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July 11, 2014

Mr. Ed Ralston
Remediation Management
Phillips 66 Company
76 Broadway
Sacramento, California 95818

Subject: **Remediation System Installation and Startup Report**
Former Phillips 66 Facility No. 255353 (AOC # 1396)
600 Westlake Avenue North
Seattle, Washington
Washington State Department of Ecology VCP No. NW1714
Cardno ATC Project No. 076.75118.1396

Dear Mr. Ralston:

Enclosed is a copy of Cardno ATC's report summarizing remedial system installation and startup activities for the Former Phillips 66 Company (Phillips 66) facility located at 600 Westlake Avenue North in Seattle, Washington.

If you have questions regarding the information presented in this report, or if you need additional information, please do not hesitate to contact us at (503) 684-0525.

Sincerely,

CARDNO ATC

Felicia D Wood for
Mark Newman
Project Geologist

Kyle Sattler, L.G.
Senior Project Manager

State of Washington
29940
Licensed Geologist
KYLE RAYMOND SATTLER

Enclosures

REMEDIATION SYSTEM INSTALLATION AND STARTUP REPORT

Former Phillips 66 Facility No. 255353 (AOC #1396)
600 Westlake Avenue North
Seattle, Washington

Cardno ATC Project No. 076.75118.1396

Prepared on behalf of:
Mr. Ed Ralston
Phillips 66 Company
76 Broadway
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1.0 INTRODUCTION

Cardno ATC has prepared this report on behalf of Phillips 66 Company (P66) to document the results of the soil vapor extraction (SVE) and air-sparge (AS) remediation system installation and startup activities at former Phillips 66 Facility No. 255353 (AOC #1396). The former facility address is 600 Westlake Avenue North, Seattle, Washington. P66 is conducting investigation, cleanup, and monitoring of the former P66 facility (located on the south half of City Block #77) and those properties on or around Block #77 bounded by Westlake Avenue North, Valley Street, Terry Avenue North, and Mercer Street (herein referenced as the Site). P66 is conducting the investigation, cleanup, and monitoring pursuant to a Settlement and Remedial Action Agreement (Settlement Agreement) among ConocoPhillips (now P66), Union Oil Company of California, City Investors XI, LLC (City Investors), and the City of Seattle (City) that was executed in April 2007.

The remediation system installation and startup activities described in this report were conducted in conjunction with construction activities associated with the Mercer Corridor Project (MCP). The MCP is a major construction project being implemented by the City of Seattle in cooperation with King County, the State of Washington, and the United States to improve traffic congestion in and around the Mercer Street corridor between Interstate 5 and Elliot Avenue West. The MCP commenced in early 2010.

The former P66 facility is currently enrolled in the Washington State Department of Ecology's (Ecology) Voluntary Cleanup Program (VCP) and has been assigned VCP No. NW1714. The Site is shown relative to surrounding physical features in Figure 1. The current layout of the Site is shown on Figure 2.

2.0 SITE DESCRIPTION AND LOCATION

P66 is the current owner of the property that comprises the south half of the city block that is bounded on the north by Valley Street, to the east by Terry Avenue North, to the south by Mercer Street, and to the west by Westlake Avenue North. It is possible this city block is known as City Block #77 (and will be referred to as City Block #77 herein). City Investors XI, LLC (City Investors) currently owns the property that comprises the north half of the block. The eastern portion of the north half of City Block #77 was formerly occupied by the Brace Lumber Mill and subsequently by a Denny's restaurant. A former Union 76-branded gasoline service station (previously owned by Union Oil Company of California [Unocal]) previously occupied the southwest portion of City Block #77. The City currently holds easements for public rights-of-way on the streets and avenues surrounding the block.

All previous facilities on City Block #77 have been removed and/or demolished, and the north half of the block (owned by City Investors) is currently used as a parking lot. As part of the MCP, the City acquired a 70-foot wide strip of land from P66 located along on the north side of Mercer Street between Terry Avenue North and Westlake Avenue North in the MCP area. The approximate western two-thirds of the current P66 property is occupied by numerous above ground storage/treatment tanks utilized as part of a construction dewatering system associated with the development of the city block west of City Block #77, across Westlake Avenue North. The approximate eastern one-third of the current P66 property is occupied by the above ground AS/SVE system compound that is currently operating.

2.1 Site Cleanup History

In May 1980, Unocal discovered that approximately 80,000 gallons of supreme leaded gasoline was released from a product line south of the western pump islands at the Westlake 76 Station to the subsurface over a four-month period. In response to the release the underground storage tanks (USTs) and product lines were replaced. Two recovery trenches and numerous recovery wells installed at the property removed a total of approximately 41,900 gallons of liquid phase hydrocarbons (LPH) between June 1980 and October 1992.

In 1988, an initial SVE system was installed utilizing the then existing recovery wells and trenches. Approximately 4,262 pounds of gasoline was recovered by the SVE system between June 1998 and August 1990, when the system was shut down due to decreasing extracted vapor concentrations. In February 1990, five USTs were removed from the former Unocal service station on the City Investors property located at the southeast corner of Westlake Avenue North and Valley Street. The USTs ranged from 550 gallons to 5,000 gallons in capacity and were previously used to store used motor oil and gasoline. Approximately 800 cubic yards of petroleum contaminated soil was excavated during removal of the USTs.

Between January 1991 and July 1993, approximately 465 gallons of LPH was recovered during periodic manual/passive LPH removal efforts. The initial SVE system continued to operate through May 1995.

In May 2001, a gasoline product line was ruptured during the removal of waste oil and heating oil USTs at the Westlake 76 Station. An estimated 600 gallons of supreme unleaded gasoline was released. Approximately 500 gallons of product was immediately removed from the excavation utilizing a vacuum truck. Throughout the year, vacuum trucks and hand bailing were used for fluid recovery from adjacent monitor wells. Approximately 4 gallons of LPH was manually recovered. Approximately 12,100 gallons of impacted groundwater was removed by vacuum truck.

In 2003, P66 installed a new AS/SVE system at the Westlake 76 Station that included an AS/SVE trench, SVE wells, and several deep AS wells. The system became operational in August 2003. Approximately 1,410 tons of petroleum impacted soil was removed and transported for treatment during the installation of the remediation system trenches and wells.

Further investigations conducted by P66 and other parties in 2004 and 2005 indicated petroleum contamination remained in soil and groundwater in various areas of the Site. In addition to residual impacts from the 1980 release on the Westlake 76 Station, these investigations indicated the presence of petroleum products released from past operations on the City Investors property, including the Union 76-branded gasoline service station and the former Brace Lumber Mill and Denny's restaurant. Additional investigation also indicated that petroleum products were released during past operations of service station and/or fuel storage facilities formerly located on neighboring properties, including the former Rosen property located at 961-965 Mercer Street, south of the P66 property. Releases of petroleum products on and from these properties and potentially other sources had impacted the City street and utility ROWs surrounding Block #77.

Between July 2006 and April 2007, pursuant to the April 2007 Settlement Agreement between P66 and the City, P66 implemented the first phase of the Westlake/Mercer Cleanup Project (herein

referred to as Phase I). Phase I was performed as an independent remedial action and designed and completed on an expedited basis, as required to meet the City's timeline for construction of the South Lake Union Streetcar line and to avoid disruption of the Streetcar line due to remedial action at the Site. The Phase I remedial activities included; 1) installation of steel shoring, excavation and off-site disposal of petroleum-impacted soil from the eastern lanes of Westlake Avenue North, and installation of AS/SVE wells and associated conveyance piping back to the P66 property boundary and connection to the then existing above ground AS/SVE system; 2) installation of SVE and enhanced fluid recovery (EFR) wells in Terry Avenue North and installation of associated conveyance piping back to the P66 property and connection to the then existing above ground AS/SVE system; 3) soil and groundwater sampling and analysis; and 4) backfilling and surface restoration. A total of approximately 16,172 tons of soil was excavated from the Westlake and Terry Avenue North ROWs, between Mercer and Valley Streets. Influent vapor samples indicated that the petroleum hydrocarbon impact was highest in those SVE wells completed in Terry Avenue North. Information regarding the Phase I W/MCP is provided in URS Corporation's Phase I Close Out Report, prepared in 2007.

Between November 2007 and August 2008, biweekly enhanced fluid recovery was performed utilizing the recovery wells in Terry Avenue North. A total of 28,142 gallons of impacted groundwater was removed from the wells during this time. Cumulative petroleum hydrocarbon removal from September 2003 through March 2008 was approximately 1,940 pounds. Total liquid phase hydrocarbons (LPH) recovered from June 1980 through the end of the third quarter 2008 was approximately 43,632 gallons. Information regarding the recovery of petroleum impacted fluids and vapor between November 2007 and August 2008 is provided in Delta's On-Site Environmental Assessment – Horizontal and Vertical Delineation report prepared in 2005.

In September 2008, the Westlake 76 Station was demolished, all above-ground structures were removed, and all of the existing conveyance piping for the remediation wells were cut and capped in their respective ROWs to facilitate Phase II W/MCP excavation activities.

Between November 2008 and June 2009, P66 implemented the second phase of the Westlake/Mercer Cleanup Project (herin referred to as Phase II), where City Block #77 (with the exception of the southeast corner) was excavated to depths up to 20 feet below ground surface (bgs). A soil/cement/bentonite (SCB) gravity wall was installed along the south, east, and north boundaries of City Block #77 (Figure 2). The SCB gravity wall, in conjunction with the previously installed sheet pile wall along the west property boundary, provided shoring for Phase II excavation activities and continues to serve as a hydraulic barrier. Backfill and surface restoration activities were completed in July 2009. A total of approximately 54,450 tons of soil was excavated from the Site during the Phase II excavation activities and transported off-site for disposal. Information regarding the Phase II is provided in URS Corporations Phase II Soil Sampling Report, prepared in 2009.

Confirmation soil sampling was conducted during the Phase II excavation activities to document conditions at the base of the excavation and to assess whether additional excavation was required to achieve cleanup levels or other project requirements. A total of 244 samples were collected from 65 sampling cells. On a cell by cell basis, P66 evaluated the data and assessed whether or not site conditions and/or project objectives required additional excavation. If requested by P66, the excavation continued downward until residual concentrations were below Ecology's Model Toxics Control Act (MTCA) Method A Cleanup Levels or as far as reasonably practicable depending on the accessibility of the petroleum impacts and other actual conditions in the field.

Soils encounterd during the Phase I and Phase II excavation activities generally consisted of sandy fill down to depths of at least 5 feet bgs. Fill between 5 feet to 35 feet bgs consisted of highly variable compositions of silty sand, sandy silt, sand, silt to silty clay, clayey silt, sand with clay, sandy gravel, and occasionally thin layers of peat/clay. The fill material also includes variable proportions of wood or wood chips/wood debris, and sawdust, as thick as 5 to 11 feet.

The current monitor well network consists of 14 wells, including MWR-1 through MWR-6, MW-41, MW-45, MW-50, MW-54, MW-209 through MW-211, and SMW-3. All other wells have either been destroyed or decommissioned due to construction or remedial activities. Documentation for the former well network can be found in previous reports. Depth to groundwater typically fluctuates between 9 and 12 feet bgs over much of the area. Based on depth to groundwater measurements, it is apparent that groundwater flow is not consistent beneath the P66 property, but generally appears to flow towards the north. Groundwater flow direction is likely impacted by subsurface hydro-geologic barriers installed during remedial excavation activities completed in 2008 and/or the current dewatering activities taking place west of the Site.

Groundwater monitoring has been conducted at the Site since 1988. Groundwater monitoring has been conducted on a quarterly basis from the current monitor well network since at least 1995 through December 2012. A baseline monitoring event was conducted in November 2013 prior to starting the currently operating remediation system. Analytical results were similar to historic results since 2011.

During the MCP, numerous SVE and AS wells were installed in Terry Avenue North, Mercer Street, and Westlake Avenue North. Most recently, in July 2013, numerous remediation wells were installed in the Valley Street ROW under the oversight of SDOT. Between August and November 2013, all of the remediation wells/conveyance piping located in the Mercer and Valley Street ROWs and the Westlake and Terry Avenue ROWs were connected to new above ground AS/SVE treatment system currently located on the Phillips 66 property. The installation of the current above ground AS/SVE treatment system is described in this report.

3.0 REMEDIATION SYTEM INSTALLATION AND STARTUP

3.1 Remedial Well Installation Activities – Current AS/SVE System

Prior to implementation of the MCP construction activities, the City incorporated design specifications for P66's AS/SVE wells and associated conveyance piping for Mercer and Valley Streets (prepared by Stantec Consulting Incorporated, dated October 15, 2009) into the plans and specifications for the MCP. P66's AS/SVE wells and associated conveyance piping would be installed in the Mercer Street ROW abutting the P66 property (including in the condemnation area) and in the Valley Street ROW abutting the north half of Block 77 by SDOT's contractor during the course of the MCP construction. These wells and associated conveyance piping would then be tied together with the remedial wells and conveyance piping that was installed between July 2006 and April 2007 within Westlake Avenue North and Terry Avenue North (prior to the MCP construction - described in Section 2.1).

3.1.1 Mercer Street

In January 2011, Clearcreek Contractors (Clearcreek) of Marysville, Washington installed a vault box on the north side of Mercer Street to route the future AS/SVE conveyance piping to be installed in Mercer Street. Between May and June, 2011 the City oversaw the installation of eight 1-inch diameter AS wells to approximately 20 feet bgs, designated MAS-20 through MAS-27, and eight 1-inch diameter SVE wells to approximately 8 feet bgs, designated MSVE-10 and MSVE-13 through MSVE-19 in Mercer Street, including the 70 foot easement. Clearcreek also excavated the conveyance piping trenching in Mercer Street in order to install the conveyance piping from the wells to the vault box.

In March and April, 2012 the City oversaw the installation of 19 1-inch diameter AS wells to approximately 20 feet bgs, designated MAS-1 through MAS-19, and 11 1-inch diameter SVE wells to approximately 8 feet bgs, designated MSVE-1 through MSVE-9, MSVE-11 and MSVE-12 within Mercer Street. Clearcreek also excavated the conveyance piping trenching in Mercer Street in order to install the conveyance piping from the wells to the vault box installed in January, 2011.

Locations of the AS/SVE wells installed in Mercer Street are shown in Figures 2 and 3. Copies of Ecology's available Resource Protection Well Reports documenting some of the AS/SVE well installation activities are provided in Appendix A.

3.1.2 Valley Street

In July 2013, the City oversaw the installation of 14 1-inch diameter AS wells to approximately 20 feet bgs, designated VAS-1 through VAS-14, and eight 1-inch diameter SVE wells to approximately 8 feet bgs, designated VSVE-1 through VSVE-7, and VSEVE-9 within the P66 Area of Valley Street. Clearcreek also excavated the associated trenches for the conveyance piping from the wells. The conveyance piping trench was excavated toward the southwest corner of the intersection of Valley Street and Terry Avenue North, and was terminated on the west side of Terry Avenue North, approximately 20 feet south of the intersection.

Locations of the AS/SVE wells installed in Valley Street are shown in Figures 2 and 4. Copies of Ecology's available Resource Protection Well Reports documenting the AS well installation activities are provided in Appendix B. Resource Protection Well Reports documenting the SVE well installation activities could not be located.

3.2 Remediation System Construction

Between August and December 2013, Cardno ATC observed and documented Clearcreek perform the installation and construction of the following treatment system components:

- on-site conveyance piping connected to the previously installed remediation wells located in Westlake Avenue North, Mercer Street, and Terry Avenue North,
- conveyance piping along Terry Avenue North that were connected to the previously installed remediation wells located in Valley Street,
- new above ground AS/SVE treatment system components, and
- effluent discharge piping connected to King County's sewer system in Terry Avenue North.

The AS/SVE system was installed in general accordance with Cardno's treatment system design plans and remediation system equipment bid specifications. All trenching activities that required subsurface work below four feet required benching excavation techniques and shield systems (aluminum trench box[s]) to prevent cave-ins in accordance with Washington State Department of Labor and Industries regulations (WAC 296-155-650).

3.3 Site Health and Safety Plan

As required by the Occupational Safety and Health Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), and by Washington State Department of Labor and Industries "Hazardous Waste Operations and Emergency Response" guidelines (WAC Chapter 296-843), Cardno ATC prepared a Site-Specific Health and Safety Plan (HASP) prior to the commencement of fieldwork. The Site-Specific HASP was reviewed by field staff and contractors before beginning field operations at the site.

3.4 Permitting

Cardno ATC obtained numerous permits relating to installation and construction of the system. These permits included:

- King County Wastewater Treatment Division Major Discharge Authorization Permit No.4262-01 (for discharge of treated water to King County sewer system),
- Puget Sound Clean Air Agency (PSCCA) Permit No. 10602, Registration Number 29548 (for discharge of treated vapors into the atmosphere),
- SDOT Major Utility Permit No. 208912 (for installation of conveyance piping along Terry Avenue), and
- Electrical Permit No. 6391591 (for installation of electrical components associated with the AS/SVE system).

Permit requirements were followed and all required inspections were completed during the course of the project. Copies of all the permits are provided in Appendix C.

3.5 Subsurface Utility Clearance

Prior to field activities, Clearcreek marked out all on- and off-site trench routes and the location of the concrete equipment pad in accordance with the Underground Service Alert (USA) guidelines, and notified Seattle Public Utilities of all pending subsurface activities. Cardno ATC also contracted a private utility locator to survey the site for underground utilities. Hand excavation was performed within five feet of any marked utility. Hand excavation consisted of either digging with a shovel, or using an air knife and vacuum excavation to uncover utilities.

3.6 On-Site System Trenching and Plumbing

On-site trenching and plumbing for the conveyance piping began on August 26, 2013, and continued through October 25, 2013. On-Site trenching activities began in the northwest corner of the P66 property (the southern half of City Block #77). The contractor began by excavating at the northwest corner to expose the Westlake Avenue AS/SVE conveyance piping previously capped near the property boundary. The trench was subsequently excavated to approximately five feet bgs using

benching techniques to create a one-to-one slope as required by safety regulations referenced in Section 4.2. Excavated soil was temporarily stored on-site on polyethylene sheeting and covered with polyethylene sheeting at the end of each day to prevent runoff. See photograph Nos. 1 through 3 of the Photographic Log presented in Appendix D.

On-Site trenching also occurred from the vault previously installed along the north side of Mercer (described in Section 4.1). Due to the depth of the conveyance piping from the wells located in Mercer Street within the vault, it was necessary to install an aluminum trench box in this area during the excavation and subsequent concrete cutting activities for employee safety (see photograph Nos. 4 through 6). Confined space entry was required for work inside of the Mercer Vault. During all confined space entry work, an authorized employee would enter and perform required work inside of the vault with an authorized attendant located outside for safety, work-assistance, and emergency rescue operations (see photograph Nos. 7 and 17-18).

All on-site trenches were lined with polyethylene sheeting and bedded with coarse sand in accordance with Cardno's specifications before plumbing activities commenced. Two-inch diameter schedule 80 polyvinylchloride (PVC) piping was used for the SVE conveyance piping. One-inch diameter schedule 80 PVC piping was used for the AS system conveyance piping on site. After being laid in the trench but prior to being connected to existing well-piping, the SVE piping was pressure tested at 10 pounds per square inch (PSI) for 10 minutes and the AS system piping was pressure tested at 30 PSI for 30 minutes (see photograph Nos. 8-12). Westlake Avenue North SVE piping was installed in the trench first, followed by the Mercer Street SVE piping, followed by the Westlake Avenue North AS piping, followed finally by the Mercer Street AS piping. All installed conveyance piping was separated vertically by at least two-inches of coarse sand per the specifications. Conveyance piping was kept in an organized manner in the trenches and was labeled during the connection process (see photograph Nos. 13-35).

Once SVE and AS conveyance piping was installed, connected and labeled another layer of coarse sand was backfilled on top. After backfilling with sand the polyethylene sheeting was enclosed around the conveyance piping. Controlled-density-fill (CDF) was poured over the enclosed piping. The termination point of the newly installed conveyance piping was demarcated with painted PVC flags (see photograph Nos. 36-40). Locations of all the on-site AS/SVE conveyance piping trenches are shown in Figure 5.

On September 13, 2013 Valley Electric Company of Everett, Washington, installed electrical conduit from the Mercer Vault to the north end of the P66 property to provide electricity for the remediation system compound. The electrical conduit was inspected and approved by the City and then covered with CDF and backfill material by Clearcreek (see photograph Nos. 41-42). Once plumbing activities were completed the trenches were completely backfilled with clean excavated soil over the CDF and compacted using a vibratory plate-compactor attachment on the excavator and then covered with gravel to match the existing surface conditions (see Photograph Nos. 43-45).

3.7 Off-Site System Trenching and Plumbing

On September 23, 2013 the off-site trenching activities on Terry Avenue North began. Traffic control and pedestrian delineation was provided and in-place before work began. Trenching activities started in the southwest corner of the intersection of Valley Street and Terry Avenue North, where the conveyance piping from the remediation wells installed in Valley Street were unearthed. The trench

was dug to approximately three feet bgs and did not require benching techniques. The trench was extended south along the west side of Terry Avenue adjacent to the northern property boundary. The trench was lined with polyethylene sheeting and bedded with coarse sand. Two-inch diameter schedule 80 PVC piping was used for the SVE piping and one-inch diameter stainless steel piping was used for the AS system piping. All conveyance piping was pressure tested, kept organized, and labeled during the connection process to the existing well-piping. Once SVE and AS conveyance piping was installed, connected and labeled another layer of coarse sand was backfilled around and on top of them. After backfilling, the polyethylene sheeting was enclosed around the conveyance piping. CDF was poured over the enclosed piping and the upper six to 12- inches was then backfilled with DOT approved crushed gravel..

The Terry Avenue North trench was excavated southward along Terry Avenue North and then oriented toward the P66 property with an approximate 90-degree turn. During the transition from off-site to on-site, the one-inch diameter stainless steel piping was transitioned to one-inch diameter schedule 80 PVC piping. Once trenching activities were complete the trenches were backfilled with fill material and compacted with a vibrating plate compactor. Any removed asphalt was restored to its original state (see photograph Nos. 46-70). The location of the trench along Terry Avenue North is shown on Figure 6.

3.8 System Stub-Up Construction

On October 10, 2013, after all the horizontal AS and SVE conveyance piping had been placed in the trenches, the contractor commenced excavation for the vertical conveyance piping stub-ups in the northern area of the P66 property, north of the remediation system compound. This excavation extended to approximately four feet bgs. The power junction box was connected to the previously installed electrical conduit. The frame for the stub-up piping was constructed in the excavation using stainless steel unistrut material. For the stub-up piping, two-inch diameter schedule 80 PVC was used for the SVE piping and one-inch diameter schedule 80 PVC was used for the AS piping. All piping was organized and pressure tested before being connected. All piping was labeled during the connection process. After all stub-up piping was labeled and connected the piping was covered with coarse sand, wrapped in polyethylene sheeting and backfilled with CDF. After backfilling with CDF the excavation area was covered with gravel fill and compacted with a plate-compactor in preparation for concrete (see photograph Nos. 71-85).

3.9 System Compound Construction

On October 25, 2013, Clearcreek began constructing the AS/SVE system remediation compound. The remediation compound consists of a concrete equipment pad surrounded by a chain-link fence equipped with locking gates (Figure 7). The equipment pad was constructed in general accordance with Cardno's design specifications. Clearcreek removed existing asphalt, which was replaced with gravel fill (to provide a stable foundation for the equipment pad) and graded the fill to ensure the equipment pad was constructed with the appropriate slope for drainage purposes. The slope of the pad directs all surface water within the pads containment to a sump that pumps the water through the treatment system prior to discharge to the county's sewer system. Cardno ATC observed Clearcreek frame and pour the concrete slab. The electrical conduit was stubbed up along the west side of the concrete pad where it was later connected to the systems control panel (see photograph Nos. 86-97).

On November 6, 2013, Clearcreek began constructing the manifold for the AS and SVE systems. The SVE manifold was constructed of both gray and clear schedule 80 PVC for stability and strength. Once the connections to the underground conveyance pipes and stub-ups were made, the above-ground stub-ups were properly spaced through concrete collars and then fastened to a unistrut frame for stability (see photograph Nos. 98-100).

On November 8, 2013 Clearcreek delivered all of the SVE and AS remediation equipment delivered to the site. All remediation system equipment was inspected by Cardno ATC upon delivery. All system equipment was placed on the concrete pad under the supervision of Cardno ERI. Electrical systems were installed by Valley Electric (see photograph Nos. 101-111).

Security and safety measures around the system compound were installed beginning November 12, 2013. An 8-foot chain link fence, with PVC privacy slats was installed around the system pad with three 16-foot wide gates. A three foot wide gate for personal access is located on the south side of the compound (Figure 7). The fence installation was completed on November 14, 2013 (see photograph No. 107).

3.10 Soil Disposal

Between September 27, 2013 and October 9, 2013, a total of 182.36 tons of soil excavated during the on- and off-site trenching activities was transported to Waste Management's Alaska Street Facility for disposal. The soil was profiled as non-hazardous waste and was removed from the site by Clearcreek. Copies of the weigh tickets provided by Waste Management are included in Appendix E.

3.11 Air Sparge System Specifications

The AS system consists of an air compressor, a heat exchanger and a valve manifold. The air compressor and heat exchanger are mounted on a skid that was manufactured and assembled by Newterra Incorporated (Newterra) in Minden, Nevada. A process flow diagram is provided on Figure 8. The sparge system is connected to 62 individual sparge wells. Twenty-one of these wells (designated AS-1 through AS-21) are completed as single point sparge wells in Westlake Avenue North at depths approximately 25 feet bgs. Fourteen of the wells (VAS-1 through VAS-14) are completed as single point sparge wells in Valley Street at depths approximately 18 feet bgs. The remaining twenty-seven AS wells (MAS-1 through MAS-27) are single point sparge wells located in Mercer Street at depths approximately 21 feet bgs. The labeled locations of the AS wells in the manifolds are shown in Figure 9.

3.12 Soil Vapor Extraction System Specifications

The SVE system extracts vapors and treats any groundwater extracted during SVE operation. The groundwater treatment portion of the system utilizes knockout tanks to remove bulk water prior to vapor entering into the vacuum pumps. The water is pumped into an equalization tank inside the remediation compound before it is processed through the treatment system. Treatment of the water begins with primary filtration using series-mounted cartridge filters to remove any sediment. The water is then pumped to two 1,000-pound liquid phase granular activated carbon (GAC) vessels (in series) for removal of readily volatile compounds. Treated water is discharged to the sanitary sewer under King County Wastewater Treatment Division Major Discharge Authorization Permit No.4262-01. The SVE components, including the equalization tank and the sediment filters are mounted on

skids manufactured and assembled by Newterra. Carbon vessels for water treatment are manufactured by Evoqua Water Technologies LLC (formerly Siemens Water Technologies LLC). A process flow diagram is provided on Figure 8.

The SVE system consists of two positive displacement blowers (blower 701 and blower 801) that apply vacuum to extract vapors from a total of 34 vertical SVE wells (19 in Mercer Street and 15 in Terry Avenue North) and 16 horizontal wells (eight in Valley Street and nine in Westlake Avenue North). The 19 one-inch diameter vertical SVE wells in Mercer Street are designated MSVE-1 through MSVE-19 (all approximately 8 feet bgs). The 15 one-inch diameter vertical SVE wells in Terry Avenue North are designated WA-1 through WC-3, V-1 through V-9, TSVE-1 through TSVE-8, TSVE-10 through TSVE-12, TEFR-1 Air, TEFR-2 Air, TMW-48 Air, and TMW-65 Air (depths unknown). The eight one-inch diameter horizontal SVE wells in Valley Street are designated VSVE-1 through VSVE-7, and VSEVE-9 (all approximately 8 feet bgs). The nine one inch-diameter horizontal SVE wells in Westlake Avenue North are designated WC1 through WC3, WB1 through WB3, and WA1 through WA3 (depths unknown). The labeled locations of the SVE wells are shown in Figure 9.

The soil vapor is remediated by passing through three separate trains of series-mounted vapor phase GAC vessels (two 1,000-pound GAC vessels per train). The carbon system is designed and monitored to ensure at least 97% removal efficiency of volatile organic compounds (VOCs). Treated vapors are discharged to the atmosphere under permit from the Puget Sound Clean Air Agency (Registration Number 29548).

3.13 Sparge System Startup

On December 03, 2013, Cardno staff was onsite with Newterra personnel to perform sparge system startup activities. The system was set to sparge each zone (approximately 20% of the wells) for five minutes with the compressor running at 15% power, and operate continuously, cycling through all of the sparge zones and then starting again at the first group of sparge points. The system is designed to operate only when the SVE system is also operating.

3.14 Soil Vapor Extraction System Startup

On December 03, 2013, Cardno staff was onsite with Newterra personnel to perform SVE system startup activities. The System was started up in shakedown mode with the sparge compressor set to deliver approximately 5 psi and to cycle every five minutes and the SVE portion set to extract at a vacuum of 30" of H2O with the motors running at only 30 percent until it could be verified all components were functioning properly. Startup of the water portion of the treatment system was delayed until the SVE system pulled water out during SVE operation. A totalizer was installed after the second cartridge filter, before the water is sent through the liquid phase GAC vessels and discharged to the King County's sanitary sewer system at the discharge point (Figure 7). All components of the system functioned appropriately during startup activities.

Vapor and water samples were collected during startup of the SVE system to ensure compliance with permit conditions outlined in the PSCAA and KCIW permits. Initial influent vapor samples were collected from sample ports after the dilution valve of each blower (designated 701 Diluted Influent and 801 Diluted Influent), intermediate vapor samples were collected from sample ports installed on each train between the series mounted carbon vessels (designated V1, V2 and V3 Intermediate), and

effluent samples were collected from sample ports installed on each train after the last series mounted carbon vessels (designated V1, V2 and V3 Effluent). Vapor samples collected on December 27, 2013, in accordance with the PSCAA permit, were submitted to Pace Analytical Laboratories, Inc. (Pace) in Seattle, Washington with appropriate chain-of-custody documentation. Pace is a Washington State accredited laboratory (Accreditation Program Certification No. 1186). The analytical report is provided in Appendix F. The samples were collected during startup of the SVE system to ensure compliance with the PSCAA permit conditions. Chemical analysis of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX) was performed utilizing Method TO-15. The analytical results are summarized on Table 1. TPHg concentrations at the inlets to the GAC vessels were below the permit threshold of 200 ppmv, above which the control efficiency of 97% must be demonstrated. Based on the startup vapor analytical results, the SVE system is effective at removing petroleum hydrocarbons at an efficiency greater than 99 percent. The flow rate of 350 cubic feet per minute is also less than the permitted flow rate.

Water samples collected on December 27, 2013, in accordance with the KCIW permit, also were submitted to Pace with appropriate chain-of-custody documentation. The analytical report is provided in Appendix G. The samples were collected during system startup to ensure compliance with the KCIW permit. Chemical analysis of TPHg (NWTPH-gx), and BTEX, was performed utilizing Method EPA-8021. The analytical results are summarized on Table 2. All results demonstrated compliance with the permit limits.

4.0 OPERATION AND MAINTENANCE

Operation and maintenance (O&M) was performed on a general daily basis from system startup on December 3, 2013 until January 31, 2014, then on a general weekly basis through the first quarter of 2014. The first quarter O&M activities are summarized in Cardno's Remediation Progress Report – First Quarter 2014, dated July 2, 2014.

O&M will continue to be performed on a periodic basis. An O&M manual has been prepared for the system and consists of equipment manuals and specifications, as well as maintenance instructions and schedules for the equipment. The O&M manual is kept on-site.

Cardno ATC recommends continuing regular monitoring, operations and maintenance of the remediation system, and performing system optimization as needed to maximize hydrocarbon recovery. All future O&M activities and optimization efforts will be summarized in future quarterly O&M reports.

TABLES

Table 1 - Vapor Sample Analytical Results

FORMER PHILLIPS 66 FACILITY #255353 (AOC 1396)
600 Westlake Avenue North, Seattle, Washington

Sample Location	Sample Date	Work Order No.	Analytical Vapor Results (EPA Method TO-15 for VOCs) (µg/m3)					
			THCg	Benzene	Toluene	Ethylbenzene	m&p Xylenes	o-Xylenes
701 Diluted Influent	12/27/13	10253710	95,000	82	168	66	478	157
801 Diluted Influent	12/27/13	10253710	54,900	38	146	244	364	ND<35.8
V1 Intermediate	12/27/13	10253710	4,310	ND<16.6	ND<39.3	ND<44.9	ND<89.9	ND<44.9
V1 Effluent	12/27/13	10253710	6,800	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7
V2 Intermediate	12/27/13	10253710	Sample received empty at lab					
V2 Effluent	12/27/13	10253710	11,200	ND<11.0	7,390	ND<29.7	ND<59.5	ND<29.7
V3 Intermediate	12/27/13	10253710	19,500	ND<9.4	31	ND<25.5	ND<51.0	ND<25.5
V3 Effluent	12/27/13	10253710	7,880	ND<11.0	1,860	ND<29.7	ND<59.5	ND<29.7

Notes:

Samples "701 Diluted Influent" and "801 Diluted Influent" were collected from sample ports installed after the dilution valves associated with the SVE skids 701 and 801 respectively. There are three sets (or trains) of two vapor phase carbon units (for a total of six) used to treat extracted vapors. The two carbon units associated with each train are plumbed in series. Samples V1 Influent, V1 Intermediate, and V1 Effluent were collected from sample ports associated with the first train of vapor phase carbon units. Samples V2 Influent, V2 Intermediate, and V2 Effluent were collected from sample ports associated with the second train of vapor phase carbon units. Samples V3 Influent, V3 Intermediate, and V3 Effluent were collected from sample ports associated with the third train of vapor phase carbon units. The influent sample ports for each train are located prior to the first carbon units. The intermediate sample ports for each train are located between the first and second carbon units. The effluent sample ports for each train are located after the second (and last) carbon units. The sample port locations are shown on Figure 7.

Table 2 - Water Sample Analytical Results

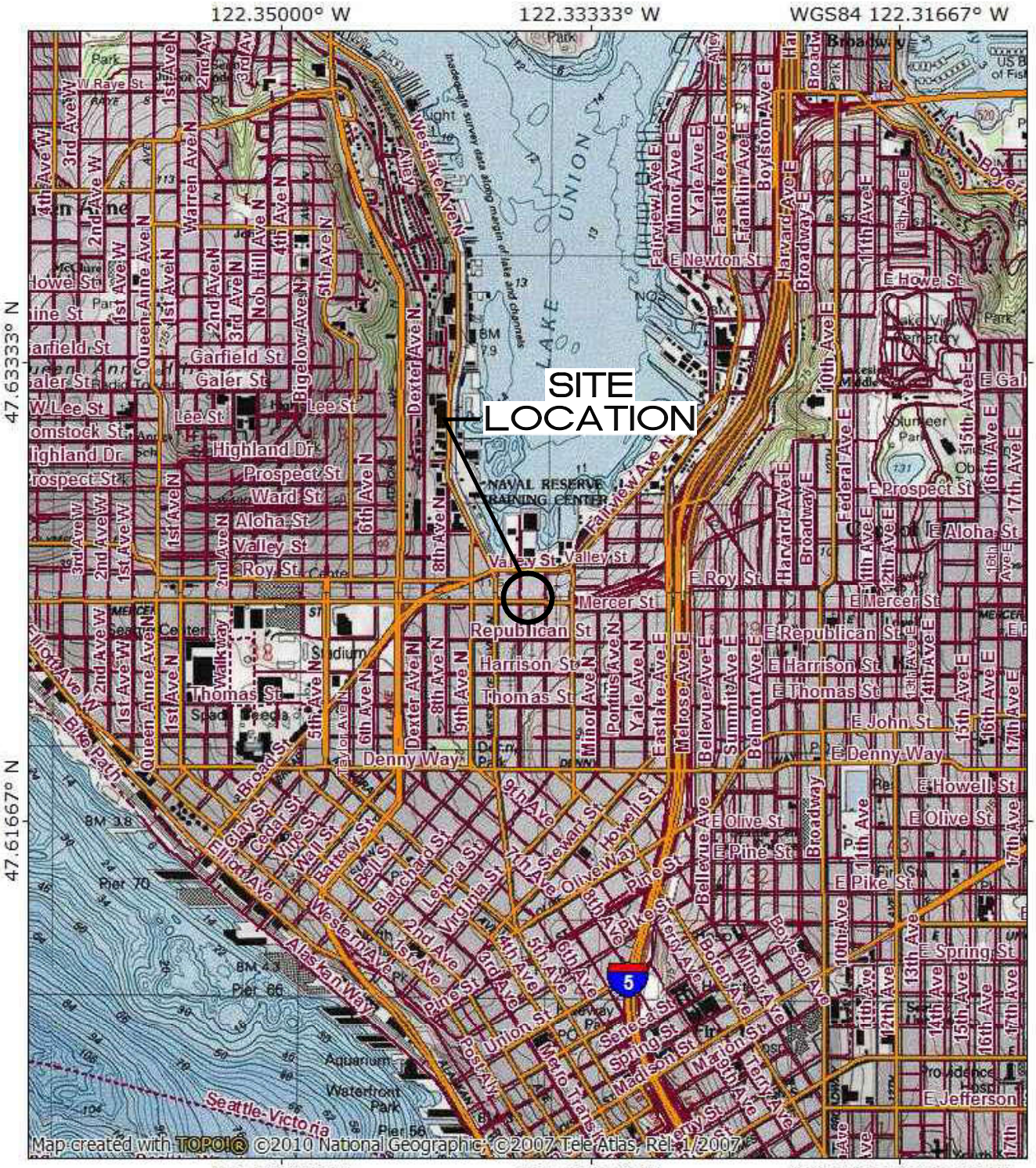
FORMER PHILLIPS 66 FACILITY #255353 (AOC 1396)
600 Westlake Avenue North, Seattle, Washington

Sample Location	Sample Date	Work Order No.	Analytical Water Results (EPA Method TO-15 for VOCs) (µg/L)				
			THCg	Benzene	Toluene	Ethylbenzene	Total Xylenes
W-DSCHG	12/27/13	10258424	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INT	12/27/13	10258424	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF	12/27/13	10258424	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)

Notes:

There are a total of two liquid phase carbon units plumbed in series to treat water. Samples W-INF and W-INF-WS1 were collected from a sample port located prior to the first liquid phase carbon unit. Samples W-INT and W-OUT-WC1 were collected from a sample port located between the first and second liquid phase carbon units. Samples W-DSCHG were collected from the sample port located after the second (and final) liquid phase carbon unit. The sample port locations are shown on Figure 2.

FIGURES



SOURCE: USGS TOPO MAP, SEATTLE SOUTH E, WA QUAD, 1983

SITE VICINITY MAP

PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)
600 WESTLAKE AVENUE N
SEATTLE, WA

PROJECT NUMBER: 76.75118.1396		DATE: 6/20/14	FIGURE 1
APPROVED BY: KS		DRAWN BY: BK	

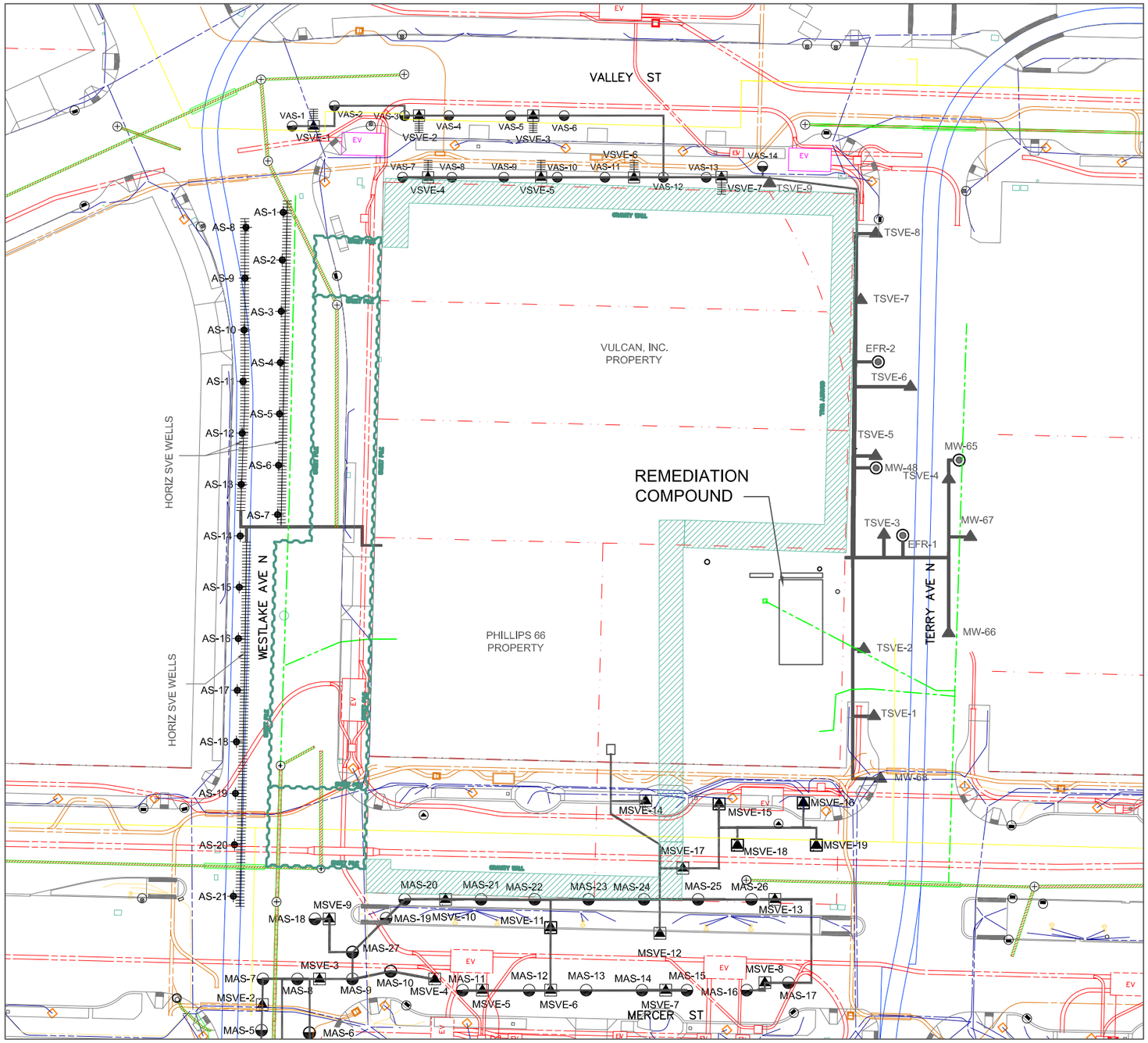
Cardno ATC
Shaping the Future
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

S:\Projects\76\75000 COP\1396\VICINITY.dwg

NOTES:

1. LOCATIONS OF SITE FEATURES CONSTRUCTED FOR THE P-66 REMEDIATION SYSTEM (REMEDIATION COMPOUND, ON-SITE TRENCHES, TERRY AVE. TRENCH EXTENSION) HAVE NOT BEEN SURVEYED AND ARE APPROXIMATE.

2. LOCATIONS OF ALL OTHER SITE AND AREA FEATURES ARE BASED ON PLANS SUPPLIED BY SDOT, AND HAVE NOT BEEN VERIFIED BY THE PROJECT ENGINEER.



LEGEND:

- LAMP POST LOCATION
- PROPERTY LINES
- TRENCH ROUTES
- AS-1 — AIR SPARGE WELL ON WESTLAKE AVENUE
- HORIZONTAL SVE WELL
- TSVE-1 — SVE WELLS ON TERRY AVENUE
- MW-67 — MONITORING WELL
- EFR-1 — ENHANCED FLUID RECOVERY WELL
- MAS-1 — AS WELL ON MERCER
- MSVE-7 — SVE WELLS ON MERCER
- VAS-13 — VALLEY STREET AS WELL
- VSVE-7 — VALLEY STREET HORIZONTAL SVE WELL
- ELECTRICAL LINE LOCATION FOR STREET LIGHTS
- SANITARY/ STORM SEWER LOCATION
- STORM SEWER MANHOLE/CATCH BASIN LOCATION
- ELECTRICAL LINE LOCATION (SCL)
- COMMUNICATION LINE LOCATION
- GAS LINE LOCATION
- STREET CAR LINE LOCATION

APPROXIMATE SCALE

0 60 120 Feet

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SITE LAYOUT DIAGRAM

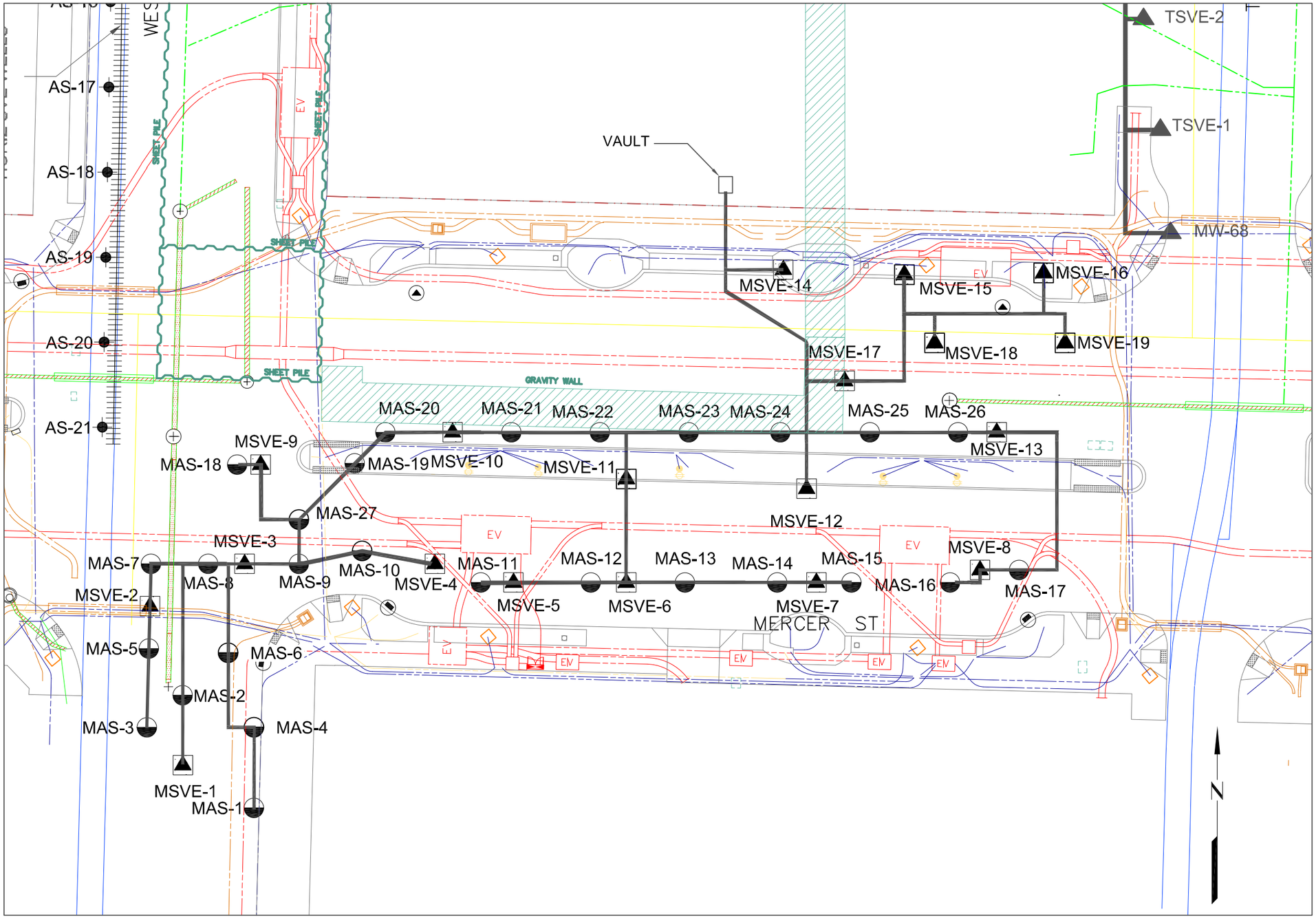
PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION:

- SHEET PILE LOCATION
- GRAVITY WALL LOCATION

PROJECT NO.
03132603

FIGURE
2
EJB: 06/20/14



LEGEND:

- LAMP POST LOCATION
- PROPERTY LINES
- ELECTRICAL LINE LOCATION FOR STREET LIGHTS
- SANITARY/ STORM SEWER LOCATION
- STORM SEWER MANHOLE/CATCH BASIN LOCATION
- ELECTRICAL LINE LOCATION (SCL)
- COMMUNICATION LINE LOCATION
- GAS LINE LOCATION
- CURB/ SIDEWALK LOCATION
- SHEET PILE LOCATION
- GRAVITY WALL LOCATION
- STREET CAR LINE LOCATION

APPROXIMATE SCALE

0 32 64 Feet

Cardno ERI

Shaping the Future

MERCER ST. AS/SVE WELLS

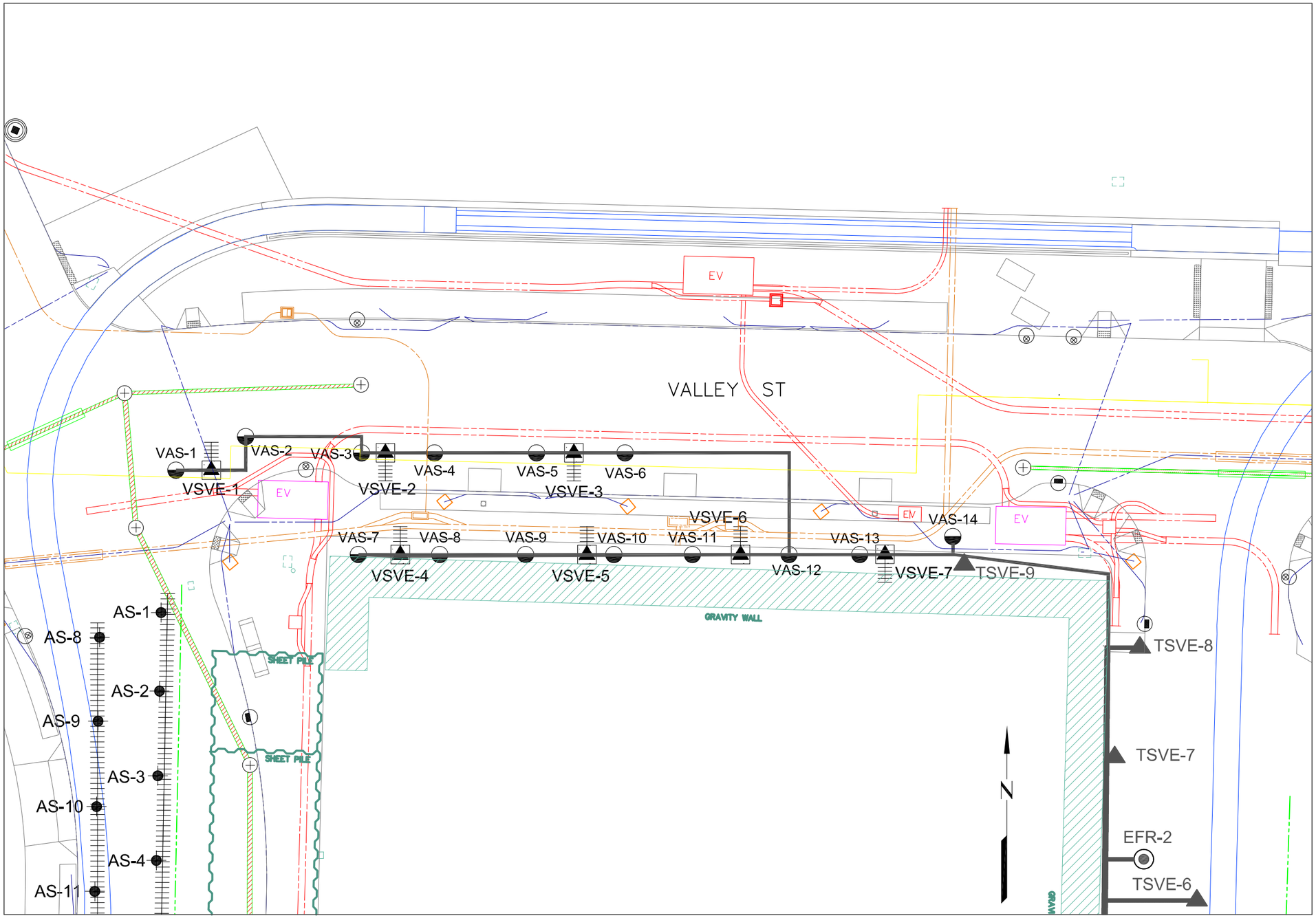
PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION:

- TRENCH ROUTES
- AS-1 AIR SPARGE WELL ON WESTLAKE AVENUE
- HORIZONTAL SVE WELL
- TSVE-1 SVE WELLS ON TERRY AVENUE
- MAS-1 AS WELL ON MERCER
- MSVE-7 SVE WELLS ON MERCER

PROJECT NO.
03132603

FIGURE
3
EJB: 06/20/14



LEGEND:

- LAMP POST LOCATION
- PROPERTY LINES
- ELECTRICAL LINE LOCATION FOR STREET LIGHTS
- SANITARY/ STORM SEWER LOCATION
- STORM SEWER MANHOLE/CATCH BASIN LOCATION
- ELECTRICAL LINE LOCATION (SCL)
- COMMUNICATION LINE LOCATION
- GAS LINE LOCATION
- CURB/ SIDEWALK LOCATION
- SHEET PILE LOCATION
- GRAVITY WALL LOCATION
- STREET CAR LINE LOCATION

APPROXIMATE SCALE

0 32 64 Feet

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VALLEY ST. AS/SVE WELLS

PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION:

- TRENCH ROUTES
- AS-1 — AIR SPARGE WELL ON WESTLAKE AVENUE
- HORIZONTAL SVE WELL
- TSVE-1 — SVE WELLS ON TERRY AVENUE
- EFR-1 — ENHANCED FLUID RECOVERY WELL
- VAS-13 — VALLEY STREET AS WELL
- VSVE-7 — VALLEY STREET HORIZONTAL SVE WELL

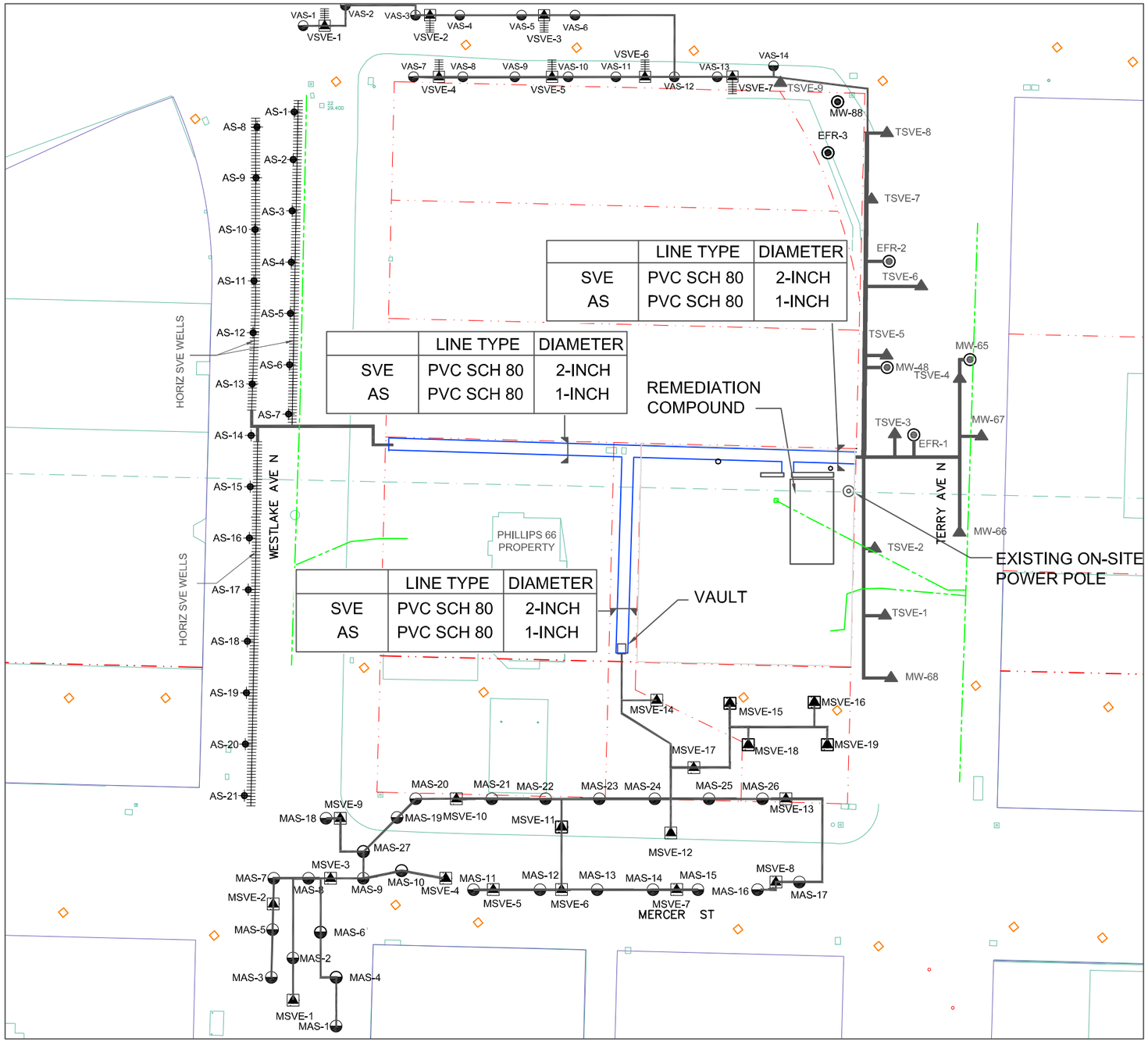
PROJECT NO.
03132603

FIGURE
4
EJB: 06/20/14

NOTES:

1. LOCATIONS OF SITE FEATURES CONSTRUCTED FOR THE P-66 REMEDIATION SYSTEM (REMEDIATION COMPOUND, ON-SITE TRENCHES, TERRY AVE. TRENCH EXTENSION) HAVE NOT BEEN SURVEYED AND ARE APPROXIMATE.

2. LOCATIONS OF ALL OTHER SITE AND AREA FEATURES ARE BASED ON PLANS SUPPLIED BY SDOT, AND HAVE NOT BEEN VERIFIED BY THE PROJECT ENGINEER.



LEGEND:

- APPROXIMATE LAMP POST LOCATION
- ON-SITE AS/SVE TRENCHING
- APPROXIMATE SANITARY/ STORM SEWER LOCATION
- APPROXIMATE PROPERTY LINES
- OFF-SITE TRENCH ROUTES
- AS-1 — AIR SPARGE WELL ON WESTLAKE AVENUE
- HORIZONTAL SVE WELL
- TSVE-1 — SVE WELLS ON TERRY AVENUE
- MW-67 — MONITORING WELL
- EFR-1 — ENHANCED FLUID RECOVERY WELL
- MAS-1 — AS WELL ON MERCER
- MSVE-7 — SVE WELLS ON MERCER
- VAS-13 — VALLEY STREET AS WELL
- VSVE-7 — VALLEY STREET HORIZONTAL SVE WELL

APPROXIMATE SCALE

0 60 120 Feet

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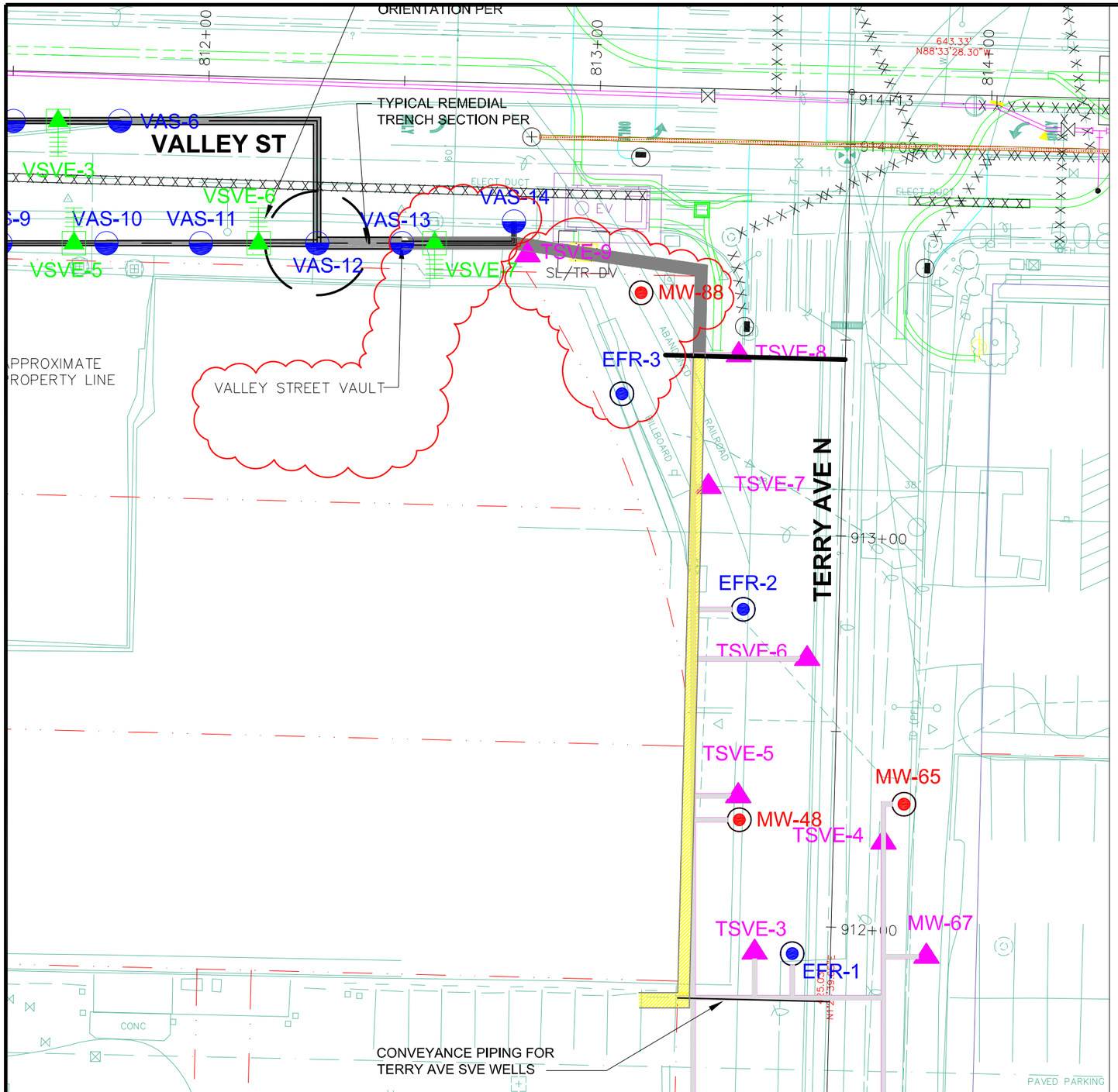
AS/SVE ON-SITE TRENCHING

PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION:

PROJECT NO.
03132603

FIGURE
5
EJB: 06/20/14



LEGEND:

- TERRY TRENCH ROUTE
- VALLEY STREET TRENCH, VAULT PLAN #774-437
- TERRY AVENUE TRENCH, VAULT PLAN #774-437
- TSVE-1 — SVE WELLS ON TERRY AVENUE
- MW-1 — MONITORING WELL
- EFR-1 — ENHANCED FLUID RECOVERY WELL
- APPROXIMATE PROPERTY LINE
- VAS-1 — VALLEY STREET AIR SPARGE WELL
- VSVE-1 — VALLEY STREET HORIZONTAL SOIL VAPOR EXTRACTION WELL

N

APPROXIMATE SCALE
1" = 30'

0 30' 60'

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AS/SVE TRENCH ROUTE ALONG TERRY AVENUE

PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION

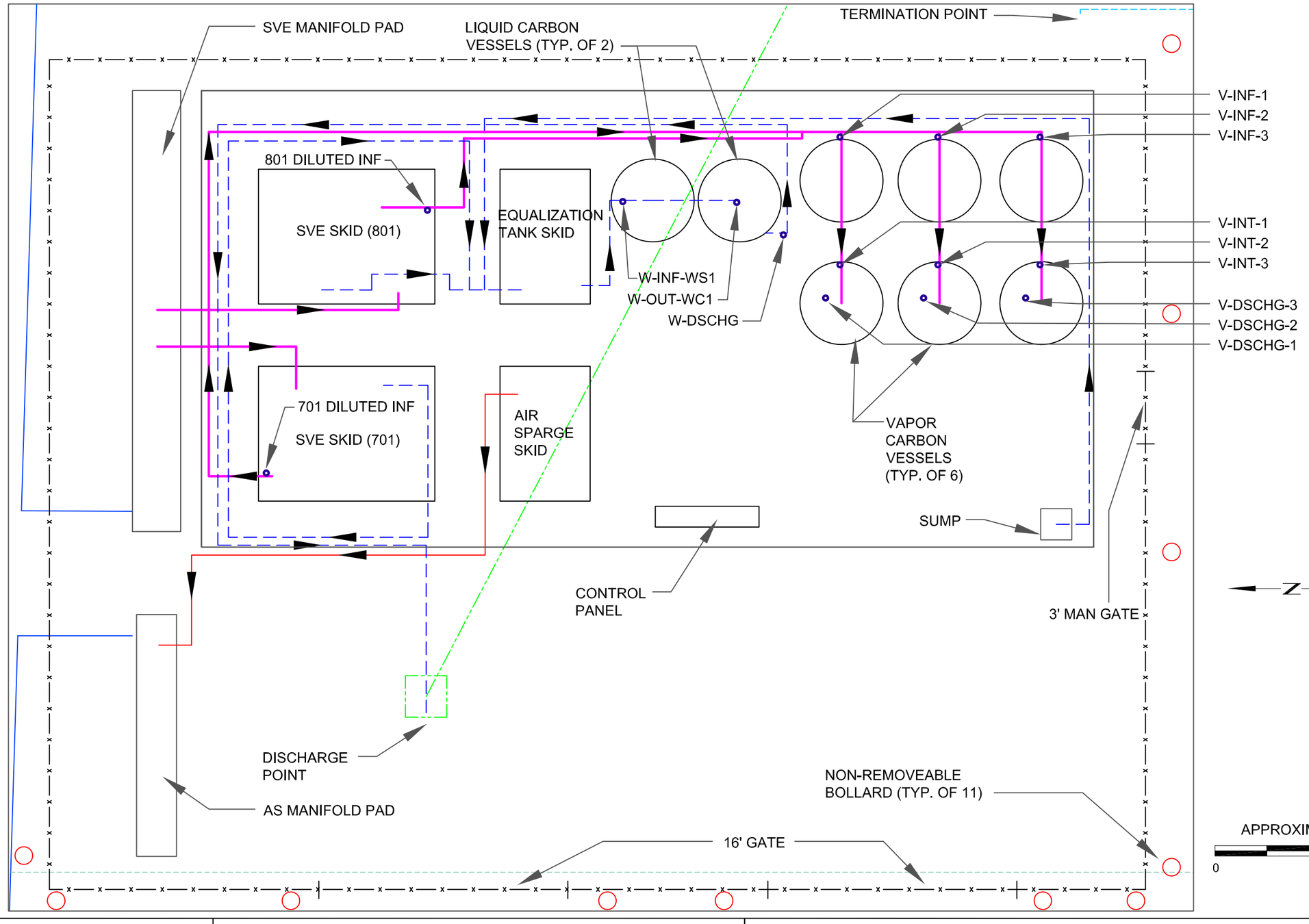
PROJECT NO.
03132603

FIGURE
6

NOTES:

1. LOCATIONS OF SITE FEATURES CONSTRUCTED FOR THE P-66 REMEDIATION SYSTEM (REMEDIATION COMPOUND, ON-SITE TRENCHES) HAVE NOT BEEN SURVEYED AND ARE APPROXIMATE.

2. LOCATIONS OF ALL OTHER SITE AND AREA FEATURES ARE BASED ON PLANS SUPPLIED BY SDOT, AND HAVE NOT BEEN VERIFIED BY THE PROJECT ENGINEER.



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REMEDIATION SYSTEM LAYOUT

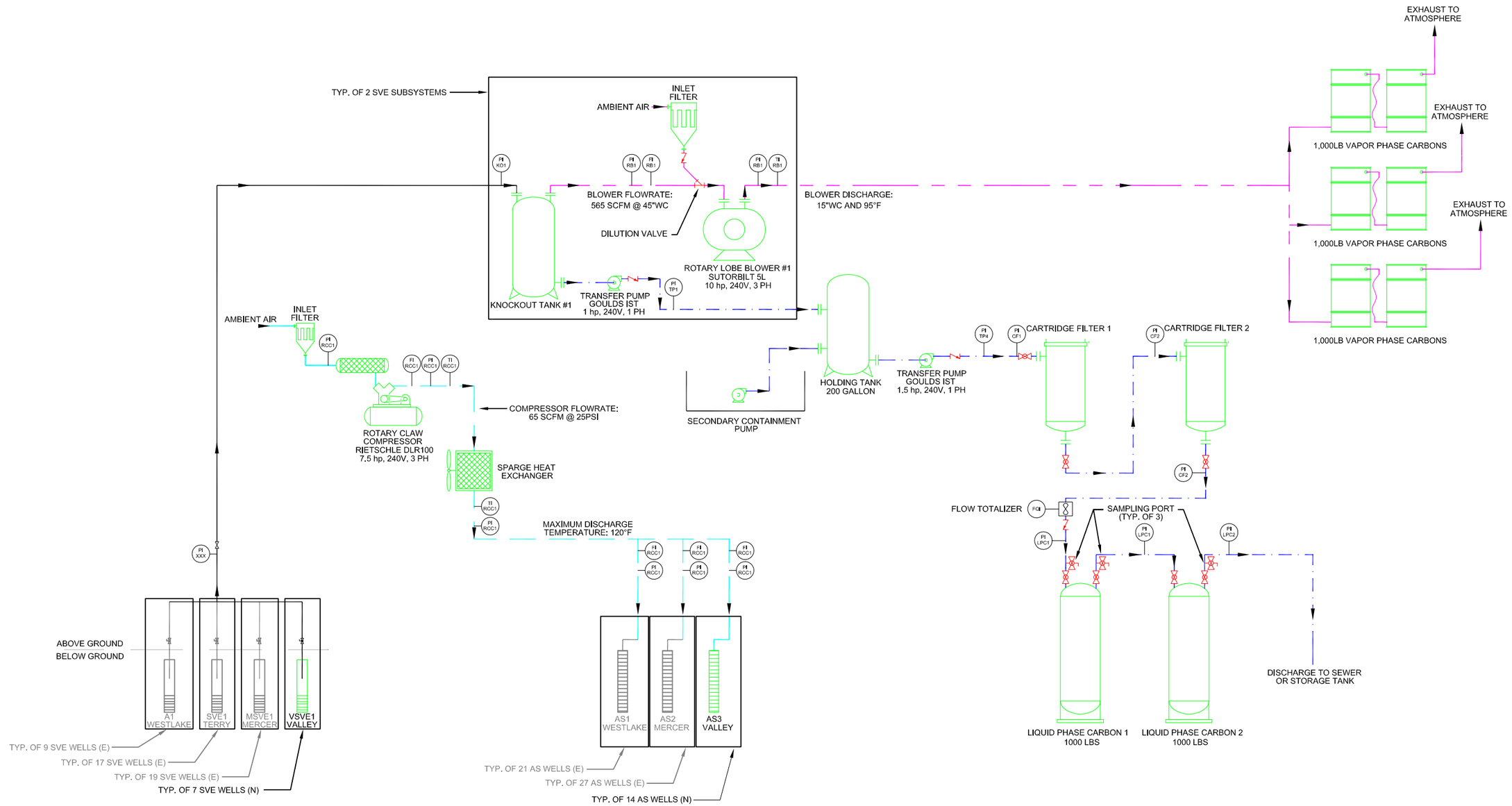
PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION:

- SVE TRENCHING
- APPROXIMATE SANITARY/ STORM SEWER LOCATION
- AIR SPARGE REMEDIATION PIPING
- COMPOUND FENCE LOCATION
- VAPOR REMEDIATION PIPING
- WATER REMEDIATION PIPING
- APPROXIMATE WATER UTILITIES LOCATION
- BOLLARD LOCATION

PROJECT NO.
03132603

FIGURE
7
EJB: 07/11/14



Cardno ERI

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PROCESS FLOW DIAGRAM

PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION

- Extracted Groundwater and Vapor
- Extracted Groundwater
- Extracted Vapor
- Pressurized Air
- (E) Existing Well or Equipment

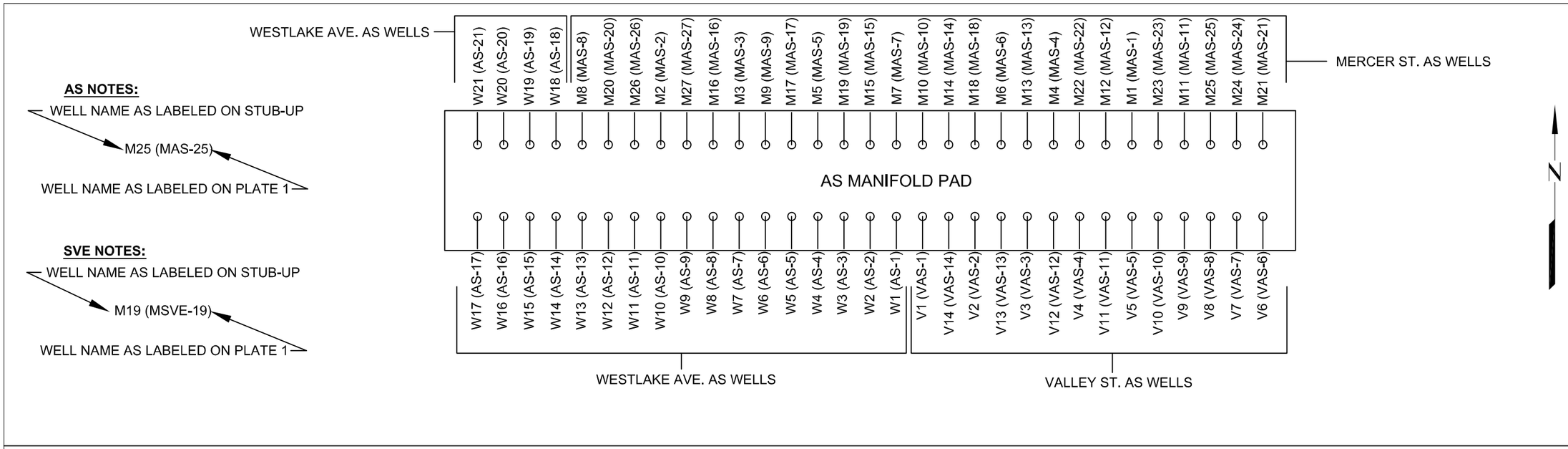
PROJECT NO.

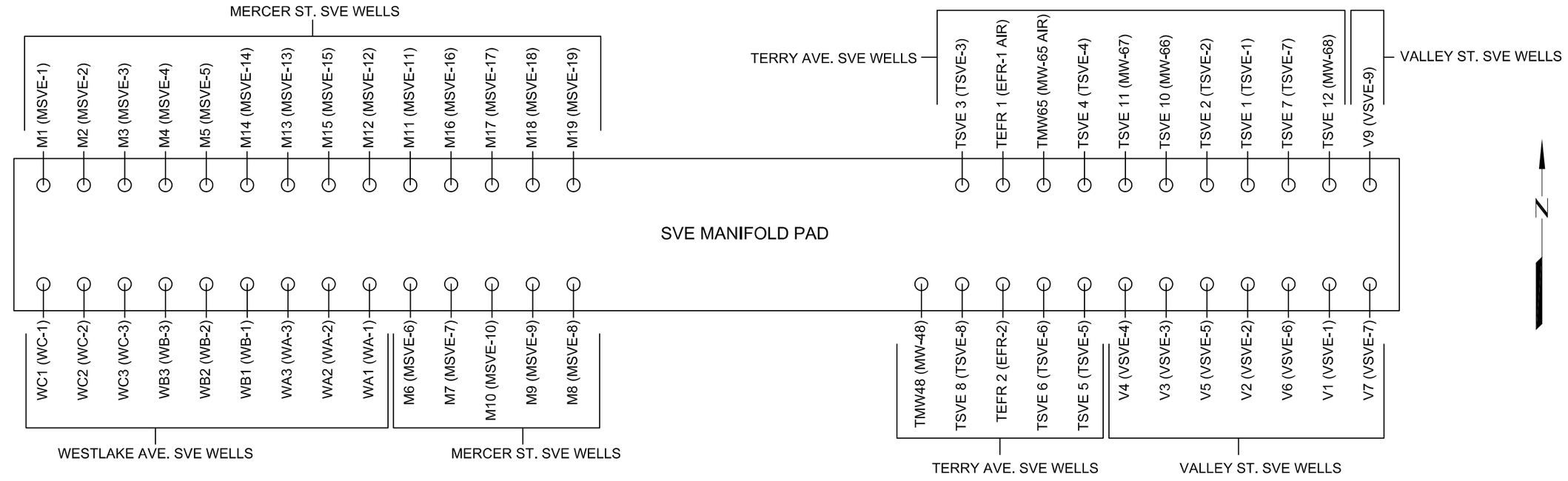
3132603

FIGURE

8

EJB: 07/11/14





Cardno ERI
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AS/SVE WELL LABELS

PHILLIPS 66 Facility No. 255353
600 Westlake Avenue North
Seattle, Washington

EXPLANATION

PROJECT NO.
03132603

FIGURE
9
EJB: 07/11/14

APPENDIX A

ECOLOGY RESOURCE PROTECTION WELL REPORTS – MERCER STREET

25-4B-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

MAS24 419262

Construction/Decommission
- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
- [X] Resource Protection
- [ ] Geotechnical Soil Boring

Property Owner: Mercer Corridor
Site Address: Westlake Ave. N. & Mercer St.
City: Seattle County: 17-King EWM
Location: 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Consulting Firm: Clearcreek Contractor's

Unique Ecology Well ID Tag No.: BHB 441

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

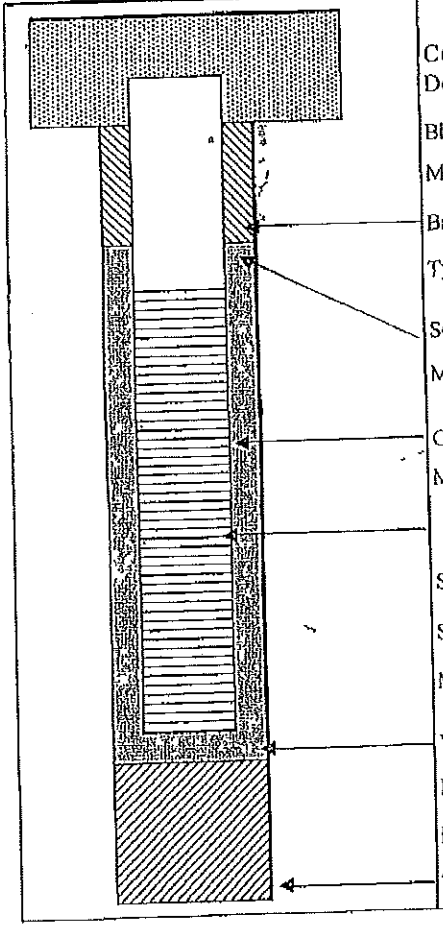
[X] Driller [ ] Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter: 8 4 Static Level: 14

Work/Decommission Start Date: 6/11/11
Work/Decommission End Date: 11

If trainee, licensed driller's Signature and License No. _____

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	Pipe 4" below grade FT
Blank Casing (dia x dep)	1 16'4"
Material	S.S
Backfill	10'4" FT
Type	Neat cement
Seal	4
Material	Bent chips
Gravel Pack	2 FT
Material	2/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	S.S.
Well Depth	20'4" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20'4" FT
brown Silty Sand

0 - FT

0 - FT

RECEIVED
JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 7 2011)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

MSVE10 419258

Construction/Decommission
☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King
EWM

Consulting Firm Clearcreek Contractor's

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Unique Ecology Well ID Tag No. BHB 442

Lat/Long (s;t;r still Required) Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 6" 10 Static Level N/A

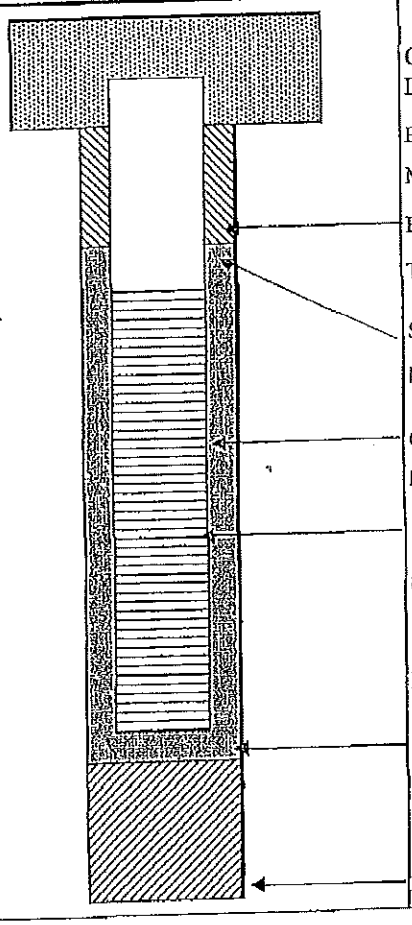
Work/Decommission Start Date 5-31-11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date 11 11

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	4 @ 4' 10"
Material	pvc
Backfill	6" FT
Type	portland
Seal	6"
Material	Bent chips
Gravel Pack	3' 3" FT
Material	#2 12
Screen (dia x dep)	4 3'
Slot Size	020
Material	pvc
Well Depth	7' 10" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 7' 10" FT brown silty Sand

0 - FT

0 - FT

RECEIVED
JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission MSVE19 419265

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E ☐ EWM ☐ or WWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHB 443

Lat/Long (s;t;r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 10 Static Level N/A

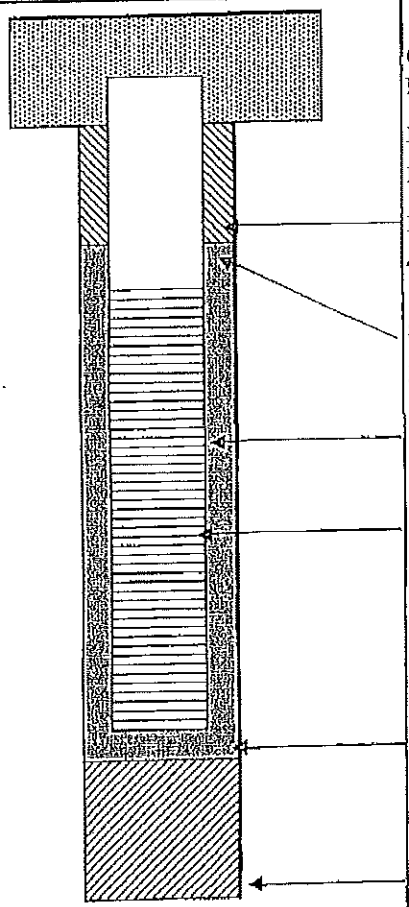
Work/Decommission Start Date 5 31 11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	4 5'6"
Material	pvc
Backfill	9" FT
Type	heat Cement
Seal	6"
Material	Bent chips
Gravel Pack	3' 3" FT
Material	2/12
Screen (dia x dep)	3 4
Slot Size	.020
Material	pvc
Well Depth	8'6" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 8.5 FT brown Silty Sand

0 - FT

0 - FT

RECEIVED JUL 19 2011 WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 7/01)

25-46-30

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Decommission MSVE16 419267

[X] Construction
[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
[X] Resource Protection
[ ] Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King EWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHB 444

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

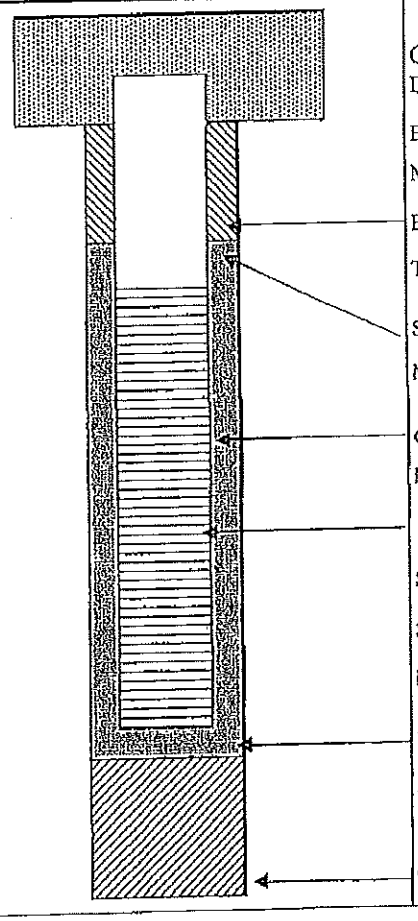
[X] Driller [ ] Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 10 Static Level N/A

Work/Decommission Start Date 5-31-11
Work/Decommission End Date 11

If trainee, licensed driller's Signature and License No. _____

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0	FT
Blank Casing (dia x dep)	4 4'4"	
Material	puc	
Backfill	6"	FT
Type	Neat Cement	
Seal	6"	
Material	Bent Chips	
Gravel Pack	3'3"	FT
Material	2/12	
Screen (dia x dep)	4 3	
Slot Size	.020	
Material	puc	
Well Depth	7.4"	FT
Backfill		
Material		
Total Hole Depth		FT

Formation Description

0 - 7'4" FT
brown Silty Sand

0 - FT

0 - FT

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WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev=v 2/01)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

MSVE 15 419269

Construction/Decommission
☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King
BWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHB 445

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 10 Static Level N/A

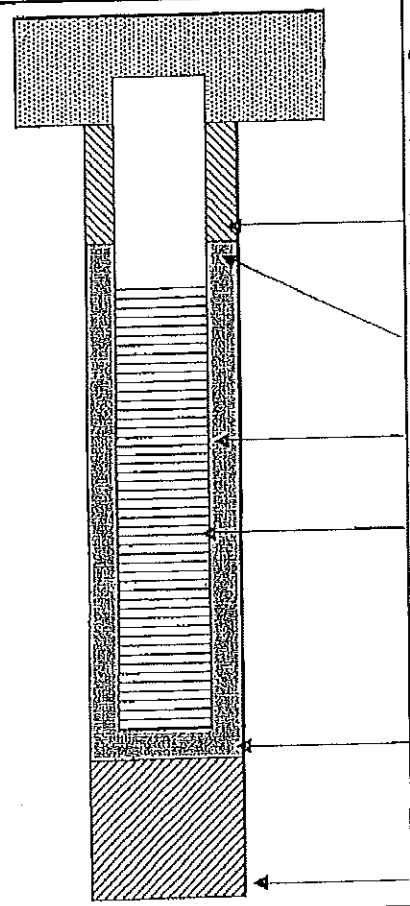
Work/Decommission Start Date 5-31-18

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date "

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	4 4'10"
Material	pvc
Backfill	6" FT
Type	Neat cement
Seal	6"
Material	Bent chips
Gravel Pack	3'3" FT
Material	2/12
Screen (dia x dep)	4 3
Slot Size	.020
Material	pvc
Well Depth	7'10" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 7'10" FT brown silty sand

0 - FT

0 - FT

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WATER RESOURCES - NWRO

Scale 1" = _____

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25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

MSVE 18

Construction/Decommission 419270

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. RE05927

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor

Site Address Westlake Ave. N. & Mercer St.

City Seattle County 17-King EWM

Location 1/4 NE 1/4 SE Sec 30 Twn 26N R 4E or WWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHB 446

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger

Driller/Trainee Signature _____

Driller/Trainee License No. 2073

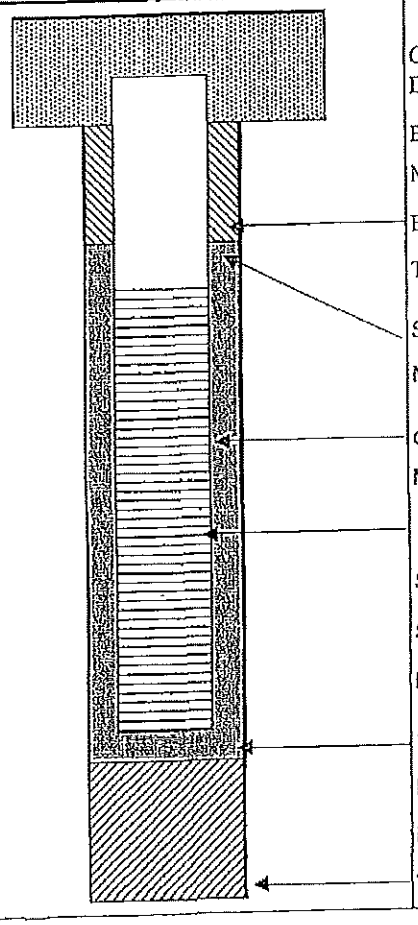
Cased or Uncased Diameter 10 Static Level N/A

Work/Decommission Start Date 5-31-11

Work/Decommission End Date "

If trainee, licensed driller's Signature and License No. _____

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	4 4'10"
Material	PVC
Backfill	6" FT
Type	neat cement
Seal	6"
Material	Bent chips
Gravel Pack	3'3" FT
Material	2/12
Screen (dia x dep)	4 3
Slot Size	1020
Material	PVC
Well Depth	7'10" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 7'10" FT brown Silty Sand

0 - FT

0 - FT

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JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

1/1

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Decommission MAS 23 41927(

- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
- [X] Resource Protection
- [ ] Geotechnical Soil Boring

Property Owner: Mercer Corridor
Site Address: Westlake Ave. N. & Mercer St.
City: Seattle County: 17-King EWM
Location: 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM
Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. _____

Consulting Firm: Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHR 447

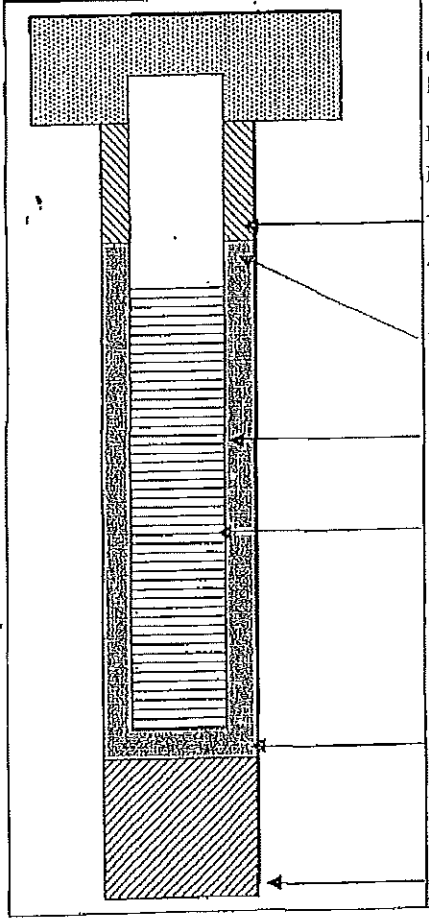
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

If trainee, licensed driller's Signature and License No. _____

Cased or Uncased Diameter 8" Static Level 14
Work/Decommission Start Date 6/1/11
Work/Decommission End Date _____

Construction/Design — **Well Data** W11-329



Concrete Surface Seal Depth	Pipe 4' below grade 0 FT
Blank Casing (dia x dep)	1 16'1"
Material	S.S.
Backfill	10'1" FT
Type	neat cement
Seal	4'
Material	Rent chips
Gravel Pack	2 FT
Material	2 1/2
Screen (dia x dep)	1 11
Slot Size	.020
Material	S.S.
Well Depth	20'1" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20 FT	brown Silty Sand
0 - FT	
0 - FT	

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WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev 2/01)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission MaS 22 419273

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King
Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E EWM or WWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHS 448

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 8"4 Static Level 14.

Work/Decommission Start Date 6/1/11
Work/Decommission End Date 11

If trainee, licensed driller's Signature and License No. _____

Construction/Design — **Well Data** W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	1 16' 3"
Material	5.5
Backfill	12' 3" FT
Type	Neat cement
Seal	4
Material	Bent Chips
Gravel Pack	2' FT
Material	2/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	5.5
Well Depth	20 3 FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20' 3" FT brown Silty Sand

0 - FT

0 - FT

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WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419275 MAS 21

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID Tag No. BHB 449

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E ☐ EWM ☐ WWM

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature Scott K
Driller/Trainee License No. 2073

Cased or Uncased Diameter 8 1/4 Static Level 14

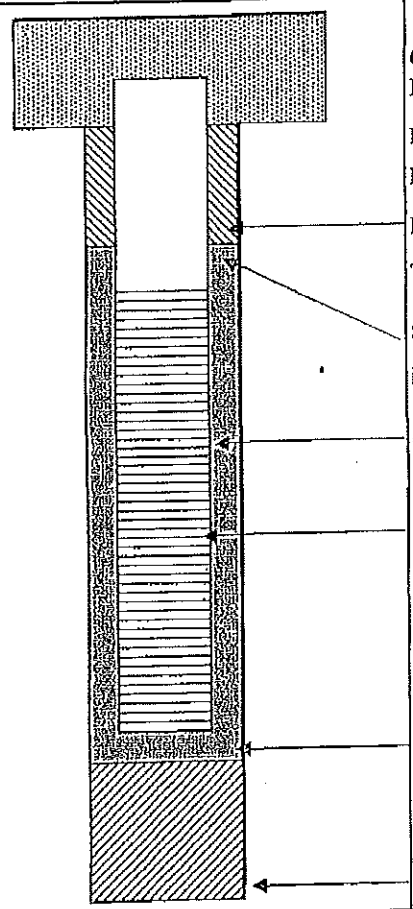
Work/Decommission Start Date 6/11/11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date "

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design — Well Data W11-329



Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	1 15'5"
Material	S.S
Backfill	10'5" FT
Type	Neat Cement
Seal	4
Material	Bent chips
Gravel Pack	2 FT
Material	2/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	S.S.
Well Depth	20'5" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20'5"	FT
brown Silty Sand	
0 -	FT
0 -	FT

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JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

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25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419276 MAS 20

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner: Mercer Corridor
Site Address: Westlake Ave. N. & Mercer St.
City: Seattle County: 17-King
EWM

Consulting Firm: Clearcreek Contractor's

Unique Ecology Well ID Tag No.: BHB450

Location: 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No.: _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter: 8 5 Static Level: 14

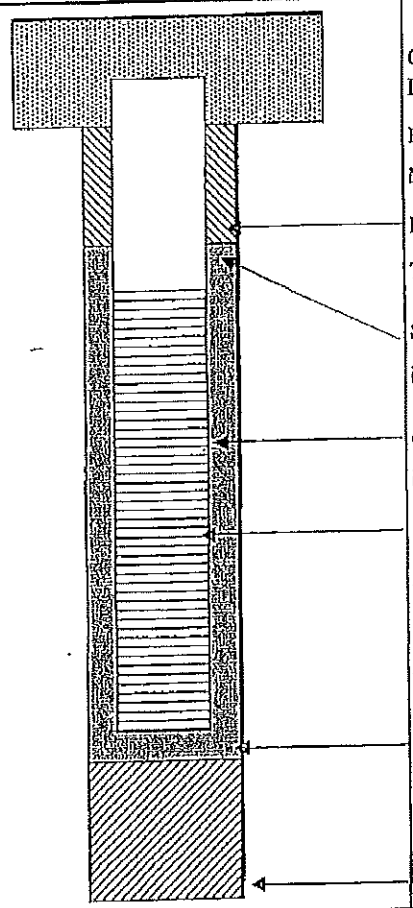
Work/Decommission Start Date: 6/11/11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date: "

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade / 0 FT
Blank Casing (dia x dep)	1 X 15' 7"
Material	SS.
Backfill	10' 7" FT
Type	Neat cement
Seal	4'
Material	Bent chips
Gravel Pack	2 FT
Material	2/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	S.S.
Well Depth	20' 7" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20' 7" FT: brown Silty Sand

0 - FT

0 - FT

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WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev 2/01)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419277 MAS 25

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King EWM
Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Consulting Firm Clearcreek Contractor's

Unique Ecology Well ID
Tag No. BHB 451

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

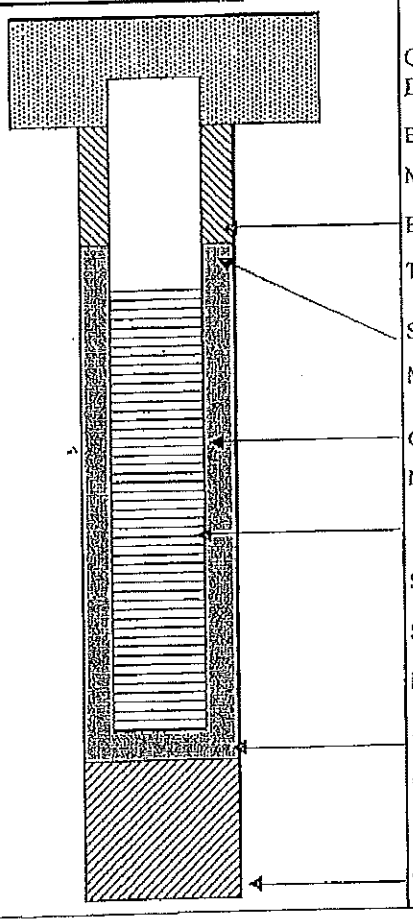
If trainee, licensed driller's Signature and License No. _____

Cased or Uncased Diameter 8 in Static Level 14

Work/Decommission Start Date 6/1/11

Work/Decommission End Date "

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	1 15'5"
Material	5.5
Backfill	10' 5" FT
Type	Neat cement
Seal	4
Material	Bent chips
Gravel Pack	2 FT
Material	2/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	S.S.
Well Depth	20' 5" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 -20.5" FT

0 - FT

0 - FT

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WATER RESOURCES - NWRO

Scale 1" = _____

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ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419278 MAS 26

Type of Well
- [X] Resource Protection
- [ ] Geotechnical Soil Boring

- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King EWM

Consulting Firm Clearcreek Contractor's

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Unique Ecology Well ID Tag No. BHB 452

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

[X] Driller [ ] Trainee Name (Print) Scott Krueger

Driller/Trainee Signature _____

Driller/Trainee License No. 2073

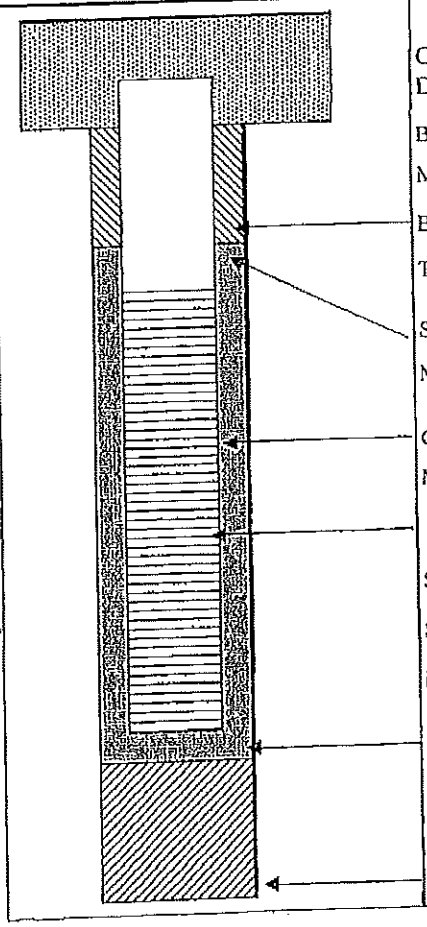
Cased or Uncased Diameter 8 1/4 Static Level 14

Work/Decommission Start Date 6/14/11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date 11

Construction/Design — Well Data W11-329



Concrete Surface Seal Depth	4' below grade 0 FT
Blank Casing (dia x dep)	1 15'9"
Material	S.S
Backfill	10' 9" FT
Type	Neat Cement
Seal	4'
Material	Bent chips
Gravel Pack	2 FT
Material	8 1/12
Screen (dia x dep)	1 1
Slot Size	.020
Material	S.S.
Well Depth	20' 9" FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 20' 9" FT: brown Silty Sand

0 - FT

0 - FT

RECEIVED
JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419279
☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor
Site Address Westlake Ave. N. & Mercer St.
City Seattle County 17-King
EWM

Consulting Firm Clearcreek Contractor's

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Unique Ecology Well ID Tag No. BHB453

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

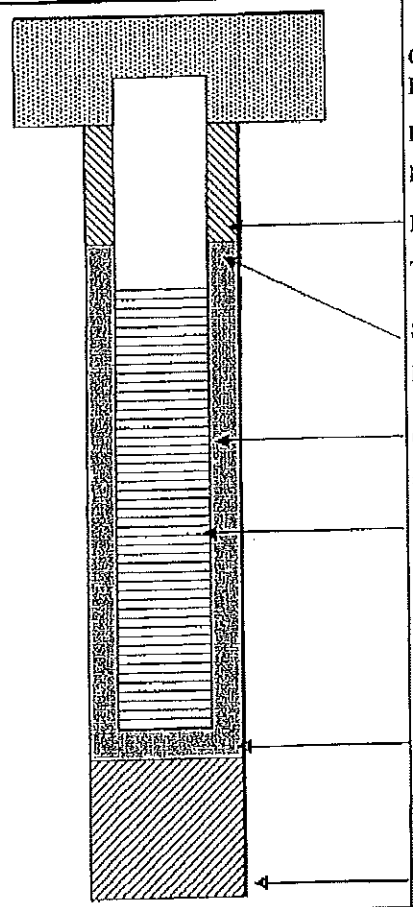
☒ Driller ☐ Trainee Name (Print) Scott Krueger
Driller/Trainee Signature _____
Driller/Trainee License No. 2073

Cased or Uncased Diameter 8¼ Static Level N/A

Work/Decommission Start Date 6/11/11
Work/Decommission End Date "

If trainee, licensed driller's Signature and License No. _____

Construction/Design — **Well Data** W11-329 -



Concrete Surface Seal Depth	4' below grade 0	FT
Blank Casing (dia x dep)	4 4'10"	
Material	PVC	
Backfill	6"	FT
Type	Neat cement	
Seal	6"	
Material	Bent chips	
Gravel Pack	3'3"	FT
Material	2/12	
Screen (dia x dep)	4 3	
Slot Size	1020	
Material	PVC	
Well Depth	7'10"	FT
Backfill		
Material		
Total Hole Depth		FT

Formation Description

0 - 7'10" FT — brown Silty Sand

0 - _____ FT

0 - _____ FT

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JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE05927

Construction/Decommission 419280 MSVE 17

☒ Construction

☒ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
☒ Resource Protection
☐ Geotechnical Soil Boring

Property Owner Mercer Corridor

Site Address Westlake Ave. N. & Mercer St.

Consulting Firm. Clearcreek Contractor's

City Seattle County 17-King

Unique Ecology Well ID Tag No. BHB 454

Location 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E ☐ EWM ☐ WWM

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long.Min/Sec _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Tax Parcel No. _____

☒ Driller ☐ Trainee Name (Print) Scott Krueger

Driller/Trainee Signature _____

Driller/Trainee License No. 2073

Cased or Uncased Diameter 8¼ Static Level N/A

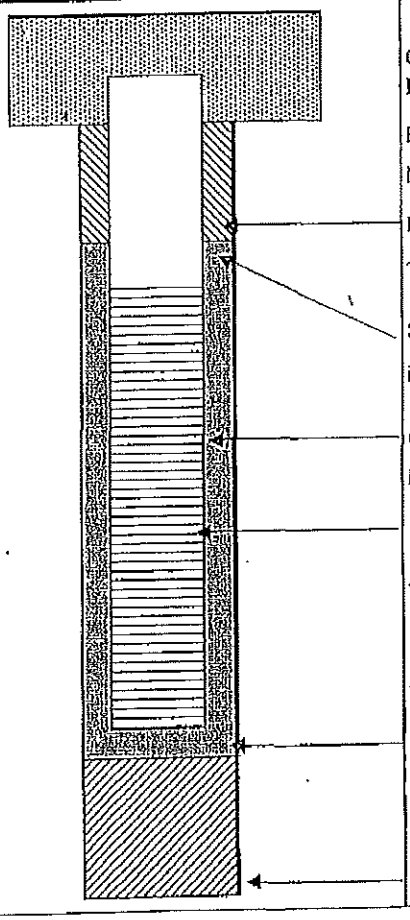
Work/Decommission Start Date 6/22/11

If trainee, licensed driller's Signature and License No. _____

Work/Decommission End Date 11

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Design



Well Data W11-329

Concrete Surface Seal Depth	below grade 0 FT
Blank Casing (dia x dep)	4 5'
Material	pvc
Backfill	6" FT
Type	Neat cement
Seal	6"
Material	Bent chips
Gravel Pack	3'3" FT
Material	#2/12
Screen (dia x dep)	4 3'
Slot Size	.020
Material	pvc
Well Depth	8' FT
Backfill	
Material	
Total Hole Depth	FT

Formation Description

0 - 8' FT brown silty Sand

0 - FT

0 - FT

RECEIVED
JUL 19 2011
WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

25-4E-30J

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT *Notice of Intent No.* RE05927

MSUE 14 41928

Construction/Decommission
- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well
- [X] Resource Protection
- [ ] Geotechnical Soil Boring

Property Owner: Mercer Corridor

Site Address: Westlake Ave. N. & Mercer St.

City: Seattle County: 17-King EWM

Location: 1/4 NE 1/4 SE Sec 30 Twn 25N R 4E or WWM

Consulting Firm: Clearcreek Contractor's

Unique Ecology Well ID Tag No.: BHB 455

Lat/Long (s,t,r still Required) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No.: _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): Scott Krueger

Driller/Trainee Signature: Scott Krueger

Driller/Trainee License No.: 2073

Cased or Uncased Diameter: 8 ¼ Static Level: N/A

Work/Decommission Start Date: 6/2/11 (11)

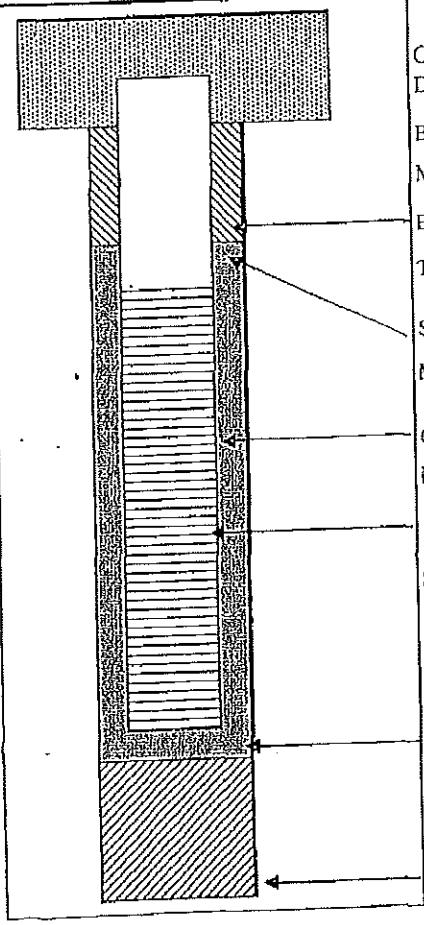
Work/Decommission End Date: _____

If trainee, licensed driller's Signature and License No.: _____

Well Data W11-329

Concrete Surface Seal Depth	below grade 0 FT
Blank Casing (dia x dep)	4 3'6"
Material	pvc
Backfill	6" FT
Type	neat cement
Seal	6"
Material	Bent chips
Gravel Pack	3'3" FT
Material	2/12
Screen (dia x dep)	4 3
Slot Size	1020
Material	pvc
Well Depth	16.6" FT
Backfill	
Material	
Total Hole Depth	FT

Construction/Design



Formation Description

0 - 6.5 FT: brown Silty Sand,

0 - FT

0 - FT

RECEIVED JUL 19 2011 WATER RESOURCES - NWRO

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

APPENDIX B

ECOLOGY RESOURCE PROTECTION WELL REPORTS – VALLEY STREET

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. RE08597

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 362

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

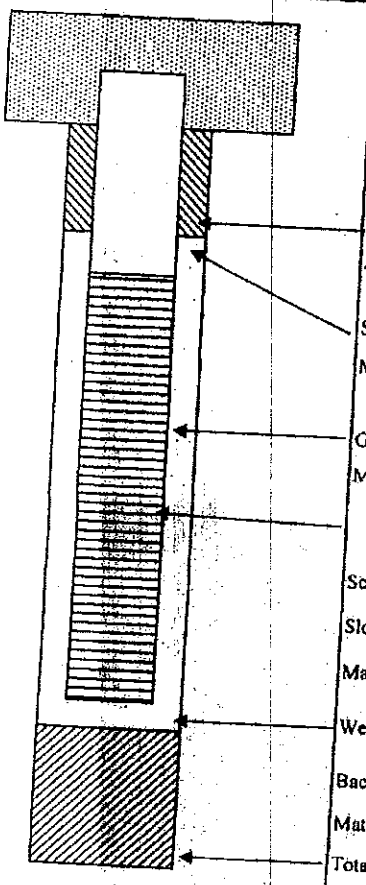
If trainee, licensed driller's Signature and License No. _____

Cased or Uncased Diameter 8 1/2 Static Level 15'

Work/Decommision Start Date 6/26/13

Work/Decommision End Date 6/26/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	—	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1" x 1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	—	
Material	—	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 1

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm: Clearcreek Contractor's

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 563

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) DAVID Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

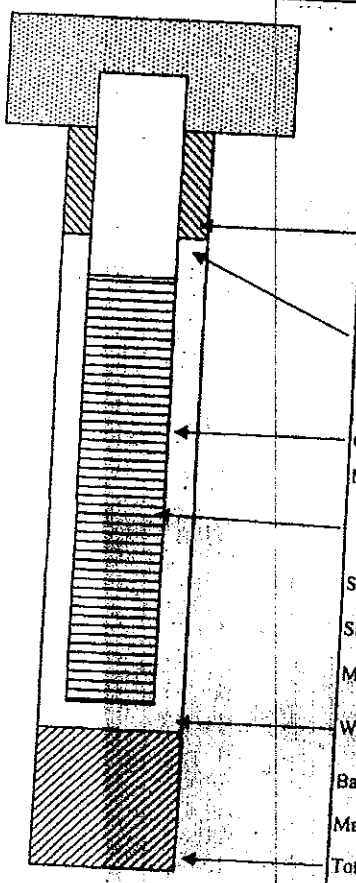
If trainee, licensed driller's Signature and License No. _____

Cased or (Uncased) Diameter 8 1/2 Static Level 15'

(Work)/Decommision Start Date 6/26/13

(Work)/Decommision End Date 6/26/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	—	FT
Blank Casing (dia x dep)	4"	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	—	
Material	—	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #2

Scale 1"= _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

Consulting Firm: Clearcreek Contractor's

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 554

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Tax Parcel No. _____

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

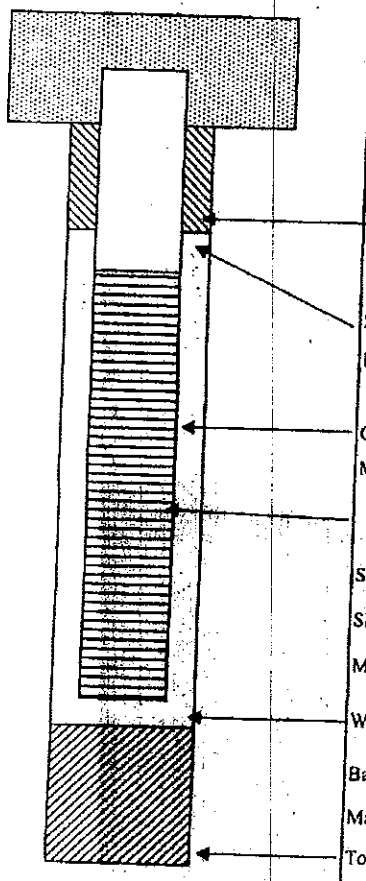
Cased or Uncased Diameter 8 1/2 Static Level 15'

If trainee, licensed driller's Signature and License No. _____

Work/Decommission Start Date 6-24-13

Work/Decommission End Date 6-24-13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 3

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 553

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E EWM or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature

Driller/Trainee License No. 2744

Tax Parcel No. _____

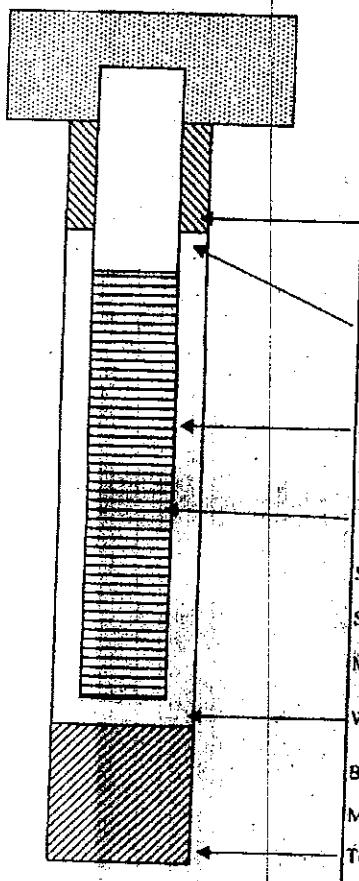
Cased or Uncased Diameter 8 1/2 Static Level 15'

If trainee, licensed driller's Signature and License No. _____

Work/Decommision Start Date 6-24-13

Work/Decommision End Date 6-24-13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 4

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

Consulting Firm: Clearcreek Contractor's

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 362

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature

Driller/Trainee License No. 2744

Tax Parcel No.

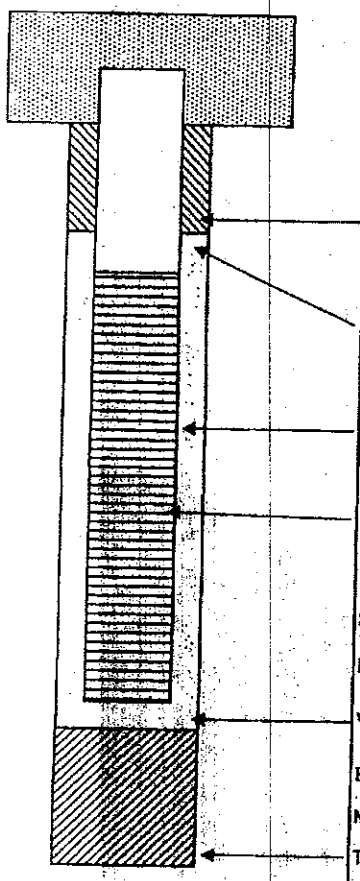
If trainee, licensed driller's Signature and License No.

Cased or Uncased Diameter 8 1/2 Static Level 15'

Work/Decommision Start Date 6-24-13

Work/Decommision End Date 6-24-13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 5

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT
Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

Consulting Firm: Clearcreek Contractor's

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 551

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E EWM or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

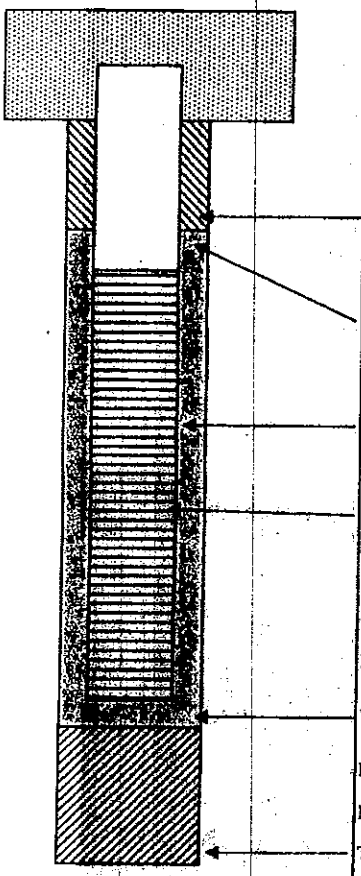
Cased or Uncased Diameter 8"/2 Static Level 15'

Work/Decommision Start Date 6-24-13

If trainee, licensed driller's Signature and License No. _____

Work/Decommision End Date 6-24-13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #6

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Consulting Firm: Clearcreek Contractor's

Site Address: Valley St between Terry and Westlake

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 556

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

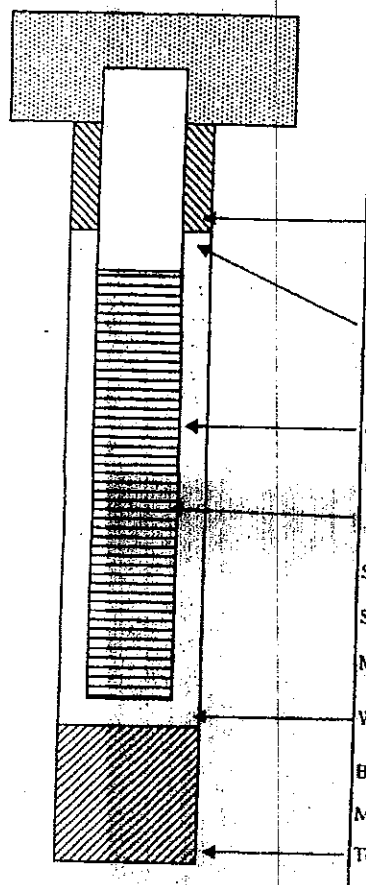
Cased or Uncased Diameter 8 1/2 Static Level 15'

Work/Decommision Start Date 6/25/13

If trainee, licensed driller's Signature and License No. _____

Work/Decommision End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1" x 1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 7

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm: Clearcreek Contractor's

Unique Ecology Well ID Tag No.: BIC 555

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Trainee Name (Print): David Gose

Driller/Trainee Signature: _____

Driller/Trainee License No.: 2744

If trainee, licensed driller's Signature and License No.: _____

CURRENT

Notice of Intent No.: RE08597

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

City: Seattle County: King

Location: 1/4 SE NE NE Sec 30 TWN 25N R 4E EWM or WWM

Lat/Long (s,t,r still Required): Lat Deg x Lat Min/Sec x; Long Deg x Long Min/Sec x

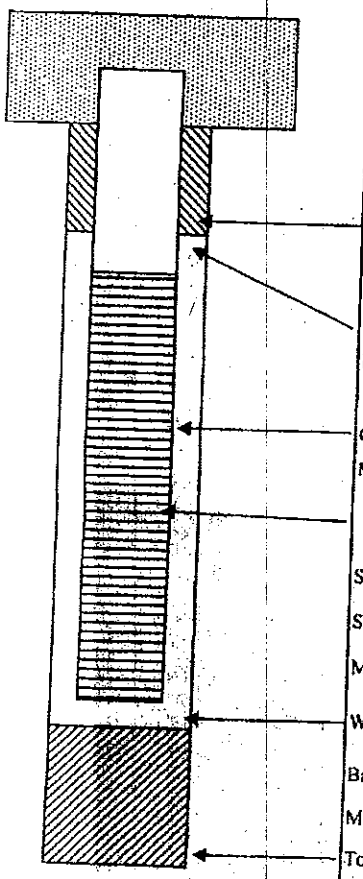
Tax Parcel No.: _____

Cased or (Uncased) Diameter: 8 1/2 Static Level: 15'

(Work)/Decommision Start Date: 6-24-13

(Work)/Decommision End Date: 6-24-13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	—	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	—	
Material	—	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 8

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. **RE08597**

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 557

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

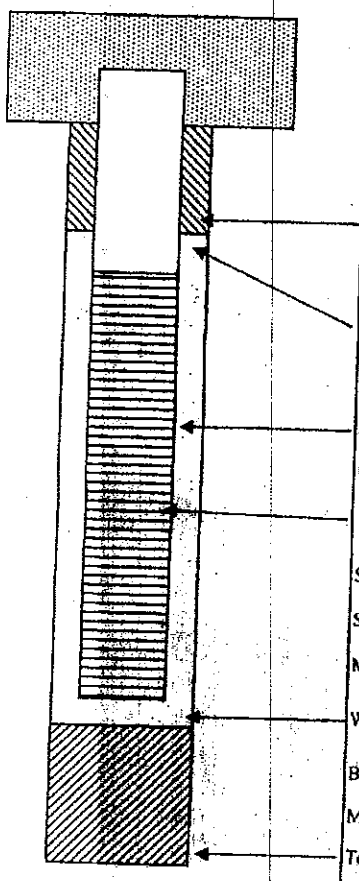
Cased or Uncased Diameter 8 1/2 Static Level 15'

If trainee, licensed driller's Signature and License No. _____

Work/Decommission Start Date 6/25/13

Work/Decommission End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #9

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 558

EWM

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature

Driller/Trainee License No. 2744

Tax Parcel No. _____

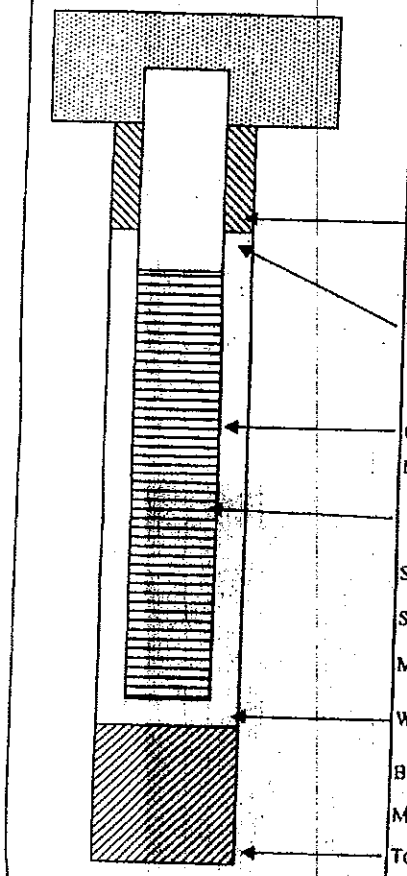
Cased or Uncased Diameter 8 1/2 Static Level 15'

Work/Decommision Start Date 6/25/13

If trainee, licensed driller's Signature and License No.

Work/Decommision End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #10

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 559

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

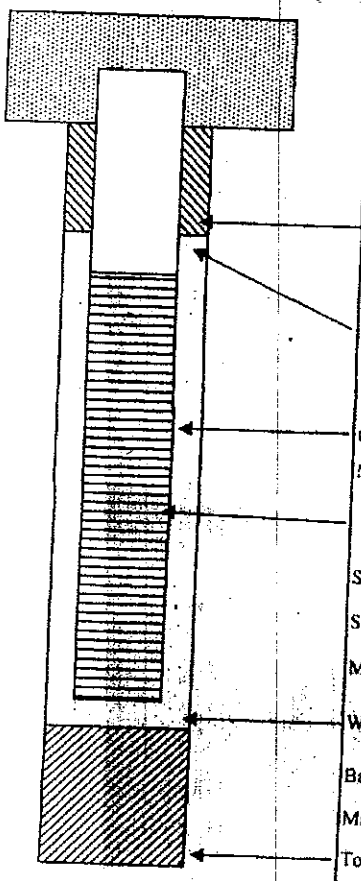
Cased or Uncased Diameter 8 1/2 Static Level 15'

Work/Decommision Start Date 6/25/13

If trainee, licensed driller's Signature and License No. _____

Work/Decommision End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	–	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	–	
Material	–	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL # 11

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner: City of Seattle

Site Address: Valley St between Terry and Westlake

Consulting Firm: Clearcreek Contractor's

City: Seattle County: King

Unique Ecology Well ID Tag No. BIC 560

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature

Driller/Trainee License No. 2744

Tax Parcel No.

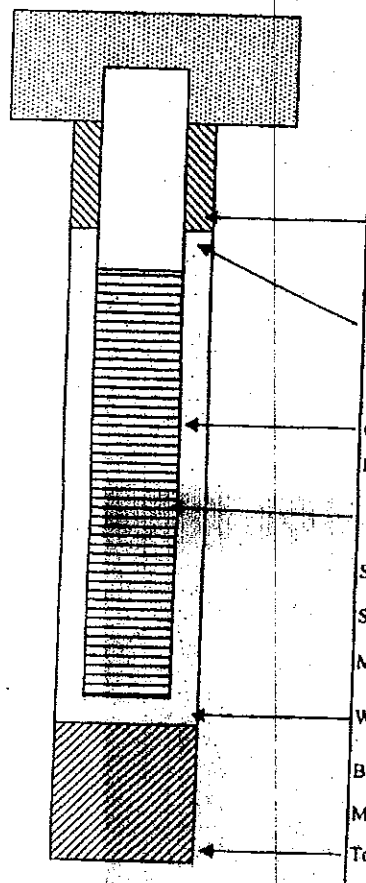
Cased or Uncased Diameter 8"1/2 Static Level 15'

If trainee, licensed driller's Signature and License No.

Work/Decommision Start Date 6/25/13

Work/Decommision End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	-	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	-	
Material	-	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #12

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Property Owner City of Seattle

Site Address Valley St between Terry and Westlake

Consulting Firm **Clearcreek Contractor's**

City Seattle County King

Unique Ecology Well ID Tag No. BIC 561

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

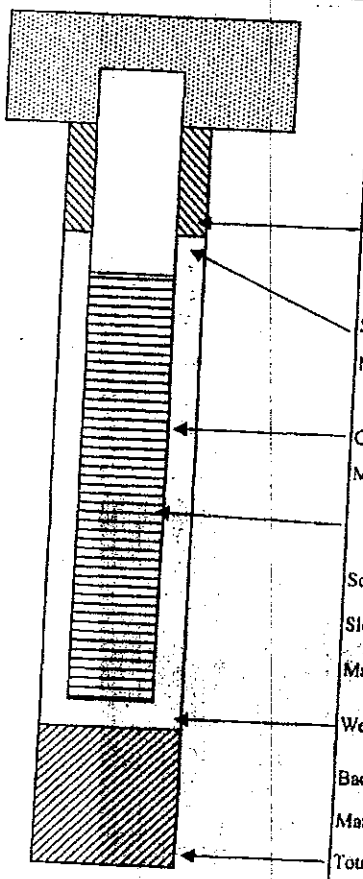
Cased or Uncased Diameter 8 1/2 Static Level 15'

If trainee, licensed driller's Signature and License No. _____

Work/Decommision Start Date 6/25/13

Work/Decommision End Date 6/25/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	—	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
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Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1"x1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	—	
Material	—	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6" FT

GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE

0 - FT

0 - FT

WELL #13

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT

Notice of Intent No. RE08597

Construction/Decommission

[X] Construction

[ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Type of Well

[X] Resource Protection

[ ] Geotechnical Soil Boring

Consulting Firm **Clearcreek Contractor's**

Property Owner **City of Seattle**

Site Address **Valley St between Terry and Westlake**

City **Seattle** County **King**

Unique Ecology Well ID Tag No. BIC 564

Location 1/4 SE NE NE Sec 30 TWN 25N R 4E [EWM] or WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s,t,r still Required) Lat Deg x Lat Min/Sec x

Long Deg x Long Min/Sec x

[X] Driller [ ] Trainee Name (Print) David Gose

Driller/Trainee Signature _____

Driller/Trainee License No. 2744

Tax Parcel No. _____

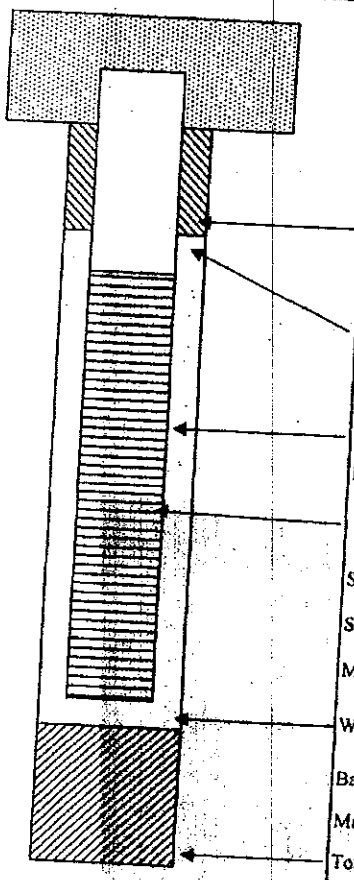
If trainee, licensed driller's Signature and License No. _____

Cased or (Uncased) Diameter 8 1/2 Static Level 15'

(Work)/Decommision Start Date 6/26/13

(Work)/Decommision End Date 6/26/13

Construction/Design



Well Data W3-362

Concrete Surface Seal Depth	—	FT
Blank Casing (dia x dep)	14'	
Material	SS	
Backfill	6'	FT
Type	NEAT CEMENT	
Seal	4'	
Material	HYD BENT	
Gravel Pack	2'	FT
Material	2/12 SAND	
Screen (dia x dep)	1" x 1'	
Slot Size	.010	
Material	S.S.	
Well Depth	17'6"	FT
Backfill	—	
Material	—	
Total Hole Depth	17'6"	FT

Formation Description

0 - 17'6"	FT	GREYISH BLUE FINE TO MEDIUM SILTY SANDS W/ FEW GRAVELS NEAR SURFACE
0 -	FT	
0 -	FT	

WELL #14

Scale 1" = _____

Page _____ of _____

ECY 050-12 (Rev. 2/01)

APPENDIX C

PERMITS

King County

Wastewater Treatment Division
Industrial Waste Program
Department of Natural Resources and Parks
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
206-263-3000 Fax 206-263-3001
TTY Relay: 711

June 26, 2013

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ed Ralston
Phillips 66 Company
76 Broadway
Sacramento, CA 95818

Issuance of Discharge Authorization No. 4262-01 to Phillips 66 Company – Facility No. 255353

Dear Mr. Ralston:

The King County Industrial Waste Program (KCIW) has reviewed your application to discharge industrial wastewater to the sewer system from the Phillips 66 Company – Facility No. 255353 facility located at 600 Westlake Avenue North, Seattle, Washington, and has issued the enclosed Major Discharge Authorization.

This authorization permits you to discharge limited amounts of industrial wastewater into King County's sewer system in accordance with the effluent limitations and other requirements and conditions set forth in the document and the regulations outlined in King County Code 28.84.060 (enclosed). As long as you maintain compliance with regulations and do not change the nature and volume of your discharge, KCIW will not require you to apply for an industrial wastewater discharge permit, a type of approval that would result in additional requirements and increased fees.

If you propose to increase the volume of your discharge or change the type or quantities of substances discharged, you must contact KCIW at least 60 days before making these changes.

King County Code 28.84 authorizes a fee for each Major Discharge Authorization issued by the King County Department of Natural Resources and Parks. The fee for issuance of a Major Discharge Authorization in 2013 is $1,585. King County will send you an invoice for this amount.

If at any time you have questions about this discharge authorization or your wastewater discharge, please call me at 206-263-3005, or email me at dana.heinz@kingcounty.gov. You may also wish to visit our program's Internet pages at: www.kingcounty.gov/industrialwaste.

Thank you for helping support our mission to protect public health and enhance the environment.

Sincerely,

Dana Heinz
Compliance Investigator

Enclosures

cc: Amar Gill, Cardno ERI
Julie Howell, Seattle Public Utilities
Kristin Painter, King County

King County

MAJOR DISCHARGE AUTHORIZATION
King County Industrial Waste Program
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658

NUMBER 4262-01
for

Phillips 66 Company - Facility No. 255353

Facility address: 600 Westlake Ave. N.
Seattle, WA 98109

Mailing address: 76 Broadway
Sacramento, CA 95818

Phone: 406-656-4521

Emergency (24-hour) phone: 503-684-0525

Industry type: Groundwater remediation – petroleum

SIC code: 5541 **EPA Id. No.:** NA

Discharge to: West Point Treatment Plant

*Note: This authorization is valid only for the specific discharges shown below:

Discharge process: Wastewater generated by groundwater remediation – petroleum operation

Effective date: July 1, 2013
Expiration date: June 30, 2018

DESCRIPTION OF SAMPLE SITES AND DISCHARGE VOLUMES

Sample Site No.	Description	Maximum Industrial Volume (gallons per day)
IW1162A	Sample tap after treatment	15,000

Permission is hereby granted to discharge industrial wastewater from the above-identified facility into the King County sewer system in accordance with the effluent limitations and monitoring requirements set forth in this authorization.

If the industrial user wishes to continue to discharge after the expiration date, an application must be filed for re-issuance of this discharge authorization at least 90 days prior to the expiration date. For information concerning this King County Discharge Authorization, please call Industrial Waste Compliance Investigator Dana Heinz at 206-263-3005.

24-HOUR EMERGENCY NOTIFICATION

West Point Treatment Plant: 206-263-3801
Washington State Department of Ecology: 425-649-7000

SPECIAL CONDITIONS

A. Discharge to the sanitary sewer shall not begin until KCIW has conducted a preoperative inspection of the pretreatment facilities and has sent written notification (email is sufficient) to the permittee that discharges may begin.

B. Before discharge of treated groundwater to the sewer begins, the permittee must contact Seattle Public Utilities (206-684-7817) to establish a sewer account to ensure accurate assessment of sewer charges for all groundwater discharged to the sewer from this project

C. The discharge from the GAC breakthrough shall be sampled as outlined in your sampling work plan submitted to KCIW for the same parameters monitored for at sample site IW1162A. If any of King County limits are exceeded, you must cease discharge and notify KCIW.

D. All persons responsible for monitoring the discharge to the sanitary sewer shall review a copy of this authorization.

E. A copy of this authorization shall be on site at all times for review and reference.

F. The discharge shall not cause hydraulic overloading conditions of the sewerage conveyance system. During periods of peak hydraulic loading, KCIW and Seattle Public Utilities representatives reserve the authority to request that discharge to the sewer be stopped.

G. All wastewater shall be collected and treated in accordance with treatment methods approved by KCIW. Wastewater shall not bypass treatment systems. Modifications to wastewater treatment systems shall not occur without prior approval from KCIW.

H. Totalizing and non-resettable flow meters must be installed on all permitted discharge pipes to the sewer.

I. An accessible sampling spigot must be installed on the discharge pipe from the last treatment unit of the wastewater treatment system. The sample site shall be representative of all industrial waste streams discharged to the sewer from this site. Each sample site shall be accessible to KCIW representatives when discharge to the sewer is occurring

SELF-MONITORING REQUIREMENTS

A. The following self-monitoring requirements shall be met for this discharge authorization:

Sample Site No.	Parameter	Sample Type	Frequency
IW1162A	Benzene	Grab	Semiannually
	Ethylbenzene	Grab	Semiannually
	Toluene	Grab	Semiannually
	Total Xylenes	Grab	Semiannually
	Nonpolar Fog	3 Grabs	Semiannually
	Daily discharge volume	Continuous	Semiannually
	Total monthly flow	Continuous	Monthly
	Settleable solids	Grab (by Imhoff cone) [B]	Only if operating criteria are exceeded
	Hydrogen sulfide	Meter reading	Only if operating criteria are exceeded
	Explosivity	Meter reading	Only if operating criteria are exceeded

B. The settleable solids field test by Imhoff cone must be performed as follows:

1. Fill Imhoff cone to one-liter mark with well-mixed sample
2. Allow 45 minutes to settle
3. Gently stir sides of cone with a rod or by spinning. settle 15 minutes longer
4. Record volume of settleable matter in the cone as mL/L

C. The three nonpolar fats, oils, and grease (FOG) grab samples shall be of equal volume, collected at least five minutes apart, and analyzed separately. When using U.S. Environmental Protection Agency (EPA) approved protocols specified in 40 CFR Part 136, the individual grab samples may be composited (at the laboratory) prior to analysis.

D. The result of the composite sample or the average of the concentrations of the three grab samples may be reported as Total FOG unless the value is 100 mg/L or greater, in which case the concentration of nonpolar FOG must be reported.

E. If a violation of any discharge limits or operating criteria is detected in monitoring, you shall notify KCIW immediately upon receipt of analytical data.

F. A semiannual self-monitoring report shall be filed with KCIW no later than July 15 and January 15 each year. The semiannual report must include the total monthly volumes of water discharged to the sewer as well as the analytical results for the previous six months monitoring. If no discharge takes place during the six-month period, it shall be noted on the semiannual report.

G. All self-monitoring data submitted to KCIW, which required a laboratory analysis, must have been performed by a laboratory accredited by the Washington State Department of Ecology for each parameter tested, using procedures approved by 40 CFR 136. This does not apply to

field measurements performed by the industrial user such as pH, temperature, flow, atmospheric hydrogen sulfide, total dissolved sulfides, total settleable solids by Imhoff cone, or process control information.

H. All sampling data collected by the permittee and analyzed using procedures approved by 40 CFR 136 or approved alternatives shall be submitted to KCIW whether required as part of this authorization or done voluntarily by the permittee.

I. Self-monitoring reports shall be signed by an authorized representative of the industrial user. The authorized representative of the industrial user is defined as:

1. The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation

2. The manager of one or more manufacturing, production, or operating facilities, but only if the manager:

   a. Is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations
   b. Can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements and knowledgeable of King County reporting requirements
   c. Has been assigned or delegated the authority to sign documents, in accordance with corporate procedures

3. A general partner or proprietor if the industrial user is a partnership or proprietorship, respectively

4. A director or highest official appointed or designated to oversee the operation and performance of the industry if the industrial user is a government agency

5. The individuals described in one through four above may designate an authorized representative if:

   a. The authorization is submitted to King County in writing
   b. The authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company or agency

GENERAL DISCHARGE LIMITATIONS

Operating Criteria

There shall be no odor of solvent, gasoline, or hydrogen sulfide (rotten egg odor), oil sheen, unusual color, or visible turbidity. The discharge must remain translucent. If any of the discharge limits are exceeded, you must stop discharging and notify KCIW at 206-263-3000.

Corrosive Substances

Limits

Maximum:	pH 12.0 (s.u.)
Instantaneous minimum:	pH 5.0 (s.u.)
Daily minimum:	pH 5.5 (s.u.)

The instantaneous minimum pH limit is violated whenever any single grab sample or any instantaneous recording is less than pH 5.0. The daily minimum pH limit is violated whenever any continuous recording of 15 minutes or longer remains below pH 5.5 or when each pH value of four consecutive grab samples collected at 15-minute intervals or longer within a 24-hour period remains below pH 5.5.

Discharges of more than 50 gallons per day of caustic solutions equivalent to more than five percent NaOH by weight or greater than pH 12.0 are prohibited unless authorized by KCIW and subject to special conditions to protect worker safety, the collection system, and treatment works.

Fats, Oils, and Grease

Discharge of FOG shall not result in significant accumulations that either alone or in combination with other wastes are capable of obstructing flow or interfere with the operation or performance of sewer works or treatment facilities.

Nonpolar FOG (petroleum origin): The three nonpolar FOG grab samples shall be of equal volume, collected at least five minutes apart, and analyzed separately. When using EPA approved protocols specified in 40 CFR Part 136, the individual grab samples may be composited (at the laboratory) prior to analysis. The result of the composite sample or the average of the concentrations of the three grab samples may be reported as Total FOG unless the value is 100 mg/L or greater, in which case the concentration of nonpolar FOG must be reported.

Polar FOG (animal and/or vegetable origin): Dischargers of polar FOG shall minimize free-floating polar FOG. Dischargers may not add emulsifying agents exclusively for the purpose of emulsifying free-floating FOG.

Flammable or Explosive Materials

No person shall discharge any pollutant, as defined in 40 CFR 403.5, that creates a fire or explosion hazard in any sewer or treatment works, including, but not limited to, waste streams with a closed cup flashpoint of less than 140° Fahrenheit or 60° Centigrade using the test methods specified in 40 CFR 261.21.

At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system), be more than five percent nor any single reading be more than 10 percent of the lower explosive limit (LEL) of the meter.

Pollutants subject to this prohibition include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides, and any other substances that King County, the fire department, Washington State, or the EPA has notified the user are a fire hazard or a hazard to the system.

Petroleum Compounds	Maximum Concentration ppm (mg/L)
Benzene	0.07
Ethylbenzene	1.7
Toluene	1.4
Total xylenes	2.2

Heavy Metals/Cyanide

The industrial user shall not discharge wastes, which exceed the following limitations:

Heavy Metals & Cyanide	Instantaneous Maximum ppm (mg/L)[1]	Daily Average ppm (mg/L)[2]
Arsenic	4.0	1.0
Cadmium	0.6	0.5
Chromium	5.0	2.75
Copper	8.0	3.0
Lead	4.0	2.0
Mercury	0.2	0.1
Nickel	5.0	2.5
Silver	3.0	1.0
Zinc	10.0	5.0
Cyanide	3.0	2.0

[1] The instantaneous maximum is violated whenever the concentration of any sample, including a grab within a series used to calculate daily average concentrations, exceeds the limitation.

[2] The daily average limit is violated: a) for a continuous flow system when a composite sample consisting of four or more consecutive samples collected during a 24-hour period over intervals of 15 minutes or greater exceeds the limitation, or b) for a batch system when any sample exceeds the limitation. A composite sample is defined as at least four grab samples of equal volume taken throughout the processing day from a well-mixed final effluent chamber, and analyzed as a single sample.

High Temperature

The industrial user shall not discharge material with a temperature in excess of 65° C (150° F).

Hydrogen Sulfide

Atmospheric hydrogen sulfide: 10.0 ppm
(As measured at a monitoring manhole designated by KCIW)

Soluble sulfide limits may be established on a case-by-case basis depending upon volume of discharge and conditions in the receiving sewer, including oxygen content and existing sulfide concentrations.

Organic Compounds

No person shall discharge any organic pollutants that result in the presence of toxic gases, vapors, or fumes within a public or private sewer or treatment works in a quantity that may cause worker health and safety problems.

Organic pollutants subject to this restriction include, but are not limited to: Any organic pollutants compound listed in 40 CFR Section 433.11 (e) (total toxic organics [TTO] definition), acetone, 2-butanone (MEK), 4-methyl-2-pentanone (MIBK), and xylenes.

Settleable Solids

Settleable solids concentrations: 7.0 mL/L

GENERAL CONDITIONS

A. All requirements of King County Code pertaining to the discharge of wastes into the municipal sewer system are hereby made a condition of this discharge authorization.

B. The industrial discharger shall implement measures to prevent accidental spills or discharges of prohibited substances to the municipal sewer system. Such measures include, but are not limited to, secondary containment of chemicals and wastes, elimination of connections to the municipal sewer system, and spill response equipment.

C. Any facility changes, which will result in a change in the character or volume of the pollutants discharged to the municipal sewer system, must be reported to your KCIW representative. Any facility changes that will cause the violation of the effluent limitations specified herein will not be allowed.

D. In the event the permittee is unable to comply with any of the conditions of this discharge authorization because of breakdown of equipment or facilities, an accident caused by human error, negligence, or any other cause, such as an act of nature the company shall:

1. Take immediate action to stop, contain, and clean up the unauthorized discharges and correct the problem
2. Immediately notify KCIW so steps can be taken to prevent damage to the sewer system
3. Submit a written report within 14 days of the event (*14-Day Report*), describing the breakdown, the actual quantity and quality of resulting waste discharged, corrective action taken, and the steps taken to prevent recurrence

E. Compliance with these requirements does not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this discharge authorization or the resulting liability for failure to comply.

F. The permittee shall, at all reasonable times, allow authorized representatives of KCIW to enter that portion of the premises where an effluent source or disposal system is located or in which any records are required to be kept under the terms and conditions of this discharge authorization.

G. Nothing in this discharge authorization shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations including discharge into waters of the state. Any such discharge is subject to regulation and enforcement action by the Washington State Department of Ecology.

H. This discharge authorization does not authorize discharge after its expiration date. If the permittee wishes to continue to discharge after the expiration date, an application must be filed for reissuance of this discharge authorization at least 90 days prior to the expiration date. If the permittee submits its reapplication in the time specified herein, the permittee shall be deemed to have an effective wastewater discharge authorization until KCIW issues or denies the new wastewater discharge authorization. If the permittee fails to file its reapplication in the time period specified herein, the permittee will be deemed to be discharging without authorization.

Compliance Investigator: Dana H Date: June 26, 2013
Dana Heinz

King County

Industrial Waste Semi-Annual Self-Monitoring Report

Mail or FAX to: King County Industrial Waste
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
Phone 206-263-3000 / FAX 206-263-3001

Company Name: Phillips 66 Company – Facility No. 255353

This form is available at www.kingcounty.gov/industrialwaste.

Please specify year: 20_____ **Semi-Annual Report for Semester 1** **Sample Site No.:** IW1162A **Permit/DA No.:** 4262-01

All units are mg/l unless otherwise noted. Note: Write in self-monitoring parameters, if not provided, e.g. Silver (Ag) or settleable solids (mL/L).

	Sample Date month/day	Sample Type C (Composite) G (Grab) BC (Batch)	Benzene ▼	Ethylbenzene ▼	Toluene ▼	Total Xylenes ▼			Non-polar fats, oils & grease (FOG) (Record average of 3 grabs only)	Discharge Volume on sample day (gallons)	Total Monthly Flow (gallons)
Semester 1	Jan/_____										
	Feb/_____										
	Mar/_____										
	Apr/_____										
	May/____										
	Jun/_____										

→ Total Volume Semester 1: _____gallons

NOTES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that all data requiring a laboratory analysis were analyzed by a Washington State Department of Ecology accredited laboratory for each parameter tested.

Signature of Principal Executive or Authorized Agent Date

Due Date: Semi-annual report for Semester 1 is due by July 15 of each year. **Please Note:** Do not include original laboratory reports with this form unless otherwise requested. Keep the original laboratory reports on file and available for inspection for at least 3 years.

King County

Industrial Waste Semi-Annual Self-Monitoring Report

Mail or FAX to: King County Industrial Waste
130 Nickerson Street, Suite 200
Seattle, WA 98109-1658
Phone 206-263-3000 / FAX 206-263-3001

Company Name: Phillips 66 Company – Facility No. 255353

This form is available at www.kingcounty.gov/industrialwaste.

Please specify year: 20_____ **Semi-Annual Report for Semester 2** **Sample Site No.:** IW1162A **Permit/DA No.:** 4262-01

All units are mg/l unless otherwise noted. Note: Write in self-monitoring parameters, if not provided, e.g. Silver (Ag) or settleable solids (mL/L).

	Sample Date month/day	Sample Type C (Composite) G (Grab) BC (Batch)	Benzene ▼	Ethylbenzene ▼	Toluene ▼	Total Xylenes ▼			Non-polar fats, oils & grease (FOG) (Record average of 3 grabs only)	Discharge Volume on sample day (gallons)	Total Monthly Flow (gallons)
Semester 2	Jul/____										
	Aug/____										
	Sep/____										
	Oct/____										
	Nov/____										
	Dec/____										

→ Total Volume Semester 2: _____gallons

NOTES:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that all data requiring a laboratory analysis were analyzed by a Washington State Department of Ecology accredited laboratory for each parameter tested.

Signature of Principal Executive or Authorized Agent Date

Due Date: Semi-annual report for Semester 2 is due by January 15 of each year. **Please Note:** Do not include original laboratory reports with this form unless otherwise requested. Keep the original laboratory reports on file and available for inspection for at least 3 years.

Puget Sound Clean Air Agency

Notice of Construction No. **10602**

Registration No. **29548**

Date

SEP 2 0 2013

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

Soil remediation project with soil vapor extraction (SVE) system controlled by carbon adsorption system (Siemens VSC-1000).

APPLICANT

Amar Gill
Cardno ERI
801 2nd Ave, Suite 700
Seattle, WA 98104

OWNER

Former Phillips 66 Facility No. 255353
600 Westlake Ave N
Seattle, WA 98107

INSTALLATION ADDRESS

Former Phillips 66 Facility No. 255353, 600 Westlake Ave N, Seattle, WA, 98107

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.

2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

3. All vapors from the remediation extraction system shall be vented to the carbon adsorption system for control. The maximum influent flow rate to each carbon adsorption system shall not exceed 500 standard cubic feet per minute (scfm). Cardno ERI shall measure and record the influent flowrate to the carbon adsorption system at least once per month.

4. The control efficiency of the carbon adsorption system shall be maintained at a minimum of 97% for Total Petroleum Hydrocarbon (TPH) when the TPH influent concentration to the carbon adsorption system is greater than or equal to 200 ppmv.

5. Within 30 days after the initial startup of the carbon adsorption system and at least once a month afterward, Cardno ERI shall demonstrate compliance with condition No.4 of this order in accordance with the following requirements:

a. Determine the concentration of TPH in the gas at the inlet to the carbon adsorption system and the exhaust of the carbon adsorption system using EPA Method 18, or other equivalent method following approval from the Agency.

b. Calculate the control efficiency based on the inlet and exhaust TPH concentrations as determined under condition No.5.a. to demonstrate compliance.

Cardno ERI shall keep records of each sampling, analysis, calculation results and date they were taken.

6. During operation of the activated carbon vessels, Cardno ERI shall contemporaneously monitor the gas stream with a photo-ionization detector (PID) or flame-ionization detector (FID) to prevent breakthrough at least once per week at the following locations:

SEP 2 0 2013

a. At the inlet to the second to the last carbon vessel in series.

b. At the inlet to the last carbon vessel in series.

7. Cardno ERI shall immediately change out the second to last carbon vessel with unspent carbon upon breakthrough defined as the detection at its outlet of the higher of the following:

a. 10 % of the inlet stream concentration to the carbon vessel.

b. 10 ppmv (measured as hexane).

8. Cardno ERI shall maintain the following information of operation of the activated carbon vessels:

a. Hours and time of operation.

b. The analysis or monitoring results for the day of operation they were taken.

c. The date change out occurred and the number of carbon vessel(s) changed.

9. The activated carbon monitoring schedule as required by condition No.6 of this order may be changed based on the decline in organic emissions and/or the demonstrated breakthrough rates of the carbon vessels following approval from the Agency.

10. Cardno ERI shall report any non-compliance with condition no.4 of this order to the Agency no later than 30 days in which it is first discovered. Cardno ERI shall detail the corrective action taken and include the data showing the exceedance as well as the time of occurrence in the submittal.

11. Records to be maintained by this Order of Approval shall be kept for at least two years from the date of generation, and made available to Puget Sound Clean Air Agency personnel upon request.

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

MengChiu Lim
Reviewing Engineer

Carole Cenci
Senior Engineer

ns

Notice of Completion

WARNING:

Regulation I, Section 6.09, requires that the owner or applicant notify the Agency of the completion of the work covered by the application and when its operation will begin. This form is provided for your convenience to assist you in complying with this part of the Regulation.

APPLICANT or OWNER SECTION

Mail to: Puget Sound Clean Air Agency
Compliance Division
1904 3rd Ave, Ste 105
Seattle, WA 98101-3317

The project described below was completed on _____.

_____	_____	_____	_____
Signature of Owner and/or Applicant	Title	Phone	Date

FOR AGENCY USE ONLY

Notice of Construction No. **10602**
Registration No. **29548**

Project Description

Soil remediation project with soil vapor extraction (SVE) system controlled by carbon adsorption system (Siemens VSC-1000).

[X] Conditions on Reverse Side

Applicant

Amar Gill
Cardno ERI
801 2nd Ave, Suite 700
Seattle, WA, 98104

Owner

Former Phillips 66 Facility No. 255353
600 Westlake Ave N
Seattle, WA, 98107

Location

Former Phillips 66 Facility No. 255353, 600 Westlake Ave N, Seattle, WA, 98107

☐ Inspector Check ☐ Engineer **MCL** and Inspector check.

Follow up _____ (Estimated completion date plus 7)

Date Inspected _____ Inspector _____

Remarks _____

_____

_____

_____

CONDITIONS

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11. Records to be maintained by this Order of Approval shall be kept for at least two years from the date of generation, and made available to Puget Sound Clean Air Agency personnel upon request.

Seattle Dept of Transportation
Street Use Permits, 23rd Floor
700 Fifth Ave, Suite 2300
P O Box 34996
Seattle, WA 98124-4996

UTILITY PERMIT

Permit No.: 208912

Inspector: Kevin Miller

LOCATION

Inspection District: SOUTH LAKE UNION

Address: 600 WESTLAKE AVE N

Details: WORK IS ON TERRY AVE N

Application Date: 6/17/13 4:58 pm

Issue Date: 9/11/13 1:27 pm

PARTIES (* Primary Applicant)

Role	Name	Address	Phone
*24 Hour Contact	PAINTER, MAGDELANA	3203 15TH ST,,EVERETT,WA,98201	(206)445-2053
Permittee	CLEARCREEK CONTRACTORS INC.	3203 15TH STREET,,EVERETT,WA,98201-	(425)252-5800
Owner'S Agent	RALSTON, EDWARD	76 BROADWAY,,SACRAMENTO,CA,95818	(916)558-7633

PERMITTED USES

Use Code: 51 **Vault Plan #:** **Plan Serial #:**

Right of Way: NON-ARTERIAL **DPD #:** **To Be Restored By:** PERMITTEE

Space	Start Date	Duration	Sq. Feet	Description	Conditions
A	09/23/2013	30	1,600.00		A remediation trench will be completed on the w-side of Terry Ave N, extending south to the SDOT Mercer Corridore Project construction limits.

CONDITIONS OF USE

ADDITIONAL CONDITIONS :

Additional Notes: *Care shall be taken to ensure that proper clearance from the trolley is maintained at all times. Coordinate any disruptions or clearance issues with the street car program manager: Ethan Melone @ 206-684-8066.*

ADDITIONAL CONDITIONS 1 :

Additional Notes: *Coordinate all work with the Mercer Corridor improvements. Project Contact: Angela Brady*
Email: angela.brady@seattle.gov
Phone: 206-684-3115

E1.15 :
MULCHING AND MATTING - Apply mulch to protect exposed soils and promote plant establishment.

E1.40 :
PERMANENT SEEDING AND PLANTING - Install temporary surface runoff control measures prior to seeding or planting to protect the surface from erosion until the vegetation is established. Establish permanent vegetation (e.g., grasses, legumes, trees, and shrubs) as rapidly as possible to prevent soil erosion by wind or water.

E1.45 :
SODDING - Establish permanent turf for immediate erosion protection or to stabilize drainage pathways where concentrated overland flow will occur.

E1.50 :
TOPSOILING - Preserve and use topsoil to enhance final site stabilization with vegetation and to provide a suitable growth medium for final site stabilization with vegetation.

E3.25 :
STORM DRAIN INLET PROTECTION - Install storm drain covers on stormwater structures less than 12 inches deep during construction. Install catch basin filter socks in stormwater structures greater than 12 inches deep. Place the storm drain or catch basin grate on top of the catch basin filter sock to hold it in place.

C1.20 :
USE OF CHEMICALS DURING CONSTRUCTION - Use only the recommended amounts of chemical materials and apply them in a proper manner. Neutralize the pH of concrete wash water from concrete mixers, if necessary.

C1.35 :
SAWCUTTING AND PAVING POLLUTION PREVENTION - Vacuum slurry and cuttings during the activity to prevent migration offsite and do not leave slurry and cuttings on permanent concrete or asphalt paving overnight. Dispose of collected slurry and cuttings, waste material, and demolition debris in a manner that does not violate groundwater or surface water quality standards. Implement preventative measures such as berms, barriers, secondary containment, and vactor trucks if observations indicate that a violation of water quality standards could occur.

C1.45 :
SOLID WASTE HANDLING AND DISPOSAL - Remove and dispose of accumulated solid waste at authorized disposal areas. Label waste containers and place them in a covered area with closed lids. Salvage and recycle any useful materials.

BMP5 :

SPILL PREVENTION AND CLEANUP-Keep a spill cleanup kit in a nearby vehicle or next to the work site so that it is easily accessible. Make sure the contents of the spill kit are appropriate for the types and quantities of materials used for this work task. Refill spill kit materials before beginning work.

BMP16 :
CONCRETE POURING, CONCRETE/ASPHALT CUTTING, AND ASPHALT APPLICATION - Sweep or shovel loose aggregate chunks and dust for recycling or proper disposal. Place storm drain covers or similarly effective containment devices over all storm drains located downslope or adjacent to the work area. Shovel or vacuum all slurry and remove from the site. Perform cleaning of concrete application and mixing equipment or concrete-delivery vehicles in a designated area where the rinse water is controlled.

BMP20 :
LANDSCAPING AND LAWN VEGETATION MANAGEMENT - Use proper fertilizer and herbicide application techniques to minimize nutrient pollution of stormwater. Implement proper landscaping and mulching techniques to prevent plant material and excess mulch from entering the separate storm drainage system. Do not dispose of collected vegetation in separate storm drainage systems, waterways, water bodies or greenbelt areas.

DAMAGED OR DESTROYED UTILITY :
SDOT makes no representation regarding the safety or integrity of the subject structure. If the structure is damaged or destroyed, SDOT will have no obligation to provide an alternative location for the permit utility.

PRECON MEETING REQUIRED :
A pre-construction meeting with the SDOT Street Use is required prior to the start of work.

TREE TRUNK OR ROOTS :
Contact the City Arborist Office (684-8733) a minimum of five working-days prior to digging within any landscaped areas in the street rights-of-way. The edge of all trenching must be at least five feet (5') from any street trees. When trenching near trees with trunks greater than twelve inches (12") in diameter, hand dig all trenching for a distance of ten feet (10'), measured five feet (5') radius from the tree trunk. When encountering tree roots, cut off cleanly with sharp saw (do not leave torn or ripped tree roots unattended). Do not cut roots greater than two inches (2") in diameter (contractor will have to hand tunnel underneath the roots). Do not paint ends of roots. Notify Landscape Maintenance at 684-4121 at least forty eight (48) hours in advance when working in landscaped areas or on trees.

FEES

Description	Date	Amount
DEPOSIT - OTC	06/17/2013	$2,500.00
ISSUANCE FEE - USE 51	09/9/2013	$146.00
USE FEE - USE 51 - SPACE A	07/3/2013	$0
REVIEW CHARGE	07/3/2013	$344.00
REVIEW CHARGE	08/8/2013	$602.00
REVIEW CHARGE	09/5/2013	$172.00
Totals:		$3,764.00

STREET USE INSPECTOR Kevin Miller (206) 386-9141

Permittee _____ Director Per _____

GENERAL REQUIREMENTS

1. ***Nature of permit.*** This permit is issued pursuant to the Seattle Municipal Code (SMC), Chapter 15.04, for use and/or occupancy of the public right-of-way consistent with the terms and conditions set forth herein. This permit is wholly of a temporary nature, vests no permanent rights whatsoever, and is revocable pursuant to SMC 15.04.070.
2. ***Acceptance of terms, conditions, and requirements.*** Permittee accepts the terms, conditions, and requirements of this permit and agrees to comply with them to the satisfaction of the Seattle Department of Transportation, Street Use Division, or such other agency as may be designated by the City of Seattle. Permittee further agrees to comply with all applicable city ordinances, including but not limited to Title 15 SMC, and all applicable requirements of state and federal law.
3. ***Copy of permit.*** A copy of the issued permit and approved plans must be on site and available at all times.
4. ***Expiration of permit.*** This permit shall remain valid until revoked pursuant to SMC 15.04.070; provided that, the permit shall expire automatically if the authorized work does not begin within six months from the date the permit is issued.
5. ***Superiority of Street Improvement Permit.*** When a Street Improvement Permit exists, the rights acquired under the Street Improvement Permit supersedes those acquired under any other Street Use or Utility Permits.
6. ***Compliance with technical requirements and standards.*** All work within the public right-of-way shall be performed and completed in accordance with requirements set forth in the following technical documents published by the City of Seattle, as now or hereafter amended: Right-of-Way Improvements Manual; Standard Specifications for Road, Bridge, and Municipal Construction; Standard Plans for Municipal Construction; Street and Sidewalk Pavement Opening and Restoration Rule; and Traffic Control Manual for In-Street Work.
7. ***Scope of Work.*** The Permittee shall construct the improvements reflected in, and in accordance with, this permit and the City approved construction plans. Any and all revisions, omissions and / or additions to the scope of work shall be reviewed and approved by the City prior to implementation.
8. ***Street Use Notification.*** Construction work may be completed in several phases: site preparation (setting up traffic control, sawcutting, etc), ground

breaking, and restoration. Before beginning any phase of work in the public right-of-way, the Permittee shall notify Street Use of each start date. Permittee shall be responsible for notifying Street Use Job Start at (206) 684-5270 or SDOTJobStart@Seattle.gov a minimum of 2 business days prior to the start of work and provide the following information:

- Permit Number
- Job Site Address
- Start Date - Please specify if Job Start date is the same as the Excavation date. If the dates are different, please provide both dates.
- Brief Work Description
- Job Site Contact Name and Phone Number

Failure to do so shall result in a penalty of $300 or such other amount as may be established pursuant to SMC 15.04.074.

For Street Improvement Permits and Major Utility Permits, a preconstruction meeting is required prior to the start of construction, and the assigned inspector shall be notified a minimum of 2 business days prior to required inspections.

9. ***Utility notification prior to ground disturbance.*** The Permittee shall call Utility Underground Locator Center (1-800-424-5555) a minimum of 48 hours prior to ground disturbance.
10. ***Public notification.*** Permittee shall notify all potentially affected residents and businesses, at least one week prior to starting work within the public right-of-way.
11. ***Coordination of work.*** In performing work authorized by this permit, the Permittee shall coordinate with other contractors working in the public right-of-way to minimize the impact to the public.
12. ***Hours of work.*** Work performed within the public right-of-way shall occur only during hours authorized under all applicable codes, regulations, rules and permits.
13. ***Off-Hour Work.*** Work outside of normal working hours (8:00 am -5:00 pm Monday through Friday) requires a minimum of 3 business days advanced notice to the SDOT Street Use Inspection Supervisor prior to the off hours work. Work outside of normal working hours may also require a separate approved traffic control plan. A minimum of 2 hours of inspection time will be charged for inspection outside of normal working hours at the premium rate. A Stop Work order and/or a Citation may be issued for failure to notify a minimum of 3 business days in advance.
14. ***Inspection fees.*** Permittee shall pay for City inspections of work authorized under this permit per the current fee schedule as established pursuant to SMC 15.04.074, and to cover all other associated costs.
15. ***Billing.*** All fees and costs billed pursuant to this permit shall be paid to the City of Seattle within 30 days from the date of the invoice. Past due invoices may be subject to interest charges and / or sent to collections.
16. ***Deposits, Charges, and Future Billings.*** The Permittee is responsible for all permit charges. If a deposit was made for estimated future street use services, any unused portion of the deposit shall be refunded to the Permittee. Any charges in excess of the deposit shall be billed to the Permittee.
17. ***Corrective Work.*** The Permittee is responsible for any additional costs incurred by the City resulting from temporary or corrective measures required to bring the work area in compliance with standards that apply, including, but not limited to, temporary traffic control, requirements for temporary structures, temporary stabilization and temporary restoration when the Permittee is not on site.
18. ***Indemnification.*** The Permittee agrees to defend, indemnify, and hold harmless the City of Seattle, its officials, officers, employees, and agents against: (1) any liability, claims, causes of action, judgments, or expenses, including reasonable attorney fees, resulting directly or indirectly from any act or omission of the Permittee, its contractors, subcontractors, anyone directly or indirectly employed by them, and anyone for whose acts or omissions they may be liable, arising out of the Permittee's use or occupancy of the public right-of-way; and (2) all loss by the failure of the Permittee to fully or adequately perform, in any respect, all authorizations or obligations under this Permit.

EXISTING IMPROVEMENTS

1. ***Costs of damage to City property and improvements.*** Permittee shall be responsible for the costs of repairing any damage to city property or improvements resulting from work performed by or on behalf of the Permittee within the public right-of-way.
2. ***Utility protection.*** The Permittee shall be responsible for checking locations and providing adequate protection for all utilities in the work area.
3. ***Utility relocation.*** The Permittee shall be responsible for notifying affected utilities and requesting any necessary relocation.
4. ***Survey monuments.*** Prior to removing, destroying, disturbing, or covering a survey monument, such that the survey point is no longer visible or readily accessible, Permittee shall obtain a permit from the Department of Natural Resources pursuant to Washington Administrative Code, Chapter 332-120.

ENVIRONMENTAL PROTECTION

1. ***Best management practices required.*** The Permittee shall be responsible for the control of surface runoff, erosion and sediment at the construction site, as required by: the Stormwater Code (Title 22 Subtitle VIII SMC), the Standard Specifications for Road, Bridge, and Municipal Construction and Department of Planning and Development Director's Rule 16-2000, as now or hereafter amended. The site and the surrounding area shall generally be kept clean and free of construction debris or other material, including but not limited to mud, dust, rock, asphalt, and concrete. Waste materials shall be collected and disposed of at an appropriate disposal site. These materials shall be prevented from entering any part of the public sewer and storm drain system, and any surface waters.

TRAFFIC CONTROL REQUIREMENTS

1. ***Compliance with the Traffic Control Manual for In-Street Work.*** In order to provide safe and effective work areas and to ward, control, protect, and expedite vehicular and pedestrian traffic, signage for all construction within the public right-of-way shall comply with the City of Seattle Traffic Control Manual for In-Street Work, as now or hereafter amended. When required, the conditions on the traffic control plan shall supercede any conflicting provisions or requirements in the City of Seattle Manual for In Street Work. A copy of the current City of Seattle Traffic Control Manual for In-Street Work, and approved traffic control plan, when required, shall be on site at all times.
2. ***Lanes to remain open during peak hours.*** Traffic lanes shall not be closed during the following peak hours: 6:00 am-9:00 am and 3:00 pm-7:00 pm

in the Central Business District, and 7:00 am-9:00 am and 4:00 pm-6:00 pm for arterials elsewhere in the City, unless specifically noted on the approved traffic control plan.

3. ***Maintain access.*** Access shall be maintained or accommodated during construction.
4. ***Width of temporary traffic lanes.*** Temporary traffic lanes created during the permitted work shall be a minimum of 11 feet in width, unless otherwise approved on the traffic control plan.
5. ***Working within restricted curb spaces.*** When the project impacts a restricted curb space, such as parking stalls, meters, pay stations, and related signage, the Permittee shall obtain permission from SDOT Traffic Management prior to the start of work. Contact the SDOT Traffic Engineers at (206) 684-5086 prior to the start of work.
6. ***Temporary No Parking signs and easels.*** In areas without parking pay stations or parking meters, establishing a Temporary No Parking Zone requires placement of type T-38 or T-39 easels, and completion of an online verification form in conformance with the Traffic Control Manual for In-street Work. The Permittee shall contact SDOT's Traffic Permit Counter when working in pay-to-park areas (meters or pay station controlled).
7. ***Nighttime Illumination.*** Four or more Type B warning lights of sufficient brilliance to be seen from 500 feet, must be maintained at all times during the hours of darkness at the points of obstruction or excavation of any right-of-way.

Project # 6391591

Address	600 Westlake Ave N	**Permit Number**	**6391591**
Location	SITE	**Permit Status**	Permit Closed
Records Filed At		**Application Date**	Nov 11, 2013
Application Type	ELECTRICAL	**Issue Date**	Nov 11, 2013
Work Type	FIELD REVIEW	**Expiration Date**	Nov 11, 2014
Category	COMMERCIAL	**Finaled Date**	Dec 11, 2013
King Co. Assessor's #			
Zone/Overlays and ECA			
Legal Description		**Contractor**	**VALLEY ELEC CO OF MTVERNON INC** 1100 MERRILL CREEK PARKWAY EVERETT, WA 98203 **ELECTRICAL CONTRACTOR LICENSE:** VALLEEC141NA
Description of Work	INSTALLING A SPARGE SYSTEM TO AID CONSTRUCTION OF A PREVIOUSLY PERMITTED PROJECT 12/10/13 BS ADD 70 SOLENOID VALVES	**Permit Remarks**	

Low Voltage and Communication Systems

Type	# Control Units	# of Devices
-		

Transformers

Qty	Size
1	015 KVA

Services

Qty	Size
1	001-125 AMP

Electric Heaters

Qty	Size
-	

Feeders

Qty	Size
-	

Motors

Qty	Size
5	010 HP

Connections

Receptacles	0	**Light Outlets**	0	**Switches**	70	**Fixtures**	0
Residential Fans	0	**Track Lighting**	0	**Multi-Outlet Assy (ft)**	0	**Smoke Detectors**	0

Devices and Branch Circuits

Floodlights	0	**Dimmers (Comrcl 2000W+)**	0	**Dedicated Appliances 15-25 Amp**	0
Furnaces (non-elec)	0	**Sign Circuits**	0	**Dedicated Appliances 30-50 Amp**	0

Fire Alarm Info

Fire Alarm Devices	0	**Fire Alarm Control Units**	0

Renewable Energy

Range	Qty
0-6 KW	0
7-26 KW	0

Project # 6391591

Inspections

Required Inspections - Not Yet Scheduled

Type				Comments
None				

Required Inspections - Scheduled

Type	Date		Inspector	Comments
None				

Completed Inspections

(Multiple same-type inspections may be required to complete a project)

Type	Date	Result	Inspector	Comments
FINAL	Nov 27, 2013	Partial Pass	REYNOLDU	11/26/2013 WEBUSR Contact : Steve Hannaman 206-850-8148 11/27/2013 reynoldu 1. bond rgs 90 below main disc. 2. no insp on underground. pothole for inspection 3. gfci on industrial control cabinet not type wr 4. motor skids not listed 5. update permit 6. phase tape and label for voltage colors.
FINAL	Dec 05, 2013	Partial Pass	REYNOLDU	12/05/2013 WEBUSR Contact : Shane Hannaman 206-396-6588 or Steve Hannaman 206-850-8148 12/5/2013 reynoldu final conditional on permit being updated to include all work
FINAL	Dec 11, 2013	Passed	REYNOLDU	

Waived Inspections

Type				Comments
COVER				
SERVICE				on permit 6386122

Definition of Terms

COVER	This inspection type is performed for all installations which require approval before closing walls, ceilings, floors or underground.
FINAL	All permits require a final inspection to certify that the work performed is in compliance with applicable codes.
PARTIAL PASS	Area of work inspected passed and additional inspections of this type are required - move ahead with corrections/conditions
SERVICE	Service inspections apply to fire alarm, security alarm (low voltage devices) and when services (including temp. Power for sfr) are selected.

Project # 6391591

Fees & Receipts

Go to **Not all fees are eligible for online payment*

Fees ***All fees are subject to change until permit is ready to issue. Final fees are established at issuance.***

Date Paid	Status	Description	Fee	Quantity	Amount	Paid
11/11/13	Paid	ADMINISTRATIVE	$61.00	1	$61.00	$61.00
12/11/13	Paid	ADMINISTRATIVE (POST-ISSUE ADD/CHANGE)	$49.00	1	$49.00	$49.00
11/11/13	Paid	TRANSFORMERS	$44.00	1	$44.00	$44.00
12/11/13	Paid	SWITCHES	$1.80	70	$126.00	$126.00
11/11/13	Paid	MOTORS	$226.25	1	$226.25	$226.25
11/11/13	Paid	SERVICES	$90.50	1	$90.50	$90.50
				Total Amount	**$596.75**	**$596.75**

Project # 6391591

Contacts

Project Contacts

Name	Primary	Capacity
VALLEY ELEC CO OF MTVERNON INC 1100 MERRILL CREEK PARKWAY EVERETT, WA 98203	YES	Contractor

APPENDIX D

PHOTOGRAPHIC LOG

On-Site Trenching and Piping Installation Activities (8-27-13 through 9-17-13)

Photo 1
8-27-13: SVE and AS stub-ups from existing Westlake Avenue well piping during beginning of excavation activities in the northwest corner of Project Site. View facing north.

Photo 2
8-27-13: Typical storage of excavated soils covered and stored on polyethylene liner until hauled off site or backfilled.

Photo 3
8-27-13: Typical benching of trenches during piping installation activities. View of SVE/AS well piping stub-ups from Westlake Avenue, facing west.

Photo 4
8-28-13: Beginning of trench north-adjacent to Mercer Vault

Photo 5
8-29-13: Installing trench box in Mercer Vault trench.

Photo 6
8-29-13: Concrete window cut into north wall of Mercer Vault.

Photo 7
8-29-13: Preparing for confined space entry into Mercer Vault.

Photo 8
9-3-13: View of typical polyethylene liner with sand bed at T-junction of Westlake and Mercer Trenches on north side of Project Site, facing northwest.

Photo 9
9-3-13: Labeling of new 2" PVC piping in preparation for pressure testing and connection to existing 4" PVC SVE well piping from Westlake Avenue.

Photo 10
9-3-13: 2" PVC SVE piping being installed on sand bed in trench to connect to existing Westlake Avenue well piping, facing west.

Photo 11
9-3-13: Pressure testing of 2" PVC piping before connecting to existing SVE well piping.

Photo 12
9-3-13: After pressure testing, new 2" PVC piping is connected to existing 4" PVC SVE well piping coming from Westlake Avenue.

Photo 13
9-4-13: Connected 2" PVC SVE well piping is covered in sand bed after being attached to existing well piping.

Photo 14
9-6-13: 2" PVC SVE piping from Mercer Vault layered over sand bed in trench.

Photo 15
9-6-13: 2" PVC SVE piping from Mercer Vault at T-junction overlaying SVE piping from Westlake Avenue.

Photo 16
9-6-13: 2" PVC SVE piping from Mercer Vault being pressure tested.

Photo 17
9-6-13: Confined space entry into Mercer Vault to attach pressure tested PVC piping to existing SVE well piping.

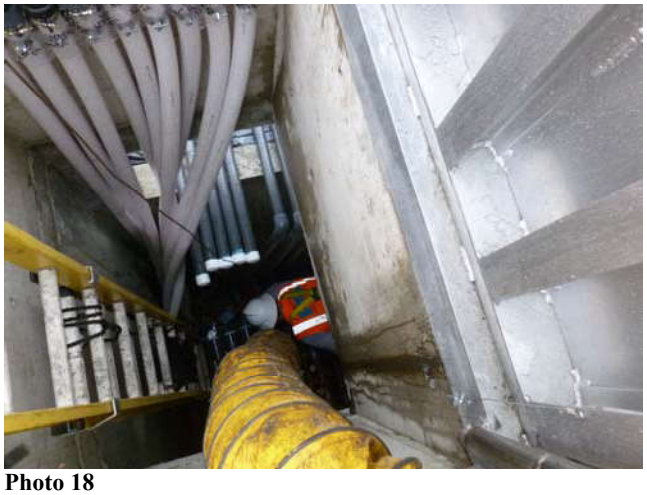

Photo 18
9-6-13: Ventilation system inside Mercer Vault to help with odor/temperature inside of vault.

Photo 19
9-6-13: Pressure tested 2" PVC SVE piping is attached to SVE well-piping inside Mercer Vault.

Photo 20
9-6-13: 2" PVC SVE piping is connected to existing 2" PVC SVE well-piping in Mercer Vault. Stainless piping is the existing AS

Photo 21
9-9-13: 2" PVC piping for Mercer Vault SVE well-piping being pressure tested.

Photo 22
9-9-13: Disconnecting stub-ups from 1" stainless AS well-piping from Westlake Avenue.

Photo 23
9-10-13: 1" PVC piping for Westlake Avenue AS well-piping being laid in trench, facing east.

Photo 24
9-10-13: Westlake Avenue 1" PVC AS piping being pressure tested. Each pipe is labeled as it is being connected to the existing well-piping.

Photo 25
9-10-13: 1" PVD AS piping connected to existing 1" stainless AS well-piping from Westlake Avenue.

Photo 26
9-10-13: Westlake Avenue and Mercer Trench well-piping layered with sand bedding and labeled during connection to existing well-piping.

Photo 27
9-10-13: Mercer Vault AS piping is organized through concrete form to connect to existing AS well-piping.

Photo 28
9-10-13: AS piping from Mercer Vault layered and organized during connection and pressure testing.

Photo 29
9-10-13: AS piping through concrete form before connecting to existing Mercer Vault AS well-piping.

Photo 30
9-10-13: Mercer Vault AS piping being pressure tested before connecting to existing AS well-piping.

Photo 31
9-11-13: Final layout of AS piping from Mercer Vault after pressure testing and connecting to existing well-piping.

Photo 32
9-11-13: Final layout of AS piping from Mercer Vault layered over sand-bedded Westlake piping at T-junction.

Photo 33
9-11-13: 1" PVC AS piping connected to 1" stainless well-piping inside Mercer Vault.

Photo 34
9-12-13: 2" PVC SVE well-piping from Westlake and Mercer Vault is layered beneath 1" PVC AS well-piping from Westlake and Mercer Vault. Sand bedding according to specifications between each layer.

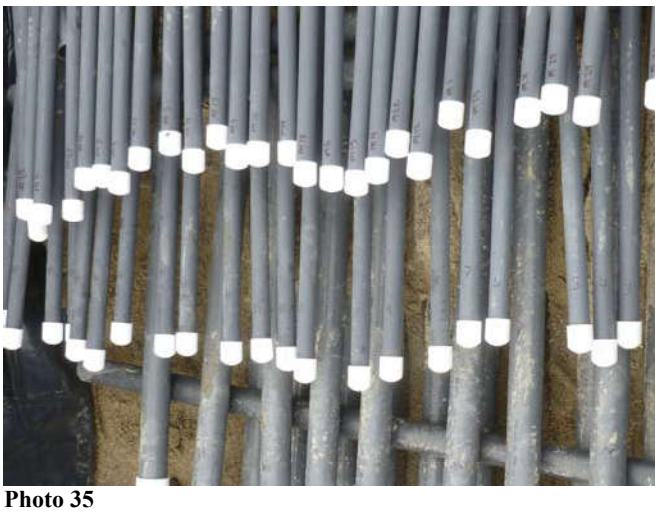

Photo 35
9-12-13: All installed piping is labeled as it is connected to existing well-piping.

Photo 36
9-12-13: Trenches are backfilled with sand after AS and SVE well-piping has been installed and connected.

Photo 37
9-12-13: Well-piping and sand backfill is wrapped in poly-liner, view facing northwest.

Photo 38
9-12-13: Preparing to pour CDF over wrapped well-piping adjacent to Mercer Vault.

Photo 39
9-12-13: Trench north-adjacent to Mercer Vault after CDF, view facing north.

Photo 40
9-12-13: Temporary termination point of installed well-piping, wrapped and demarcated, to be connected to system manifold area.

Photo 41
9-13-13: Electrical conduit with detection/hazard tape installed on top of CDF in trench north-adjacent to Mercer Vault, view facing north.

Photo 42
9-17-13: Backfilling activities begin in Mercer Vault trench over installed electrical conduit.

Photo 43
9-17-13: Contractors compacting soil with vibrating plate attachment on excavator.

Photo 44
9-17-13: View of compacted fill over well-piping and electrical conduit, view facing northwest.

Photo 45
9-17-13: View of temporary termination of well-piping and electrical conduit.

Terry Avenue Trenching and Pipe Installation Activities (9-23-13 through 10-10-13)

Photo 46
9-23-13: View of Terry Avenue right-of-way before beginning trenching activities, facing north.

Photo 47
9-23-13: Traffic control and delineation around work area in Terry Avenue right-of-way, facing north.

Photo 48
9-24-13: Breaking up concrete slab at south end of Terry Avenue to unearth existing remediation well-piping and begin trenching activities.

Photo 49
9-24-13: Existing AS and SVE well-piping is un-earthed at the north end of Terry Avenue and labeled according to Cardno ATC documentation.

Photo 50
9-24-13: Trenching is continued south along Terry Avenue, view facing northwest.

Photo 51
9-24-13: Unearthed historically leaking City of Seattle water line. City of Seattle is contacted for repairs.

Photo 52
9-24-13: View of erosion control and fencing around Terry Avenue trench, facing north.

Photo 53
9-25-13: View of Terry Avenue trench lined with poly and bedded with sand. Pedestrian walkway delineated, view facing north.

Photo 54
9-25-13: 2" PVC SVE piping is pressure tested after being installed in trench.

Photo 55
9-26-13: 2" PVC SVE piping being connected to 2" PVC existing SVE well-piping after pressure testing. 1" stainless AS well-piping located above.

Photo 56
9-27-13: SVE piping covered with sand in preparation for installation of 1" stainless AS piping.

Photo 57
9-27-13: AS piping layered on top of sand bed over connected SVE piping.

Photo 59
9-27-13: AS piping labeled during connection process after pressure testing.

Photo 60
9-27-13: AS and SVE piping is covered in sand and wrapped in poly-liner after connected to existing well-piping.

Photo 61
9-30-13: CDF is poured over installed piping, view facing north along Terry Avenue.

Photo 62
9-30-13: CDF poured over installed well-piping, view facing north on Terry Avenue.

Photo 63
10-1-13: Exclusion zone fencing is moved south along Terry Avenue in anticipation of trenching activities.

Photo 64
10-2-13: Exposed remediation piping as trench is continued south along Terry Avenue.

Photo 65
10-3-14: Terry avenue trench is continued onto east side of project site. Trench is lined with poly-liner.

Photo 66
10-4-13: SVE piping is laid in sand-bedded trench leading into project site.

Photo 67
10-4-13: SVE piping is pressure tested.

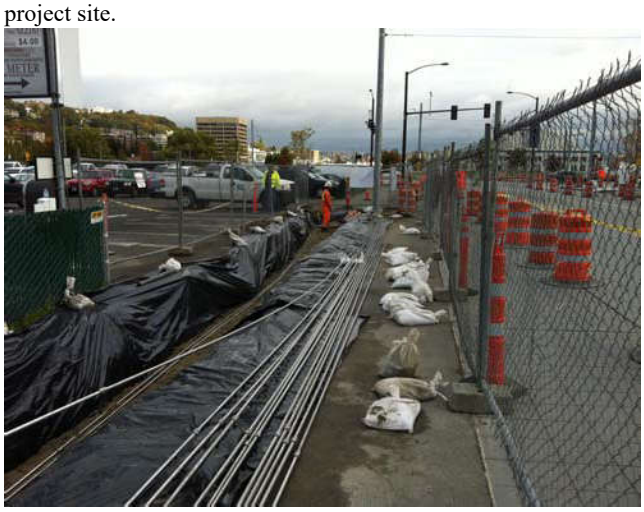

Photo 68
10-7-13: 1" stainless AS piping is installed in trench above sand bed and SVE piping.

Photo 69
10-7-13: 1" PVC piping is connected to 1" stainless AS piping and pressure tested, labeled and covered in sand bedding.

Photo 70
10-10-13: Driveway of parking lot where trenching occurred is restored.

On-site Manifold Construction and System Installation (10-10-13 through12-2-13)

Photo 71
10-10-13: Manifold area trench is excavated.

Photo 72
10-10-13: Power junction box is installed by Seattle City Light at north side of site connected to previously installed electrical conduit.

Photo 73
10-10-13: View of electrical box and manifold area trench, facing east.

Photo 74
10-17-13: GLY Construction places storm water tanks on site west-adjacent to system installation area.

Photo 75
10-17-13: Begin well piping stub-ups from Terry Avenue for manifold connection area.

Photo 76
10-17-13: Pressure testing of 2" PVC stub-up piping for before connecting to 2" PVC SVE well-piping from Terry Avenue

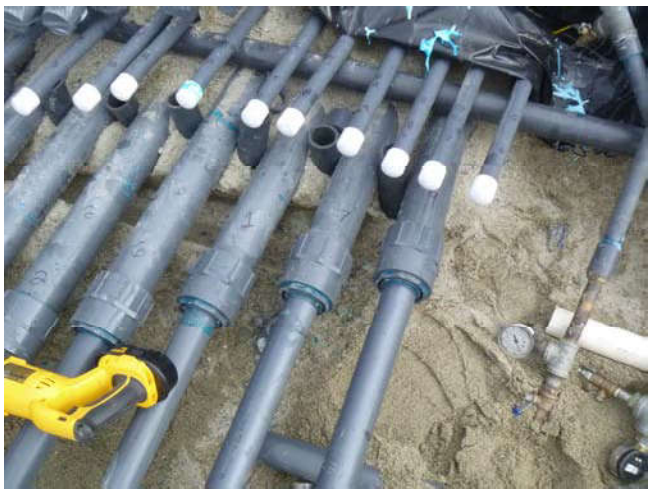

Photo 77
10-17-13: Connecting 2" PVC stub-ups for manifold connection to existing 2" PVC SVE well-piping from Terry Avenue. Stub-up piping is labeled during connection process.

Photo 78
10-17-13: 2" PVC SVE well-piping from Westlake Avenue extended to stub-up manifold connection area.

Photo 79
10-18-13: 2" PVC SVE well-piping stub-ups from Westlake Avenue attached to manifold connection area metal framing. Stub-up piping is labeled during connection process.

Photo 80
10-22-13: 1" PVC AS well-piping from Westlake Avenue is connected to stub-up piping at manifold connection area.

Photo 81
10-22-13: 1"PVC AS piping is connected to 1" stainless stub-up piping in manifold connection area.

Photo 82
10-24-13: After all AS/SVE piping has been connected, labeled and double checked with Cardno ATC documentation stub-up/manifold connection area is wrapped with poly-liner and backfilled with CDF.

Photo 83
10-25-13: Stub-up area backfilled with CDF. Electrical conduit for remediation system installed above CDF, facing west.

Photo 84
10-25-13: Stub-up area backfilled with CDF. Electrical conduit for remediation system installed above CDF, facing east.

Photo 85
10-25-13: Backfilling of stub-up area.

Photo 86
10-28-13: Removal of existing asphalt area to create foundation for system equipment pad.

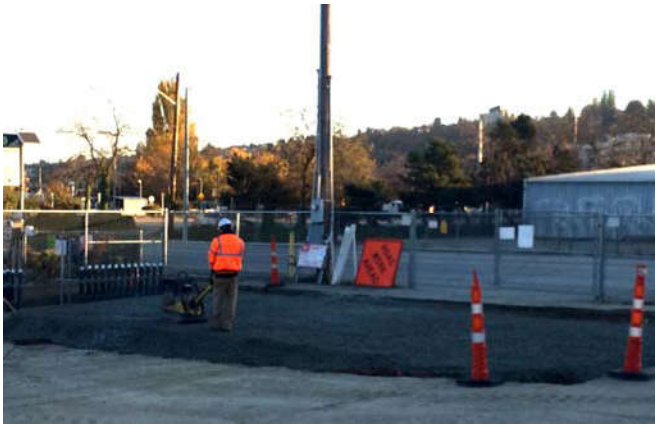

Photo 87
10-29-13: Asphalt foundation for equipment pad compacted with plate-compactor.

Photo 88
10-30-13: PVC protective sleeves around stub-up piping are secured in gravel foundation.

Photo 89
10-30-13: Compacted fill and foundation around stub-up area.

Photo 90
10-30-13: View of sump in southwest corner of foundation, facing north.

Photo 91
11-1-13: Construction of wood framing for concrete equipment pad form.

Photo 92
11-4-13: View of concrete form with rebar, preparing for concrete equipment pad.

Photo 93
11-4-13: Wood framing around proposed sump area in southwest corner of concrete pad.

Photo 94
11-4-13: Pouring and spreading concrete into wood frame.

Photo 95
11-5-13: Concrete pad, after pouring and spreading, waiting to dry, view facing north.

Photo 96
11-5-13: Concrete equipment pad and concrete pad around well-piping stub-ups, view facing south.

Photo 97
11-5-13: Electrical conduit extended along west side of concrete equipment pad.

Photo 98
11-6-13: Spreading of asphalt around concrete pad and finished areas.

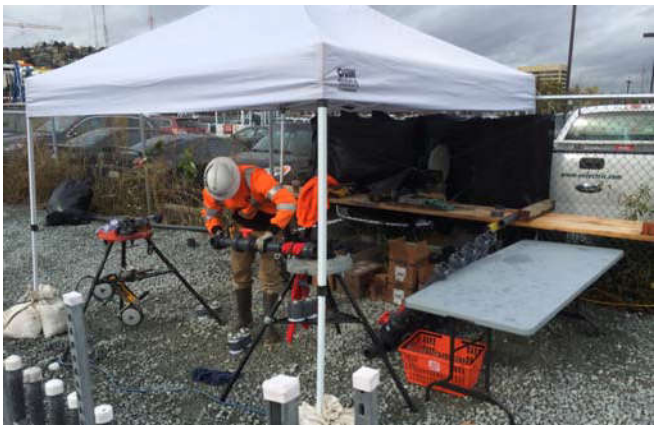

Photo 99
11-7-13: PVC SVE manifold construction setup.

Photo 100
11-7-13: PVC SVE manifold.

Photo 101
10-31-13: Delivery of remediation system equipment to contractor's facility. Photos takes during equipment delivery inspection

Photo 102
10-29-13: Delivery of remediation system equipment to contractor's facility. Photos takes during equipment delivery inspection

Photo 103
11-11-13: Delivery of remediation system equipment to project site by contractor.

Photo 104
11-12-13: Equipment is transferred onto equipment pad.

Photo 105
11-12-13: Equipment is placed on pad is accordance with Cardno ERI instruction.

Photo 106
11-13-13: PVC SVE manifold is installed and connected to existing well-piping.

Photo 107
11-14-13: Remediation system compound is installed.

Photo 108
11-15-13: Stormwater sump in southwest corner of concrete pad.

Photo 109
11-22-13: AS manifold and flow meters connected to AS conveyance piping.

Photo 110
12-2-13: AS and SVE manifold connected to remediation system.

Photo 111
12-2-13: System equipment being connected by Cardno ERI.

APPENDIX E

WASTE MANAGEMENT WEIGH TICKETS

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 68710

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 09/27/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator			
In	09/27/2013 10:10:12	SCALE 1	lmercer	Inbound	Gross	57580 lb
Out	09/27/2013 10:10:12		lmercer		Tare	27360 lb
					Net	30220 lb
					Tons	15.11

Comments CLEARCREEK - GD

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	15.11	Tons				
2	GONDOLA 16.77/TN 10T-GON	100	15.11	Tons				KING
3	RCR .93-RCR 0.93 w/10tn	100	15.11	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	15.11	Tons				

Total Tax
Total Ticket

203WM
Driver's Signature

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 68771

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 09/27/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator
In	09/27/2013 14:13:34	SCALE 1	lmercer
Out	09/27/2013 14:13:34		lmercer

Inbound

Gross	66240 lb
Tare	27360 lb
Net	38880 lb
Tons	19.44

Comments CLEARCREEK - GD

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	19.44	Tons				
2	GONDOLA 16.77/TN 10T-GON	100	19.44	Tons				KING
3	RCR .93-RCR 0.93 w/10tn	100	19.44	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	19.44	Tons				

Total Tax
Total Ticket

Driver's Signature

209WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Reprint
Ticket# 68748

Ph: 206 763 5025

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 09/27/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator
In	09/27/2013 12:45:49	SCALE 1	lmercer
Out	09/27/2013 12:45:49		lmercer

Inbound

Gross	61960 lb
Tare	27360 lb
Net	34600 lb
Tons	17.30

Comments CLEAR CREEK - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	17.30	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	17.30	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	17.30	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	17.30	Tons				

Total Tax
Total Ticket

Driver's Signature

2013

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Reprint
Ticket# 69725
Ph: 206 763 5025

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/09/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/09/2013 07:02:07	SCALE 1	lmercer		Gross	66660 lb
Out	10/09/2013 07:02:07		lmercer		Tare	27360 lb
					Net	39300 lb
					Tons	19.65

Comments CLR CRK - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	19.65	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	19.65	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	19.65	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	19.65	Tons				

Total Tax
Total Ticket

Driver's Signature

205WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 69606

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/07/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/07/2013 13:13:20	SCALE 1	lmercer		Gross	65740 lb
Out	10/07/2013 13:13:20		lmercer		Tare	27360 lb
					Net	38380 lb
					Tons	19.19

Comments CLR CRK - GD

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	19.19	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	19.19	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	19.19	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	19.19	Tons				

Total Tax
Total Ticket

Driver's Signature

203WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 69590

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/07/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator
In	10/07/2013 11:33:03	SCALE 1	lmercer
Out	10/07/2013 11:33:03		lmercer

Inbound

Gross	66280 lb
Tare	27360 lb
Net	38920 lb
Tons	19.46

Comments CLR CRK - GD

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	19.46	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	19.46	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	19.46	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	19.46	Tons				

Total Tax
Total Ticket

Driver's Signature

2013WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 69573

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/07/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/07/2013 09:14:31	SCALE 1	lmercer		Gross	65980 lb
Out	10/07/2013 09:14:31		lmercer		Tare	27360 lb
					Net	38620 lb
					Tons	19.31

Comments CLR CRK - GD

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	19.31	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	19.31	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	19.31	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	19.31	Tons				

Total Tax
Total Ticket

Driver's Signature

209WM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Reprint
Ticket# 69562
Ph: 206 763 5025

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/07/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/07/2013 08:05:28	SCALE 1	lmercer		Gross	64540 lb
Out	10/07/2013 08:05:28		lmercer		Tare	27360 lb
					Net	37180 lb
					Tons	18.59

Comments CLR CRK - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	18.59	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	18.59	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	18.59	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	18.59	Tons				

Total Tax
Total Ticket

Driver's Signature

20SWM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 69638

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/08/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator	Inbound		
In	10/08/2013 07:11:08	SCALE 1	lmercer		Gross	60180 lb
Out	10/08/2013 07:11:08		lmercer		Tare	27360 lb
					Net	32820 lb
					Tons	16.41

Comments CLR CRK - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Daily Cover-PCS-Tons-Pet	100	16.41	Tons				KING
2	GONDOLA 16.77/TN 10T-GON	100	16.41	Tons				KING
3	RCR .93-RCR 0.93 w/10tn	100	16.41	Tons				KING
4	ENVFEE$1.29 W/10TN M-Env	100	16.41	Tons				KING

Total Tax
Total Ticket

Driver's Signature

20SWM

WASTE MANAGEMENT

Alaska Street
70 S Alaska Street
Seattle, WA, 98134

Ph: 206 763 5025

Reprint
Ticket# 69651

Customer Name CONOCO PHILLIPS BOTHELL CONOC
Ticket Date 10/08/2013
Payment Type Credit Account
Manual Ticket#
Route AK
Hauling Ticket#
Destination
PO# 1072430R

Carrier SELF HAULER *
Vehicle# C43S
Container
Driver CHASE BURNS
Check#
Billing# 0000121
Grid

Volume

	Time	Scale	Operator
In	10/08/2013 08:27:05	SCALE 1	lmercer
Out	10/08/2013 08:27:05		lmercer

Inbound

Gross	63160 lb
Tare	27360 lb
Net	35800 lb
Tons	17.90

Comments CLR CRK - LM

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
								KING
1	Daily Cover-PCS-Tons-Pet	100	17.90	Tons				
2	GONDOLA 16.77/TN 10T-GON	100	17.90	Tons				
3	RCR .93-RCR 0.93 w/10tn	100	17.90	Tons				
4	ENVFEE$1.29 W/10TN M-Env	100	17.90	Tons				

Total Tax
Total Ticket

Driver's Signature

20SWM

APPENDIX F

ANALYTICAL LABORATORY REPORT FOR VAPOR SAMPLES

Pace Analytical®
www.pacelabs.com

February 21, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory on December 27, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised Report, REV-1 02/21/14. Per client request, this report only includes the air portion of the coc.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jenni Gross

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Keith Fox, Cardno ATC
Michael Miller, Cardno ATC

NELAP ACCREDITED TNI LABORATORY

REPORT OF LABORATORY ANALYSIS

CERTIFICATIONS

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Dept of Environmental Management #40770
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
EPA Region 5 #WD-15J
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

SAMPLE SUMMARY

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10253710004	**V-INF-1**	Air	12/27/13 13:00	12/27/13 14:30
10253710005	**V-INF-2**	Air	12/27/13 13:00	12/27/13 14:30
10253710006	**V-INT-1**	Air	12/27/13 13:10	12/27/13 14:30
10253710007	**V-INT-2**	Air	12/27/13 13:11	12/27/13 14:30
10253710008	**V-INT-3**	Air	12/27/13 13:12	12/27/13 14:30
10253710009	**V-DSCHG-1**	Air	12/27/13 13:25	12/27/13 14:30
10253710010	**V-DSCHG-2**	Air	12/27/13 13:26	12/27/13 14:30
10253710011	**V-DSCHG-3**	Air	12/27/13 13:27	12/27/13 14:30

REPORT OF LABORATORY ANALYSIS

SAMPLE ANALYTE COUNT

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10253710004	**V-INF-1**	TO-15	DR1	6	PASI-M
10253710005	**V-INF-2**	TO-15	DR1	6	PASI-M
10253710006	**V-INT-1**	TO-15	DR1	6	PASI-M
10253710008	**V-INT-3**	TO-15	DR1	6	PASI-M
10253710009	**V-DSCHG-1**	TO-15	DR1	6	PASI-M
10253710010	**V-DSCHG-2**	TO-15	AH2, DR1	6	PASI-M
10253710011	**V-DSCHG-3**	TO-15	DR1	6	PASI-M

ANALYTICAL RESULTS

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Sample: V-INF-1 **Lab ID: 10253710004** Collected: 12/27/13 13:00 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	**82.2**	ug/m3	11.0	33.8		01/09/14 20:58	71-43-2	A4
Ethylbenzene	**66.1**	ug/m3	29.7	33.8		01/09/14 20:58	100-41-4	
THC as Gas	**95000**	ug/m3	2060	33.8		01/09/14 20:58		
Toluene	**168**	ug/m3	26.0	33.8		01/09/14 20:58	108-88-3	
m&p-Xylene	**478**	ug/m3	59.5	33.8		01/09/14 20:58	179601-23-1	
o-Xylene	**157**	ug/m3	29.7	33.8		01/09/14 20:58	95-47-6	

Sample: V-INF-2 **Lab ID: 10253710005** Collected: 12/27/13 13:00 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	**37.7**	ug/m3	13.2	40.7		01/09/14 21:52	71-43-2	A4
Ethylbenzene	**244**	ug/m3	35.8	40.7		01/09/14 21:52	100-41-4	
THC as Gas	**54900**	ug/m3	2470	40.7		01/09/14 21:52		
Toluene	**146**	ug/m3	31.3	40.7		01/09/14 21:52	108-88-3	
m&p-Xylene	**364**	ug/m3	71.6	40.7		01/09/14 21:52	179601-23-1	
o-Xylene	ND	ug/m3	35.8	40.7		01/09/14 21:52	95-47-6	

Sample: V-INT-1 **Lab ID: 10253710006** Collected: 12/27/13 13:10 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	ND	ug/m3	16.6	51.05		01/09/14 20:04	71-43-2	A4
Ethylbenzene	ND	ug/m3	44.9	51.05		01/09/14 20:04	100-41-4	
THC as Gas	**4310**	ug/m3	3100	51.05		01/09/14 20:04		
Toluene	ND	ug/m3	39.3	51.05		01/09/14 20:04	108-88-3	
m&p-Xylene	ND	ug/m3	89.8	51.05		01/09/14 20:04	179601-23-1	
o-Xylene	ND	ug/m3	44.9	51.05		01/09/14 20:04	95-47-6	

Sample: V-INT-3 **Lab ID: 10253710008** Collected: 12/27/13 13:12 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	ND	ug/m3	9.4	28.95		01/09/14 21:25	71-43-2	A4
Ethylbenzene	ND	ug/m3	25.5	28.95		01/09/14 21:25	100-41-4	
THC as Gas	**19500**	ug/m3	1760	28.95		01/09/14 21:25		
Toluene	**30.8**	ug/m3	22.3	28.95		01/09/14 21:25	108-88-3	
m&p-Xylene	ND	ug/m3	51.0	28.95		01/09/14 21:25	179601-23-1	
o-Xylene	ND	ug/m3	25.5	28.95		01/09/14 21:25	95-47-6	

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Sample: V-DSCHG-1 **Lab ID: 10253710009** Collected: 12/27/13 13:25 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	ND	ug/m3	11.0	33.8		01/09/14 22:45	71-43-2	A4
Ethylbenzene	ND	ug/m3	29.7	33.8		01/09/14 22:45	100-41-4	
THC as Gas	**6800**	ug/m3	2060	33.8		01/09/14 22:45		
Toluene	ND	ug/m3	26.0	33.8		01/09/14 22:45	108-88-3	
m&p-Xylene	ND	ug/m3	59.5	33.8		01/09/14 22:45	179601-23-1	
o-Xylene	ND	ug/m3	29.7	33.8		01/09/14 22:45	95-47-6	

Sample: V-DSCHG-2 **Lab ID: 10253710010** Collected: 12/27/13 13:26 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	ND	ug/m3	11.0	33.8		01/09/14 23:39	71-43-2	A4
Ethylbenzene	ND	ug/m3	29.7	33.8		01/09/14 23:39	100-41-4	
THC as Gas	**11200**	ug/m3	2060	33.8		01/09/14 23:39		
Toluene	**7390**	ug/m3	104	135.2		01/10/14 15:25	108-88-3	
m&p-Xylene	ND	ug/m3	59.5	33.8		01/09/14 23:39	179601-23-1	
o-Xylene	ND	ug/m3	29.7	33.8		01/09/14 23:39	95-47-6	

Sample: V-DSCHG-3 **Lab ID: 10253710011** Collected: 12/27/13 13:27 Received: 12/27/13 14:30 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Benzene	ND	ug/m3	11.0	33.8		01/09/14 23:12	71-43-2	A4
Ethylbenzene	ND	ug/m3	29.7	33.8		01/09/14 23:12	100-41-4	
THC as Gas	**7880**	ug/m3	2060	33.8		01/09/14 23:12		
Toluene	**1860**	ug/m3	26.0	33.8		01/09/14 23:12	108-88-3	
m&p-Xylene	ND	ug/m3	59.5	33.8		01/09/14 23:12	179601-23-1	
o-Xylene	ND	ug/m3	29.7	33.8		01/09/14 23:12	95-47-6	

QUALITY CONTROL DATA

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

QC Batch: AIR/19149 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10253710004, 10253710005, 10253710006, 10253710008, 10253710009, 10253710010, 10253710011

METHOD BLANK: 1606626 Matrix: Air
Associated Lab Samples: 10253710004, 10253710005, 10253710006, 10253710008, 10253710009, 10253710010, 10253710011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3	ND	0.32	01/09/14 19:07	
Ethylbenzene	ug/m3	ND	0.88	01/09/14 19:07	
m&p-Xylene	ug/m3	ND	1.8	01/09/14 19:07	
o-Xylene	ug/m3	ND	0.88	01/09/14 19:07	
THC as Gas	ug/m3	ND	60.8	01/09/14 19:07	
Toluene	ug/m3	ND	0.77	01/09/14 19:07	

LABORATORY CONTROL SAMPLE: 1606627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	32.5	34.9	107	69-134	
Ethylbenzene	ug/m3	44.2	45.4	103	73-139	
m&p-Xylene	ug/m3	44.2	44.9	102	73-139	
o-Xylene	ug/m3	44.2	44.7	101	71-138	
THC as Gas	ug/m3	3520	3670	104	65-136	
Toluene	ug/m3	38.3	40.7	106	67-133	

SAMPLE DUPLICATE: 1606768

Parameter	Units	10253710006 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/m3	ND	ND		25	
Ethylbenzene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	ND		25	
o-Xylene	ug/m3	ND	ND		25	
THC as Gas	ug/m3	4310	4100	5	25	
Toluene	ug/m3	ND	23.4J		25	

REPORT OF LABORATORY ANALYSIS

QUALIFIERS

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

A4	Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 Westlake/ Mercer31326 REV1
Pace Project No.: 10253710

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10253710004	**V-INF-1**	TO-15	AIR/19149		
10253710005	**V-INF-2**	TO-15	AIR/19149		
10253710006	**V-INT-1**	TO-15	AIR/19149		
10253710008	**V-INT-3**	TO-15	AIR/19149		
10253710009	**V-DSCHG-1**	TO-15	AIR/19149		
10253710010	**V-DSCHG-2**	TO-15	AIR/19149		
10253710011	**V-DSCHG-3**	TO-15	AIR/19149		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1134
10253710

Page: 1 of 1

1505093

Section A Required Client Information:

Company: Cardno ATC
Address: 7070 SW Fir Loop Suite 100, Tigard, OR 97223
Email To: Kyle.Sattler
Phone: 503-684-0525 Fax: 503-624-6415
Requested Due Date/TAT:

Section B Required Project Information:

Report To: keith.fox@cardno.com
Copy To: Kyle.Sattler@cardno.com; michael.miller@cardno.com
Purchase Order No.:
Project Name: PGE Westlake/Mercer
Project Number: 31326

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER

Site Location STATE:

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	GX/BTEX 8260	TPH EPA 18	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	W-DSC HG	WT	G			12/27	1130		6				X					X	X			10253710001
2	W-INT	WT	G			12/27	1140		6				X					X	X			002
3	W-INF	WT	G			12/27	1150		6				X					X	X			003
4																						
5	V-INF-1	AR	G			12/27	1300		1	X								X		X		004
6	V-INF-2	AR	G			12/27	1300		1	X								X		X		005
7	V-INT-1	AR	G			1	1310		1	X								X		X		006
8	V-INT-2	AR	G			1	1311		1	X								X		X		007
9	V-INT-3	AR	G			1	1312		1	X								X		X		008
10	V-DSCHG-1	AR	G			1	1325		1	X								X		X		009
11	V-DSCHG-2	AR	G			1	1326		1	X								X		X		010
12	V-DSCHG-3	AR	G			12/27	1327		1	X								X		X		011

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		12/27/13	1430	PAF	12/27/13	1730	10.8	Y	N	Y
	Cardno ATC			Pace	12-28-13	9:22	2.2	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Edward Burracci
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 12/27/13

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 07Nov2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.08	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cardno ATC

Project #: WO#: 10253710

10253710

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 577953309215

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermom. Used: ☐ 80512447 ☐ 72337080 ☒ 888A912167504 ☐ 888A9132521491 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 2.0 Cooler Temp Corrected (°C): 2.2 Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C Correction Factor: +.2 Date and Initials of Person Examining Contents: JP 12.28.13

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☒ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water) DOC	☒ Yes	☐ No		Initial when completed: JP Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): pace-seattle				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Kyle Sattler Date/Time: 12/31/13

Comments/Resolution: Hold Trip Blank, do not analyze 12/31/13 TO-15 method was approved instead of EPA method 18. 12/31/13

Project Manager Review: JENNY SOSS Date: 12/30/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.07	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: CHADNE ATC

Project #: 102537 10

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other:

Tracking Number: 5779 5330 9204

Custody Seal on Cooler/Box Present? [ ] Yes [X] No Seals Intact? [ ] Yes [ ] No

Optional: Proj. Due Date: Proj. Name:

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [ ] Foam [X] None [ ] Other:

Temp. (TO17 and TO13 samples only) (°C): AMB Corrected Temp (°C): Thermom. Used: [ ] B88A912167504 [ ] 80512447 [ ] 72337080

Temp should be above freezing to 6°C Correction Factor: Date & Initials of Person Examining Contents: 12-30-13 ZL

Comments:

Chain of Custody Present?	[X] Yes	[ ] No	[ ] N/A	1.	
Chain of Custody Filled Out?	[X] Yes	[ ] No	[ ] N/A	2.	
Chain of Custody Relinquished?	[X] Yes	[ ] No	[ ] N/A	3.	
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	4.	
Samples Arrived within Hold Time?	[X] Yes	[ ] No	[ ] N/A	5.	
Short Hold Time Analysis (<72 hr)?	[X] Yes	[ ] No	[ ] N/A	6.	
Rush Turn Around Time Requested?	[ ] Yes	[X] No	[ ] N/A	7.	
Sufficient Volume?	[X] Yes	[ ] No	[ ] N/A	8.	SAMPLE V-INT-2 RECEIVED FLAT
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	9.	
-Pace Containers Used?	[X] Yes	[ ] No	[ ] N/A		
Containers Intact?	[X] Yes	[ ] No	[ ] N/A	10.	
Media: AIR (BAG)				11.	
Sample Labels Match COC?	[X] Yes	[ ] No	[ ] N/A	12.	

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? [ ] Yes [ ] No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: 12/30/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

APPENDIX G

ANALYTICAL LABORATORY REPORT FOR WATER SAMPLES

February 21, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory between December 27, 2013 and February 21, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Per client request 02/21/14, this report only includes the water portion of the coc.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Keith Fox, Cardno ATC
Michael Miller, Cardno ATC

CERTIFICATIONS

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Dept of Environmental Management #40770
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
EPA Region 5 #WD-15J
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

SAMPLE SUMMARY

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10258424001	**Place Holder**	Air	02/20/14 08:00	02/21/14 12:05
10253710001	**W-DSCHG**	Water	12/27/13 11:30	12/27/13 14:30
10253710002	**W-INT**	Water	12/27/13 11:40	12/27/13 14:30
10253710003	**W-INF**	Water	12/27/13 11:50	12/27/13 14:30
10253710012	**Trip Blank**	Water	12/27/13 00:00	12/27/13 14:30

SAMPLE ANALYTE COUNT

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10253710001	**W-DSCHG**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10253710002	**W-INT**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10253710003	**W-INF**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M

ANALYTICAL RESULTS

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Sample: W-DSCHG **Lab ID: 10253710001** Collected: 12/27/13 11:30 Received: 12/27/13 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/31/13 18:10		
Surrogates								
a,a,a-Trifluorotoluene (S)	76	%.	75-125	1		12/31/13 18:10	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/31/13 12:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/31/13 12:25	100-41-4	
Toluene	ND	ug/L	1.0	1		12/31/13 12:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/31/13 12:25	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	75-125	1		12/31/13 12:25	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		12/31/13 12:25	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125	1		12/31/13 12:25	460-00-4	

Sample: W-INT **Lab ID: 10253710002** Collected: 12/27/13 11:40 Received: 12/27/13 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		12/31/13 18:30		
Surrogates								
a,a,a-Trifluorotoluene (S)	76	%.	75-125	1		12/31/13 18:30	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/31/13 12:40	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/31/13 12:40	100-41-4	
Toluene	ND	ug/L	1.0	1		12/31/13 12:40	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/31/13 12:40	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	75-125	1		12/31/13 12:40	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1		12/31/13 12:40	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125	1		12/31/13 12:40	460-00-4	

Sample: W-INF **Lab ID: 10253710003** Collected: 12/27/13 11:50 Received: 12/27/13 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		01/07/14 16:38		
Surrogates								
a,a,a-Trifluorotoluene (S)	86	%.	70-125	1		01/07/14 16:38	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		12/31/13 12:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		12/31/13 12:55	100-41-4	

REPORT OF LABORATORY ANALYSIS

ANALYTICAL RESULTS

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Sample: W-INF **Lab ID: 10253710003** Collected: 12/27/13 11:50 Received: 12/27/13 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Toluene	ND	ug/L	1.0	1		12/31/13 12:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		12/31/13 12:55	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	75-125	1		12/31/13 12:55	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		12/31/13 12:55	2037-26-5	
4-Bromofluorobenzene (S)	94	%.	75-125	1		12/31/13 12:55	460-00-4	

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

QC Batch: GCV/11554 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10253710001, 10253710002

METHOD BLANK: 1603496 Matrix: Water
Associated Lab Samples: 10253710001, 10253710002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	12/31/13 17:50	
a,a,a-Trifluorotoluene (S)	%.	82	75-125	12/31/13 17:50	

LABORATORY CONTROL SAMPLE & LCSD: 1603497 1603498

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	958	999	96	100	75-126	4	20	
a,a,a-Trifluorotoluene (S)	%.				88	82	75-125			

MATRIX SPIKE SAMPLE: 1603500

Parameter	Units	10253438009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	ug/L	150000	200000	360000	105	75-137	
a,a,a-Trifluorotoluene (S)	%.				90	75-125	

SAMPLE DUPLICATE: 1603499

Parameter	Units	10253438007 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	6450	6060	6	30	
a,a,a-Trifluorotoluene (S)	%.	80	78	3		

SAMPLE DUPLICATE: 1603501

Parameter	Units	10253438010 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1950	2040	4	30	
a,a,a-Trifluorotoluene (S)	%.	89	91	2		

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

QC Batch: GCV/11565
QC Batch Method: NWTPH-Gx/8021
Analysis Method: NWTPH-Gx/8021
Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10253710003

METHOD BLANK: 1605291 Matrix: Water
Associated Lab Samples: 10253710003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	01/07/14 16:18	
a,a,a-Trifluorotoluene (S)	%.	100	70-125	01/07/14 16:18	

LABORATORY CONTROL SAMPLE & LCSD: 1605292 1605293

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1000	854	100	85	75-125	16	20	
a,a,a-Trifluorotoluene (S)	%.				102	87	70-125			

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

QC Batch: MSV/26056 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10253710001, 10253710002, 10253710003

METHOD BLANK: 1603229 Matrix: Water
Associated Lab Samples: 10253710001, 10253710002, 10253710003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	12/31/13 10:36	
Ethylbenzene	ug/L	ND	1.0	12/31/13 10:36	
Toluene	ug/L	ND	1.0	12/31/13 10:36	
Xylene (Total)	ug/L	ND	3.0	12/31/13 10:36	
1,2-Dichloroethane-d4 (S)	%.	87	75-125	12/31/13 10:36	
4-Bromofluorobenzene (S)	%.	94	75-125	12/31/13 10:36	
Toluene-d8 (S)	%.	98	75-125	12/31/13 10:36	

LABORATORY CONTROL SAMPLE: 1603230

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.8	84	75-125	
Ethylbenzene	ug/L	20	17.1	86	75-125	
Toluene	ug/L	20	17.2	86	75-125	
Xylene (Total)	ug/L	60	53.9	90	75-125	
1,2-Dichloroethane-d4 (S)	%.			86	75-125	
4-Bromofluorobenzene (S)	%.			95	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE SAMPLE: 1603621

Parameter	Units	10253342002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	16.3	82	70-135	
Ethylbenzene	ug/L	ND	20	16.4	82	75-125	
Toluene	ug/L	ND	20	16.3	82	75-125	
Xylene (Total)	ug/L	ND	60	52.0	87	75-125	
1,2-Dichloroethane-d4 (S)	%.				87	75-125	
4-Bromofluorobenzene (S)	%.				93	75-125	
Toluene-d8 (S)	%.				98	75-125	

SAMPLE DUPLICATE: 1603622

Parameter	Units	10253342003 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	89	88	1		

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL DATA

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

SAMPLE DUPLICATE: 1603622

Parameter	Units	10253342003 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%.	94	93	1		
Toluene-d8 (S)	%.	98	98	.3		

REPORT OF LABORATORY ANALYSIS

QUALIFIERS

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: GCV/11565

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 Westlake/ Mercer - 31326
Pace Project No.: 10258424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10253710001	**W-DSCHG**	NWTPH-Gx/8021	GCV/11554		
10253710002	**W-INT**	NWTPH-Gx/8021	GCV/11554		
10253710003	**W-INF**	NWTPH-Gx/8021	GCV/11565		
10253710001	**W-DSCHG**	EPA 8260	MSV/26056		
10253710002	**W-INT**	EPA 8260	MSV/26056		
10253710003	**W-INF**	EPA 8260	MSV/26056		

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1134
10253710

Page: 1 of 1

1505093

Section A Required Client Information:

Company: Cardno ATC
Address: 7070 SW Fir Loop Suite 100, Tigard, OR 97223
Email To: Kyle.Sattler
Phone: 503-684-0525 Fax: 503-624-6415
Requested Due Date/TAT:

Section B Required Project Information:

Report To: keith.fox@cardno.com
Copy To: Kyle.Sattler@cardno.com; michael.miller@cardno.com
Purchase Order No.:
Project Name: PGE Westlake/Mercer
Project Number: 31326

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER

Site Location STATE:

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test ↓: GX/BTEX 8260	TPH EPA 18	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	W-DSC HG	WT	G			12/27	1130		6				X						X			10253710001
2	W-INT	WT	G			12/27	1140		6				X						X			002
3	W-INF	WT	G			12/27	1150		6				X						X			003
4																						
5	V-INF-1	AR	G			12/27	1300		1	X										X		004
6	V-INF-2	AR	G			12/27	1300		1	X										X		005
7	V-INT-1	AR	G			1	1310		1	X										X		006
8	V-INT-2	AR	G			1	1311		1	X										X		007
9	V-INT-3	AR	G			1	1312		1	X										X		008
10	V-DSCHG-1	AR	G			1	1325		1	X										X		009
11	V-DSCHG-2	AR	G			1	1326		1	X										X		010
12	V-DSCHG-3	AR	G			12/27	1327		1	X										X		011

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		12/27/13	1430	PACE	12/27/13	1730	10.8	Y	N	Y
	Cardno ATC			Pace	12-28-13	9:22	2.2	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Edward Burracci
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 12/27/13

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 07Nov2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.08	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cardno ATC

Project #: **WO# : 10253710**

10253710

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other:

Tracking Number: 577953309215

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: Temp Blank? ☒ Yes ☐ No

Thermom. Used: ☐ 80512447 ☐ 72337080 ☒ 888A912167504 ☐ 888A9132521491 Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 2.0 Cooler Temp Corrected (°C): 2.2 Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C Correction Factor: +.2 Date and Initials of Person Examining Contents: JP 12.28.13

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☒ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water) DOC	☒ Yes	☐ No		Initial when completed: JP Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): pace-seattle				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Kyle Sattler Date/Time: 12/31/13

Comments/Resolution: Hold Trip Blank, do not analyze 12/31/13 TO-15 method was approved instead of EPA method 18. 12/31/13

Project Manager Review: EMM Date: 12/30/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.07	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: CHADNE ATC

Project #: 102537.10

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other:

Tracking Number: 5779 5330 9204

Custody Seal on Cooler/Box Present? [ ] Yes [X] No Seals Intact? [ ] Yes [ ] No

Optional: Proj. Due Date: Proj. Name:

Packing Material: [ ] Bubble Wrap [ ] Bubble Bags [ ] Foam [X] None [ ] Other:

Temp. (TO17 and TO13 samples only) (°C): AMB Corrected Temp (°C): Thermom. Used: [ ] B88A912167504 [ ] 80512447 [ ] 72337080

Temp should be above freezing to 6°C Correction Factor: Date & Initials of Person Examining Contents: 12-30-13 JL

Comments:

Chain of Custody Present?	[X] Yes	[ ] No	[ ] N/A	1.	
Chain of Custody Filled Out?	[X] Yes	[ ] No	[ ] N/A	2.	
Chain of Custody Relinquished?	[X] Yes	[ ] No	[ ] N/A	3.	
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	4.	
Samples Arrived within Hold Time?	[X] Yes	[ ] No	[ ] N/A	5.	
Short Hold Time Analysis (<72 hr)?	[X] Yes	[ ] No	[ ] N/A	6.	
Rush Turn Around Time Requested?	[ ] Yes	[X] No	[ ] N/A	7.	
Sufficient Volume?	[X] Yes	[ ] No	[ ] N/A	8.	SAMPLE V-INT-2 RECEIVED FLAT
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	9.	
-Pace Containers Used?	[X] Yes	[ ] No	[ ] N/A		
Containers Intact?	[X] Yes	[ ] No	[ ] N/A	10.	
Media: AIR (BAG)				11.	
Sample Labels Match COC?	[X] Yes	[ ] No	[ ] N/A	12.	

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? [ ] Yes [ ] No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: 12/30/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)