-GW-MW4R-0120		1510				

Comments/Special Instructions: EIM EDDs

	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Printed Name:	Lara Linde	Dave Theimer	Thunderbird	A. Volgardsen
Company:	PMX	Thunderbird		ARI
Date & Time:	4/6/11 0905	4/6/11 9:05	4/6/11 11:24	4/6/11 1124

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

SAMPLE RECEIPT

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: ~~Paramount~~ AV Onsite

Project Name: Former Chevron Property

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: AV Thunderdog

Assigned ARI Job No: SQ56

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 4.6 ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 4/6/11 Time: 1124

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:_____			
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI.....	NA	_____	

Was Sample Split by ARI : NA YES Date/Time:_____ Equipment:_____ Split by:_____

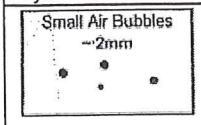
Samples Logged by: AV Date: 4/6/11 Time: 1140

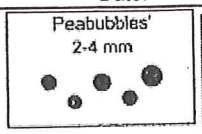
** ***Notify Project Manager of discrepancies or concerns*** **

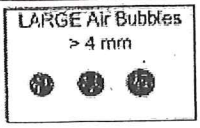
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:







Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SQ56
Client: OnSite Environmental, Inc.
Project Event: 233-1896-098
Project Name: Former Chevron Property

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CHEV-GW-MW10R-0140	SQ56A	11-7549	Groundwater	04/05/11 09:35	04/06/11 11:24
2.	CHEV-GW-MW11-0130	SQ56B	11-7550	Groundwater	04/05/11 10:40	04/06/11 11:24
3.	CHEV-GW-MW11-1130	SQ56C	11-7551	Groundwater	04/05/11 11:00	04/06/11 11:24
4.	CHEV-GW-MW18B-0130	SQ56D	11-7552	Groundwater	04/05/11 12:35	04/06/11 11:24
5.	CHEV-GW-MW16R-0140	SQ56E	11-7553	Groundwater	04/05/11 13:35	04/06/11 11:24
6.	CHEV-GW-MW4R-0120	SQ56F	11-7554	Groundwater	04/05/11 15:10	04/06/11 11:24

Printed 04/06/11

PRESERVATION VERIFICATION 04/06/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SQ56

PC: Mark
VTSR: 04/06/11

Inquiry Number: NONE
Analysis Requested: 04/06/11
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-482
Validatable Package: No
Deliverables:

Project #: 233-1896-098
Project: Former Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-7549 **SQ56A**	CHEV-GW-MW10R-0140														*							
11-7550 **SQ56B**	CHEV-GW-MW11-0130																					
11-7551 **SQ56C**	CHEV-GW-MW11-1130																					
11-7552 **SQ56D**	CHEV-GW-MW18B-0130																					
11-7553 **SQ56E**	CHEV-GW-MW16R-0140																					
11-7554 **SQ56F**	CHEV-GW-MW4R-0120																					

lab to determine preservation

SQ56: 00025

Checked By AV Date 4/6/11

METHOD BLANK RESULTS-CONVENTIONALS
SQ56-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	Blank
Ferrous Iron	04/06/11 12:00	mg/L	< 0.040 U

SQ56:00006

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Ferrous Iron by Method SM3500 FeD

Data Release Authorized:
Reported: 04/07/11
Date Received: 04/06/11
Page 1 of 1

QC Report No: SQ56-OnSite Environmental, Inc.
Project: Former Chevron Property
233-1896-098

Client/ ARI ID	Date Sampled	Matrix	Analysis Date & Batch	RL	Result
CHEV-GW-MW10R-0140 SQ56A 11-7549	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.400	12.4
CHEV-GW-MW11-0130 SQ56B 11-7550	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.200	2.66
CHEV-GW-MW11-1130 SQ56C 11-7551	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.200	2.74
CHEV-GW-MW18B-0130 SQ56D 11-7552	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.200	1.48
CHEV-GW-MW16R-0140 SQ56E 11-7553	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.040	0.094
CHEV-GW-MW4R-0120 SQ56F 11-7554	04/05/11	Groundwat	04/06/11 12:00 040611#1	0.200	5.40

Reported in mg/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

LAB CONTROL RESULTS-CONVENTIONALS
SQ56-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	LCS	Spike Added	Recovery
Ferrous Iron	04/06/11 12:00	mg/L	0.499	0.500	99.8%

SQ56 : 00008

REPLICATE RESULTS-CONVENTIONALS
SQ56-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: 04/05/11
Date Received: 04/06/11

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SQ56A Client ID: CHEV-GW-MW10R-0140					
Ferrous Iron	04/06/11	mg/L	12.4	12.4	0.0%

SQ56:00009

MS/MSD RESULTS-CONVENTIONALS
SQ56-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: 04/05/11
Date Received: 04/06/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: SQ56A Client ID: CHEV-GW-MW10R-0140						
Ferrous Iron	04/06/11	mg/L	12.4	16.1	4.00	92.5%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

12 April 2011

Lara Linde
Parametrix
4660 Kitsap Way, Suite A
Bremerton, WA 98312

RE: Client Project: 233-1896-098, Former Chevron Property
ARI Job No: SQ76

Dear Lara:

Please find enclosed the chain-of-custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted five water samples on April 7, 2011. The samples were analyzed for ferrous iron as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file SQ76

MDH/esj

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: SQ76	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: Onsite Env	Phone:	Date: 4/6/11	Ice Present?
Client Contact: David Bannerster		No. of Coolers:	Cooler Temps:
Client Project Name: Former Chevron Property			
Client Project #: 233-1896-0956	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Total Ferrous Fe	Notes/Comments
CHEV-GW-MW21R-0140	4/6/11	0930	GW	1	X	
CHEV-GW-MW26R-0115		1040				
CHEV-GW-MW22R-0140		1140				
CHEV-GW-MW13R-0130		1320				
CHEV-GW-MW25-0130		1450				

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Elm EDDs	Printed Name: Lara Linde	Printed Name: David J. Theimer	Printed Name: DAVID J. THEIMER	Printed Name: A. Volgardsen
	Company: PMX	Company: Thursday Delivery	Company: Thursday Delivery	Company: ARI
	Date & Time: 4/7/11 0910	Date & Time: 4/7/11 9:10	Date & Time: 4/7/11 10:43	Date & Time: 4/7/11 1043

SQ76 : 0956

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite

Project Name: Former Chevron Property

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: Thunderdog

Assigned ARI Job No: SQ76

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	1.1	

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 90941619

Cooler Accepted by: AV Date: 4/7/11 Time: 1043

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	(NA)	YES	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)		

Was Sample Split by ARI : (NA) YES Date/Time:_____ Equipment:_____ Split by:_____

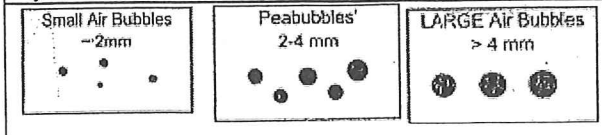
Samples Logged by: AV Date: 4/7/11 Time: 1050

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SQ76
Client: OnSite Environmental, Inc.
Project Event: 233-1896-098
Project Name: Former Chevron Property

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CHEV-GW-MW21R-0140	SQ76A	11-7640	Water	04/06/11 09:30	04/07/11 10:43
2.	CHEV-GW-MW26R-0115	SQ76B	11-7641	Water	04/06/11 10:40	04/07/11 10:43
3.	CHEV-GW-MW22R-0140	SQ76C	11-7642	Water	04/06/11 11:40	04/07/11 10:43
4.	CHEV-GW-MW13R-0130	SQ76D	11-7643	Water	04/06/11 13:20	04/07/11 10:43
5.	CHEV-GW-MW25-0130	SQ76E	11-7644	Water	04/06/11 14:50	04/07/11 10:43

Printed 04/07/11

PRESERVATION VERIFICATION 04/07/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **SQ76**

PC: Mark
VTSR: 04/07/11

Inquiry Number: NONE
Analysis Requested: 04/07/11
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-481
Validatable Package: No
Deliverables:

Project #: 233-1896-098
Project: Former Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-7640 **SQ76A**	CHEV-GW-MW21R-0140														*							
11-7641 **SQ76B**	CHEV-GW-MW26R-0115														↓							
11-7642 **SQ76C**	CHEV-GW-MW22R-0140																					
11-7643 **SQ76D**	CHEV-GW-MW13R-0130																					
11-7644 **SQ76E**	CHEV-GW-MW25-0130																					

* Lab to determine preservation

SQ76 SGS

Checked By AV Date 4/7/11

METHOD BLANK RESULTS-CONVENTIONALS
SQ76-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	Blank
Ferrous Iron	04/07/11 11:00	mg/L	< 0.040 U

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Ferrous Iron by Method SM3500 FeD

Data Release Authorized:
Reported: 04/07/11
Date Received: 04/07/11
Page 1 of 1

QC Report No: SQ76-OnSite Environmental, Inc.
Project: Former Chevron Property
233-1896-098

Client/ ARI ID	Date Sampled	Matrix	Analysis Date & Batch	RL	Result
CHEV-GW-MW21R-0140 SQ76A 11-7640	04/06/11	Water	04/07/11 11:00 040711#1	0.400	10.1
CHEV-GW-MW26R-0115 SQ76B 11-7641	04/06/11	Water	04/07/11 11:00 040711#1	0.040	0.059
CHEV-GW-MW22R-0140 SQ76C 11-7642	04/06/11	Water	04/07/11 11:00 040711#1	0.040	0.043
CHEV-GW-MW13R-0130 SQ76D 11-7643	04/06/11	Water	04/07/11 11:00 040711#1	0.400	7.94
CHEV-GW-MW25-0130 SQ76E 11-7644	04/06/11	Water	04/07/11 11:00 040711#1	0.040	1.39

Reported in mg/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

SQ76:00007

LAB CONTROL RESULTS-CONVENTIONALS
SQ76-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	LCS	Spike Added	Recovery
Ferrous Iron	04/07/11 11:00	mg/L	0.482	0.500	96.4%

SQ76:00008

REPLICATE RESULTS-CONVENTIONALS
SQ76-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: 04/06/11
Date Received: 04/07/11

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SQ76A Client ID: CHEV-GW-MW21R-0140					
Ferrous Iron	04/07/11	mg/L	10.1	9.93	1.7%

SQ76:00009

MS/MSD RESULTS-CONVENTIONALS
SQ76-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 04/07/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: 04/06/11
Date Received: 04/07/11

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: SQ76A Client ID: CHEV-GW-MW21R-0140						
Ferrous Iron	04/07/11	mg/L	10.1	13.7	4.00	90.0%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

12 April 2011

Lara Linde
Parametrix
4660 Kitsap Way, Suite A
Bremerton, WA 98312

RE: Client Project: 233-1896-098, Former Chevron Property
ARI Job No: SR00

Dear Lara:

Please find enclosed the chain-of-custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources, Inc. (ARI) accepted three water samples on April 8, 2011. The samples were analyzed for ferrous iron as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports will remain on file at ARI. Should you have any questions, please contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file SR00

MDH/bc

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: 5R00	Turn-around Requested:	Page: 1 of 1	
ARI Client Company: Onsite Env	Phone: (425) 883-3881	Date: 4/7/11	Ice Present?
Client Contact: David Baumgarter		No. of Coolers:	Cooler Temps:
Client Project Name: Former Chevron Property			
Client Project #: 233-1896-098	Samplers: L. Linde (PMX)		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested: Total Ferrous Fe	Notes/Comments
CHEV-GW-MW19R-0180	4/7/11	1000	GW	1	X	
CHEV-GW-MW9R-0140	↓	1115	↓	↓	↓	
CHEV-GW-MW27-0120	↓	1250	↓	↓	↓	

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
EIM EDDs	Printed Name: Lisa Linde	Printed Name: DAVE Theimer	Printed Name: DAVE THEIMER	Printed Name: A. Vargardsen
	Company: PMX	Company: Thunderbird Delivery	Company: Thunderbird Courier	Company: ARI
	Date & Time: 4/8/11 0825	Date & Time: 4/8 8:24	Date & Time: 4/8 - 10:20	Date & Time: 4/8/11 1020

SR00 : 000002

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Onsite

Project Name: Former Chevron Property

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:_____

Assigned ARI Job No: SR00

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	NO
Were custody papers included with the cooler?	YES	NO
Were custody papers properly filled out (ink, signed, etc.)	YES	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 2.1 ____ ____ ____ ____ ____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90041619

Cooler Accepted by: AV Date: 4/8/11 Time: 1020

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	NO
What kind of packing material was used? ...	Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other:_____		
Was sufficient ice used (if appropriate)?	NA	YES	NO
Were all bottles sealed in individual plastic bags?		YES	NO
Did all bottles arrive in good condition (unbroken)?		YES	NO
Were all bottle labels complete and legible?		YES	NO
Did the number of containers listed on COC match with the number of containers received?		YES	NO
Did all bottle labels and tags agree with custody papers?		YES	NO
Were all bottles used correct for the requested analyses?		YES	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI	NA	_____	

Was Sample Split by ARI : NA YES Date/Time:_____ Equipment:_____ Split by:_____

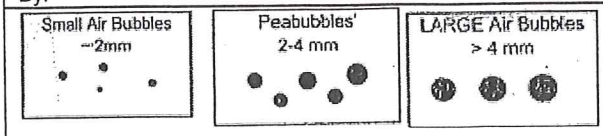
Samples Logged by: AV Date: 4/8/11 Time: 1031

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 04/08/11
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SR00

PC: Mark
VTSR: 04/08/11

Inquiry Number: NONE
Analysis Requested: 04/08/11
Contact: Baumeister, David
Client: OnSite Environmental, Inc.
Logged by: AV
Sample Set Used: Yes-482
Validatable Package: No
Deliverables:

Project #: 233-1896-098
Project: Former Chevron Property
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	AK102 <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
11-7735 **SR00A**	CHEV-GW-MW19R-0180														*							
11-7736 **SR00B**	CHEV-GW-MW9R-0140														↓							
11-7737 **SR00C**	CHEV-GW-MW27-0120														↓							

* Lab to determine Fe^{2+} preservation

SR00 00004

Checked By AV Date 4/8/11

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: SR00
Client: OnSite Environmental, Inc.
Project Event: 233-1896-098
Project Name: Former Chevron Property

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CHEV-GW-MW19R-0180	SR00A	11-7735	Groundwater	04/07/11 10:00	04/08/11 10:20
2.	CHEV-GW-MW9R-0140	SR00B	11-7736	Groundwater	04/07/11 11:15	04/08/11 10:20
3.	CHEV-GW-MW27-0120	SR00C	11-7737	Groundwater	04/07/11 12:50	04/08/11 10:20

Printed 04/08/11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

SR00 : 00006

S	Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
NA	The flagged analyte was not analyzed for
NR	Spiked compound recovery is not reported due to chromatographic interference
NS	The flagged analyte was not spiked into the sample
M	Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
M2	The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
Y	The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
EMPC	Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
C	The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
P	The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference
X	Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
Z	Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

SR00 : 00007

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

SR00 : 00008

METHOD BLANK RESULTS-CONVENTIONALS
SR00-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/11/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	Blank
Ferrous Iron	04/08/11 11:30	mg/L	< 0.040 U

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Ferrous Iron by Method SM3500 FeD

Data Release Authorized:
Reported: 04/11/11
Date Received: 04/08/11
Page 1 of 1

QC Report No: SR00-OnSite Environmental, Inc.
Project: Former Chevron Property
233-1896-098

Client/ ARI ID	Date Sampled	Matrix	Analysis Date & Batch	RL	Result
CHEV-GW-MW19R-0180 SR00A 11-7735	04/07/11	Groundwat	04/08/11 11:30 040811#1	0.040	0.839
CHEV-GW-MW9R-0140 SR00B 11-7736	04/07/11	Groundwat	04/08/11 11:30 040811#1	2.00	49.4
CHEV-GW-MW27-0120 SR00C 11-7737	04/07/11	Groundwat	04/08/11 11:30 040811#1	0.800	27.6

Reported in mg/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

REPLICATE RESULTS-CONVENTIONALS
SR00-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/11/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: 04/07/11
Date Received: 04/08/11

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: SR00B Client ID: CHEV-GW-MW9R-0140					
Ferrous Iron	04/08/11	mg/L	49.4	49.2	0.4%

LAB CONTROL RESULTS-CONVENTIONALS
SR00-OnSite Environmental, Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Groundwater
Data Release Authorized:
Reported: 04/11/11

Project: Former Chevron Property
Event: 233-1896-098
Date Sampled: NA
Date Received: NA

Analyte	Date/Time	Units	LCS	Spike Added	Recovery
Ferrous Iron	04/08/11 11:30	mg/L	0.474	0.500	94.8%

APPENDIX K

ORC Injection Field Logs

5/26/11 Overcast, 46° F, slight breeze

0745 Arrived onsite ESN waiting for gate to be opened. Discussed work to be completed for the day. Dan and Julie with ESN on site today.

ESN has the drill rig with a Power probe 9500 PTC equipped. Equipment includes a support trailer and an additional truck.

0815 Connected to City of Bremerton water supply

0830 Unloaded ORC. A total of 30-25 lbs buckets of ORC onsite.

Plan to use 5.5 lbs ORC per foot for half dosing with 3 gal water mix per foot

0900 Began boring on first probe hole. ESN does do use the asphalt saw down to 4' depth and then install #8 Bentonite to provide a seal. Then Bore through the Bentonite with injection head down to depth. Ran approx 3 gal clear water through pump to clear out ORC. Half dose ORC 15' deep

0930 Started Borehole #2 Half Dose ORC. 15' deep.

1000 Started Borehole #3 Half dose ORC. 15 ft deep.

1015 Borehole #2 had a liquid discharge approximately 3 feet from boring. We plan to use less water and slow holes to allow pressure to dissipate.

1030 Started Borehole #4. Half dose ORC. 15' deep.

1045 Borehole #4 had a liquid discharge at surface approximately six and ten feet away to the West.

1050 Started Borehole #5. Half dose ORC. 15' deep.

1110 Borehole #5 had a liquid discharge at surface approximately 15 feet to the west.

1130 Began Borehole #6. Double dose ORC. 14' deep.

1205 Began Borehole #7. Normal dose ORC. 15' deep.

1240 Began Borehole #8. Normal dose ORC. 17' deep

1310 Began Borehole #9. Normal dose ORC. 16' deep.

1340 - Began Borehole #10. Half dose ORC. 14' deep.

1400 Began Borehole #11. Half dose ORC. 14' deep.

1420 Began Borehole #12. Normal dose ORC. 15' deep.

1440 Began Borehole #13 Normal dose ORC. 15' deep.

1505 Began Borehole #14. Normal dose ORC 15' deep.

1530 Completed Borehole #14. Finished boring for the day.

1600 Offsite Locked Gate

BF 5/26/11

5/27/11 Partly Cloudy, 52°F, slight Breeze

0845 ESN onsite Dan and Chris for ESN. Discussed work to be conducted today.

Bill Davis, D. O'Keefe, B. Webb on for site visit. ESN brought 36 buckets of ORC to site. Each bucket is 25 lbs.

0930 Started Borehole #15 Normal Dose ORC - 14' deep. Measured Depth to water in 3 wells. MW-21R = 9 ft MW-9R = 11 feet MW-4R = 11 feet

0950 Started Borehole #16 Normal Dose ORC. 15' deep

1015 Started Borehole #17 Normal Dose ORC 15' deep.

1035 Started Borehole #18 Normal Dose ORC 15' deep.

1100 Started Borehole #19 Normal Dose ORC. 15' deep.

1120 Started Borehole #20 Normal Dose ORC. 15' deep

1145 Started Borehole #21 Normal Dose ORC 15' deep.

1215 Started Borehole #22 Normal Dose ORC 14' deep. Stopped at 14' due to refusal of probe May have contacted 18" storm drain.

1240 Started Borehole #23. Normal Dose ORC 15' deep

1310 Started Borehole #24 Normal Dose ORC 15' deep

1340 Started Borehole #25. Normal Dose ORC 15' deep.

1405 Started Borehole #26. Normal Dose ORC 15' deep.

1440 Started Borehole #27 Normal Dose ORC - 15' Deep.

1510 Started Borehole #28 Normal Dose ORC. 15' Deep.

1530 Completed Borehole #28. Cleaned up site.

1600 Offsite

Brij 5/27/11

5/31/11 Partly Cloudy, normal 55°F

0800 Arrived onsite. Met Dan and Chris of ESN and discussed work for the day.

ESN brought 160 buckets of ORC to site. Each bucket is 25 lbs.

OBG measured depth to water in 3 wells. MW-21R = 9 ft, MW-9R = 10 ft, MW-4R = 11 ft.

0940 Started Borehole #29. Normal Dose ORC. 15' Deep.

0905 Started Borehole #30. Normal Dose ORC. 14' Deep

0930 Started Borehole #31. Double Dose ORC. 14' Deep.

1005 Started Borehole #32 Normal Dose ORC 15' Deep.

1030 Started Borehole #33 Double Dose ORC - 15' Deep.

1115 Started Borehole #34. Double Dose ORC. 14' Deep.

1155 Started Borehole #35. Normal Dose ORC 15' Deep

1220 Started Borehole #36 Normal Dose ORC. 15' Deep.

1255 Started Borehole #37. Double Dose ORC. 15' Deep.

1330 Started Borehole #38. Double Dose ORC. 15' Deep

1405 Started Borehole #39. Double Dose ORC. 14' Deep

Borehole #39 had a discharge 10' to the west. Stopped pump and allowed to reach equilibrium.

1445 Started Borehole #40. Normal Dose ORC. 15' Deep.

1550 Started Borehole #41 Normal Dose ORC. 15' Deep

1615 Started Borehole #42. Normal Dose ORC 15' Deep.

1630 Finished Borehole #42. 7-25 lb buckets left today. Cleaned up site.

1700 Looked Good Offsite.

Brij 5/31/11

6/1/2011 Overcast 60°F

0800 ON SITE
0830 STARTED BH 43 15' DEEP DOUBLE DOSE
0845 DTW IN MW-9R ~10' BGS
0855 DTW IN MW-2S ~8.5' BGS
0900 DTW IN MW-4R ~10.5' BGS
0905 DTW IN MW-2IR ~8.5' BGS
0925 STARTED BH44, 15' DEEP DOUBLE DOSE
0950 BH45, 15' DEEP SINGLE DOSE
1005 BH46 15' DEEP SINGLE DOSE
1030 BH 47 15' DEEP DOUBLE DOSE
1115 BH 48 15' DEEP HALF DOSE
1130 BH 49 15' DEEP HALF DOSE
1200 BH50 15' DEEP HALF DOSE
1220 BH 51 15' DEEP HALF DOSE
1300 BH52 15' DEEP HALF DOSE
1335 BH 53 15' Deep Half Dose ORC
1400 BH54 14' Deep Double Dose ORC.
1435 BH 55 14' Deep Double Dose ORC.
1515 BH 56 15' Deep Double Dose ORC.
1555 BH57 15' Deep Double Dose ORC.
1625 Finished BH 57. Cleaned up site.
1645 Locked Gate. Offsite.

Bi y 6/1/11

6/2/11 Overcast. Slight wind 52°F

0755 E&N onsite. Dan and Chris arrived with 63 buckets ORC.
0835 BH 58 14' Deep Double Dose ORC.
0905 BH 59 15' Deep Half Dose ORC.
0925 BH 60 15' Deep Half Dose ORC.
0950 BH61 15' Deep Half Dose ORC.
1010 BH 62 15' Deep Half Dose ORC.
1030 BH 63 15' Deep Half Dose ORC.
1050 BH 64 15' Deep Half Dose ORC.
1120 BH 65 15' Deep Half Dose ORC.
1140 BH66 15' Deep Half Dose ORC.
1200 BH 67 15' Deep Half Dose ORC.
1225 BH 68 15' Deep Half Dose ORC.
1300 BH 69 15' Deep Half Dose ORC.
1315 BH 70 15' Deep Half Dose ORC.
BH 70 had a very strong gasoline odor when the rods were pulled.
1345 BH 71 15' Deep Half Dose ORC.
1405 BH 72 15' Deep Half Dose ORC.
1440 BH 73 15' Deep Half Dose ORC.
1505 BH 74 15' Deep Half Dose ORC.
1545 BH 75 15' Deep Half Dose ORC.
1615 BH 76 15' Deep Half Dose ORC.
1635 Completed BH 76. Cleaned up site.
33 buckets ORC left for the day.
1655 Locked Gate. Offsite. Bi y 6/2/11

6/3/11 Partly Cloudy No wind. 60°F

0750 ESN onsite. Don and Chris brought 5? buckets of ORC onsite.

0815 measured depth to water MW-4R = 10 ft
MW-25 = 8 ft

0835 BH77 15' Deep Half Dose ORC.
0910 BH78 15' Deep Normal Dose ORC.
0935 BH79 14' Deep Normal Dose ORC
1000 BH80 14' Deep Normal Dose ORC
1030 BH81 14' Deep Normal Dose ORC.
1105 BH82 15' Deep Normal Dose ORC.
1130 BH83 15' Deep Normal Dose ORC.
1200 BH84 15' Deep Normal Dose ORC.
1220 BH85 14' Deep Normal Dose ORC.
1255 BH86 14' Deep Normal Dose ORC.
1320 BH87 15' Deep Normal Dose ORC.
1350 BH88 15' Deep Normal Dose ORC.
1415 BH89 15' Deep Normal Dose ORC.
1445 BH90 15' Deep Normal Dose ORC.
1510 BH91 14' Deep Normal Dose ORC.
1545 BH92 16' Deep Normal Dose ORC.
1615 Completed BH92. cleaned up site.
17 buckets of ORC remaining for the day
1650 Locked Gate off site.

BL 6/3/11

6/6/11 Overcast 55°F

0750 ESN onsite. Don and Chris arrived with 41 buckets ORC.
0820 BH93 14' Deep Double Dose ORC.
0915 BH94 14' Deep Normal Dose ORC.
0950 BH95 14' Deep Normal Dose ORC.
1010 BH95 Developed a surface discharge approximately 8 ft east of hole. Slowed pump speed to minimum and still discharging. Moved to next hole and will inject additional left-over ORC into next hole. Dosed with approximately 33 lbs ORC
1020 BH96 15' Deep Normal ORC Dose plus 22 lbs
1105 BH97 15' Deep Normal Dose ORC.
1130 BH98 15' Deep Half Dose ORC.
1155 BH99 15' Deep Normal Dose ORC.
1220 BH100 15' Deep Normal Dose ORC.
1245 BH101 15' Deep Normal Dose ORC.
1315 BH102 14' Deep Normal Dose ORC.
1345 BH103 15' Deep Normal Dose ORC.
1420 BH104 15' Deep Normal Dose ORC.
1500 BH105 15' Deep Normal Dose ORC
1530 BH106 15' Deep Normal Dose ORC.
1600 BH107 15' Deep Normal Dose ORC.
1630 BH108 15' Deep Normal Dose ORC.
1710 Finished BH108. cleaned up site
1800 Locked Gate offsite

BL 6/6/11