ADDENDUM TO
INDEPENDENT REMEDIAL ACTION REPORT
CASE POWER AND EQUIPMENT

SUNNYSIDE, WASHINGTON

Prepared for

Case Power and Equipment

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Addendum to Independent Remedial Action Report
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The material and data in this report were prepared under the supervision and direction of the undersigned.

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1 INTRODUCTION

This addendum to the Independent Remedial Action Plan (IRAP) Report (EMCON, January 24, 1995) presents the results of the expanded environmental site assessment and remedial action conducted by EMCON at the former Case Corporation (Case) facility located at 405 Scoon Road, in Sunnyside, Washington. All work was performed in the vicinity of the steam cleaning pad on the west side of the building in general accordance with the proposal for soil sampling, monitoring well installation, and groundwater monitoring dated May 16, 1995, and the proposal for remediation of impacted soils dated July 13 and November 3, 1995.

1.1 Objectives

The purpose of the expanded environmental assessment was to further assess the lateral extent of the soil contamination in the vicinity of the steam cleaning pad, and to evaluate the potential for groundwater contamination in the area of impacted soil. The intent of the assessment was to gather information requested by the Washington State Department of Ecology (Ecology) based on their review of the IRAP Report during April 1995.

Based on the results of the expanded environmental assessment, independent cleanup actions were performed consistent with the Washington State Model Toxics Control Act (MTCA). The remedial actions were performed to remove petroleum hydrocarbon impacted soil and reduce the potential for impact to the groundwater so that institutional controls would not be incorporated into the property deed.

1.2 Background

The site is located at 405 Scoon Road in the city of Sunnyside, Yakima County, Washington (Figure 1). The property is approximately 2 acres in size and slopes slightly to the east with less than 5 feet of vertical relief across the site.

There is a steel and block structure (main building) located in the north central portion of the property and a wood frame storage building located along the northern property boundary. The main building, approximately 10,400 square feet in size, houses the retail parts, sales, and service portions of the business. The storage building houses the bulk

consumable storage area and is approximately 800 square feet in size. The remainder of the site is used for equipment display purposes and outdoor storage (Figure 2).

The areas immediately adjacent to the buildings and the high traffic areas are covered with crushed rock and gravel. The equipment preparation/steam cleaning pad, located west of the main building, is constructed of concrete. The remainder of the site is native soil.

The property owner, Mr. Gerritt Schilperoort of Sunnyside, Washington, reportedly developed the property in 1958. The site has previously been operated by International Harvester from 1958 to 1976, Empire Equipment from 1976 to 1981, Deruyter Equipment from 1981 to 1987, and Case Power and Equipment from 1987 to December 1994. The dealership was purchased by JRJ Equipment Company from Case Corporation in December 1994.

1.2.1 Previous Investigations

Conestoga-Rovers & Associates, Inc. (CRA), of Rosemont, Illinois completed two investigations at the site for Case. A Phase 1 Environmental Assessment of the facility was conducted in 1991 and updated by CRA in 1993. The updated phase 1 report (November 1993) documented existing site conditions and provided recommendations for mitigating potential environmental concerns.

CRA also was retained to oversee remediation of soils impacted by a suspected release of waste oil and antifreeze in April 1992. The suspected release was believed to be the result of spillage while transferring waste oil and waste antifreeze to an aboveground storage tank and/or as a result of leakage of radiator fluid from a vehicle during servicing. Remedial activities included the removal of impacted soil from the south end of the steam cleaning pad and the collection and analysis of soil samples. CRA reported (July 1993) that the confirmation soil samples indicated the impacted soil associated with the release had been removed.

Prior to Case Corporation vacating the site, a Phase 1 Environmental Assessment Update was conducted by EMCON to document site environmental conditions. The Phase 1 Environmental Assessment Update, dated September 13, 1994, identified three areas with total petroleum hydrocarbon (TPH) impacted soils. The first area was located along the western interior of the bulk storage building. The second area was located west of the main building adjacent to the equipment preparation/steam cleaning pad. The third area was located south of the main building. In October 1994, analytical testing verified that all three areas were impacted with TPH above MTCA Method A cleanup levels.

In late October 1994, approximately 150 tons of petroleum impacted soils were excavated from the three areas and transported to the Columbia Ridge Landfill in Arlington, Oregon. Excavation on the west and north edges of the steam cleaning pad (see Figure 3) was

conducted to the maximum extent possible given the location of existing site structures. Impacted soil was left in place along the east wall of the excavation beneath the concrete steam cleaning pad. TPH as diesel and TPH as oil were detected on the east excavation sidewall at concentrations of 4,200 and 23,000 mg/kg, respectively. Analytical test results from the soil samples collected from the bottom of the excavation did not indicate concentrations of TPH above the method reporting limits.

Results of the cleanup action were presented to Ecology on January 24, 1995, in an Independent Remedial Action Report. In a letter dated April 27, 1995, Ecology requested additional information regarding the extent of soil contamination remaining beneath the steam cleaning pad and that the groundwater in the vicinity of the steam cleaning pad be characterized.

1.3 Scope of Work

An expanded environmental assessment was conducted in response to Ecology's requests. The primary tasks of the expanded environmental assessment included:

- Drilling and installing three monitoring wells;
- Hand auguring three soils borings;
- Collecting soil and groundwater samples;
- Coordinating soil and groundwater analytical tests;
- Determining the groundwater flow direction; and
- Reviewing the data and preparing a remedial action plan.

Information collected during the expanded environmental assessment was utilized in the preparation of a remedial action plan. Remedial actions were conducted in two phases and included:

- Removal of the cracked and broken portion of the steam cleaning pad and portions of the concrete floor inside the building;
- Drilling and sampling of exploratory borings within the building to determine the eastern extent of soil contamination;
- Excavation, stockpiling, and disposal of petroleum hydrocarbon impacted soil;
- Collection and analysis of verification soil samples;

- Backfilling the excavation and replacing the concrete pad; and
- Preparation of this report.

The following sections summarize the investigation methods and findings and the remedial actions conducted at the site.

2 EXPANDED ENVIRONMENTAL ASSESSMENT METHODS

2.1 Boring and Monitoring Well Installation

2.1.1 Drilling and Soil Sampling Methods

On May 31, 1995, six borings were advanced in the vicinity of the steam cleaning pad by Environmental West Exploration, Inc. of Spokane, Washington under the observation of an EMCON geologist. Three soil borings were hand augured beneath the concrete pad to facilitate soil sample collecting and three borings were drilled around the pad for the purpose of soil sampling and monitoring well installation. Prior to drilling, all equipment was cleaned with a high pressure steam cleaner. The location of the borings are shown on Figure 3.

Steam Cleaning Pad Borings Three soil borings (B-1, B-2, and B-3) were hand augured beneath the concrete steam cleaning pad to a depth of 5 feet below ground surface (bgs). Prior to auguring the borings, the concrete pad was cored by a local concrete coring contractor. The borings were advanced utilizing a 3-inch diameter hand auger.

Soil samples were collected for laboratory analysis from 2 and 4 feet bgs utilizing 6-inch long, 1.5-inch diameter brass liners and a hand driven sampler. Following each sample drive, the brass liner was immediately retrieved and wrapped in aluminum foil, capped with plastic end caps, labeled, logged on the chain of custody form, and placed in a chilled cooler for transport to the laboratory.

After the soil samples were collected the borings were backfilled with bentonite. A concrete cap was installed over the boring flush with the existing concrete pad.

Monitoring Well Borings Three borings designated MW-1, MW-2 and MW-3 were advanced to a maximum depth of 15.5 feet bgs using a Mobile B-61 truck-mounted drill rig and 4¼-inch inside-diameter (i.d.), 8-inch outside-diameter (o.d.) hollow-stem augers. Prior to drilling, all equipment was cleaned with a high pressure steam cleaner.

Soil samples were collected for laboratory analysis and lithologic evaluation from undisturbed soil ahead of the auger bit using a 2-foot long, 2¼-inch o.d. split-spoon

sampler with clean brass liners. The sampler was driven with a 140-pound hammer using a 30-inch stroke. Blow counts were recorded for each 0.5 foot the sampler was advanced.

Following each sample drive, the sampler was retrieved and split into three sections. One 6-inch long brass liner was immediately retrieved (generally the 6-inch liner placed nearest to the sampler shoe) and wrapped in aluminum foil, capped on each end with plastic end caps, labeled, logged on the chain of custody form, and placed in a chilled cooler for transport to the laboratory. A second quantity of soil was placed in a 4 ounce jar for screening purposes. The remaining soil was described on an exploratory drilling log in general accordance with the Unified Soil Classification System. Subsurface conditions noted on the drilling log include lithology, density, and moisture content of the soil. The drilling action, drill speed, and examination of drill cuttings were used in conjunction with the examination of the soil samples to make geologic interpretations. The exploratory boring logs are provided in Appendix A.

Soil samples collected from the boring were screened for the presence of volatile organic compounds with a portable photoionization detector (PID) at the time of collection. This is a subjective analysis, affected by, among other influences, climate (e.g., temperature and humidity), soil type and conditions, instrument calibration, and operation. The intent of this analysis is to quantitatively compare samples.

A PID (Photovac Microtip Model MP-100), calibrated to 100 parts per million isobutylene, was used to obtain the screening measurements. A sample of the soil was placed in a clean jar and aluminum foil was placed over the mouth of the jar. The jar was then allowed to stand in the field vehicle for approximately one-quarter hour. The aluminum foil was then punctured with the PID probe and the maximum reading in the headspace above the soil was recorded on the boring log.

2.1.2 Monitoring Well Installation

Monitoring wells were constructed in borings MW-1, MW-2, and MW-3 on May 31, 1995. Each monitoring well was constructed of flush-threaded, 2-inch diameter Schedule 40 PVC pipe with 0.010-inch factory slotted PVC screen. A flush threaded bottom cap was placed below the screen section in MW-1. The bottom cap and pipe section below the slotted interval was approximately 1 foot in length. For precise placement of the slotted screen interval in MW-2 and MW-3, the base of the screen was cut and slip caps were secured onto the bottom. A filter pack of #10-20 Colorado silica sand was placed around each well screen and extended a minimum of 1½ foot above the screened interval. Bentonite chips (½-inch minus) were placed above the filter pack to approximately ½ foot bgs. The remaining annular space was sealed with concrete. A flush mounted, steel monument was cemented in place over the well. Each monitoring well was labeled with a unique well identification number provided by Ecology.

The well screen and casing assembly, filter pack sand, and bentonite chip seal were installed concurrent with the removal of the 4-inch i.d. hollow-stem auger from the borehole. The total depth of the boring, the bottom depth of the well, and the placement depth of filter pack sand, bentonite chips, and concrete were measured to the nearest 0.1-foot using a fiberglass tape with a stainless steel weight. Monitoring well construction details are summarized on Table 1 and in Appendix A.

2.1.3 Monitoring Well Development

The well screen zone in each monitoring well was developed by surging and pumping the infiltrated sediments from the well with a 1.7-BK pump. Surging and bailing was continued until a minimum of ten casing volumes of groundwater were removed from each well.

2.1.4 Monitoring Well Elevation Survey

The top of PVC casing of each new monitoring well was surveyed for vertical elevation to the nearest 0.01 foot. The survey was conducted by an EMCON geologist with a Sokkia Set 5 auto-level. The monitoring well elevations were surveyed with respect to the MW-3 PVC casing rim elevation. The rim of MW-3 was given an arbitrary elevation of 100.00 feet. The surveyed elevations are presented on Table 2.

2.1.5 Depth to Water

Depth-to-water (DTW) was measured in each monitoring well on June 1, 1995, before each well was purged for sampling, and on July 26, 1995, during the remedial action phase of work. The DTW measurements were taken with an electric water-level sounder using the top of PVC casing as the reference point. The DTW values were converted to groundwater elevations by subtracting the DTW from the surveyed top of casing elevation.

2.2 Groundwater Sampling

Groundwater samples were collected for chemical analysis from monitoring wells MW-1, MW-2 and MW-3 on June 1, 1995. The samples were collected after a minimum of three casing volumes of groundwater was purged from each monitoring well and the pH, specific conductance, and temperature had stabilized to within 10 percent between consecutive readings. Standing water in the casing was purged from the monitoring wells using Tygon® tubing and a peristaltic pump.

Groundwater samples were collected in new 1.5-inch diameter disposable polyethylene bailers and gently decanted into the appropriate sample vial provided by the laboratory. A

duplicate groundwater sample was collected from monitoring well MW-1. Each sample container was labeled, placed in a chilled cooler, logged on a chain of custody form, and transported to the laboratory for analysis. Chain of custody forms are presented in Appendix B.

2.3 Residuals management

Soil and water generated while drilling, cleaning equipment, well development, and groundwater sampling were stored on site in 55-gallon drums. The residual materials were disposed of during the remedial action phase of work.

2.4 General Laboratory Procedures

Soil and groundwater analyses were performed by Columbia Analytical Services in Kelso Washington.. The analyses quantified the concentrations of benzene, toluene, ethylbenzene, total xylenes (BTEX), and hydrocarbon identification including TPH as gasoline, TPH as diesel, and TPH as oil.

BTEX concentrations were determined by EPA Methods 5030A/8020. TPH concentrations were quantified by hydrocarbon scan utilizing EPA Methods 3550/3510/8015 Modified.

3 EXPANDED ENVIRONMENTAL ASSESSMENT RESULTS

3.1 Soils

Soils encountered in the borings consisted of fill, silty sand, and sandy silt. Undisturbed soils consisted primarily of brown silt with some fine sand. Lithologic logs of the borings are presented in Appendix A.

3.2 Depth to Groundwater

The findings of the June 1 and July 27, 1995, groundwater elevation survey are presented in Table 2. The depth to groundwater below the top of casing ranged from 3.74 feet in MW-3 to 4.98 feet in MW-1 on June 1, and from 5.42 feet in MW-3 to 6.06 feet in MW-1 on July 27, 1995. Relative groundwater elevations using an assumed elevation of 100.00 feet ranged from 95.72 feet in MW-1 to 97.29 feet in MW-2 on June 1, and 94.10 feet in MW-1 to 94.94 feet in MW-2 on July 27, 1995.

The potentiometric surface of the groundwater in the vicinity of the steam cleaning pad sloped to the southeast during June and July; however, the water table surface dropped from 1.62 to 2.35 feet during that period. The June 1, 1995, groundwater elevations are contoured on Figure 4 and indicate a hydraulic gradient of 0.017 ft/ft.

3.3 Quantitative Chemical Analysis

3.3.1 Soil Analytical Results

The soil sample analytical results are presented on Table 3 and are summarized on Figure 3. The Laboratory Reports are presented in Appendix B. BTEX and TPH as gasoline concentrations were not detected at or above the method reporting limit in any of the samples analyzed.

TPH as diesel concentrations were reported at 188 and 909 mg/kg in the B-3, 2- and 4-foot samples, respectively. TPH as diesel was not detected at or above the method

reporting limit in any of the other samples. The TPH as diesel concentration detected 4 feet bgs in B-3 exceeded the MTCA Method A cleanup criterion of 200 mg/kg.

TPH as oil was reported at concentrations above the MTCA Method A cleanup criterion of 200 mg/kg in samples B-2-2' (294 mg/kg), and B-3-4' (947 mg/kg). TPH as oil was also reported at concentrations below the MTCA Method A cleanup criteria in boring B-3 at 2 feet bgs (107 mg/kg), MW-1 at 4 feet bgs (109 mg/kg), and MW-3 at 5 feet bgs (109 mg/kg). The laboratory reports indicate that TPH as oil concentrations were below the method reporting limit in borings MW-2 at 4 feet bgs, B-1 at 2 and 4 feet bgs, and B-2 at 4 feet bgs.

3.3.2 Groundwater Analytical Results

Groundwater analytical results are summarized on Table 4 and Figure 4. Laboratory reports are presented in Appendix B. BTEX, TPH as gasoline, and TPH as oil concentrations were not detected at or above the method reporting limits in any of the groundwater samples. TPH as diesel was detected in all samples at concentrations up to 435 µg/L; however, no TPH as diesel concentrations exceeded the MTCA Method A cleanup criterion of 1,000 µg/L.

4 INDEPENDENT REMEDIAL ACTION

4.1 Introduction

During the initial environmental assessment conducted in late October 1994, impacted soil on the west and north edges of the steam cleaning pad were excavated to the maximum extent possible without removing the steam cleaning pad. An area of impacted soil was left in place along the east wall of the excavation beneath the steam cleaning pad. TPH as diesel and TPH as oil concentrations were reported on the east sidewall at 4,200 mg/kg and 23,000 mg/kg, respectively. Analytical test results from the soil samples collected from the bottom of the excavation at approximately 5 feet bgs did not indicate concentrations of TPH at or above the analytical method reporting limits. The approximate limits of the initial excavation are shown on Figure 3.

During the expanded environmental assessment (May 1995) the extent of contamination beneath the steam cleaning pad was evaluated by drilling three borings (B-1, B-2, and B-3) and collecting soil samples for analysis. The analytical results indicated that TPH as diesel and oil concentrations were present at concentrations above the MTCA cleanup criteria of 200 mg/kg in samples collected from borings B-2 and B-3. Based on the results of soil samples, a remedial action plan was prepared and the impacted soil beneath the steam cleaning pad was removed in July 1995.

During the steam cleaning pad remediation, visual observations and soil sample results indicated that soil contamination extended to the east of the steam cleaning pad beneath the main building. To determine the extent of contamination beneath the building, four borings were drilled and soil samples were collected. Based on soil sample results, a cleanup plan was prepared and remedial actions were conducted within the building during November 1995. This section describes the remedial actions conducted beneath the steam cleaning pad and building.

4.2 Steam Cleaning Pad Soil Remediation

Steam cleaning pad remedial actions were conducted between July 25 and 27, 1995. Remedial activities included the removal of portions of the concrete steam cleaning pad, excavation of petroleum impacted soil, verification soil sample collection and analysis,

backfill, and pad replacement. Soil excavation was performed by Omega Services, Inc. of Spokane, Washington, under the observation of an EMCON geologist.

The concrete pad was saw cut and a backhoe was used to remove the concrete steam cleaning pad in the vicinity B-2 and B-3. Soil beneath the concrete surface was stained dark gray to black to an approximate depth of 2 inches. Additional portions of the concrete pad were removed to the south and east of B-3 based on the visual extent of stained soil. Concrete cutting and soil excavation was limited to the east by the presence of the building (Figure 3).

Approximately 120 cubic yards (cy) of soil were removed from the excavation beneath the steam cleaning pad. The depth of the excavation ranged from 2- to 5-feet below surface and extended to groundwater in the deeper parts of the excavation. The area between B-2 and B-1 exhibited the least degree of soil staining. The soil in the vicinity of B-3 exhibited the highest degree of soil staining. A sheen was not observed on the groundwater surface. The limits of the excavation were guided by visual observation of soil staining, laboratory analytical results from the boring samples, and field analysis of soil samples utilizing a HNU-Handby Environmental Soil Test Kit for the semi-quantification of petroleum hydrocarbon constituents. The west and north sides of the excavation were bounded by backfill materials placed during the previous remedial effort conducted in October 1994.

Lightly stained soil on the east side of the excavation was observed to extend beneath the existing building. The stained area extended approximately 7 feet north to south and was approximately 2 to 2.5 feet in thickness.

4.2.1 Soil Sampling

Soil samples were collected for laboratory analysis from the excavation floor and walls to verify that the vertical and lateral extent of the contamination was removed. Four samples were collected from the floor of the excavation. The sample depths ranged from 3.5 to 5 feet below the depth of the former pad. Soil samples were also collected from the south and east walls of the excavation. Samples were not collected from the west and north sides of the excavation since soils from these areas had been previously excavated and backfilled with clean material. The extent of contamination was further defined by samples collected from B-1 during the expanded environmental assessment.

The samples were collected from the general areas shown on Figure 5. Composite soil samples collected from the excavation walls were obtained by scraping soil from the bottom of the excavation to surface. The east wall sample was collected from the most highly stained area. Floor samples were collected from several points in an area and composited into a single sample. Each sample was transferred into clean glass jars provided by the laboratory, labeled, logged on the chain of custody form and placed in a chilled cooler for transportation to the laboratory.

4.2.2 Quantitative Chemical Analysis

General Laboratory Procedures. Soil analyses were performed by North Creek Analytical in Spokane, Washington. The analyses quantified the concentrations of TPH as diesel, and TPH as oil by Ecology Method WTPH-D extended.

Analytical Results. Analytical results indicated the presence of TPH as diesel concentrations in the south wall (43 mg/kg) and east wall (410 mg/kg) samples, and TPH as oil concentrations in the east wall sample (37 mg/kg). No other TPH as diesel and oil concentrations were reported at or above the method detection limits. Only the TPH as diesel concentration reported in the East Wall sample exceeded the MTCA Method A cleanup criterion of 200 mg/kg. The analytical results are summarized on Table 3 and Figure 5. The laboratory reports are presented in Appendix B.

4.3 Building Soil Remediation

As previously mentioned, lightly stained soil on the east side of the steam cleaning pad excavation was observed to extend beneath the existing building. The stained area extended approximately 7 feet north to south and was approximately 2 to 2.5 feet in thickness. The analytical results of the sample collected from the east wall excavation verified the presence of TPH as diesel above the MTCA cleanup criteria.

4.3.1 Impact Characterization

On August 17, 1995, four borings (B-4, B-5, B-6, and B-7) were hand augured beneath the main building to determine the extent of impacted soil. The locations of the borings are shown on Figure 3.

Soil samples from borings B-5, B-6 and B-7 were submitted for laboratory analysis to quantify the concentrations of TPH as diesel, and TPH as oil by Ecology Method WTPH-D extended. Soil samples collected from B-4 appeared to be impacted based on field observations and were not submitted for laboratory analysis. The laboratory analytical results are summarized on Table 2 and are shown on Figure 3 . The analytical results indicate that TPH as diesel and TPH as oil concentrations in each sample were below the MTCA Method A cleanup criteria. TPH as diesel was reported in B-7 at 1.2 feet (110 mg/kg) and 2.6 feet (19 mg/kg) below the concrete slab surface. TPH as oil was detected in the sample collected from B-7 at 1.2 feet (120 mg/kg) below the concrete slab surface.

4.3.2 Remedial Action

Remedial actions to remove impacted soil extending beneath the main building were conducted between July 27 and 29, 1995. Remedial activities included the removal of portions of the concrete floor, excavation of petroleum impacted soil, verification soil sample collection, excavation backfill, and floor replacement. Soil excavation was performed by Hollenbeck Excavation, Inc. of Othello, Washington, under the observation of an EMCON geologist.

The concrete floor was saw cut and removed in the area shown on Figure 3. Soil beneath the concrete surface was excavated to a depth ranging from 3 to 5 feet below surface. Approximately 25 cy of soil were removed from the excavation beneath the concrete pad. The limits of the excavation were guided by the laboratory analytical results from the boring samples and visual observation. Approximately ½ cy of impacted soil was left inplace beneath the buildings supporting wall.

4.3.3 Soil Sampling

Two soil samples were collected for laboratory analysis from the excavation floor (E-Floor-5') and northeast wall (E-Wall-Comp) to verify that the vertical and lateral extent of the contamination was removed. Each sample was transferred into clean glass jars provided by the laboratory, labeled, logged on the chain of custody form and placed in a chilled cooler for transportation to the laboratory. The north, south, and southeast boundaries were defined by the samples analyzed from borings B-5, B-6, and B-7, respectively. The samples were collected from the general areas shown on Figure 5.

4.3.4 Quantitative Chemical Analysis

General Laboratory Procedures. Soil analyses were performed by North Creek Analytical in Spokane, Washington. The analyses quantified the concentrations of TPH as diesel, and TPH as oil by Ecology Method WTPH-D extended.

Analytical Results. The analytical results indicate that samples from the northeast wall and excavation bottom did not contain TPH as diesel or TPH as oil at or above the method detection limits. The analytical results from the boring samples also indicated that TPH as diesel and TPH as oil concentrations in each sample were below the MTCA Method A cleanup criteria. The maximum TPH as diesel concentration was reported in B-7 at 1.2 feet (110 mg/kg) and the maximum TPH as oil concentration was reported in the sample collected from B-7 at 1.2 feet (120 mg/kg) below the concrete slab surface. The laboratory analytical results are summarized on Table 2 and Figure 5. The laboratory reports are presented in Appendix B.

4.4 Verification Soil Sample

As previously mentioned, verification soil samples were collected during each phase of the remedial activities to determine if the petroleum hydrocarbon levels were below MTCA Method A cleanup criteria at the bottom and sides of the excavations. If a soil sample(s) exceeded the MTCA Method A cleanup criteria, subsequent phases of work were performed to remove the contaminated material.

Table 5 summarizes the analytical results of the verification samples. Figure 5 indicates collection locations and the summarizes the analytical results. As shown on Figure 5, the samples collected at the limits of the excavation (bottom and sidewall) indicate petroleum hydrocarbon concentrations at levels below MTCA method A cleanup criteria with exception of the sample collected below the buildings footer.

4.5 Residuals Disposal

All impacted soil was stockpiled on, and covered with plastic to limit water run-on and runoff. Groundwater purged from the wells during sampling was mixed with the excavated soils and disposed of at the Columbia Ridge Landfill operated by Oregon Waste Systems in Arlington, Oregon.

5 SUMMARY

Petroleum hydrocarbon impacted soil above MTCA Method A cleanup criteria was detected on the north and west edge of the steam cleaning pad, beneath the steam cleaning pad, and beneath the building floor immediately east of the steam cleaning pad. The source of the impacted soil is assumed to be from previous equipment servicing operations where oily equipment was steam cleaned on the concrete pad at the west end of the main building. The oily fluids then percolated through the soil to the near surface groundwater on the north and west end of the pad and were mobilized to the east in the direction of groundwater flow. The contaminated soil was generally observed in the soils above the horizon associated with groundwater fluctuations and the capillary fringe (surface to 5 foot depth).

Groundwater samples collected from the monitoring wells located on the north, west, and south edges of the steam cleaning pad did not indicate the presence of BTEX, TPH as gasoline, or TPH as oil at or above the method reporting limits. TPH as diesel was reported in all samples at concentrations ranging from 293 to 435 µg/L. No TPH as diesel concentrations exceeded the MTCA Method A cleanup criterion of 1,000 µg/L.

Approximately 450 tons of impacted soil was excavated from the vicinity of the steam cleaning pad in October 1994, and July and November 1995. Verification soil samples collected from the base and walls of the excavations and several of the borings (see Figure 5) indicate that soils at the boundaries of the excavations were below MTCA Method A cleanup criteria for petroleum hydrocarbons. Approximately ½ cy of impacted soil was left inplace beneath the buildings supporting wall. A soil sample collected from the impacted area ("East Wall" sample) indicated a TPH as diesel concentration of 410 mg/kg and TPH as oil concentration of 37 mg/kg. This small quantity of remaining impacted soil is not expected to be a significant threat to the environmental health or the environment since it is of low concentration and is capped with concrete

Based on the soil sample analytical results, all known, accessible petroleum hydrocarbon impacted soils in the vicinity of the steam cleaning pad have been removed. Groundwater analytical results did not indicate BTEX, TPH as gasoline, TPH as diesel, or TPH as oil concentrations above the respective MTCA Method A cleanup criteria. Based on the results, no further remedial actions are proposed and a notice of no further action is requested for the site.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

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TABLES

Table 1

Monitoring Well Construction Summary
Case Power and Equipment
Sunnyside, Washington

Well No.	Date Drilled	Depth Drilled (Feet BGL)	Screen Interval (Feet BGL)	Sand Pack Interval (Feet BGL)	Seal Interval (Feet BGL)	Ecology Identification No.
MW-1	05/31/95	15.5	3.0 - 14.5	2.0 - 15.5	0 - 2.0	ABW - 438
MW-2	05/31/95	15.0	3.0 - 14.5	2.0 - 15.0	0 - 2.0	ABW - 436
MW-3	05/31/95	15.0	3.5 - 15.0	2.0 - 15.0	0 - 2.0	ABW - 437

NOTES:
Feet - BGL = feet below ground level

Table 2

Wellhead and Groundwater Elevation Summary
Case Power and Equipment
Sunnyside, Washington

Well No.	Wellhead Elevation	Depth to Water (feet)	Date	Groundwater Elevation
MW-1	100.70	4.98	06/01/95	95.72
		6.60	07/27/95	94.10
MW-2	101.03	4.63	06/01/95	97.29
		6.09	07/27/95	94.94
MW-3	100.00	3.74	06/01/95	96.26
		5.42	07/27/95	94.58

NOTES:
Wellhead elevations (top of PVC casing) surveyed relative to top of MW-3 casing using arbitrary datum of 100.00 feet.

Table 3

Soil Analytical Results
Case Power and Equipment
Sunnyside, Washington
(mg/kg)

Sample No.	Date Sampled	Sample Location	Sample Depth (feet)	Benzene[a]	Toluene[a]	Ethyl-benzene[a]	Total Xylenes[a]	TPH as Gasoline[b]	TPH as Diesel[b]	TPH as Oil[b]
SF-W-5	07/26/95	Southwest Floor	5	--	--	--	--	--	ND	ND
S-Wall	07/26/95	South Wall	1-4	--	--	--	--	--	43	ND
SF-E-4	07/26/95	Southeast Floor	4	--	--	--	--	--	ND	ND
E-Wall	07/26/95	East Wall	1-4	--	--	--	--	--	410	37
CF-3.5	07/26/95	Center Floor	3.5	--	--	--	--	--	ND	ND
NF-W-3.5	07/26/95	Northwest Floor	3.5	--	--	--	--	--	ND	ND
B5-1.6, 3.5	08/17/95	B-5	1.6/3.5	--	--	--	--	--	ND	ND
B6-2	08/17/95	B-6	2	--	--	--	--	--	ND	ND
B6-3.7	08/17/95	B-6	3.7	--	--	--	--	--	ND	ND
B7-1.2	08/17/95	B-7	1.2	--	--	--	--	--	110	120
B7-2.6	08/17/95	B-7	2.6	--	--	--	--	--	19	ND
E-Floor-5	11/28/95	East Floor	5	--	--	--	--	--	ND	ND
EW-Comp	11/28/95	East Wall	1-5	--	--	--	--	--	ND	ND

NOTES:
ND = Not detected at or above the method reporting limit.
-- = Not analyzed for particular analyte
[a] Analyzed by EPA Methods 5030A/8020.
[b] Samples collected on 10/31/95 analyzed by Columbia Analytical Services in Kelso, Washington, by Ecology Method WTPH-HCID and WTPH-D extended.
Samples collected on 05/31/95 analyzed by Columbia Analytical Services in Kelso, Washington by EPA Methods 3550/8015 modified.
Samples collected on 08/17/95 and 11/28/95 analyzed by North Creek Analytical in Spokane, Washington by Ecology Method WTPH-D extended.

Table 3

Soil Analytical Results
Case Power and Equipment
Sunnyside, Washington
(mg/kg)

Sample No.	Date Sampled	Sample Location	Sample Depth (feet)	Benzene[a]	Toluene[a]	Ethyl-benzene[a]	Total Xylenes[a]	TPH as Gasoline[b]	TPH as Diesel[b]	TPH as Oil[b]
SF-W-5	07/26/95	Southwest Floor	5	--	--	--	--	--	ND	ND
S-Wall	07/26/95	South Wall	1-4	--	--	--	--	--	43	ND
SF-E-4	07/26/95	Southeast Floor	4	--	--	--	--	--	ND	ND
E-Wall	07/26/95	East Wall	1-4	--	--	--	--	--	410	37
CF-3.5	07/26/95	Center Floor	3.5	--	--	--	--	--	ND	ND
NF-W-3.5	07/26/95	Northwest Floor	3.5	--	--	--	--	--	ND	ND
B5-1.6, 3.5	08/17/95	B-5	1.6/3.5	--	--	--	--	--	ND	ND
B6-2	08/17/95	B-6	2	--	--	--	--	--	ND	ND
B6-3.7	08/17/95	B-6	3.7	--	--	--	--	--	ND	ND
B7-1.2	08/17/95	B-7	1.2	--	--	--	--	--	110	120
B7-2.6	08/17/95	B-7	2.6	--	--	--	--	--	19	ND
E-Floor-5	11/28/95	East Floor	5	--	--	--	--	--	ND	ND
EW-Comp	11/28/95	East Wall	1-5	--	--	--	--	--	ND	ND

NOTES:
ND = Not detected at or above the method reporting limit.
-- = Not analyzed for particular analyte
[a] Analyzed by EPA Methods 5030A/8020.
[b] Samples collected on 10/31/95 analyzed by Columbia Analytical Services in Kelso, Washington, by Ecology Method WTPH-HCID and WTPH-D extended.
Samples collected on 05/31/95 analyzed by Columbia Analytical Services in Kelso, Washington by EPA Methods 3550/8015 modified.
Samples collected on 08/17/95 and 11/28/95 analyzed by North Creek Analytical in Spokane, Washington by Ecology Method WTPH-D extended.

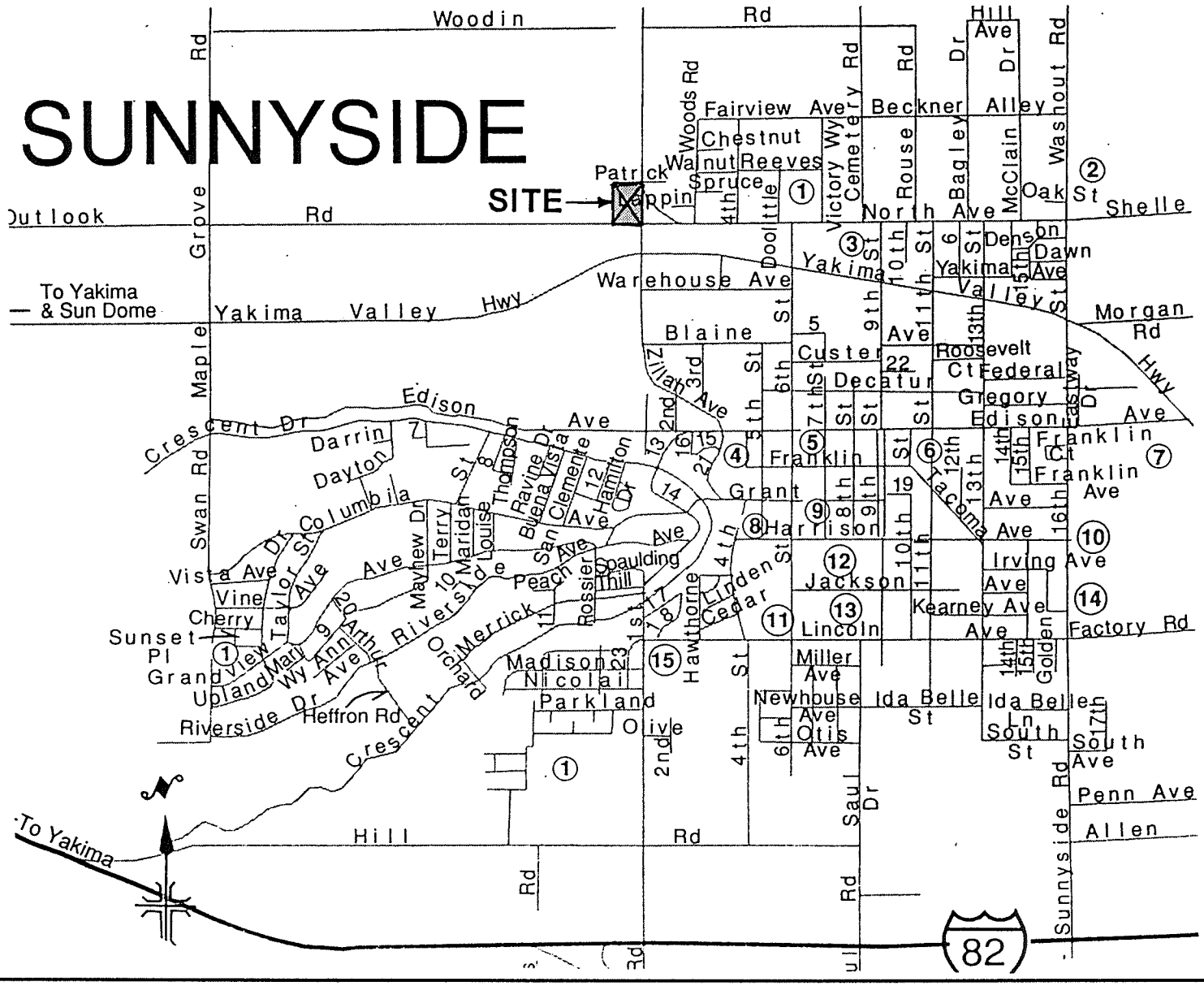
Table 4

Groundwater Analytical Results
Case Power and Equipment
Sunnyside, Washington
(µg/L)

Monitoring Well No.	Benzene[a]	Toluene[a]	Ethyl-benzene[a]	Total Xylenes[a]	TPH as Gasoline[b]	TPH as Diesel[b]	TPH as Oil[b]
MW-1	ND	ND	ND	ND	ND	328	ND
MW-1 (Dup)	ND	ND	ND	ND	ND	379	ND
MW-2	ND	ND	ND	ND	ND	293	ND
MW-3	ND	ND	ND	ND	ND	435	ND

NOTES
ND - not detected at or above the Method Reporting Limit.
Samples collected on 06/01/95.
Samples analyzed by Columbia Analytical Services in Kelso, Washington.
[a] Analyzed by EPA Methods 5030A/8020.
[b] Hydrocarbon Scan analyzed by EPA Methods 3510/8015 Modified.

FIGURES

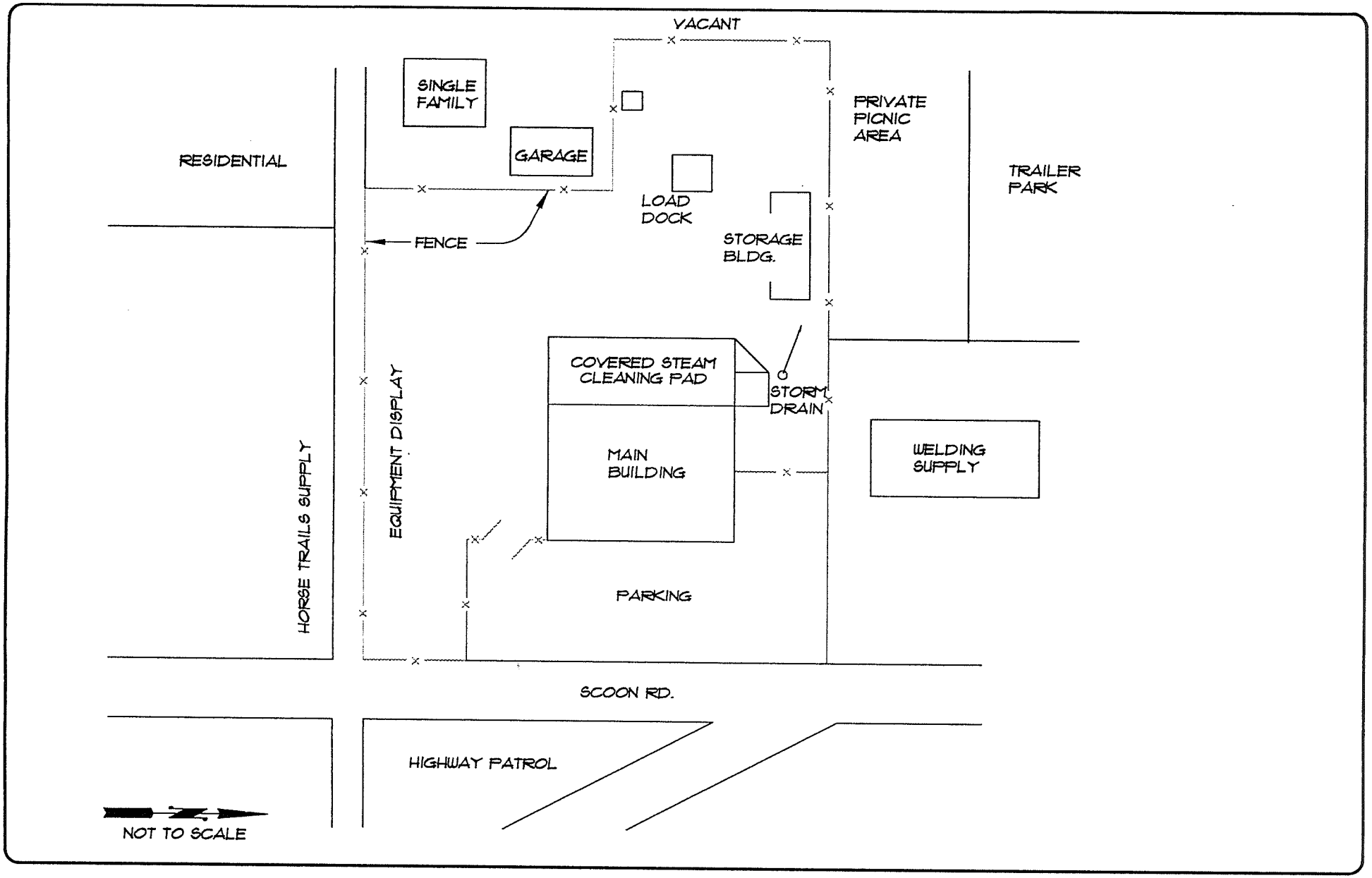


emcon

DATE	12/01/94
DWN.	JAB
REV.	
APPR.	JAL
PROJECT NO.	0914-007.02

J I CASE
SUNNYSIDE, WASHINGTON
VICINITY MAP
FIGURE 1

1/13/95 G:\DWG\0914\007\02_D.DWG



EMCON

DATE 12/01/94
DWN. JAB
REV.
APPR. JAL
PROJECT NO.
0914-007.02

J I CASE
SUNNYSIDE, WASHINGTON
SITE PLAN
FIGURE 2

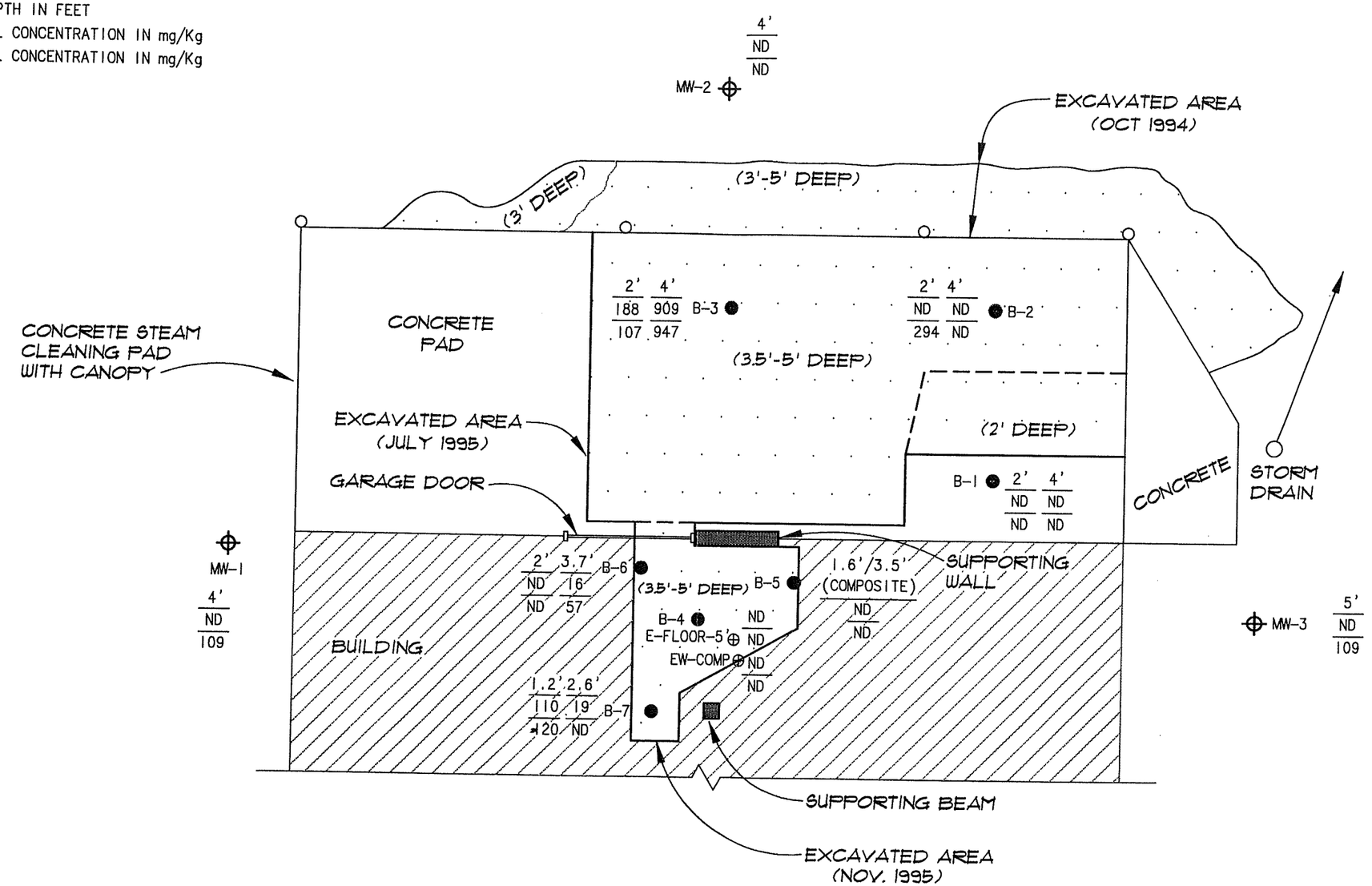
1/13/95 G:\DWG\0914\007\02_B.DWG

EXPLANATION

MW-2 ⊕ MONITORING WELL

B-2 ● BORING LOCATION

2' SAMPLE DEPTH IN FEET
188 TPH DIESEL CONCENTRATION IN mg/Kg
107 TPH AS OIL CONCENTRATION IN mg/Kg



0 10 20
SCALE(ft)

DATE 6/22/95
DWN. JAB/JAL
APPR. JAL
REVIS. 12-28-95
PROJECT NO.
0914-007.03

Figure 3
J I CASE
SUNNYSIDE, WASHINGTON
MONITORING WELL/BORING LOCATIONS
AND SOIL ANALYTICAL RESULTS

EMCON

PLOT: 1=10 12-28-95 G:\DWG\0914\007\FIG-3.DWG

EXPLANATION

MW-2 ⊕ MONITORING WELL

B-2 ● BORING LOCATION

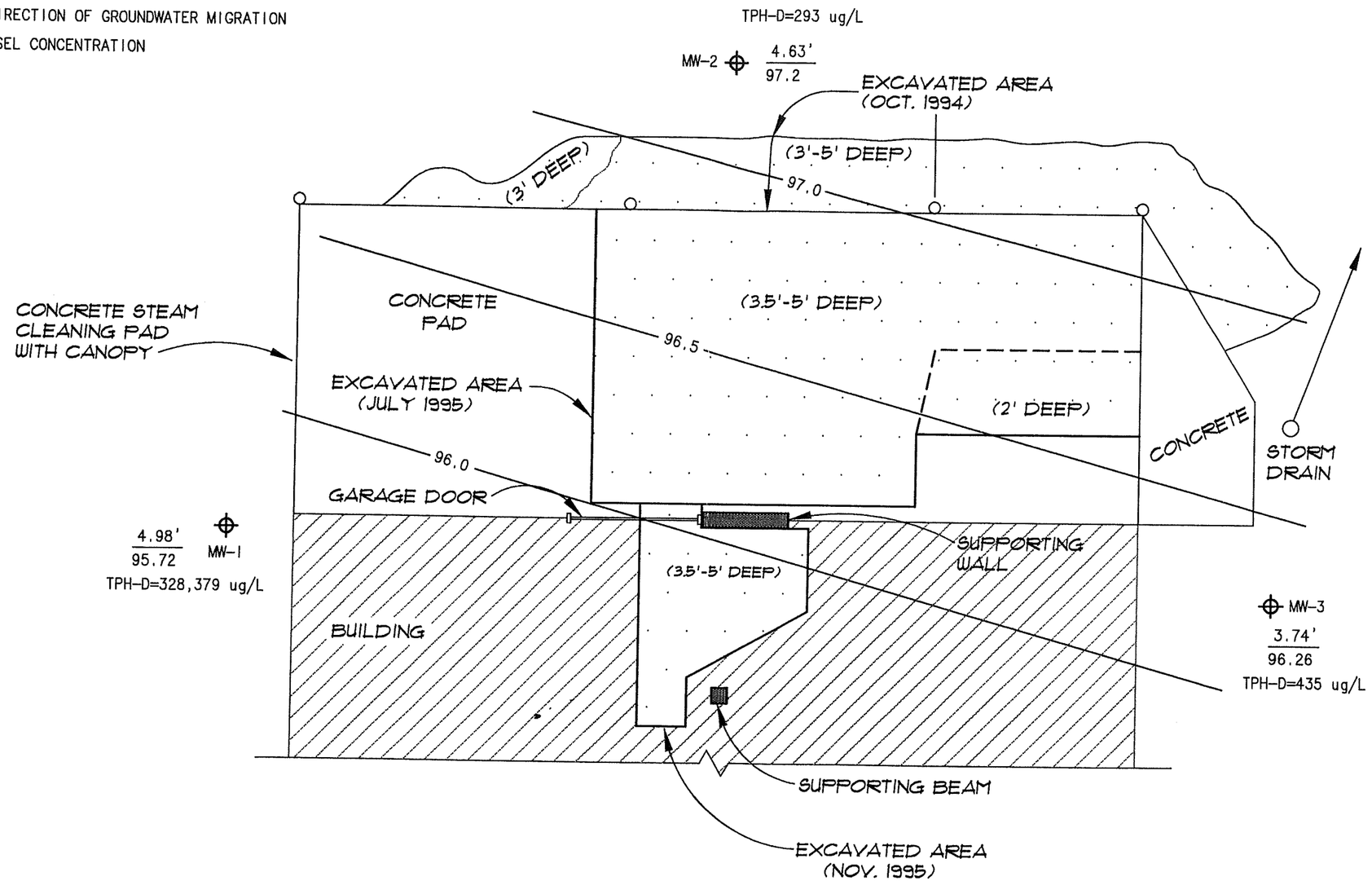
4.63' DEPTH TO GROUNDWATER

97.29 RELATIVE GROUNDWATER ELEVATION

—97.0— GROUNDWATER ELEVATION CONTOUR

INFERRED DIRECTION OF GROUNDWATER MIGRATION

TPH-D=293 ug/L TPH AS DIESEL CONCENTRATION



EMCON

0 10 20

SCALE(ft)

DATE 6/22/95
DWN. JAB/JAL
APPR. JAL
REVIS. 12/28/95
PROJECT NO.
0914-007.03

Figure 4
J I CASE
SUNNYSIDE, WASHINGTON
GROUNDWATER ANALYTICAL RESULTS
AND ELEVATIONS - JUNE 1, 1995

PLOT: 1=10 12/28/95 G:\DWG\0914\007\FIG-4.DWG

EXPLANATION

MW-2 ⊕ MONITORING WELL

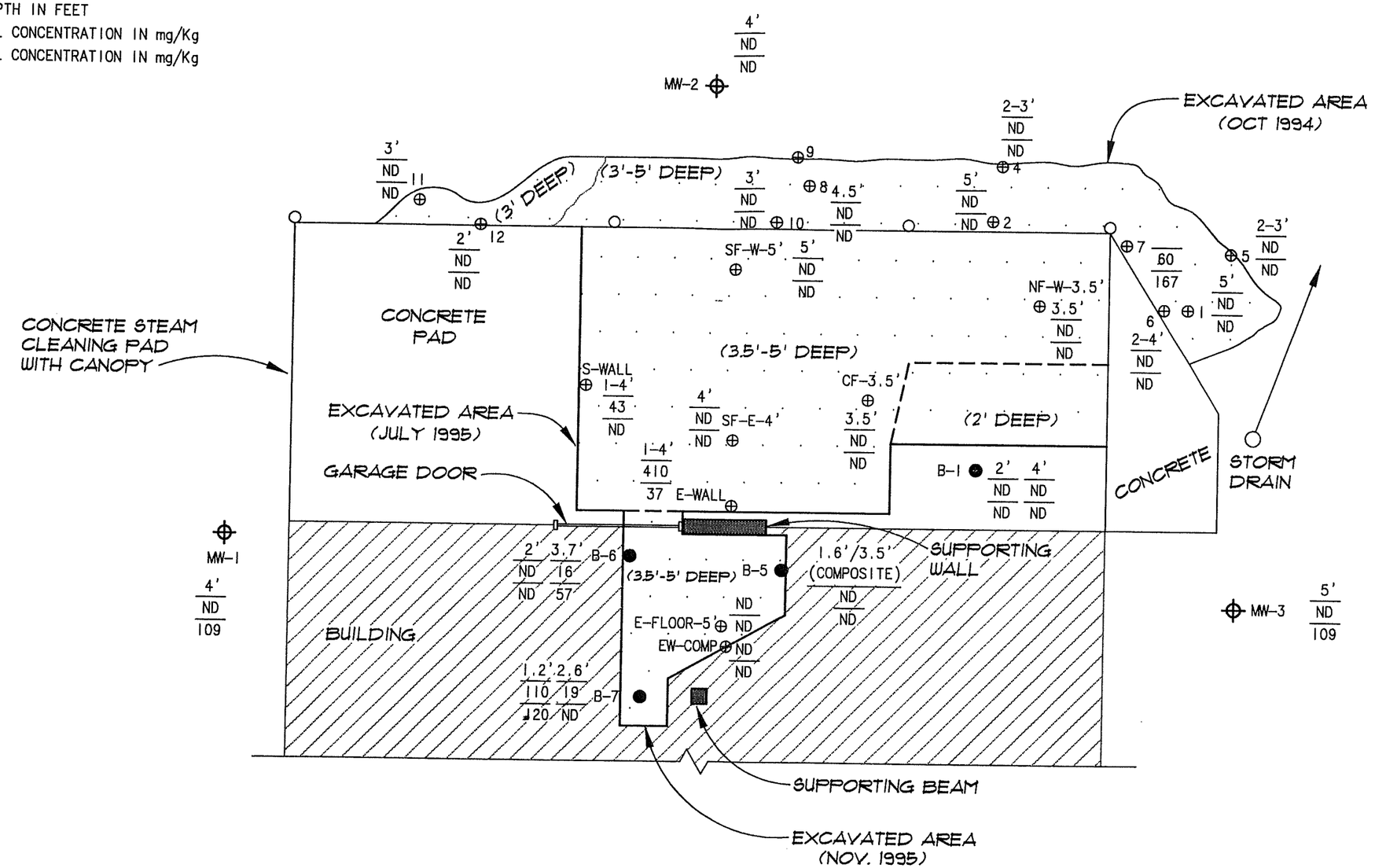
B-2 ● BORING LOCATION

CF-3' ⊕ VERIFICATION SAMPLE LOCATION

2' SAMPLE DEPTH IN FEET

188 TPH DIESEL CONCENTRATION IN mg/Kg

107 TPH AS OIL CONCENTRATION IN mg/Kg



0 10 20

SCALE(ft)

EMCON

DATE 6/22/95
DWN. JAB/JAL
APPR. JAL
REVIS. 9/12/95
PROJECT NO. 0914-007.03

Figure 5
J I CASE
SUNNYSIDE, WASHINGTON
VERIFICATION SAMPLE LOCATIONS AND SOIL ANALYTICAL RESULTS

PLOT: 1=10 12/28/95 G:\DWG\0914\007\FIG-5.DWG

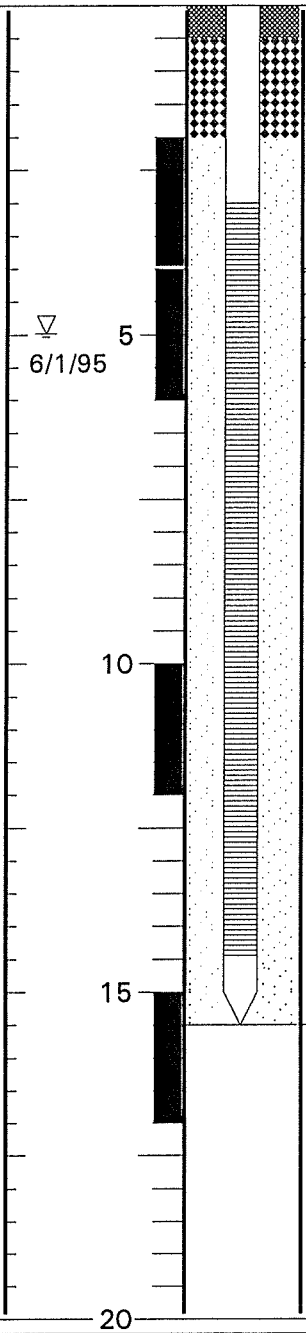
APPENDIX A

SOIL BORING LOGS

LOG OF EXPLORATORY BORING

PROJECT NAME	**Case Sunnyside, Washington**	BORING NO.	**MW- 1**
LOCATION		PAGE	**1 OF 2**
DRILLED BY	**Environmental West**	GROUND ELEV.	**100.70'**
DRILL METHOD	**Hollow Stem Auger**	TOTAL DEPTH	**17.00'**
LOGGED BY	**J.S. Latta**	DATE COMPLETED	**05/31/95**

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	LITHOLOGIC DESCRIPTION
SS	0	4-3-6-8	**0 to 4.0 feet: SANDY SILT (ML)**, brown, silt with some fine sand, firm, moist. Bedded. Micaceous.
MW-1-4 SS	0	6-8-8-10	**4.0 to 5.5 feet: SILTY SAND (SM)**, brown, fine sand with some silt and a few percent medium sand, firm, moist to wet. Micaceous.
			5.5 to 15.5 feet: SANDY SILT (ML), brown, silt with some fine sand, stiff, wet. Bedded. Micaceous.
SS	0	6-14-12-16	
SS	0	8-12-16-30	
			Total depth drilled = 15.5 feet. Total depth sampled = 17.0 feet.
			See Page 2 for Well Completion Details.



REMARKS

Washington State Department of Ecology Well No.: ABW 438. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

LOG OF EXPLORATORY BORING

PROJECT NAME	**Case Sunnyside, Washington**	BORING NO.	**MW- 1**
LOCATION		PAGE	**2 OF 2**
DRILLED BY	**Environmental West**	GROUND ELEV.	**100.70'**
DRILL METHOD	**Hollow Stem Auger**	TOTAL DEPTH	**17.00'**
LOGGED BY	**J.S. Latta**	DATE COMPLETED	**05/31/95**

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION
				25				**WELL COMPLETION DETAILS:** 0 to 3.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 3.0 to 14.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots. 14.5 to 15.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe and a 2-inch-diameter threaded end cap. 0 to 0.5 foot: Concrete. 0.5 to 2.0 feet: Bentonite chips hydrated with potable water. 2.0 to 15.5 feet: 10 - 20 Colorado Silica Sand.
				30				
				35				
				40				

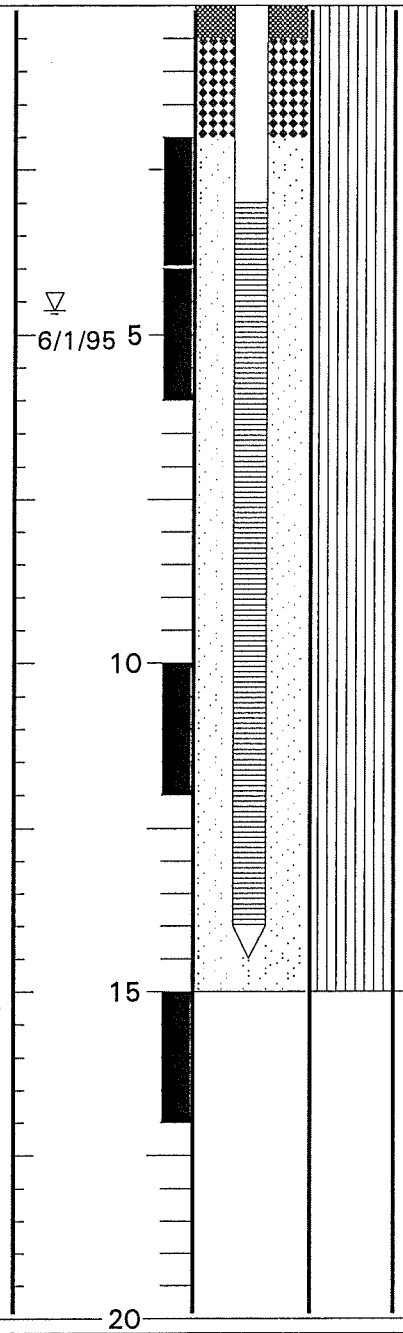
REMARKS

Washington State Department of Ecology Well No.: ABW 438. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

LOG OF EXPLORATORY BORING

PROJECT NAME	**Case Sunnyside, Washington**	BORING NO.	**MW- 2**
LOCATION		PAGE	**1 OF 2**
DRILLED BY	**Environmental West**	GROUND ELEV.	**101.03'**
DRILL METHOD	**Hollow Stem Auger**	TOTAL DEPTH	**17.00'**
LOGGED BY	**J.S. Latta**	DATE COMPLETED	**05/31/95**

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	LITHOLOGIC DESCRIPTION
			0 to 15.0 feet: SANDY SILT (ML), with some SILTY SAND (SM) interbeds, brown, silt with some fine sand, firm to stiff.
SS	0	5-5-7-7	@ 0 to 4.0 feet: moist.
MW-2-4 SS	0	4-8-10-15	@ 4.0 to 16.5 feet: wet.
SS	0	5-7-12-17	
SS	0	5-10-15	Total depth drilled = 15.0 feet. Total depth sampled = 16.5 feet.
			See Page 2 for Well Completion Details.



REMARKS

Washington State Department of Ecology Well No.: ABW 436. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

LOG OF EXPLORATORY BORING

PROJECT NAME	Case Sunnyside, Washington	BORING NO.	MW- 2
LOCATION		PAGE	2 OF 2
DRILLED BY	Environmental West	GROUND ELEV.	101.03'
DRILL METHOD	Hollow Stem Auger	TOTAL DEPTH	17.00'
LOGGED BY	J.S. Latta	DATE COMPLETED	05/31/95

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION
				25				**WELL COMPLETION DETAILS:** 0 to 3.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 3.0 to 14.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots and a 2-inch-diameter flush end cap screwed to screen. 0 to 0.5 foot: Concrete. 0.5 to 2.0 feet: Bentonite chips hydrated with potable water. 2.0 to 15.0 feet: 10 - 20 Colorado Silica Sand.
				30				
				35				
				40				

REMARKS

Washington State Department of Ecology Well No.: ABW 436. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

LOG OF EXPLORATORY BORING

PROJECT NAME **Case Sunnyside, Washington**
LOCATION
DRILLED BY **Environmental West**
DRILL METHOD **Hollow Stem Auger**
LOGGED BY **J.S. Latta**

BORING NO. **MW- 3**
PAGE **1 OF 2**
GROUND ELEV. **100.00'**
TOTAL DEPTH **17.00'**
DATE COMPLETED **05/31/95**

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 17.0 feet: SANDY SILT (ML), with some SILTY SAND (SM) interbeds, brown, silt with some fine sand, firm to stiff.
								@ 0 to 4.0 feet: moist.
			▽ 6/1/95					@ 4.0 to 17.0 feet: wet.
MW-3-5 SS	0	4-6-8-12		5				
SS	0	5-8-8-20		10				
SS	0	5-10-15-20		15				Total depth drilled = 15.0 feet. Total depth sampled = 17.0 feet.
				20				See Page 2 for Well Completion Details.

REMARKS

Washington State Department of Ecology Well No.: ABW 437. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

EMCON

LOG OF EXPLORATORY BORING

PROJECT NAME	**Case Sunnyside, Washington**	BORING NO.	**MW- 3**
LOCATION		PAGE	**2 OF 2**
DRILLED BY	**Environmental West**	GROUND ELEV.	**100.00'**
DRILL METHOD	**Hollow Stem Auger**	TOTAL DEPTH	**17.00'**
LOGGED BY	**J.S. Latta**	DATE COMPLETED	**05/31/95**

SAMPLING METHOD AND NUMBER	PID (in ppm)	BLOWS PER 6-INCHES	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION
				25				**WELL COMPLETION DETAILS:** 0 to 3.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 3.5 to 15.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots and a 2-inch-diameter flush end cap screwed to screen. 0 to 0.5 foot: Concrete. 0.5 to 2.0 feet: Bentonite chips hydrated with potable water. 2.0 to 15.0 feet: 10 - 20 Colorado Silica Sand.
				30				
				35				
				40				

REMARKS

Washington State Department of Ecology Well No.: ABW 437. SS = 2.5-inch O.D. split-spoon sampler driven with a 140-pound hammer and 30-inch drop. PID = Photoionization Detector. Well assembly is 2-inch schedule 40 PVC pipe with 0.010-inch slotted screen, No. 10-20 sand pack, and flush-mount locking security casing.

EMCON
Northwest, Inc.
West 7106 Will D. Alton Lane, Suite 108 ● Spokane, WA 99204
Office (509) 838-1144 ● FAX (509) 838-1382

Field Sampling Data

DUP

LOCATION/ADDRESS Case Sunnyside WA
PROJECT NAME _____ # 0914 007.03
CLIENT/CONTACT _____

Well or Surface Site Number MW-1
Sample Designation MW-1
Date, Time 6/1/95
Weather Sunny 87°F

HYDROLOGY MEASUREMENTS:

(Nearest .01 ft.)	Elevation	Date, Time	Method Used (M-Scope Number or Other)
~~4.63~~ 4.98	95.72	~~0843~~ 0840	Since # 51453

WELL EVACUATION:

Gallons	Pore Volumes	Method Used	Rinse Method	Date, Time
1.7	1	Peristaltic Pump		
5.1	3			

Surface Water Flow Speed _____, Measurement Method _____, Date, Time _____

SAMPLING:

Sample	Date, Time	Method	Volume (ml)	Container Type	Depth Taken (feet)	Field Filtered (yes,no)	Preservative	Iced (yes,no)	Sampler Cleaning Method
8020	6/1/95 1210	Dip	(3)40	VOA	—	No	HCl	Yes	Non-Phosphatic detergent wash H2O rinse MeOH rinse Distilled H2O rinse
8015M		Bailer	1000	Amber Glass	—	No	—	Yes	

FIELD WATER QUALITY TESTS:

Pore Vol. Number	pH	Conductivity	Temp	Eh
1	7.80	901	15.9	
2	7.76	1056	15.6	
3	7.88	817	14.7	
4	7.91	832	14.6	

NOTES:

Water is slightly cloudy brown. Pumped at a slower rate during purging to avoid drying up well and reduce turbidity. Collected a duplicate set of samples labelled "DUP."

Collected a sample "Purge Water" (2 bottles) from 55 gal drum at 12:20 and a sample "Cuttings" (4 4oz jars) from 4-55 gal drums at 12:40

Total # of Bottles: 4+4

Signature: John D Jatte

SEA-400-01

EMCON
Northwest, Inc.
West 7106 Will D. Alton Lane, Suite 108 ● Spokane, WA 99204
Office (509) 838-1144 ● FAX (509) 838-1382

Field Sampling Data

LOCATION/ADDRESS Case Sunnyside WA
PROJECT NAME # 0914 007.03
CLIENT/CONTACT

Well or Surface Site Number MW-2
Sample Designation MW-2
Date, Time 6/1/95
Weather Sunny 87°F

HYDROLOGY MEASUREMENTS:

(Nearest .01 ft.)	Elevation	Date, Time	Method Used (M-Scope Number or Other)
4.63	96.40	0843	Sinco # 51453

WELL EVACUATION:

Gallons	Pore Volumes	Method Used	Rinse Method	Date, Time
1.7	1	Peristaltic Pump		
5.1	3			

Surface Water Flow Speed ____ Measurement Method ____ Date, Time ____

SAMPLING:

Sample	Date, Time	Method	Volume (ml)	Container Type	Depth Taken (feet)	Field Filtered (yes,no)	Preservative	Iced (yes,no)
8020	6/1/95 1120	Disp Bailer	(3) 40	VOA		No	HCl	Yes
015M			1000	Amber Glass		No	—	Yes

Sampler Cleaning Method: Non-Phosphatic detergent wash, H2O rinse, MeOH rinse, Distilled H2O rinse

FIELD WATER QUALITY TESTS:

Pore Vol. Number	pH	Conductivity	Temp	Eh
1	6.80	548	15.1	
2	7.05	507	13.6	
3	7.46	557	12.9	
4	7.75	554	12.9	

NOTES:

Water cloudy brown. Well pumped dry during purging.

Total # of Bottles: 4

Signature: John D Patton

emcon
Northwest, Inc.
West 7106 Will D. Alton Lane, Suite 108 ● Spokane, WA 99204
Office (509) 838-1144 ● FAX (509) 838-1382

Field Sampling Data

LOCATION/ADDRESS Case Sunnyside
PROJECT NAME # 0914007.03
CLIENT/CONTACT

Well or Surface Site Number MW-3
Sample Designation MW-3
Date, Time 6/1/95
Weather Sunny 87°F

HYDROLOGY MEASUREMENTS:

(Nearest .01 ft.)	Elevation	Date, Time	Method Used (M-Scope Number or Other)
3.74	96.26	0840	Sinco #51453

WELL EVACUATION:

Gallons	Pore Volumes	Method Used	Rinse Method	Date, Time
1.8	1	Peristaltic Pump		
5.4	3			

Surface Water Flow Speed ____ Measurement Method ____ Date, Time ____

SAMPLING:

Sample	Date, Time	Method	Volume (ml)	Container Type	Depth Taken (feet)	Field Filtered (yes,no)	Preservative	Iced (yes,no)	Sampler Cleaning Method
8015M	6/1/95 11:45	Disp. Bailer	(3)40	VOA		No	HCl	Yes	Non-Phosphatic detergent wash H2O rinse MeOH rinse Distilled H2O rinse (X)
3020		Bailer	1000	Amber Glass		No	—	Yes	

FIELD WATER QUALITY TESTS:

Pore Vol. Number	pH	Conductivity	Temp	Eh
1	7.50	1490	14.7	
2	7.46	1534	14.7	
3	7.47	1513	14.2	

NOTES:

Water slightly cloudy brown. Pumped at a slower rate during purging in an attempt to keep well from being pumped dry, this also reduced turbidity

Total # of Bottles: 4

Signature: John D Fotta

SEA-400-01

APPENDIX B

LABORATORY ANALYTICAL RESULTS
AND
CHAIN OF CUSTODY

Columbia Analytical Services inc.

November 23, 1994 Service Request No.: K946828

Jeff Lower
EMCON Northwest, Inc.
W 7106 Will D. Alton Lane, Suite 108
Spokane, WA 99204

Re: **CASE/Project #914-007.02**

Dear Jeff:

Enclosed are the results of the sample(s) submitted to our laboratory on November 2, 1994. Preliminary results were transmitted via facsimile on November 18 and 22, 1994. For your reference, these analyses have been assigned our service request number K946828.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 260.

Respectfully submitted,

Columbia Analytical Services, Inc.

Richard A Cramer for JMS

Janice M. Sedlak
Project Chemist

JMS/td

1317 South 13th Avenue • P.O. Box 479 • Kelso, Washington 98626 • Telephone 206/577-7222 • Fax 206/636-1068

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

ASTM	American Society for Testing and Materials
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON Northwest
Project: CASE/#914-007.02
Sample Matrix: Soil

Service Request: K946828
Date Collected: 10/31/94
Date Received: 11/2/94
Date Extracted: NA
Date Analyzed: 11/3/94

Solids, Total
EPA Method 160.3
Percent (%)

Sample Name	Lab Code	Result
1-Bottom	K946828-001	77.2
2-Bottom	K946828-002	75.9
3-East Wall	K946828-003	73.8
4-West Wall	K946828-004	76.7
5-Northwest Wall	K946828-005	79.4
6-Southeast Wall	K946828-006	81.2
7-Sidewall	K946828-007	83.3
8-Bottom	K946828-008	78.6
9-West Wall	K946828-009	79.0
10-East Wall	K946828-010	77.5
11-Bottom	K946828-011	78.6
12-East Wall	K946828-012	81.5

Approved By: Richard A Cicerone Date: 11/23/94

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON Northwest	**Service Request:**	K946828
Project:	CASE/#914-007.02	**Date Collected:**	10/31/94
Sample Matrix:	Soil	**Date Received:**	11/2/94
		Date Extracted:	11/3/94
		Date Analyzed:	11/3-5/94

Total Petroleum Hydrocarbon - Hydrocarbon Identification
Washington DOE Method WTPH-HCID
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	**Gasoline**	**Diesel**	**Oil**
Method Reporting Limit:	20	50	100

Sample Name	**Lab Code**			
1-Bottom	K946828-001	ND	ND	ND
2-Bottom	K946828-002	ND	ND	ND
3-East Wall	K946828-003	ND	D	D
4-West Wall	K946828-004	ND	ND	ND
5-Northwest Wall	K946828-005	ND	ND	ND
6-Southeast Wall	K946828-006	ND	ND	ND
7-Sidewall	K946828-007	ND	ND	D
8-Bottom	K946828-008	ND	ND	ND
9-West Wall	K946828-009	ND	ND	ND
10-East Wall	K946828-010	ND	ND	ND
11-Bottom	K946828-011	ND	ND	ND
12-East Wall	K946828-012	ND	ND	ND
Method Blank	K941103-SB	ND	ND	ND

D — Detected at or above the method reporting limit. Refer to the report(s) immediately following for quantitative results for the detected components.

Approved By: _____ Date: 11/8/94

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON Northwest	**Service Request:**	K946828
Project:	CASE/#914-007.02	**Date Collected:**	10/31/94
Sample Matrix:	Soil	**Date Received:**	11/2/94
		Date Extracted:	11/10/94
		Date Analyzed:	11/17,18,22/94

Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	**Diesel**	**Oil**
Method Reporting Limit:	25	100

Sample Name	**Lab Code**		
3-East Wall	K946828-003	23,000(a)	4200(a)
7-Sidewall	K946828-007	60(b)	167
Method Blank	K941110-SB	ND	ND

a Result is from a diluted sample extract. Dilution factor: 1:50.
b Quantified as diesel. The sample contained an oil component that partially eluted in the diesel range.

Approved By: _____ Date: 11/22/94

2A/061694
6828PHC.JW1 - 2AMRL 11/22/94

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON Northwest
Project: CASE/#914-007.02
Sample Matrix: Soil

Service Request: K946828
Date Collected: 10/31/94
Date Received: 11/2/94
Date Extracted: 11/8/94

Volatile Organic Compounds
EPA Method 8260
Units: µg/Kg (ppb)
Dry Weight Basis

		3-East Wall Between Post		
	Sample Name:	1and 2	Method Blank	Method Blank
	Lab Code:	K946828-003(a)	K946828-MB1	K946828-MB2
	Date Analyzed:	11/10/94	11/9/94	11/10/94
Analyte	**MRL**			
Dichlorodifluoromethane (CFC 12)	5	<1600	<250	ND
Chloromethane	5	<1600	<250	ND
Vinyl Chloride	5	<1600	<250	ND
Bromomethane	5	<1600	<250	ND
Chloroethane	5	<1600	<250	ND
Trichlorofluoromethane (CFC 11)	5	<1600	<250	ND
Acetone	50	<16000	<2500	ND
1,1-Dichloroethene	5	<1600	<250	ND
Carbon Disulfide	5	<1600	<250	ND
Methylene Chloride	10	<3200	<500	ND
trans -1,2-Dichloroethene	5	<1600	<250	ND
1,1-Dichloroethane	5	<1600	<250	ND
2-Butanone (MEK)	20	<6400	<1000	ND
2,2-Dichloropropane	5	<1600	<250	ND
cis -1,2-Dichloroethene	5	<1600	<250	ND
Chloroform	5	<1600	<250	ND
Bromochloromethane	5	<1600	<250	ND
1,1,1-Trichloroethane (TCA)	5	<1600	<250	ND
1,1-Dichloropropene	5	<1600	<250	ND
Carbon Tetrachloride	5	<1600	<250	ND
1,2-Dichloroethane	5	<1600	<250	ND
Benzene	5	<1600	<250	ND
Trichloroethene (TCE)	5	<1600	<250	ND
1,2-Dichloropropane	5	<1600	<250	ND
Bromodichloromethane	5	<1600	<250	ND
Dibromomethane	5	<1600	<250	ND
2-Hexanone	20	<6400	<1000	ND
cis -1,3-Dichloropropene	5	<1600	<250	ND
Toluene	5	<1600	<250	ND
trans -1,3-Dichloropropene	5	<1600	<250	ND
1,1,2-Trichloroethane	5	<1600	<250	ND
4-Methyl-2-pentanone (MIBK)	20	<6400	<1000	ND
1,3-Dichloropropane	5	<1600	<250	ND

a MRL is elevated because of matrix interferences and because the sample required diluting.
Dilution Factor:320

Approved By: Carla Lyon Date: 11/17/94

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON Northwest
Project: CASE/#914-007.02
Sample Matrix: Soil

Service Request: K946828
Date Collected: 10/31/94
Date Received: 11/2/94
Date Extracted: 11/8/94

Volatile Organic Compounds
EPA Method 8260
Units: µg/Kg (ppb)
Dry Weight Basis

		3-East Wall Between Post		
	Sample Name:	1and 2	Method Blank	Method Blank
	Lab Code:	K946828-003(a)	K946828-MB1	K946828-MB2
	Date Analyzed:	11/10/94	11/9/94	11/10/94
Analyte	**MRL**			
Tetrachloroethene (PCE)	5	<1600	<250	ND
Dibromochloromethane	5	<1600	<250	ND
1,2-Dibromoethane (EDB)	20	<6400	<1000	ND
Chlorobenzene	5	<1600	<250	ND
1,1,1,2-Tetrachloroethane	5	<1600	<250	ND
Ethylbenzene	5	<1600	<250	ND
Total Xylenes	5	6200	<250	ND
Styrene	5	<1600	<250	ND
Bromoform	5	<1600	<250	ND
Isopropylbenzene	20	<6400	<1000	ND
1,1,2,2-Tetrachloroethane	5	<1600	<250	ND
1,2,3-Trichloropropane	5	<1600	<250	ND
Bromobenzene	5	<1600	<250	ND
n-Propylbenzene	20	<6400	<1000	ND
2-Chlorotoluene	20	<6400	<1000	ND
4-Chlorotoluene	20	<6400	<1000	ND
1,3,5-Trimethylbenzene	20	<6400	<1000	ND
tert-Butylbenzene	20	<6400	<1000	ND
1,2,4-Trimethylbenzene	20	14000	<1000	ND
sec-Butylbenzene	20	<6400	<1000	ND
1,3-Dichlorobenzene	5	<1600	<250	ND
4-Isopropyltoluene	20	<6400	<1000	ND
1,4-Dichlorobenzene	5	<1600	<250	ND
n-Butylbenzene	20	<6400	<1000	ND
1,2-Dichlorobenzene	5	<1600	<250	ND
1,2-Dibromo-3-chloropropane (DBCP)	20	<6400	<1000	ND
1,2,4-Trichlorobenzene	20	<6400	<1000	ND
1,2,3-Trichlorobenzene	20	<6400	<1000	ND
Naphthalene	20	18000	<1000	ND
Hexachlorobutadiene	20	<6400	<1000	ND

a MRL is elevated because of matrix interferences and because the sample required diluting.
Dilution Factor:320

Approved By: Carla Lyon Date: 11/17/94

3S2P/101894

00007

APPENDIX A

LABORATORY QC RESULTS

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON Northwest	**Service Request:**	K946828
Project:	CASE/#914-007.02	**Date Collected:**	10/31/94
Sample Matrix:	Soil	**Date Received:**	11/2/94
		Date Extracted:	11/3/94
		Date Analyzed:	11/3-5/94

Surrogate Recovery Summary
Total Petroleum Hydrocarbon - Hydrocarbon Identification
Washington DOE Method WTPH-HCID

Sample Name	Lab Code	Percent Recovery o-Terphenyl
1-Bottom	K946828-001	59
2-Bottom	K946828-002	74
3-East Wall	K946828-003	NA
4-West Wall	K946828-004	72
5-Northwest Wall	K946828-005	70
6-Southeast Wall	K946828-006	70
7-Sidewall	K946828-007	68
8-Bottom	K946828-008	72
9-West Wall	K946828-009	70
10-East Wall	K946828-010	77
11-Bottom	K946828-011	72
12-East Wall	K946828-012	76
Method Blank	K941103-SB	66

CAS Acceptance Limits: 50-150

NA Not Applicable because of the sample matrix. The gas chromatogram showed target components that interfered with determination of the surrogate. The sample was not reanalyzed.

Approved By: _____ Date: 11/8/94

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON Northwest	**Service Request:**	K946828
Project:	CASE/#914-007.02	**Date Collected:**	10/31/94
Sample Matrix:	Soil	**Date Received:**	11/2/94
		Date Extracted:	11/10/94
		Date Analyzed:	11/17,18,22/94

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	**Lab Code**	**Percent Recovery** o-Terphenyl
3-East Wall	K946828-003	126
7-Sidewall	K946828-007	102
Method Blank	K941110-SB	79

CAS Acceptance Limits: 55-119

Approved By: _____ Date: 11/22/94

SUR1X/062994
6828PHC.JW1 - SUR1 11/22/94

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON Northwest
Project: CASE/#914-007.02
Sample Matrix: Soil

Service Request: K946828
Date Collected: 10/31/94
Date Received: 11/2/94
Date Extracted: 11/8/94
Date Analyzed: 11/9-10/94

Surrogate Recovery Summary
Volatile Organic Compounds
EPA Method 8260

		Percent Recovery		
Sample Name	**Lab Code**	Dibromofluoromethane	Toluene-d_8	4-Bromofluorobenzene
3-East Wall Between Post 1 and 2	K946828-003	103	100	99
Method Blank	K946828-MB1	100	99	99
Method Blank	K946828-MB2	101	98	102
CAS Acceptance Limits:		80-120	81-117	74-121

Approved By: _____ Date: 11-16-94

00011

APPENDIX B

CHAIN OF CUSTODY INFORMATION

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Columbia Analytical Services inc. 1317 South 13th Ave. • Kelso, WA 98626 • (206) 577-7222 • (800) 695-7222 • FAX (206) 636-1068

DATE 11/1/94 PAGE 1 OF 2

PROJECT NAME CASE # 914-00702

PROJECT MANAGER Lower

COMPANY/ADDRESS EMCON

W 7106 Alton Lane Suite 101

Spokane Wa PHONE 509 838-1144

SAMPLERS SIGNATURE Jeff Lower

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX ☐	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☐	TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐	TCLP Metals ☐ VOA ☐ Semi Pest/ VOA ☐ Herb ☐	Metals (total or dissolved) List Below	Cyanide	pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3, (circle)	NH_3-N, COD, Total-P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐	EPA 8260		REMARKS
1-Bottom 12' W. DRAW	10/31	10:15	1	Soil								X										5' below grade
2-Bottom Between Post 1 and 2		12:00	2									X										"
3-East wall between Post 1 and 2		12:25	3									X								X		6" below slab
4-West wall between Post 1 and 2		12:25	4									X										2-3' below Grade
5-Northeast wall between 1 and drain		12:30	5									X										"
6-Southeast wall between Post 1 and Drain		12:32	6									X										"
7-Sidewall of sump		2:10	7									X										
8-Bottom Between Pole 2 and 3		3.00	8									X										
9-West wall between 2 and 3		3:00	9									X										2½' below grade
10-East wall between Pole 2 and 3	↓	3:00	10	↓								X										3' below grade

RELINQUISHED BY:

Signature: Jeff Lower

Printed Name: Jeff Lower

Firm: EMCON

Date/Time: 11/1/94 3:00 p.m.

RECEIVED BY:

Signature: Susan Kellogg

Printed Name: Susan Kellogg

Firm: ATL

Date/Time: 11/2/94 1015

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

___ Standard (10-15 working days)

___ Provide Verbal Preliminary Results

___ Provide FAX preliminary Results

Requested Report Date ___

REPORT REQUIREMENTS

___ I. Routine Report

___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ___

Bill To ___

SAMPLE RECEIPT:

Shipping VIA: ___

Shipping #: ___

Condition: ___

Lab No: 9406828

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

STRIE ___ I: WI ___ re ___ nator; ___ OW - ___ INK - ___ d by c ___ or ___ 400

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Columbia Analytical Services inc.

1317 South 13th Ave. • Kelso, WA 98626 • (206) 577-7222 • (800) 695-7222 • FAX (206) 636-1068

DATE 11/1/94 PAGE 2 OF 2

PROJECT NAME CASE # 914-607.02

PROJECT MANAGER Lower

COMPANY/ADDRESS EMCON

PHONE 509 838-1144

SAMPLERS SIGNATURE Jeff Lower

NUMBER OF CONTAINERS

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX ☐	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☐	TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐	TCLP Metals ☐ VOA ☐ Semi Pest/ VOA ☐ Herb ☐	Metals (total or dissolved) List Below	Cyanide	pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3, (circle)	NH_3-N, COD, Total-P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐	Hold	REMARKS
Bottom between Pile 3 and 4			11								X									3' below grade
12 - East wall between Pile 3 and 4			12								X									2' below grade
S-1			13															X		Stockpile Sample
S-2			14															X		"
S-3			15															X		"
S-4			16															X		"
																				"

RELINQUISHED BY:

Signature: Jeff Lower

Printed Name: Jeff Lower

Firm: EMCON

Date/Time: 11/1/94 3:00 p.m.

RECEIVED BY:

Signature: Jan Nelson

Printed Name: Jan Nelson

Firm: LAS

Date/Time: 11/2/94 1015

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr. ____ 5 day

____ Standard (10-15 working days)

____ Provide Verbal Preliminary Results

____ Provide FAX preliminary Results

Requested Report Date ____

REPORT REQUIREMENTS

____ I. Routine Report

____ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)

____ III. Data Validation Report (includes All Raw Data)

____ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ____

Bill To ____

SAMPLE RECEIPT:

Shipping VIA: ____

Shipping #: ____

Condition: ____

Lab No: K946828

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

DISTRIBUTION: WHITE ur tor; Y W - lat K - re by orig

100-05

Columbia Analytical Services, Inc.

June 20, 1995

Service Request No.: K9503369

Jeff Lower
EMCON
W 7106 Will D. Alton Lane, Suite 108
Spokane, WA 99204

Re: **Case Sunnyside/Project #0914-007.03**

Dear Jeff:

Enclosed are the results of the sample(s) submitted to our laboratory on June 2, 1995. For your reference, these analyses have been assigned our service request number K9503369.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the samples analyzed.

Please call if you have any questions. My extension is 243.

Respectfully submitted,

Columbia Analytical Services, Inc

Richard Craven
Project Chemist

RAC/td

1317 South 13th Avenue • P.O. Box 479 • Kelso, Washington 98626 • Telephone 206/577-7222 • Fax 206/636-1068

COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected at or above the MRL
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

00002

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	5/31/95
Sample Matrix:	Soil	**Date Received:**	6/2/95
		Date Extracted:	6/5/95

Hydrocarbon Scan
EPA Methods 3550/8015 Modified
Units: mg/Kg (ppm)
Dry Weight Basis

		Sample Name:	**MW-1-4**	**MW-2-4**	**MW-3-5**
		Lab Code:	K9503369-007	K9503369-008	K9503369-009
		Date Analyzed:	6/8/95	6/6/95	6/8/95
Analyte	**MRL**				
Gasoline	10		ND	ND	ND
Mineral Spirits	10		ND	ND	ND
Jet Fuel	10		ND	ND	ND
Kerosene	10		ND	ND	ND
Diesel	10		ND	ND	ND
Other*	20		109	ND	109

* Quantified using 30-weight motor oil as a standard.

Approved By: Vandana Date: 6/15/95 00003

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	5/31/95
Sample Matrix:	Soil	**Date Received:**	6/2/95
		Date Extracted:	6/5/95

Hydrocarbon Scan
EPA Methods 3550/8015 Modified
Units: mg/Kg (ppm)
Dry Weight Basis

		Sample Name:	**B-1-2**	**B-1-4**	**B-2-2**
		Lab Code:	K9503369-010	K9503369-011	K9503369-012
		Date Analyzed:	6/6/95	6/6/95	6/8/95
Analyte	**MRL**				
Gasoline	10		ND	ND	ND
Mineral Spirits	10		ND	ND	ND
Jet Fuel	10		ND	ND	ND
Kerosene	10		ND	ND	ND
Diesel	10		ND	ND	ND
Other*	20		ND	ND	294

* Quantified using 30-weight motor oil as a standard.

Approved By: _____ Date: 6/15/95

3S22/102094
03369PHC.MS1 - 8015s (2) 6/15/95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	5/31/95
Sample Matrix:	Soil	**Date Received:**	6/2/95
		Date Extracted:	6/5/95

Hydrocarbon Scan
EPA Methods 3550/8015 Modified
Units: mg/Kg (ppm)
Dry Weight Basis

		Sample Name:	**B-2-4**	**B-3-2**	**B-3-4**
		Lab Code:	K9503369-013	K9503369-014	K9503369-015
		Date Analyzed:	6/6/95	6/8/95	6/10/95
Analyte	**MRL**				
Gasoline	10		ND	ND	ND
Mineral Spirits	10		ND	ND	ND
Jet Fuel	10		ND	ND	ND
Kerosene	10		ND	ND	ND
Diesel	10		ND	188	909
Other*	20		ND	107	947

* Quantified using 30-weight motor oil as a standard.

Approved By: Vandana Date: 6/10/95

00005

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	5/31/95
Sample Matrix:	Soil	**Date Received:**	6/2/95
		Date Extracted:	6/5/95

Hydrocarbon Scan
EPA Methods 3550/8015 Modified
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name:	**Method Blank**
Lab Code:	K950605-SB
Date Analyzed:	6/5/95

Analyte	**MRL**	
Gasoline	10	ND
Mineral Spirits	10	ND
Jet Fuel	10	ND
Kerosene	10	ND
Diesel	10	ND
Other*	20	ND

* Quantified using 30-weight motor oil as a standard.

Approved By: _____ Date: 6/15/95

00005

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	6/1/95
Sample Matrix:	Water	**Date Received:**	6/2/95
		Date Extracted:	6/6/95

Hydrocarbon Scan
EPA Methods 3510/8015 Modified
Units: µg/L (ppb)

		Sample Name:	**MW-1**	**MW-2**	**MW-3**
		Lab Code:	K9503369-001	K9503369-002	K9503369-003
		Date Analyzed:	6/14/95	6/14/95	6/14/95
Analyte	**MRL**				
Gasoline	50		ND	ND	ND
Mineral Spirits	50		ND	ND	ND
Jet Fuel	50		ND	ND	ND
Kerosene	50		ND	ND	ND
Diesel	50		328(a)	293(a)	435(a)
Other*	200		ND	ND	ND

* Quantified using 30-weight motor oil as a standard.

a Quantified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

Approved By: _____ Date: 6/15/95

00007

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	6/1/95
Sample Matrix:	Water	**Date Received:**	6/2/95
		Date Extracted:	6/6/95

Hydrocarbon Scan
EPA Methods 3510/8015 Modified
Units: µg/L (ppb)

		Sample Name:	**Dup**	**Method Blank**
		Lab Code:	K9503369-004	K950606-MB
		Date Analyzed:	6/14/95	6/13/95
Analyte	**MRL**			
Gasoline	50		ND	ND
Mineral Spirits	50		ND	ND
Jet Fuel	50		ND	ND
Kerosene	50		ND	ND
Diesel	50		379(a)	ND
Other*	200		ND	ND

* Quantified using 30-weight motor oil as a standard.

a Quantified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

Approved By: Vandaver Date: 6/15/95 00008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	5/31/95
Sample Matrix:	Soil	**Date Received:**	6/2/95
		Date Extracted:	6/5/95
		Date Analyzed:	6/5,6/95

BTEX
EPA Methods 5030A/8020
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:		**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
Method Reporting Limit:		0.05	0.1	0.1	0.1
Sample Name	**Lab Code**				
MW-1-4	K9503369-007	ND	ND	ND	ND
MW-2-4	K9503369-008	ND	ND	ND	ND
MW-3-5	K9503369-009	ND	ND	ND	ND
B-1-2	K9503369-010	ND	ND	ND	ND
B-1-4	K9503369-011	ND	ND	ND	ND
B-2-2	K9503369-012	ND	ND	ND	ND
B-2-4	K9503369-013	ND	ND	ND	ND
B-3-2	K9503369-014	ND	ND	ND	ND
B-3-4	K9503369-015	ND	ND	ND	ND
Method Blank	K950603-SB	ND	ND	ND	ND

Approved By: _____ Date: 6/16/95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	6/1/95
Sample Matrix:	Water	**Date Received:**	6/2/95
		Date Extracted:	NA
		Date Analyzed:	6/8/95

BTEX
EPA Methods 5030A/8020
Units: µg/L (ppb)

Analyte:		**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
Method Reporting Limit:		0.5	1	1	1
Sample Name	**Lab Code**				
MW-1	K9503369-001	ND	ND	ND	ND
MW-2	K9503369-002	ND	ND	ND	ND
MW-3	K9503369-003	ND	ND	ND	ND
Dup	K9503369-004	ND	ND	ND	ND
Method Blank	K950608-WB	ND	ND	ND	ND

Approved By: _____ Date: 6/16/95

00010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Case Sunnyside/#0914-007.03
Sample Matrix: Soil

Service Request: K9503369
Date Collected: 5/31/95
Date Received: 6/2/95
Date Extracted: NA
Date Analyzed: 6/5/95

Solids, Total
EPA Method 160.3 Modified
Percent (%)

Sample Name	Lab Code	Result
MW-1-4	K9503369-007	80.7
MW-2-4	K9503369-008	81.5
MW-3-5	K9503369-009	79.7
B-1-2	K9503369-010	79.0
B-1-4	K9503369-011	80.0
B-2-2	K9503369-012	80.4
B-2-4	K9503369-013	77.6
B-3-2	K9503369-014	79.6
B-3-4	K9503369-015	77.9

Approved By: _____ Date: 6/9/95

00011

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Case Sunnyside/#0914-007.03
Sample Matrix: Soil

Service Request: K9503369
Date Collected: 5/31/95
Date Received: 6/2/95
Date Extracted: 6/5/95
Date Analyzed: 6/5-8/95

Surrogate Recovery Summary
Hydrocarbon Scan
EPA Methods 3550/8015 Modified

Sample Name	Lab Code	Percent Recovery o-Terphenyl
MW-1-4	K9503369-007	94
MW-2-4	K9503369-008	80
MW-3-5	K9503369-009	96
B-1-2	K9503369-010	89
B-1-4	K9503369-011	80
B-2-2	K9503369-012	84
B-2-4	K9503369-013	96
B-3-2	K9503369-014	95
B-3-4	K9503369-015	92
Method Blank	K950605-SB	83

CAS Acceptance Limits: 56-116

Approved By: Vandam Date: 6/15/95

00012

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Case Sunnyside/#0914-007.03
Sample Matrix: Water

Service Request: K9503369
Date Collected: 6/1/95
Date Received: 6/2/95
Date Extracted: 6/6/95
Date Analyzed: 6/13-14/95

Surrogate Recovery Summary
Hydrocarbon Scan
EPA Methods 3510/8015 Modified

Sample Name	Lab Code	Percent Recovery o-Terphenyl
MW-1	K9503369-001	76
MW-2	K9503369-002	76
MW-3	K9503369-003	76
Dup	K9503369-004	75
Method Blank	K950606-MB	82

CAS Acceptance Limits: 59-110

Approved By: Vandan Date: 6/15/95 00013

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Case Sunnyside/#0914-007.03
Sample Matrix: Soil

Service Request: K9503369
Date Collected: 5/31/95
Date Received: 6/2/95
Date Extracted: 6/5/95
Date Analyzed: 6/5,6/95

Surrogate Recovery Summary
BTEX
EPA Methods 5030A/8020

Sample Name	Lab Code	Percent Recovery 1,4-Difluorobenzene
MW-1-4	K9503369-007	92
MW-2-4	K9503369-008	87
MW-3-5	K9503369-009	89
B-1-2	K9503369-010	85
B-1-4	K9503369-011	89
B-2-2	K9503369-012	89
B-2-4	K9503369-013	85
B-3-2	K9503369-014	87
B-3-4	K9503369-015	84
Method Blank	K950603-SB	103

CAS Acceptance Limits: 52-123

Approved By: _____ Date: 6/14/95

00014

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	K9503369
Project:	Case Sunnyside/#0914-007.03	**Date Collected:**	6/1/95
Sample Matrix:	Water	**Date Received:**	6/2/95
		Date Extracted:	NA
		Date Analyzed:	6/8/95

Surrogate Recovery Summary
BTEX
EPA Methods 5030A/8020

Sample Name	**Lab Code**	**Percent Recovery** 4-Bromofluorobenzene
MW-1	K9503369-001	90
MW-2	K9503369-002	88
MW-3	K9503369-003	90
Dup	K9503369-004	90
Method Blank	K950608-WB	88

CAS Acceptance Limits: 69-114

Approved By: _____ Date: 6/16/95

00015

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Columbia Analytical Services inc. 1317 South 13th Ave. • Kelso, WA 98626 • (206) 577-7222 • (800) 695-7222 • FAX (206) 636-1068

DATE June 1, 1995 PAGE 1 OF 2

PROJECT NAME Case Sunnyside # 0914 007.03

PROJECT MANAGER Jeff Lower

COMPANY/ADDRESS EMCON

W. 7106 Alton Ln. #101

Spokane, WA 99204 PHONE 509 838-1144

SAMPLERS SIGNATURE John S Latta

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX X	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan X	TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐	TCLP Metals ☐ VOA ☐ Semi Pest/ VOA ☐ Herb ☐	Metals (total or dissolved) List Below	Cyanide	pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3 (circle)	NH_3-N, COD, Total-P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐			REMARKS
MW-1-4	5/31/95	1145	K3369-7	Soil	1						1	1										
MW-2-4	"	1540	8	Soil	1						1	1										
MW-3-5	"	1710	9	Soil	1						1	1										
B-1-2	"	1450	10	"	2						1	1										
B-1-4	"	1510	11	"	2						1	1										
B-2-2	"	1520	12	"	2						1	1										
B-2-4	"	1540	13	"	2						1	1										
B-3-2	"	1600	14	"	2						1	1										
B-3-4	"	1615	15	"	2						1	1										One bttl Labeled B-2-4 was Dup Time.
											Rec'd Trip Blanks not listed on COC. LKH/GB											

RELINQUISHED BY:
John S Latta
Signature
John S. Latta
Printed Name
EMCON
Firm
6/1/95 1400
Date/Time

RECEIVED BY:
Signature
Printed Name
FED Ex
Firm
6/1/95 1515
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping #: ___
Condition: ___
Lab No: K9503369

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
6/2/95 100
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

STRIPE: WHITE - ORIGINATOR; CANARY - RETURNED by CLIENT

400

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Columbia Analytical Services inc. 1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

DATE June 1, 1995 PAGE 1 OF 2

PROJECT NAME Case Sunnyside # 0914 007.03

PROJECT MANAGER Jeff Lower

COMPANY/ADDRESS EMCON

W. 7106 Alton Ln #101

Spokane, WA 99204 PHONE 509 838-1144

SAMPLERS SIGNATURE John S Latta

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX ☒	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☒	REMARKS
MW-1	6/1/95	1210	K3369-1	WATER	4	1	1	
MW-2	"	1120	2	"	4	1	1	
MW-3	"	1145	3	"	4	1	1	
DUP	"	—	4	"	4	1	1	
CUTTINGS	"	1240	5	SOIL	4	1	1	
PURGE WATER	"	1220	6	WATER	2	1	1	didnt receive VOA's, rcvd 2 1L Ambers

ANALYSIS REQUESTED

Base/Neu/Acid Organics GC/MS 625/8270 ☐ | Volatile Organics GC/MS 624/8240 ☐ | Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐ | Pesticides/PCBs 608/8080 ☐ | Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐ | TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐ | TCLP Metals ☐ VOA ☐ Semi Pest/ VOA ☐ Herb ☐ | Metals (total or dissolved) List Below ☐ | Cyanide ☐ | pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3, (circle) ☐ | NH_3-N, COD, Total-P, TKN, TOC (circle) ☐ | Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐

RELINQUISHED BY:
John S Latta
Signature
John S. Latta
Printed Name
EMCON
Firm
6/1/95 1400
Date/Time

RECEIVED BY:
Signature
Printed Name
FED EX
Firm
6/1/95 1515
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
___ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping #: ___
Condition: ___
Lab No: K9503369

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
6/2/95 100
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

HOLD "CUTTINGS" & "PURGE WATER" FOR ANALYSIS ONLY IF INSTRUCTED.

DISTRIBUTION: White - re[illegible]originator; YELLOW - lab; PINK - retained by originator

400-03

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-9508 (206) 481-9200 • FAX 485-2992
East 11115 Montgomery, Suite B • Spokane, WA 99206-4776 (509) 924-9200 • FAX 924-9290
9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Project Name:	Case - Sunny Side		
W. 7106 Will D. Alton Lane, # 106	Client Project #:	914-00703		
Spokane, WA 99204-5760			Received:	Jul 28, 1995
Attention: Craig Schwyn	NCA Project #:	S507082	Reported:	Aug 7, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
S507082-01	SFW-5'	Soil	7/26/95
S507082-02	SWALL	Soil	7/26/95
S507082-03	SF-E-4'	Soil	7/26/95
S507082-04	E-WALL	Soil	7/26/95
S507082-05	CF-3.5'	Soil	7/26/95
S507082-06	NF-W-3.5'	Soil	7/26/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	Case - Sunny Side		
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil		
Spokane, WA 99204-5760			Received:	Jul 28, 1995
Attention: Craig Schwyn	First Sample #:	S507082-01	Reported:	Aug 7, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
S507082-01	SFW-5'	76	24
S507082-02	SWALL	78	22
S507082-03	SF-E-4'	75	25
S507082-04	E-WALL	78	22
S507082-05	CF-3.5'	81	19
S507082-06	NF-W-3.5'	76	24

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	Case - Sunny Side	Sampled:	Jul 26, 1995
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	Received:	Jul 28, 1995
Spokane, WA 99204-5760	Analysis Method:	WTPH-D Extended	Extracted:	Aug 3, 1995
Attention: Craig Schwyn	First Sample #:	S507082-01	Analyzed:	Aug 3/5, 1995
			Reported:	Aug 7, 1995

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/kg (ppm)	Heavy Oil Result mg/kg (ppm)	Surrogate Recovery %
S507082-01	SFW-5'	N.D.	N.D.	60
S507082-02	SWALL	43	N.D.	68
S507082-03	SF-E-4'	N.D.	N.D.	68
S507082-04	E-WALL	410	37	78
S507082-05	CF-3.5'	N.D.	N.D.	75
S507082-06	NF-W-3.5'	N.D.	N.D.	53
BLK50803A	Method Blank	N.D.	N.D.	91
Reporting Limit:		**10**	**25**	

2-Fluorobiphenyl Surrogate Recovery Control Limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL

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East 11115 Montgomery, Suite B • Spokane, WA 99206-4776 (509) 924-9200 • FAX 924-9290
9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID: Case - Sunny Side	Analyst:	S. Armand
W. 7106 Will D. Alton Lane, # 106	Sample Matrix: Soil		
Spokane, WA 99204-5760	Analysis Method: WTPH-D	Extracted:	Aug 3, 1995
Attention: Craig Schwyn	Units: mg/kg (ppm)	Analyzed:	Aug 4, 1995
		Reported:	Aug 7, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel

Spike Conc. Added:	167
Spike Result:	143
% Recovery:	85.6
Upper Control Limit %:	125
Lower Control Limit %:	72

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Hydrocarbons

Sample Number:	S507085-04
Original Result:	32.2
Duplicate Result:	36.4
Relative % Difference	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	42

NORTH CREEK ANALYTICAL Inc

Scott L. Armand
Laboratory Manager

$$\text{\% Recovery:} \quad \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$$

Sweet-Edwards / EMCON, Inc.
Kelso, WA (206) 423-3580
Bothell, WA (206) 485-5000

Chain of Custody / Laboratory Analysis Request

DATE 7/28 PAGE 1 OF 1

PROJECT Cruz Sunny Side #914-00703
CLIENT INFO. CONTACT EMCON Spokane
ADDRESS
TELEPHONE#
SAMPLERS NAME Craig Schwyn PHONE#
SAMPLERS SIGNATURE Craig C Schwyn

SAMPLE I.D.	DATE	TIME	LAB I.D.	TYPE	BASE/NEU/ACID ORGAN. GC/MS/625/8270	VOLATILE ORGANICS GC/MS/624/8240	HALOGENATED VOLATILE ORGANICS 601/8010	PHENOLICS 604/8040	POLYNUCLEAR AROMATIC 610/8310	TOTAL ORGANIC CARBON (TOC) 415/9060	TOTAL ORGANIC HALIDE (TOX) 9020	EP TOX/TCLP METALS (Circle One)	METALS (TOTAL) (See Special Inst.)	TCLP ORGANICS	pH, COND ALK	NO_3/NO_2, Cl SO_4	Ca, Mg, Na, K	WTPHD extended						NUMBER OF CONTAINERS
1. SF-W-5'	7/26	1200	SS07082-01															X						
2. SWall	7/26	1220	-02															X						
3. SF-E-4'		1215	03															X						
4. E-Wall		1230	04															X						
5. CF-3.5'		3:40	05															X						
6. NF-W-3.5'	↓	4:00	06															X						
7.																								
8.																								

Relinquished By Sweet, Edwards & Assoc.	Relinquished By	Relinquished By	PROJECT INFORMATION	SAMPLE RECEIPT
Signature: Craig C Schwyn	Signature	Signature		
Printed Name: Craig Schwyn	Printed Name	Printed Name	Shipping I.D. No.	Total No. of Containers
Firm: EMCON	Firm	Firm	VIA	Chain of Custody Seals
Date/Time: 7/28/95 2:00	Date/Time	Date/Time	Project	Received in good condition
				LAB NO.

Received By	Received By	Received By	SPECIAL INSTRUCTIONS/COMMENTS
Federal Express	C. Kane		Samples collected on 7/26 as per C Schwyn 7.31.95 —CK
Signature	Signature C. KANE	Signature	
Printed Name	Printed Name NCA	Printed Name	
Firm	Firm 7/28/95	Firm	
Date/Time	Date/Time	Date/Time	

DISTRIBUTION: WHITE - return to originator; YELLOW - lab; PINK - retained by originator.

S-E/E 400-05

NORTH CREEK ANALYTICAL

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East 11115 Montgomery, Suite B • Spokane, WA 99206-4776 (509) 924-9200 • FAX 924-9290
9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Project Name:	None Given	
W. 7106 Will D. Alton Lane, # 106	Client Project #:	None Given	
Spokane, WA 99204-5760			Received: Aug 18, 1995
Attention: Craig Schwyn	NCA Project #:	S508055	Reported: Aug 28, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
S508055-01, 02 Composite	B5-1.6, B5-3.5 Composite	Soil	8/17/95
S508055-03	B6-2	Soil	8/17/95
S508055-04	B7-1.2	Soil	8/17/95
S508055-05	B7-2.6	Soil	8/17/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	None Given	
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	
Spokane, WA 99204-5760			Received: Aug 18, 1995
Attention: Craig Schwyn	First Sample #:	S508055-01	Reported: Aug 28, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
S508055-01, 02 Composite	B5-1.6, B5-3.5 Composite	76	24
S508055-03	B6-2	79	21
S508055-04	B7-1.2	76	24
S508055-05	B7-2.6	81	19

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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EMCON Northwest, Inc. Spokane	Client Project ID:	None Given	Sampled:	Aug 17, 1995
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	Received:	Aug 18, 1995
Spokane, WA 99204-5760	Analysis Method:	WTPH-D Extended	Extracted:	Aug 22, 1995
Attention: Craig Schwyn	First Sample #:	S508055-01	Analyzed:	Aug 22, 1995
			Reported:	Aug 28, 1995

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/kg (ppm)	Heavy Oil Result mg/kg (ppm)	Surrogate Recovery %
S508055-01, 02 Composite	B5-1.6, B5-3.5 Composite	N.D.	N.D.	74
S508055-03	B6-2	N.D.	N.D.	72
S508055-04	B7-1.2	110	120	110
S508055-05	B7-2.6	19	N.D.	99
BLK50822A	Method Blank	N.D.	N.D.	100
Reporting Limit:		**10**	**25**	

2-Fluorobiphenyl Surrogate Recovery Control Limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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EMCON Northwest, Inc. Spokane	Client Project ID: None Given	Analyst:	S. Armand
W. 7106 Will D. Alton Lane, # 106	Sample Matrix: Soil		
Spokane, WA 99204-5760	Analysis Method: WTPH-D	Extracted:	Aug 22, 1995
Attention: Craig Schwyn	Units: mg/kg (ppm)	Analyzed:	Aug 22, 1995
		Reported:	Aug 25, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel

Spike Conc. Added:	167
Spike Result:	136
% Recovery:	81.4
Upper Control Limit %:	123
Lower Control Limit %:	58

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Hydrocarbons

Sample Number:	S508055-05
Original Result:	19.1
Duplicate Result:	14.8
Relative % Difference	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	46

NORTH CREEK ANALYTICAL Inc

Scott L. Armand
Laboratory Manager

$$\text{\% Recovery:} \quad \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$$

NORTH CREEK ANALYTICAL

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East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CHAIN OF CUSTODY REPORT

CLIENT: EMCON - Spokane
ADDRESS: Spokane
PHONE: 509 838 1144 FAX:
PROJECT NAME:
PROJECT NUMBER:
SAMPLED BY:

REPORT TO: Craig Schuyler
BILLING TO:
P.O. NUMBER:
NCA QUOTE #: 1111

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [10] [5] [3] [2] [1] *(Please Select One)*

Fuels & Hydrocarbon Analyses: [5] [3] [2] [1]

** Turnaround Requests less than standard will incur Rush Charges.*

FAX RESULTS BY :

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Analysis Request: WTPH-D Extended	COMMENTS & PRESERVATIVES USED	NCA SAMPLE NUMBER
1. B5 - 1.6	8/17/95	S	1	X } Composite		SSD8055-01
2. B5 - 3.5	"	"	1	X		02
3. B6 - 2'	"	"	1	X		03
4. B7 - 1.2	"	"	1	X		04
5. B7 - 2.6	"	"	1	X		05
6.						
7.						
8.						
9.						
10.						

RELINQUISHED BY: Craig Schuyler DATE: 8/18/95
PRINT NAME: Craig Schuyler FIRM: EMCON TIME: 8:50

RECEIVED BY: Scott L. Armand DATE: 8-18-95
PRINT NAME: Scott L. Armand FIRM: NCA-S TIME: 0850

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

NORTH CREEK ANALYTICAL

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EMCON Northwest, Inc. Spokane	Project Name:	Case Sunnyside	
W. 7106 Will D. Alton Lane, # 106	Client Project #:	914007003	
Spokane, WA 99204-5760			Received: Aug 22, 1995
Attention: Craig Schwyn	NCA Project #:	S508064	Reported: Aug 28, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
S508064-01	B6-3.7'	Soil	8/17/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
This analytical report must be reproduced in its entirety.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	Case Sunnyside	
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	
Spokane, WA 99204-5760			Received: Aug 22, 1995
Attention: Craig Schwyn	First Sample #:	S508064-01	Reported: Aug 28, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
S508064-01	B6-3.7'	82	18

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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EMCON Northwest, Inc. Spokane	Client Project ID:	Case Sunnyside	Sampled:	Aug 17, 1995
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	Received:	Aug 22, 1995
Spokane, WA 99204-5760	Analysis Method:	WTPH-D Extended	Extracted:	Aug 22, 1995
Attention: Craig Schwyn	First Sample #:	S508064-01	Analyzed:	Aug 22, 1995
			Reported:	Aug 28, 1995

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/kg (ppm)	Heavy Oil Result mg/kg (ppm)	Surrogate Recovery %
S508064-01	B6-3.7'	16	57	85
BLK50822A	Method Blank	N.D.	N.D.	100
Reporting Limit:		**10**	**25**	

2-Fluorobiphenyl Surrogate Recovery Control Limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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EMCON Northwest, Inc. Spokane	Client Project ID: Case Sunnyside	Analyst: S. Armand
W. 7106 Will D. Alton Lane, # 106	Sample Matrix: Soil	
Spokane, WA 99204-5760	Analysis Method: WTPH-D	Extracted: Aug 22, 1995
Attention: Craig Schwyn	Units: mg/kg (ppm)	Analyzed: Aug 22, 1995
		Reported: Aug 28, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel

Spike Conc. Added:	167
Spike Result:	136
% Recovery:	81.4
Upper Control Limit %:	123
Lower Control Limit %:	58

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Hydrocarbons

Sample Number:	S508055-05
Original Result:	19.1
Duplicate Result:	14.8
Relative % Difference	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	46

NORTH CREEK ANALYTICAL Inc

Scott L. Armand
Laboratory Manager

$$\text{\% Recovery:} \quad \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) \,/\, 2} \times 100$$

NORTH CREEK ANALYTICAL

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CHAIN OF CUSTODY REPORT

CLIENT: ~~Case~~ Emcon
ADDRESS: Spokane
PHONE: 838-1144 FAX:
PROJECT NAME: Case Sunnyside
PROJECT NUMBER: 914007003
SAMPLED BY: Craig Schaya

REPORT TO: Craig Schaya
BILLING TO: Emcon
P.O. NUMBER:
NCA QUOTE #:

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: [10] [5] [3] [2] [1]
(Please Select One)
Fuels & Hydrocarbon Analyses: [X] [3] [2] [1]
** Turnaround Requests less than standard will incur Rush Charges.*

FAX RESULTS BY :

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Analysis Request: TPH-D Extended	COMMENTS & PRESERVATIVES USED	NCA SAMPLE NUMBER
1. B6-3.7'	8/17/95	S	1			5508064-01
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

RELINQUISHED BY: Craig Schaya DATE: 8/22/95
PRINT NAME: [illegible] FIRM: Emcon TIME: 9:00
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

~~RELINQUISHED BY:~~ RECEIVED Bob Bauer DATE: 8/22/95
PRINT NAME: Bob Bauer FIRM: NCA TIME: 8:00
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

PAGE OF

COC Rev 6, 10/94

NORTH CREEK ANALYTICAL

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EMCON Northwest, Inc. Spokane	Project Name:	CASE-Sunnyside	
W. 7106 Will D. Alton Lane, # 106	Client Project #:	914-007.003	
Spokane, WA 99204-5760			Received: Nov 30, 1995
Attention: Craig Schwyn	NCA Project #:	S511078	Reported: Dec 7, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
S511078-01	E-FLOOR-5'	Soil	11/28/95
S511078-02	E-WALL-COMP	Soil	11/28/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
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NORTH CREEK ANALYTICAL Inc.

Bob Barr for

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	CASE-Sunnyside	
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	
Spokane, WA 99204-5760			Received: Nov 30, 1995
Attention: Craig Schwyn	First Sample #:	S511078-01	Reported: Dec 7, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
S511078-01	E-FLOOR-5'	75	25
S511078-02	E-WALL-COMP	75	25

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Bob Bauer /for

Scott L. Armand
Laboratory Manager

NORTH CREEK ANALYTICAL
Laboratory Manager

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID:	CASE-Sunnyside	Sampled:	Nov 28, 1995
W. 7106 Will D. Alton Lane, # 106	Sample Matrix:	Soil	Received:	Nov 30, 1995
Spokane, WA 99204-5760	Analysis Method:	WTPH-D Extended	Extracted:	Dec 2, 1995
Attention: Craig Schwyn	First Sample #:	S511078-01	Analyzed:	Dec 4, 1995
			Reported:	Dec 7, 1995

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/kg (ppm)	Heavy Oil Result mg/kg (ppm)	Surrogate Recovery %
S511078-01	E-FLOOR-5'	N.D.	N.D.	98
S511078-02	E-WALL-COMP	N.D.	N.D.	92
BLK51202A	Method Blank	N.D.	N.D.	100
Reporting Limit:		**10**	**25**	

2-Fluorobiphenyl Surrogate Recovery Control Limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Scott L. Armand
Laboratory Manager

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

EMCON Northwest, Inc. Spokane	Client Project ID: CASE-Sunnyside	Analyst:	S. Armand
W. 7106 Will D. Alton Lane, # 106	Sample Matrix: Soil		
Spokane, WA 99204-5760	Analysis Method: WTPH-D	Extracted:	Dec 2, 1995
Attention: Craig Schwyn	Units: mg/kg (ppm)	Analyzed:	Dec 4, 1995
		Reported:	Dec 7, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel

Spike Conc. Added:	167
Spike Result:	151
% Recovery:	90.4
Upper Control Limit %:	123
Lower Control Limit %:	58

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Hydrocarbons

Sample Number:	S512002-04
Original Result:	N.D.
Duplicate Result:	N.D.
Relative % Difference	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	46

NORTH CREEK ANALYTICAL Inc

Scott L. Armand
Laboratory Manager

$$\text{\% Recovery:} \quad \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$$

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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CHAIN OF CUSTODY REPORT

CLIENT: CASE
ADDRESS: EMCON - Spokane
PHONE: 838-1144 FAX: 838-1382
PROJECT NAME: CASE - Sunnyside
PROJECT NUMBER: 914-007.003
SAMPLED BY: Craig Schwyn

REPORT TO: Craig Schwyn
BILLING TO: EMCON
P.O. NUMBER: 019772
NCA QUOTE #:

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 | 5 | 3 | 2 | 1

(Please Select One)

Fuels & Hydrocarbon Analyses: ~~5~~ | 3 | 2 | 1

** Turnaround Requests less than standard will incur Rush Charges.*

FAX RESULTS BY :

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Analysis Request: TPH-D extended	COMMENTS & PRESERVATIVES USED	NCA SAMPLE NUMBER
1. E-Floor -5'	11/28/95	S	1	X		5511078-01
2. E-WALL-Comp	11/28/95	S	1	X		-02
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

RELINQUISHED BY: Craig Schwyn DATE: 11/29/95
PRINT NAME: Craig Schwyn FIRM: EMCON TIME: 4:30

RELINQUISHED BY: John Latta DATE: 11/30/95
PRINT NAME: FIRM: EMCON TIME: 9:00AM

RECEIVED BY: John Latta DATE: 11/30/95
PRINT NAME: FIRM: EMCON TIME: 4:30

RECEIVED BY: DATE: 11-30-95
PRINT NAME: Josh L. Armond FIRM: NCA TIME: 0900

ADDITIONAL REMARKS: