ATTACHMENT D

SEPA Checklist

WAC 197-11-960 Environmental checklist.

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

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

Instructions for applicants:

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

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

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

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

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: **ConocoPhillips Petroleum Co., Renton Terminal**

2. Name of applicant: **Landau Associates on behalf of ConocoPhillips**
3. Address and phone number of applicant and contact person: **Martin Powers, Landau Associates, 130 2nd Avenue South, Edmonds, Washington 98020, (425) 329-0246**

4. Date checklist prepared: **1/24/03**
5. Agency requesting checklist: **Puget Sound Clean Air Agency**
6. Proposed timing or schedule (including phasing, if applicable): **Immediately**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **Future additions/expansion is possible depending on the extent of the release**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. **Release Notification Report will be submitted to DOE**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.
Do Not Know

10. List any government approvals or permits that will be needed for your proposal, if known.

Puget Sound Clean Air Agency – Air Discharge

City of Renton – Electrical

Renton Fire Department – Propane Tank Placement/Plumbing

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

A total fluids vacuum blower will be used to implement a dual phase vacuum extraction (DPVE) system to recover gasoline, water, and gasoline vapors from the subsurface. The gasoline will be recycled offsite; the groundwater will be treated by air stripping and discharged to the sanitary sewer; and the gasoline vapors will be incinerated in a mobile thermal oxidizer.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

2423 Lind Avenue SW, Renton, WA,
Northwestern corner of intersection of 24th Street and Lind Avenue (See Attached Map)

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): (Flat) rolling, hilly, steep slopes, mountainous, other . . . . . .

b. What is the steepest slope on the site (approximate percent slope)? **N/A**

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

8-10 feet of gravelly sand fill overlaying silt

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Unknown

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

N/A

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No

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

Project will not alter impervious surface area

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

N/A

a. **Air**

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Potential hydrocarbon vapors from liquid storage tanks

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air, if any: **Operation of a thermal oxidizer unit to control hydrocarbon vapors**

3. **Water**

a. Surface:

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

Wetlands abut the site to the southeast and west. Tributaries to the Black River are located approximately 500 feet to the west.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

N/A

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Unknown

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

Groundwater will be withdrawn, treated, and discharged to the sanitary sewer. Flow rate will likely be less than 10 gallons per minute.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the

number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

N/A

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

N/A

2) Could waste materials enter ground or surface waters? If so, generally describe.

No

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

N/A

4. **Plants**

a. Check or circle types of vegetation found on the site: **N/A**

———— deciduous tree: alder, maple, aspen, other

———— evergreen tree: fir, cedar, pine, other

———— shrubs

———— grass

———— pasture

———— crop or grain

———— wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

———— water plants: water lily, eelgrass, milfoil, other

———— other types of vegetation

b. What kind and amount of vegetation will be removed or altered? **None**

Unknown

c. List threatened or endangered species known to be on or near the site. **None known**

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: **None**

5. **Animals**

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: **Crows**
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.
Unknown

c. Is the site part of a migration route? If so, explain.

Unknown

d. Proposed measures to preserve or enhance wildlife, if any: **N/A**

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Electric – to power blower and pumps; Propane for supplemental fuel for thermal oxidizer

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: **N/A**

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No

1) Describe special emergency services that might be required.

N/A

2) Proposed measures to reduce or control environmental health hazards, if any:

N/A

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

N/A

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Operation of pumps, blower and thermal oxidizer unit; Noise level from equipment expected to be less than 10 decibels at property line

3) Proposed measures to reduce or control noise impacts, if any:

None necessary

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties?

Site is a bulk fuel terminal in an industrial area

b. Has the site been used for agriculture? If so, describe.

Unknown

c. Describe any structures on the site.

7 aboveground storage tanks with associated underground piping and support facility buildings

d. Will any structures be demolished? If so, what?

No

e. What is the current zoning classification of the site?

Industrial

f. What is the current comprehensive plan designation of the site?

Industrial

g. If applicable, what is the current shoreline master program designation of the site?

N/A

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No

i. Approximately how many people would reside or work in the completed project?

None

j. Approximately how many people would the completed project displace?

None

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

N/A

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

N/A

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

N/A

c. Proposed measures to reduce or control housing impacts, if any:

N/A

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

10 feet

b. What views in the immediate vicinity would be altered or obstructed?

N/A

c. Proposed measures to reduce or control aesthetic impacts, if any:

N/A

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

N/A

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No

c. What existing off-site sources of light or glare may affect your proposal?

None

d. Proposed measures to reduce or control light and glare impacts, if any:

N/A

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

None known

b. Would the proposed project displace any existing recreational uses? If so, describe.

No

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

N/A

13. **Historic and cultural preservation**

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

None known

c. Proposed measures to reduce or control impacts, if any:

N/A

14. **Transportation**

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Lind Avenue SW and SW 27th Street

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

Unknown

c. How many parking spaces would the completed project have? How many would the project eliminate?

N/A

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

No

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

N/A

g. Proposed measures to reduce or control transportation impacts, if any:

N/A

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No

b. Proposed measures to reduce or control direct impacts on public services, if any.

N/A

16. **Utilities**

a. Circle utilities currently available at the site: (electricity), natural gas, (water), (refuse service), (telephone), (sanitary sewer), septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

PG&E – Electricity
King County – Sanitary Sewer

C. SIGNATURE

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

Signature: .....

Date Submitted: .....

TO BE COMPLETED BY APPLICANT

EVALUATION FOR
AGENCY USE ONLY

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Proposed measures to protect such resources or to avoid or reduce impacts are:

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

ConocoPhillips
3977 Leary Way NW
Seattle, WA 98107

February 11, 2003

Washington State Department of Ecology
NW Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452
Attention: Toxics Cleanup Program

Re: Release Notification Report
Renton Terminal
Renton, WA

Dear Toxics Cleanup Program:

This letter transmits the Release Notification Report, as prepared by Landau Associates on behalf of ConocoPhillips, for the above-referenced bulk fuel distribution terminal. The report documents the discovery of a gasoline release from an above-ground storage tank as well as initial response efforts and subsequent remedial actions conducted to address this release. The report also describes plans for additional cleanup activities underway or planned for near future.

Please contact me at 206-706- 2341 should you have questions regarding this information.

Sincerely,

Tim Johnson
Site Manager
Risk Management and Remediation

Attachment

Cc: Dick Walker, Ecology NW Region
Andrew Holbrook
Bill Collins

Release Notification Report
ConocoPhillips Renton Terminal
Renton, Washington

February 11, 2003

Prepared for

ConocoPhillips Company
Renton, Washington

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907

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INTRODUCTION

PURPOSE

Landau Associates has responded to a report of a petroleum product release by the ConocoPhillips Company (ConocoPhillips; formerly Tosco Corporation) at the bulk fuel distribution terminal operated by ConocoPhillips in Renton, Washington (the site). The site is located at 2423 Lind Avenue Southwest in Renton, Washington (Figure 1). The estimated volume of product released, as determined by inventory records, was 14,800 gallons. The petroleum release was reported to the Washington State Department of Ecology (Ecology) on November 14, 2002. The purpose of this report is to notify Ecology of the details of the assessment and remedial action items completed and/or in progress in response to the release, and to outline current plans for additional assessment and remedial action activities. ConocoPhillips and Landau Associates coordinated the initial response to the release beginning on November 13, 2002. On January 17, 2003, free product was observed floating on the surface water of a nearby stormwater retention pond located near the southeastern corner of the terminal tank farm which prompted additional release response actions.

BACKGROUND

The site is a bulk petroleum fuel distribution terminal surrounded by industrial properties, public streets, and undeveloped areas (Figure 2). The petroleum products are delivered to the facility through the Olympic Pipeline, stored in aboveground tanks, and pumped to distribution tanker trucks via pipelines and a loading rack. There are currently seven large aboveground storage tanks at the site, which store leaded and unleaded gasoline, kerosene, diesel fuel, and ethanol. Each tank is surrounded by concrete walls and the entire tank area is surrounded by an earthen containment berm which provides secondary spill containment. Surface drainage in the tank area is provided by a series of gate valves in the concrete containment walls, which direct flow to a sump in the western portion of the tank area. The release notification provided to Ecology on November 14, 2002 was related to a super unleaded gasoline release from the bulk storage tank designated as Tank 2.

A previous release at the site was discovered in 1986 when petroleum-contaminated soil was encountered in the vicinity of the truck loading area. The responsible party for the release was determined to be Mobil Oil Company (currently ExxonMobil). A subsurface investigation was conducted, which revealed that contaminated groundwater and soil were present throughout the tanker truck loading area and extended south into the tank area. In addition, liquid phase hydrocarbon (LPH) floating on the groundwater table was measured up to 5.48 ft thick as recently as June 2002. In response to a consent order by Ecology (Order No. DE 87-N301), a product recovery system was constructed and

began operation in November 1987. Previous consultants documented that 57,000 gallons of product were removed by the product recovery system between December 1987 and November 1993. The product recovery system was not in operation at the time this report was prepared.

RELEASE DISCOVERY AND RESPONSE

On November 13, 2002, Landau Associates was notified by ConocoPhillips of an inventory loss of super unleaded gasoline from Tank 2. The volume of the product release was estimated by ConocoPhillips to be 14,800 gallons and the exact cause has yet to be determined, although it is suspected that there was a breach in the tank floor. Based on the initial assessment activities conducted by Landau Associates, ConocoPhillips personnel reported the release to Ecology on November 14, 2002 and Landau Associates began coordinating to conduct interim action liquid phase hydrocarbon (LPH) recovery efforts and to assess the extent of impact at the site. Landau Associates personnel installed 24 postholes around the perimeter of Tank 2 to determine if LPH was present, and monitored existing wells (HA-6, -7, -8, -12, -13, -14) to determine if LPH was present. The maximum product thickness measured on November 13, 2002 was 0.25 inches in a posthole located northwest of Tank 2 and no LPH was observed in postholes located to the south, southeast, and southwest of Tank 2. The depth to water ranged from approximately 6 to 9 ft below ground surface in the existing monitoring wells. On November 14, 2002 no measurable product was observed in any of the postholes installed on the previous day. In addition to gauging for the presence of LPH, Landau Associates personnel monitored the concentration of volatile organic compounds (VOCs) in the postholes using a photoionization detector (PID). Based on the PID readings it appeared that elevated concentrations of VOCs were present in postholes located to the west, north, and northeast of Tank 2. No elevated VOC readings were observed in postholes located southeast, south, or southwest of Tank 2. Since the release discovery, ConocoPhillips pumped the remaining product in Tank 2 to other tanks and tanker trucks and Tank 2 remains empty at this time as the condition of the tank floor is assessed.

RECOVERY WELL INSTALLATION AND PRODUCT RECOVERY

On November 16, 2002, Landau Associates oversaw the installation of a horizontal total fluids recovery well (HRW-1), seven vertical total fluids recovery wells (RW-1, RW-2, RW-3, RW-4, RW-5, RW-6, and RW-7), and four horizontal vapor recovery lines (VR-1, VR-2, VR-3, and VR-4) located along the north, east and west of Tank 2 (Figure 2). No wells were installed to the south of Tank 2 because the PID readings in the postholes installed to the south of Tank 2 did not indicate the presence of VOCs, no LPH was observed in the postholes installed south of Tank 2, and because information regarding groundwater flow direction provided by the consultant (Kleinfelder Associates) working on a

previous Mobil Oil Company product release, indicated that the groundwater flow direction at the site was to the north/northeast.

Each of the vertical recovery wells was constructed with 5 to 6 ft of screened interval, with approximately 1 to 3 ft of screen above the groundwater table to allow for the collection of floating LPH from the wells. Each screened interval was wrapped in a filter sock during installation. The vertical recovery wells were installed in a trench completed by Cowlitz Clean Sweep (a ConocoPhillips subcontractor) under the direction of Landau Associates personnel. Each vertical recovery well was installed to a total depth of approximately 8-9 ft below ground surface (BGS). Following the installation of the vertical recovery wells, the trenches were backfilled with gravel and excavated soil. The wells may also be utilized for vapor or groundwater recovery, as needed. Since November 20, 2002 groundwater and LPH were measured in the vertical recovery wells on a daily basis. Typically, measurements collected at the beginning of each day are considered representative of equilibrated conditions as product recovery operations were terminated nightly between 11:00 p.m. and 12:00 a.m. and the pumps were re-started the following morning. Maximum LPH thicknesses observed in the recovery wells during morning gauging events ranged as follows:

Well I.D.	Maximum Observed LPH Thickness, ft.	Date Observed
RW-1	1.20	11/22/02
RW-2	2.78	01/06/03
RW-3	1.28	11/22/02
RW-4	>2.65*	11/21/02
RW-5	0.10	11/21/02
RW-6	>2.05*	11/20/02
RW-7	>2.51*	11/21/02

Note: * = No water was detected in well.

Recovery of LPH was initiated in the product recovery wells on November 17, 2002 utilizing diaphragm pumps. The water and recovered product has been discharged into a Baker tank onsite. The Baker tank is equipped with an overflow weir to allow for the segregation of product and water, and storage of the majority of the product in a separate chamber within the tank. As of January 20, 2003, following a period when none of the original seven vertical wells had been pumped for at least 48 hours, LPH thicknesses were measured as follows:

Well I.D.	Observed LPH Thickness, ft.
RW-1	0.35
RW-2	1.59
RW-3	0.16
RW-4	0.30
RW-5	0.05
RW-6	0.63
RW-7	0.53

Groundwater elevation and LPH thickness data gathered from November 20, 2002 to January 22, 2003 is summarized in Table 1.

On January 17, 2003, LPH was discovered floating on the water surface of a stormwater retention pond located to the southeast of Tank 2. ConocoPhillips personnel contacted the Renton Fire Department and Ecology upon observing the LPH on the surface water on January 17, 2003. The Renton Fire Department conducted the initial response to the report of the LPH. Landau Associates, Emerald Petroleum Services, and ConocoPhillips personnel assisted the fire department in setting up a diaphragm pump to recover water and LPH collecting in the retention pond. In addition, Emerald Petroleum Services personnel set up a network of Venturi style blowers near the southern bank of the retention pond to abate vapor concentrations. Following the response actions conducted on the evening of January 17, 2003, ConocoPhillips, Landau Associates, and Emerald Petroleum Services personnel returned to the retention pond area on January 18, 2003 and completed the following activities:

- Further assessed the source of LPH flowing to the retention pond by hand digging small test pits on the western portion of the ditch leading to the retention pond.
- Installed a sandbag dam at the eastern end of the ditch leading to the retention pond to decrease the potential for LPH to continue to flow to the retention pond.
- Dug a deeper collection sump on the western side of the sandbag dam to increase the amount of fluids that could be recovered by the diaphragm pump.

On January 20 and 21, 2003, Landau Associates personnel oversaw the installation of six additional vertical total fluids recovery wells (LAI-4, 5, 6, 7, 8, and 9) to the south-southeast of Tank 2. The six vertical total fluids recovery wells were installed by Cascade Drilling using hollow-stem auger drilling methods and a limited access drill rig. Diaphragm pumps were used to recover product and water from the new wells beginning on January 20, 2003. Well construction logs for LAI-4 through LAI-9 are included in Appendix A.

PRODUCT VOLUME REMOVAL

The water and recovered product from the Tank 2 area is discharged into two Baker tanks located onsite. As of January 17, 2003 the volume of recovered LPH measured in the Baker tank was approximately 3,000 gallons. The LPH was removed for disposal using a vacuum truck supplied by Emerald Petroleum Services and was disposed at the Ferndale Refinery located near Anacortes, Washington. In addition to the LPH, Emerald Petroleum Services removed approximately 13,000 gallons of water from the Baker tank as of January 22, 2003. Bills of lading are provided by Emerald Petroleum Services are included in Appendix C. In addition to the water disposed by Emerald Petroleum Services, approximately 16,500 gallons of water has been drained from the Baker tank by ConocoPhillips personnel and discharged to an underground vault near the loading rack for ultimate treatment by the existing water treatment system and discharge to the sanitary sewer under the limitations of King County Wastewater Discharge Authorization No. 261-02. ConocoPhillips operates the water treatment system under an industrial watewater permit and the system is not associated with a groundwater treatment system operated at the site by Kleinfelder on behalf of ExxonMobil. Prior to the commencement of discharge of water from the Baker tank to the industrial wastewater treatment system, a permit variance was received from King County to discharge up to 5,000 gallons per day under the existing authorization. On December 30, 2002, Landau Associates personnel collected a grab sample (BK-1) of the water in the Baker tank to characterize the water for discharge. The grab sample was analyzed for gasoline range total petroleum hydrocarbons (TPH-G) using NWTPH-Gx method and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8021B. The analytical results for BK-1 are presented in Table 2. The analytical results indicate that the water sample contained a TPH-G concentration of 342 milligrams per liter (mg/L). Assuming that BK-1 is representative of all of the water discharged from the Baker tank as of January 22, 2003 (29,500 gallons) and assuming that the specific gravity of gasoline is 0.75, a total of 3,013 gallons (13 gallons dissolved phase and 3,000 gallons LPH) of gasoline were removed and disposed of as of January 22, 2003. The analytical report for BK-1 is included in Appendix D.

GROUNDWATER ASSESSMENT

On November 23 and 24, 2002, Landau Associates conducted a baseline groundwater sampling event at the site following the release from Tank 2. Prior to November 2002, groundwater sampling and monitoring events were most recently conducted on June 4-6, 2002 by Kleinfelder Associates as part of an ongoing remedial effort being conducted to address a historical release that has created a floating layer of LPH in the vicinity of the loading rack at the site (Kleinfelder Associates 2002). Immediately following the November 24, 2002 sampling event, Landau Associates personnel oversaw the installation of five 2-inch diameter monitoring wells (HA-15, 16, 17, 18, and 20) using hand auger methods. The five

monitoring wells were installed to further delineate LPH and baseline groundwater conditions at the site. LPH was subsequently detected in HAI-16 and HAI-20, and diaphragm pumps were used to recover LPH from these wells. Due to the detection of a significant thickness (>3 ft) of LPH in HA-20, three additional 4-inch diameter monitoring/recovery wells were installed on January 3, 2003, to the southwest (LAI-1), south (LAI-2), and southeast (LAI-3) of HA-20 to attempt to further delineate LPH near Tank 2. As of January 22, 2003, LPH was not detected in LAI-1, 2, or 3. Well logs for HA-15, 16, 17, and 20, and LAI-1, 2, and 3 are included in Appendix A.

GROUNDWATER ELEVATIONS

On November 23 and 24, 2002, LPH was detected in two (B-3 and W-4) of 37 wells measured and ranged from 0.01 ft in W-4 to 2.63 ft in B-3. The depth to groundwater ranged from 5.71 ft below the top of casing (BTOC) in HA-1 to 10.81 ft BTOC in B-3. Groundwater elevation and LPH data collected on November 23 and 24, 2002 are included in Table 1. The groundwater elevation data are also presented on Figure 3, along with groundwater potentiometric contours. The November 23 and 24, 2002 data indicate an overall groundwater flow direction to the northeast from the tank farm area. There are local variations in the groundwater flow direction, which may be caused by groundwater recharge areas in the vicinity. As of the date this report was prepared, a site wide groundwater gauging event (including wells installed since November 14, 2002) has not been completed to prepare an updated groundwater potentiometric map.

GROUNDWATER ANALYTICAL RESULTS

On November 25 and 26, 2002, after purging a minimum of three casing volumes from each of the monitoring wells which did not exhibit LPH, groundwater samples were collected using a peristaltic pump with dedicated polyethylene tubing. Groundwater samples were collected in laboratory-supplied sample containers and stored in a sample cooler for analysis of BTEX using EPA Method 8021B, TPH-G using NWTPH-Gx Method, and diesel-range total petroleum hydrocarbons (TPH-D) using NWTPH-Dx Method. A duplicate sample was collected from HA-5 and designated as HA-5-021122. A duplicate sample was also collected from B-6 and designated as B-17. The duplicate samples were analyzed for BTEX, TPH-G and TPH-D for quality assurance/quality control purposes. In addition to the groundwater samples, LPH samples were collected from wells B-3, RW-1, RW-4, and RW-7 for hydrocarbon identification analysis using Method NWTPH-HCID. The sample containers were packed in ice in the sample coolers and sent to North Creek Analytical (NCA) in Bothell, Washington by courier with a completed chain-of-custody form enclosed in the cooler.

The analytical results from the November 25 and 26, 2002 groundwater monitoring event are listed in Table 2. The dissolved phase TPH-G and benzene concentrations are shown in a table included in Figure 2. The purpose of the groundwater sampling was to evaluate the impact of the release reported in November 2002 as compared to prior conditions (June 2002) and to allow future evaluation of the effectiveness of the product recovery system in reducing the LPH and the dissolved-phase hydrocarbon concentrations at the site.

Analytical results from the November 2002 groundwater sampling event indicate that TPH-G concentrations in the tank area ranged from below detection limit in HA-13 to 25,600 micrograms per liter (ug/L) in HA-6. Benzene concentrations in the tank area ranged from 0.957 ug/L in HA-12 to 811 ug/L in HA-7. In the majority of the wells, these results indicate a decrease in concentrations when compared with the results of the previous groundwater sampling event in June 2002. The November 2002 analytical results appear to indicate a distinction in groundwater impacts from Tank 2 and the historical Mobil Oil Company release at the site. Laboratory groundwater analytical data reports are provided in Appendix C.

Groundwater samples were collected from a select group of eight monitoring wells (HA-5, HA-7, HA-8, HA-15, HA-18, LAI-1, LAI-2, and LAI-3) on January 14 and 15, 2003 and were analyzed for BTEX and TPH-G. The analytical results from the January 14-15, 2003 sampling event are included in Table 2.

FUTURE PLANNED ACTIVITIES

A dual phase vacuum extraction (DPVE) component will be added to the current system to remove LPH and impacted groundwater, intercept the groundwater and LPH prior to the liquids seeping into the retention pond, and volatilize LPH floating on the groundwater table. The liquids recovered will be transferred to a Baker tank for phase separation and disposal and the recovered vapors will be routed to a thermal oxidizer for treatment prior to atmospheric discharge. It is planned that the remedial system will continue to be operated, monitored, and maintained for some time in the future. Appropriate remedial target levels can be established following additional data collection and analysis.

In addition to the remedial activities, the following assessment activities are currently underway:

- On January 29 and 30, 2003, Landau Associates oversaw Cascade Drilling in the installation of seven additional monitoring wells (LAI-10 through LAI-16) to the southwest of Tank 2 (LAI-10, 11, and 12), to the west of Tank 2 (LAI-13, 14, and 15), and southeast of Tank 2 and south of Southwest 27th Street (LAI-16) to further assess potential impacts. These wells will be included in future groundwater gauging and sampling events.

- On January 28, 2003, Landau Associates began monitoring and recording VOC concentrations present near the stormwater retention pond and in the storm sewer catchbasins located on the north side of Southwest 27th Street.

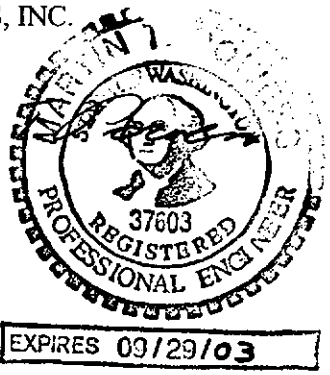
- On January 31, 2003, Landau Associates began collecting weekly groundwater samples from select wells located near Tank 2 to measure and record headspace concentrations. The additional assessment data collected will be summarized in future reports to Ecology.

USE OF THIS REPORT

This release notification report has been prepared for the exclusive use of ConocoPhillips Company for specific application to the ConocoPhillips Renton Terminal. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

LANDAU ASSOCIATES, INC.



Martin T. Powers, P.E.
Senior Engineer

MTP/rgm

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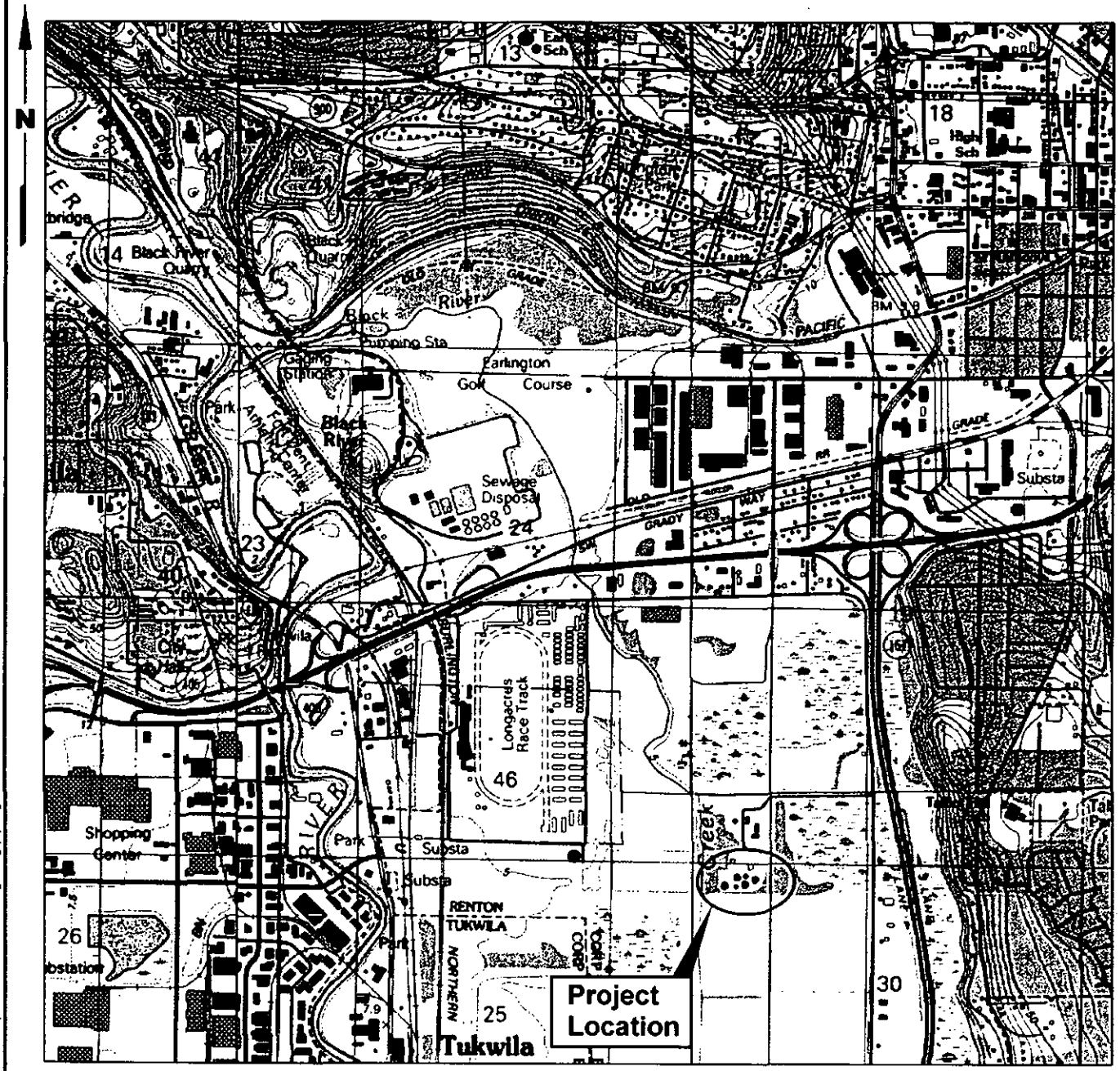
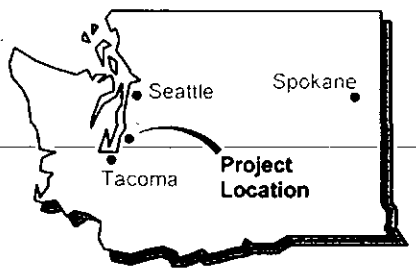
Remediation Technologies. 1994. *Environmental Baseline Assessment, Tosco Northwest Company, Pacific Northwest Marketing Properties, Acquired from BP Exploration and Oil, Inc., Renton Terminal.* Prepared for Tosco Northwest Company. May.

Kleinfelder. 2002. *2002 Groundwater Monitoring Report, Former Mobil Oil Renton Terminal (Site #46-080), 2423 Lind Avenue Southwest, Renton, Washington.* Prepared for Exxon Mobil Corporation. July 1.





0 2000 4000

Scale in Feet

Tosco-Renton\Release Report & Air Permit | T:\706\002\012\Release Rpt & Air Permit-Final\Fig1.dwg (A) 'Figure 1" 2/11/2003

LANDAU ASSOCIATES

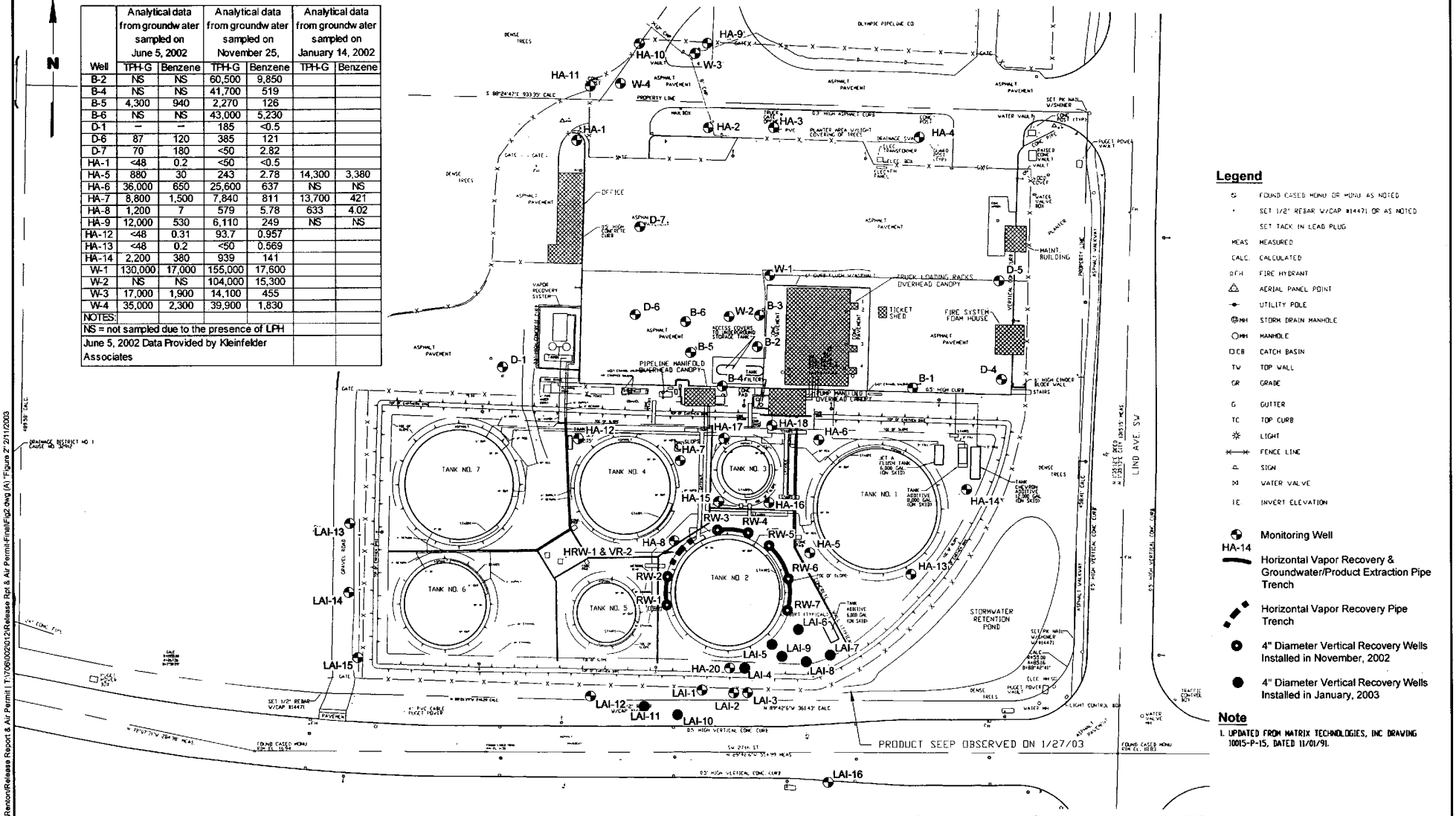
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Vicinity Map**	Figure 1

Well	Analytical data from groundwater sampled on June 5, 2002 TPH-G	Benzene	Analytical data from groundwater sampled on November 25, TPH-G	Benzene	Analytical data from groundwater sampled on January 14, 2002 TPH-G	Benzene
B-2	NS	NS	60,500	9,850		
B-4	NS	NS	41,700	519		
B-5	4,300	940	2,270	126		
B-6	NS	NS	43,000	5,230		
D-1	--	--	185	<0.5		
D-6	87	120	385	121		
D-7	70	180	<50	2.82		
HA-1	<48	0.2	<50	<0.5		
HA-5	880	30	243	2.78	14,300	3,380
HA-6	36,000	650	25,600	637	NS	NS
HA-7	8,800	1,500	7,840	811	13,700	421
HA-8	1,200	7	579	5.78	633	4.02
HA-9	12,000	530	6,110	249	NS	NS
HA-12	<48	0.31	93.7	0.957		
HA-13	<48	0.2	<50	0.569		
HA-14	2,200	380	939	141		
W-1	130,000	17,000	155,000	17,600		
W-2	NS	NS	104,000	15,300		
W-3	17,000	1,900	14,100	455		
W-4	35,000	2,300	39,900	1,830		

NOTES:

NS = not sampled due to the presence of LPH

June 5, 2002 Data Provided by Kleinfelder Associates



Legend

- Monitoring Well
- HA-14 Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells Installed in November, 2002
- 4" Diameter Vertical Recovery Wells Installed in January, 2003

Note

1. UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160
Scale in Feet

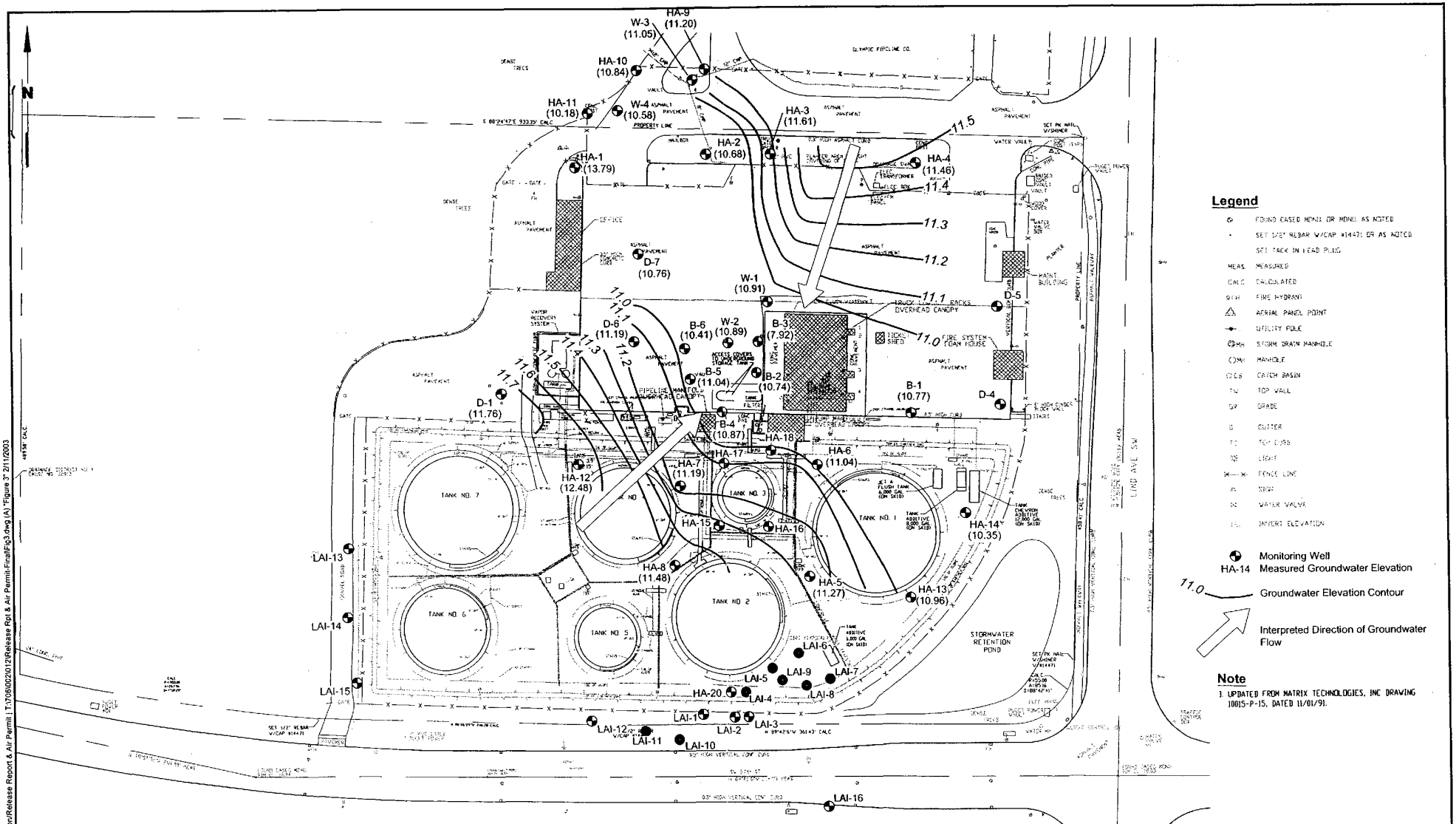
LANDAU ASSOCIATES

ConocoPhillips
2423 Lind Avenue SW
Renton, Washington

Site Map with Analytical Data

Figure 2

Tosco-Renton\Release Report & Air Permit | T:\7060002012\Release Rpt & Air Permit-Final\Fig2.dwg (A) Figure 2* 2/11/2003



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC. CALCULATED
- FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- STORM DRAIN MANHOLE
- MANHOLE
- CATCH BASIN
- TOP WALL
- GRADE
- GUTTER
- TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- INVERT ELEVATION

- Monitoring Well
- HA-14 Measured Groundwater Elevation
- 11.0 Groundwater Elevation Contour
- Interpreted Direction of Groundwater Flow

Note

1. UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160
Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Surface Map November 24, 2002**	Figure 3

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL
2423 LIND AVENUE SW
RENTON, WASHINGTON

Well Identification	Date	Top of Casing Elevation, ft (a)(b)	Depth to Free Product, ft	Elevation of Free Product, ft	Product Thickness, ft	Depth to Groundwater, ft	Groundwater Elevation, ft
B-1	11/24/02	18.62	N/A	N/A	N/A	7.85	10.77
B-2	11/24/02	18.60	N/A	N/A	N/A	7.86	10.74
B-3	11/24/02	18.73	8.18	10.55	2.63	10.81	7.92
B-4	11/24/02	18.09	N/A	N/A	N/A	7.22	10.87
B-5	11/24/02	17.97	N/A	N/A	N/A	6.93	11.04
B-6	11/24/02	17.94	N/A	N/A	N/A	7.53	10.41
D-1	11/24/02	18.03	N/A	N/A	N/A	6.27	11.76
D-2	11/24/02	19.14	NG	NG	NG	NG	NG
D-4	11/24/02	17.82	NG	NG	NG	NG	NG
D-5	11/24/02	18.12	N/A	N/A	N/A	DRY	DRY
D-6	11/24/02	17.74	N/A	N/A	N/A	6.55	11.19
D-7	11/24/02	17.69	N/A	N/A	N/A	6.93	10.76
HA-1	11/24/02	19.50	N/A	N/A	N/A	5.71	13.79
HA-2	11/24/02	18.17	N/A	N/A	N/A	7.49	10.68
HA-3	11/24/02	21.03	N/A	N/A	N/A	9.42	11.61
HA-4	11/24/02	20.24	N/A	N/A	N/A	8.78	11.46
HA-5	11/24/02	18.07	N/A	N/A	N/A	6.80	11.27
HA-6	11/24/02	18.16	N/A	N/A	N/A	7.12	11.04
HA-7	11/24/02	18.44	N/A	N/A	N/A	7.25	11.19
HA-8	11/24/02	18.88	N/A	N/A	N/A	7.40	11.48
HA-9	11/24/02	19.40	N/A	N/A	N/A	8.20	11.20
HA-10	11/24/02	19.33	N/A	N/A	N/A	8.49	10.84
HA-11	11/24/02	18.51	N/A	N/A	N/A	8.33	10.18
HA-12	11/24/02	19.91	N/A	N/A	N/A	7.43	12.48
HA-13	11/24/02	19.56	N/A	N/A	N/A	8.60	10.96
HA-14	11/24/02	20.02	N/A	N/A	N/A	9.67	10.35
R-1	11/24/02	16.94	N/A	N/A	N/A	5.90	11.04
R-2	11/24/02	17.52	N/A	N/A	N/A	6.69	10.83
W-1	11/24/02	18.86	N/A	N/A	N/A	7.95	10.91
W-2	11/24/02	18.28	N/A	N/A	N/A	7.39	10.89
W-3	11/24/02	17.10	N/A	N/A	N/A	6.05	11.05
W-4	11/24/02	18.03	7.44	10.59	0.01	7.45	10.58
RW-1	11/20/02	21.68	8.25	13.43	0.95	9.2	12.48
RW-1	11/21/02	21.68	8.25	13.43	1.15	9.4	12.28
RW-1	11/22/02	21.68	8.22	13.46	1.20	9.42	12.26
RW-1	11/24/02	21.68	8.35	13.33	1.06	9.41	12.27
RW-1	01/02/03	21.68	5.61	16.07	0.21	5.82	15.86
RW-1	01/03/03	21.68	5.51	16.17	0.21	5.72	15.96
RW-1	01/06/03	21.68	5.35	16.33	0.29	5.64	16.04
RW-1	01/07/03	21.68	5.68	16.00	0.28	5.96	15.72
RW-1	01/08/03	21.68	5.95	15.73	0.28	6.23	15.45
RW-1	01/09/03	21.68	6.03	15.65	0.29	6.32	15.36
RW-1	01/10/03	21.68	6.20	15.48	0.30	6.5	15.18
RW-1	01/13/03	21.68	6.00	15.68	0.32	6.32	15.36
RW-1	01/14/03	21.68	5.72	15.96	0.73	6.45	15.23
RW-1	01/15/03	21.68	5.99	15.69	0.19	6.18	15.50
RW-1	01/16/03	21.68	6.10	15.58	0.30	6.4	15.28
RW-1	01/17/03	21.68	6.15	15.53	0.30	6.45	15.23
RW-1	01/20/03	21.68	6.34	15.34	0.35	6.69	14.99
RW-1	01/22/03	21.68	5.60	16.08	0.29	5.89	15.79
RW-2	11/20/02	21.49	8.05	13.44	1.35	9.4	12.09
RW-2	11/21/02	21.49	8.00	13.49	1.40	9.4	12.09

TABLE 1
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CONOCOPHILLIPS RENTON TERMINAL
2423 LIND AVENUE SW
RENTON, WASHINGTON

Well Identification	Date	Top of Casing Elevation, ft (a)(b)	Depth to Free Product, ft	Elevation of Free Product, ft	Product Thickness, ft	Depth to Groundwater, ft	Groundwater Elevation, ft
RW-2	11/22/02	21.49	8.00	13.49	1.41	9.41	12.08
RW-2	11/24/02	21.49	8.21	13.28	1.49	9.70	11.79
RW-2	01/02/03	21.49	6.11	15.38	2.27	8.38	13.11
RW-2	01/06/03	21.49	5.40	16.09	2.78	8.18	13.31
RW-2	01/07/03	21.49	6.41	15.08	0.54	6.95	14.54
RW-2	01/08/03	21.49	7.67	13.82	0.01	7.68	13.81
RW-2	01/09/03	21.49	8.72	12.77	0.01	8.73	12.76
RW-2	01/10/03	21.49	6.38	15.11	0.54	6.92	14.57
RW-2	01/13/03	21.49	8.42	13.07	0.10	8.52	12.97
RW-2	01/14/03	21.49	6.17	15.32	1.32	7.49	14.00
RW-2	01/15/03	21.49	5.95	15.54	0.85	6.80	14.69
RW-2	01/16/03	21.49	6.51	14.98	1.00	7.51	13.98
RW-2	01/17/03	21.49	6.40	15.09	1.12	7.52	13.97
RW-2	01/20/03	21.49	6.35	15.14	1.59	7.94	13.55
RW-2	01/22/03	21.49	5.86	15.63	2.74	8.60	12.89
RW-3	11/20/02	20.00	8.45	11.55	0.80	9.25	10.75
RW-3	11/21/02	20.00	8.27	11.73	1.20	9.47	10.53
RW-3	11/22/02	20.00	8.18	11.82	1.28	9.46	10.54
RW-3	11/24/02	20.00	7.94	12.06	1.68	9.62	10.38
RW-3	01/02/03	20.00	6.52	13.48	0.04	6.56	13.44
RW-3	01/03/03	20.00	6.38	13.62	0.23	6.61	13.39
RW-3	01/06/03	20.00	5.92	14.08	0.03	5.95	14.05
RW-3	01/07/03	20.00	5.81	14.19	0.04	5.85	14.15
RW-3	01/08/03	20.00	5.74	14.26	0.05	5.79	14.21
RW-3	01/09/03	20.00	5.78	14.22	0.05	5.83	14.17
RW-3	01/10/03	20.00	5.88	14.12	0.05	5.93	14.07
RW-3	01/13/03	20.00	6.02	13.98	0.08	6.10	13.90
RW-3	01/14/03	20.00	5.97	14.03	0.09	6.06	13.94
RW-3	01/15/03	20.00	5.87	14.13	0.12	5.99	14.01
RW-3	01/16/03	20.00	5.89	14.11	0.09	5.98	14.02
RW-3	01/17/03	20.00	5.85	14.15	0.07	5.92	14.08
RW-3	01/20/03	20.00	5.98	14.02	0.13	6.11	13.89
RW-3	01/22/03	20.00	5.91	14.09	0.09	6.00	14.00
RW-4	11/20/02	19.92	7.50	12.42	2.64	10.14	9.78
RW-4	11/21/02	19.92	7.50	12.42	2.64	10.14	9.78
RW-4	11/22/02	19.92	8.37	11.55	0.77	9.14	10.78
RW-4	11/24/02	19.92	7.57	12.35	2.52	10.09	9.83
RW-4	01/03/03	19.92	6.31	13.61	0.50	6.81	13.11
RW-4	01/06/03	19.92	6.02	13.90	0.04	6.06	13.86
RW-4	01/07/03	19.92	5.74	14.18	0.18	5.92	14.00
RW-4	01/08/03	19.92	5.67	14.25	0.14	5.81	14.11
RW-4	01/09/03	19.92	5.67	14.25	0.19	5.86	14.06
RW-4	01/10/03	19.92	5.76	14.16	0.25	6.01	13.91
RW-4	01/13/03	19.92	5.80	14.12	0.35	6.15	13.77
RW-4	01/14/03	19.92	5.85	14.07	0.29	6.14	13.78
RW-4	01/15/03	19.92	5.05	14.87	1.80	6.85	13.07
RW-4	01/16/03	19.92	5.78	14.14	0.27	6.05	13.87
RW-4	01/17/03	19.92	5.72	14.20	0.27	5.99	13.93
RW-4	01/20/03	19.92	5.84	14.08	0.30	6.14	13.78
RW-4	01/22/03	19.92	5.82	14.10	0.34	6.16	13.76
RW-5	11/20/02	20.64	8.65	11.99	0.02	8.67	11.97
RW-5	11/21/02	20.64	8.30	12.34	0.10	8.4	12.24

TABLE 1
GROUNDWATER ELEVATION DATA
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2423 LIND AVENUE SW
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Well Identification	Date	Top of Casing Elevation, ft (a)(b)	Depth to Free Product, ft	Elevation of Free Product, ft	Product Thickness, ft	Depth to Groundwater, ft	Groundwater Elevation, ft
RW-5	11/22/02	20.64	8.46	12.18	0.06	8.52	12.12
RW-5	11/24/02	20.64	8.63	12.01	0.28	8.91	11.73
RW-5	01/02/03	20.64	6.87	13.77	0.04	6.91	13.73
RW-5	01/03/03	20.64	6.77	13.87	0.03	6.8	13.84
RW-5	01/06/03	20.64	6.46	14.18	0.04	6.5	14.14
RW-5	01/07/03	20.64	6.36	14.28	0.06	6.42	14.22
RW-5	01/08/03	20.64	6.13	14.51	0.03	6.16	14.48
RW-5	01/09/03	20.64	6.25	14.39	0.03	6.28	14.36
RW-5	01/10/03	20.64	6.43	14.21	0.04	6.47	14.17
RW-5	01/13/03	20.64	6.48	14.16	0.03	6.51	14.13
RW-5	01/14/03	20.64	6.44	14.20	0.05	6.49	14.15
RW-5	01/15/03	20.64	6.37	14.27	0.04	6.41	14.23
RW-5	01/16/03	20.64	6.40	14.24	0.02	6.42	14.22
RW-5	01/17/03	20.64	6.37	14.27	0.04	6.41	14.23
RW-5	01/20/03	20.64	6.57	14.07	0.05	6.62	14.02
RW-5	01/22/03	20.64	6.60	14.04	0.08	6.68	13.96
RW-6	11/20/02	20.34	8.05	12.29	2.05	10.1	10.24
RW-6	11/21/02	20.34	8.40	11.94	0.15	8.55	11.79
RW-6	11/22/02	20.34	8.45	11.89	0.24	8.69	11.65
RW-6	11/24/02	20.34	8.65	11.69	0.33	8.98	11.36
RW-6	01/02/03	20.34	6.70	13.64	0.87	7.57	12.77
RW-6	01/07/03	20.34	6.50	13.84	0.26	6.76	13.58
RW-6	01/08/03	20.34	6.09	14.25	0.51	6.6	13.74
RW-6	01/09/03	20.34	6.28	14.06	0.38	6.66	13.68
RW-6	01/10/03	20.34	6.42	13.92	0.23	6.65	13.69
RW-6	01/13/03	20.34	8.16	12.18	0.07	8.23	12.11
RW-6	01/14/03	20.34	6.73	13.61	0.20	6.93	13.41
RW-6	01/15/03	20.34	6.30	14.04	0.60	6.90	13.44
RW-6	01/16/03	20.34	6.28	14.06	0.65	6.93	13.41
RW-6	01/17/03	20.34	6.99	13.35	-0.70	6.29	14.05
RW-6	01/20/03	20.34	6.31	14.03	0.63	6.94	13.40
RW-6	01/22/03	20.34	6.41	13.93	0.75	7.16	13.18
RW-7	11/20/02	19.95	7.65	12.30	2.46	10.11	9.84
RW-7	11/21/02	19.95	7.60	12.35	2.51	10.11	9.84
RW-7	11/22/02	19.95	8.03	11.92	1.75	9.78	10.17
RW-7	11/24/02	19.95	8.23	11.72	1.26	9.49	10.46
RW-7	01/02/03	19.95	6.44	13.51	0.40	6.84	13.11
RW-7	01/03/03	19.95	6.28	13.67	0.40	6.68	13.27
RW-7	01/06/03	19.95	5.93	14.02	0.12	6.05	13.90
RW-7	01/07/03	19.95	5.84	14.11	0.20	6.04	13.91
RW-7	01/08/03	19.95	5.66	14.29	0.20	5.86	14.09
RW-7	01/09/03	19.95	5.72	14.23	0.33	6.05	13.90
RW-7	01/10/03	19.95	5.90	14.05	0.25	6.15	13.80
RW-7	01/13/03	19.95	5.98	13.97	0.37	6.35	13.60
RW-7	01/14/03	19.95	5.97	13.98	0.27	6.24	13.71
RW-7	01/15/03	19.95	5.95	14.00	0.30	6.25	13.70
RW-7	01/16/03	19.95	5.84	14.11	0.41	6.25	13.70
RW-7	01/17/03	19.95	5.85	14.10	0.35	6.20	13.75
RW-7	01/20/03	19.95	6.02	13.93	0.53	6.55	13.40
RW-7	01/22/03	19.95	6.11	13.84	0.80	6.91	13.04
HA-16	12/05/02	19.01	7.60	11.41	0.05	7.65	11.36
HA-16	12/11/02	19.01	7.40	11.61	0.68	8.08	10.93

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL
2423 LIND AVENUE SW
RENTON, WASHINGTON

Well Identification	Date	Top of Casing Elevation, ft (a)(b)	Depth to Free Product, ft	Elevation of Free Product, ft	Product Thickness, ft	Depth to Groundwater, ft	Groundwater Elevation, ft
HA-16	12/13/02	19.01	7.33	11.68	0.96	8.29	10.72
HA-16	12/17/02	19.01	6.67	12.34	1.54	8.21	10.80
HA-16	01/02/03	19.01	5.60	13.41	0.22	5.82	13.19
HA-16	01/06/03	19.01	5.08	13.93	0.02	5.1	13.91
HA-16	01/07/03	19.01	5.05	13.96	0.02	5.07	13.94
HA-16	01/08/03	19.01	4.95	14.06	0.03	4.98	14.03
HA-16	01/09/03	19.01	4.92	14.09	0.02	4.94	14.07
HA-16	01/10/03	19.01	4.94	14.07	0.02	4.96	14.05
HA-16	01/14/03	19.01	9.09	9.92	-3.97	5.12	13.89
HA-16	01/15/03	19.01	5.00	14.01	0.05	5.05	13.96
HA-16	01/16/03	19.01	4.92	14.09	0.04	4.96	14.05
HA-16	01/17/03	19.01	4.95	14.06	0.02	4.97	14.04
HA-16	01/20/03	19.01	4.98	14.03	0.04	5.02	13.99
HA-20	11/27/02	17.46	6.46	11.00	3.51	9.97	7.49
HA-20	12/05/02	17.46	6.25	11.21	3.57	9.82	7.64
HA-20	12/11/02	17.46	6.25	11.21	3.48	9.73	7.73
HA-20	12/13/02	17.46	6.12	11.34	3.55	9.67	7.79
HA-20	12/17/02	17.46	5.29	12.17	4.20	9.49	7.97
HA-20	01/03/03	17.46	3.26	14.20	4.39	7.65	9.81
HA-20	01/06/03	17.46	3.83	13.63	3.10	6.93	10.53
HA-20	01/07/03	17.46	4.45	13.01	1.16	5.61	11.85
HA-20	01/08/03	17.46	4.22	13.24	1.57	5.79	11.67
HA-20	01/09/03	17.46	3.97	13.49	3.11	7.08	10.38
HA-20	01/10/03	17.46	4.04	13.42	3.24	7.28	10.18
HA-20	01/13/03	17.46	9.75	7.71	-4.08	5.67	11.79
HA-20	01/14/03	17.46	4.15	13.31	3.47	7.62	9.84
HA-20	01/15/03	17.46	4.05	13.41	3.10	7.15	10.31
HA-20	01/16/03	17.46	4.15	13.31	2.90	7.05	10.41
HA-20	01/17/03	17.46	4.18	13.28	2.82	7.00	10.46
HA-20	01/20/03	17.46	4.15	13.31	3.09	7.24	10.22
HA-20	01/22/03	17.46	3.30	14.16	6.50	9.80	7.66

(a) Top of Casing Elevation values are not related to Mean Sea Level (MSL) elevations.

(b) All well elevation data provided for wells RW-1 through RW-7, HA-16, and HA-20 collected by Landau Associates relative to well HA-5. All other well elevation data derived from Kleinfelder Associates.

N/A = Not applicable; free product not detected.

NG = Not gauged.

NM = Not measured.

-- = Data not available, well elevation unknown.

TABLE 2
GROUNDWATER ANALYTICAL DATA SUMMARY
CONOCOPHILLIPS CORPORATION RENTON TERMINAL
2423 LIND AVENUE SW
RENTON, WASHINGTON

Well Identification	Date Sampled	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
B-2	5-Jun-02	NS	NS	NS	NS	NS
	24-Nov-02	60,500	9850	1780	1280	9220
B-4	5-Jun-02	NS	NS	NS	NS	NS
	24-Nov-02	41,700	519	295	2180	10500
B-5	5-Jun-02	4,300	940	23	230	560
	24-Nov-02	2,270	126	4.31	37.4	67.4
B-6	5-Jun-02	NS	NS	NS	NS	NS
	24-Nov-02	43,000	5230	5410	525	5460
D-1	5-Jun-02	--	--	--	--	--
	24-Nov-02	185	<0.5	1.12	<0.5	2.16
D-6	5-Jun-02	87	120	9.6	2.3	5.8
	24-Nov-02	385	121	10.7	1.2	5.59
D-7	5-Jun-02	70	180	6.7	.72J	8.1
	24-Nov-02	<50	2.82	0.614	<0.5	1.12
HA-1	5-Jun-02	<48	<0.2	.35J	<0.2	<0.6
	24-Nov-02	<50	<0.5	<0.5	<0.5	<1.0
HA-5	5-Jun-02	880	30	5.3	140	16
	24-Nov-02	243	2.78	1.51	<0.5	3.81
	14-Jan-03	14,300	3380	2870	43.6	151
HA-6	5-Jun-02	36,000	650	210	1700	7100
	24-Nov-02	25,600	637	181	1320	5620
HA-7	5-Jun-02	8,800	1500	73	760	1000
	24-Nov-02	7,840	811	41.1	402	580
	14-Jan-03	13,700	421	56.2	261	2,350
HA-8	5-Jun-02	1,200	6.8	4.4	31	160
	24-Nov-02	579	5.78	16.9	12.6	57.8
	14-Jan-03	633	4.02	16.5	16.3	207
HA-9	5-Jun-02	12,000	530	13	810	910
	24-Nov-02	6,110	249	3.55	349	187
HA-12	5-Jun-02	<48	0.31J	<0.2	<0.2	<0.6
	24-Nov-02	93.7	0.957	3.85	1.52	10.8
HA-13	5-Jun-02	<48	<0.2	<0.2	<0.2	<0.6
	24-Nov-02	<50	0.569	1.8	0.667	5.74
HA-14	5-Jun-02	2,200	380	16	470	32
	24-Nov-02	939	141	15.7	169	48.1
HA-15	14-Jan-03	344	3.34	0.672	<0.5	2.51
HA-17	14-Jan-03	548	10.2	<1.25	1.55	2.61
HA-18	14-Jan-03	11,400	40.3	75.9	810	2,220
W-1	5-Jun-02	130,000	17000	27000	2700	19000
	24-Nov-02	155,000	17600	24800	2950	19500
W-2	5-Jun-02	NS	NS	NS	NS	NS
	24-Nov-02	104,000	15300	15800	1960	11700
W-3	5-Jun-02	17,000	1900	45	640	2300
	24-Nov-02	14,100	455	156	463	1570
W-4	5-Jun-02	35,000	2300	32	1800	3500
	24-Nov-02	39,900	1830	38.2	2550	4220
LAI-1	15-Jan-03	4,120	728	935	22.8	120
LAI-2	15-Jan-03	72.6	2.78	2.20	1.10	9.33
LAI-3	15-Jan-03	66.6	<0.5	3.19	1.36	8.45
LAI-12 (duplicate of LAI-2)	15-Jan-03	103	3.39	3.36	1.68	15.1

NS = Not sampled.
DET = Analyte identified as present above the indicated concentration using the NWHCID analytical method.
-- = Data not available.
ND = Analyte not detected above the indicated concentration.
NA = Not analyzed.
TPH-G = Gasoline-range total petroleum hydrocarbons.
µg/L = micrograms per liter

APPENDIX A

Soil Boring and Well Completion Logs

Soil Classification System

MAJOR DIVISIONS			GRAPHIC SYMBOL	USCS LETTER SYMBOL[1]	TYPICAL DESCRIPTIONS[2][3]
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	GRAVEL AND GRAVELLY SOIL (More than 50% of coarse fraction retained on No. 4 sieve)	CLEAN GRAVEL (Little or no fines)		GW	Well-graded gravel; gravel/sand mixture(s); little or no fines
				GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines
		GRAVEL WITH FINES (Appreciable amount of fines)		GM	Silty gravel; gravel/sand/silt mixture(s)
				GC	Clayey gravel; gravel/sand/clay mixture(s)
	SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)		SW	Well-graded sand; gravelly sand; little or no fines
				SP	Poorly graded sand; gravelly sand; little or no fines
		SAND WITH FINES (Appreciable amount of fines)		SM	Silty sand; sand/silt mixture(s)
				SC	Clayey sand; sand/clay mixture(s)
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid limit less than 50)			ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity
				CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay
				OL	Organic silt; organic, silty clay of low plasticity
	SILT AND CLAY (Liquid limit greater than 50)			MH	Inorganic silt; micaceous or diatomaceous fine sand
				CH	Inorganic clay of high plasticity; fat clay
				OH	Organic clay of medium to high plasticity; organic silt
	HIGHLY ORGANIC SOIL			PT	Peat; humus; swamp soil with high organic content

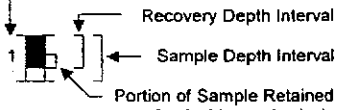
OTHER MATERIALS	GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
PAVEMENT		AC or PC	Asphalt concrete pavement or Portland cement pavement
ROCK		RK	Rock (See Rock Classification)
WOOD		WD	Wood, lumber, wood chips
DEBRIS		DB	Construction debris, garbage

Notes:
1. USCS letter symbols correspond to the symbols used by the Unified Soil Classification System and ASTM classification methods. Dual letter symbols (e.g., SP-SM) for a sand or gravel indicate a soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
2. Soil descriptions are based on the general approach presented in the *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*, as outlined in ASTM D 2488. Where laboratory index testing has been conducted, soil classifications are based on the *Standard Test Method for Classification of Soils for Engineering Purposes*, as outlined in ASTM D 2487.
3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows:

Primary Constituent:	> 50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.
Secondary Constituents:	> 30% and ≤ 50% - "very gravelly," "very sandy," "very silty," etc.
	> 15% and ≤ 30% - "gravelly," "sandy," "silty," etc.
Additional Constituents:	> 5% and ≤ 15% - "with gravel," "with sand," "with silt," etc.
	≤ 5% - "trace gravel," "trace sand," "trace silt," etc., or not noted.

Drilling and Sampling Key

SAMPLE NUMBER & INTERVAL



SAMPLER TYPE

Code	Description
a	3.25-inch O.D., 2.42-inch I.D. Split Spoon
b	2.00-inch O.D., 1.50-inch I.D. Split Spoon
c	Shelby Tube
d	Grab Sample
e	Other - See text if applicable
1	300-lb Hammer, 30-inch Drop
2	140-lb Hammer, 30-inch Drop
3	Pushed
4	Other - See text if applicable

Groundwater

▽ ATD — Approximate water elevation at time of drilling (ATD) or on date noted. Groundwater levels can fluctuate due to precipitation, seasonal conditions, and other factors.

Field and Lab Test Data

Code	Description
PP = 1.0	Pocket Penetrometer, tsf
TV = 0.5	Torvane, tsf
PID = 100	Photoionization Detector VOC screening, ppm
W = 10	Moisture Content, %
D = 120	Dry Density, pcf
-200 = 60	Material smaller than No. 200 sieve, %
GS	Grain Size - See separate figure for data
AL	Atterberg Limits - See separate figure for data
GT	Other Geotechnical Testing
CA	Chemical Analysis

2/10/03 \\EDMNAS\GINT\GINTWP\PROJECTS\706002.GPJ SOIL CLASS SHEET

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Renton, Washington

Soil Classification System and Key

Figure A-1

HA-15

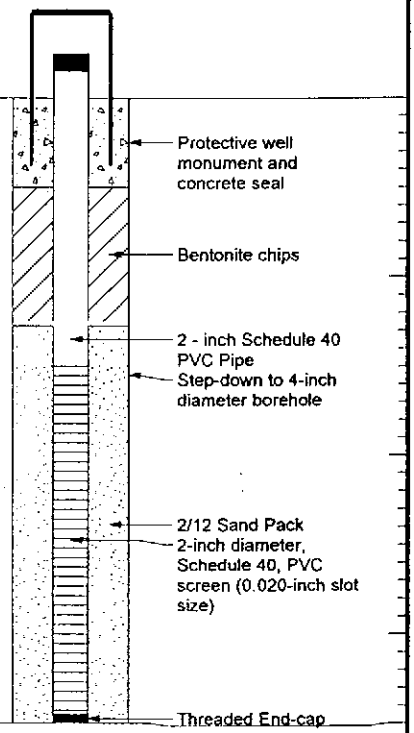
SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level
0						SM	Brown, silty, fine SAND with gravel (medium dense, moist)
						SP	Gray, fine SAND with trace gravel (medium dense, moist)
2						SP	Blue-gray, fine SAND with trace gravel (medium dense, moist to wet) (strong petroleum odor)
4						SP	Gray, fine SAND with trace coarse sand and gravel (medium dense, wet)
6							ATD ▽
8							
10							
12							
14							

Drilling Method: Hand Auger

Ground Elevation (ft):

Drilled By: Cascade Drilling Inc.

Detail



Boring Completed 11/25/02
Total Depth of Boring = 7.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTW\PROJECTS\706002.GPJ WELL LOG

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Log of HA-15

Figure A-2

HA-16

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Hand Auger

Ground Elevation (ft):

Drilled By: Cascade Drilling Inc.

Depth (ft)	USCS Symbol	Description
0	SM	Brown, silty, fine SAND with gravel (medium dense, moist)
	SP	Brown-gray, fine SAND with trace gravel (medium dense, moist to wet)
2	SP	Blue-gray, fine SAND with trace gravel (medium dense, moist to wet) (slight petroleum odor)

Detail

- Protective well monument and concrete seal
- Bentonite chips
- Step-down to 4-inch diameter borehole
- 2 - inch Schedule 40 PVC Pipe
- 2/12 Sand Pack
- 2-inch diameter, Schedule 40, PVC screen (0.020-inch slot size)
- Threaded end cap

ATD ▽

Boring Completed 11/25/02
Total Depth of Boring = 9.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ WELL LOG

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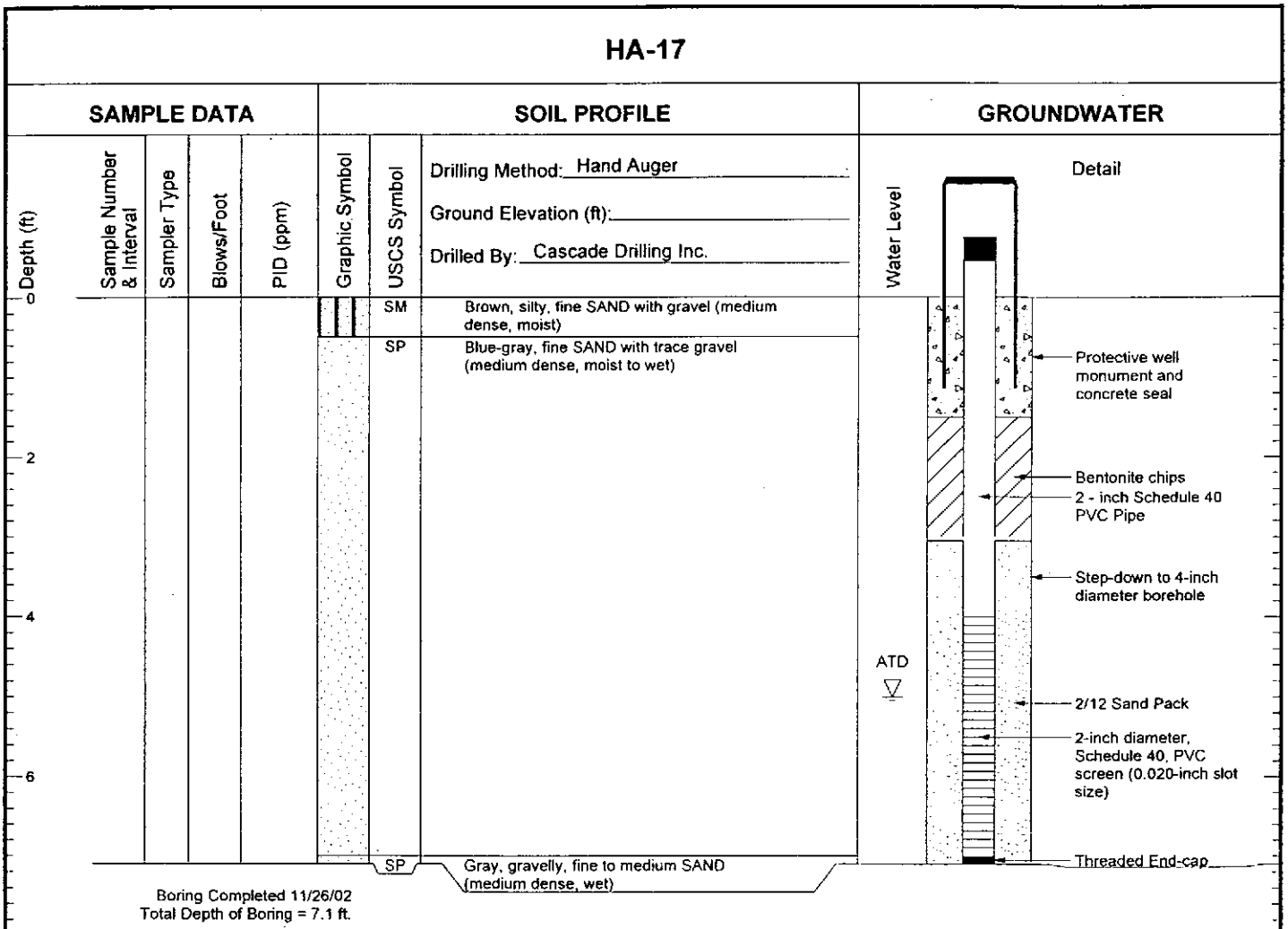
Renton, Washington

Log of HA-16

Figure A-3

HA-17



Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ WELL LOG

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Log of HA-17

Figure
A-4

HA-18

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Hand Auger

Ground Elevation (ft):

Drilled By: Cascade Drilling Inc.

Depth (ft)	USCS Symbol	Description
0	SM	Brown, silty, fine SAND with gravel (medium dense, moist)
	SP	Gray, fine SAND with trace gravel and trace silt (medium dense, moist to wet) (moderate petroleum odor)
6		Sand wet with gasoline @ 5.0 ft (strong petroleum odor)

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 2 - inch Schedule 40 PVC Pipe
- Step-down to 4-inch diameter borehole
- 2/12 Sand Pack
- 2 - inch Diameter Schedule 40 PVC Screen (0.01 - inch slot size)
- Threaded End-cap

ATD ▽

Boring Completed 11/26/02
Total Depth of Boring = 7.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

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Renton, Washington

Log of HA-18

Figure A-5

HA-20

SAMPLE DATA | **SOIL PROFILE** | **GROUNDWATER**

Drilling Method: Hand Auger
Ground Elevation (ft): _____
Drilled By: Cascade Drilling Inc.

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Soil Description
0						SP	Brown, fine SAND with gravel (medium dense, moist)
2							(strong gasoline odor @ 2 ft.)
						SP	Gray, fine SAND with trace gravel (medium dense, moist) (strong gasoline odor)
4							
6							Gasoline product level @ 5.7 ft Groundwater level at @ 9.0 ft
8							
10						ML	Brown SILT with roots (medium stiff, moist to wet)
12							
14							

Water Level: ATD ▽

Detail:
- Protective well monument and concrete seal
- Bentonite chips
- 2 - inch Schedule 40 PVC Pipe
- Step-down to 4-inch diameter borehole
- 2/12 Sand Pack
- 2 - inch Diameter Schedule 40 PVC Screen (0.01 - inch slot size)
- Threaded End-cap

Boring Completed 11/26/02
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ WELL LOG

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ConocoPhillips - Renton Terminal
Renton, Washington

Log of HA-20

Figure A-6

LAI-1

SAMPLE DATA				SOIL PROFILE			GROUNDWATER	
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SP/ SM	Light brown, fine to medium SAND with silt and gravel (loose, moist) (no odor, no sheen)	
2	1	a2	16	10				
4	2	a2	44	5				
6						SP	Gray, fine to medium SAND with gravel (loose to medium dense, wet) (very slight gasoline-like odor, no sheen)	ATD
8	3	a2	22	0				
10	4	a2	24	0		ML	Light brown, SILT with roots (stiff, moist) (no odor, no sheen)	
12								
14								

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 4-inch diameter, Schedule 40, PVC well casing
- 2/12 Sand Pack
- 4-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)
- Threaded end cap

Boring Completed 01/03/03
Total Depth of Boring = 10.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWAPROJECTS\706002.GPJ WELL LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-1

Figure
A-7

LAI-2

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
1	a2	18	37.9		SP/ SM	Light brown, fine to medium SAND with silt and gravel (loose, moist) (no odor, no sheen)	
2	a2	35	53				
3	a2	30	0.8		SP	Gray, fine to coarse SAND with gravel (medium dense to very dense, wet) (no odor, no sheen)	ATD
4	a2	50/6"	0				
5	a2	26	0		ML	Brown, SILT with roots (very stiff, moist) (no odor, no sheen)	

Depth (ft): 0, 2, 4, 6, 8, 10, 12, 14

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 4-inch diameter, Schedule 40, PVC well casing
- 2/12 Sand Pack
- 4-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)
- Threaded end cap

Boring Completed 01/03/03
Total Depth of Boring = 10.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTW\PROJECTS\706002.GPJ WELL LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-2

Figure A-8

LAI-3

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SP/ SM	Light brown, fine to medium SAND with silt and gravel (loose, moist) (no odor, no sheen)	
2	1	a2	18	9				
4	2	a2	25	10				
6	3	a2	26	3				ATD
8						SP	Gray, fine to medium SAND with gravel (loose, wet) (very slight gasoline-like odor, no sheen)	
10	4	a2	24	0				
12	5	a2	26	0		ML	Brown, SILT with roots (very stiff, moist) (no odor, no sheen)	
14								

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 4-inch diameter, Schedule 40, PVC well casing
- 2/12 Sand Pack
- 4-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)
- Threaded end cap

Boring Completed 01/03/03
Total Depth of Boring = 10.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ WELL LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-3

Figure
A-9

LAI-4

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Hollow-stem Auger
Ground Elevation (ft):
Drilled By: Cascade Drilling Inc.

Depth (ft)	USCS Symbol	Description
0	SP/ SM	Light brown, fine to medium SAND with silt and gravel (moist) (no odor, no sheen)
4	SP	Gray, fine to medium SAND with gravel (wet) (very strong gasoline-like odor, medium sheen)
10	ML	Brown, SILT with roots (moist) (no odor, no sheen)

ATD ▽

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 4-inch diameter, Schedule 40, PVC well casing
- 2/12 Sand Pack
- 4-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)
- Threaded End-cap

Boring Completed 01/20/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWP\PROJECTS\706002.GPJ WELL LOG

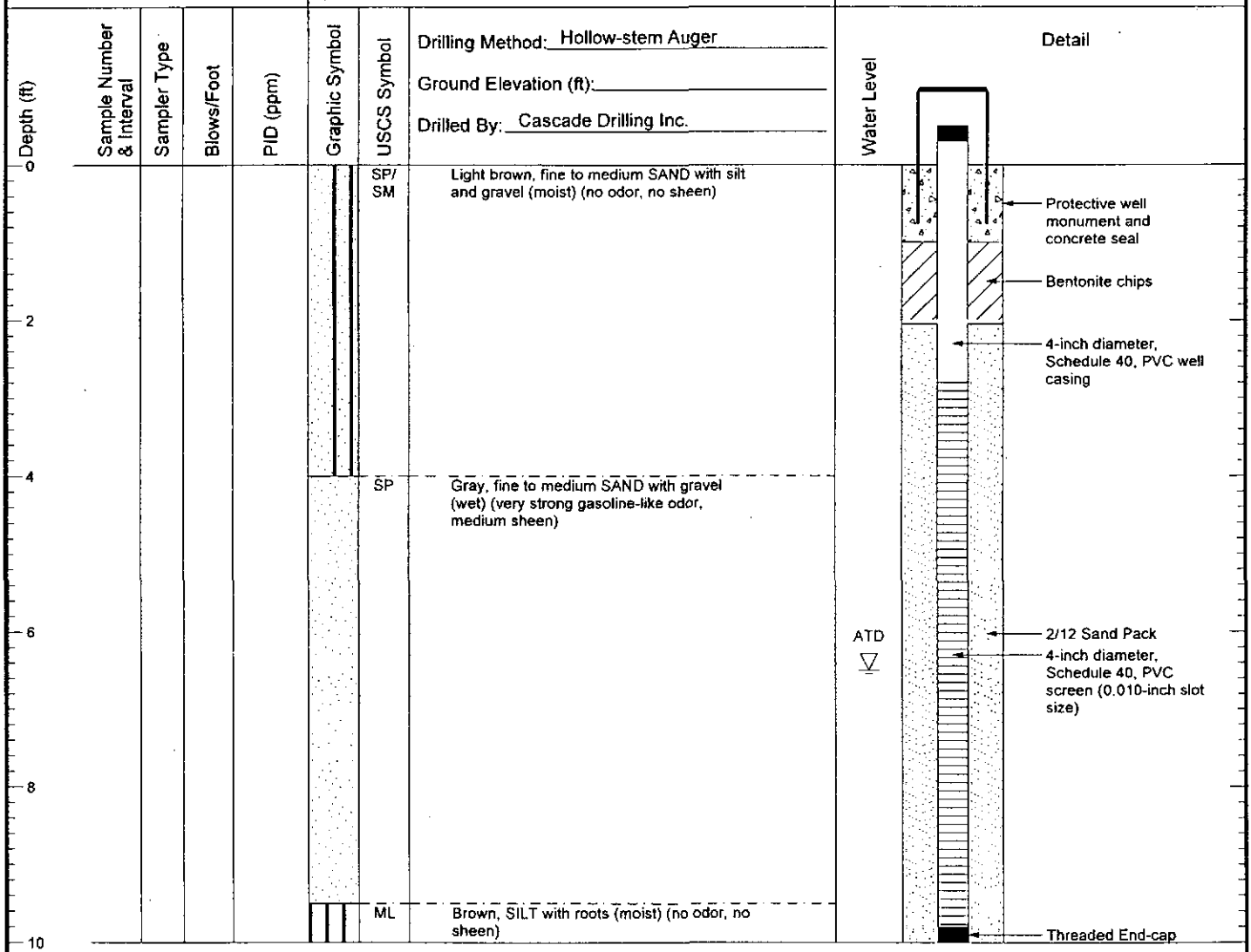
LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-4

Figure A-10

LAI-5



Boring Completed 01/20/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTW\PROJECTS\706002.GPJ WELL LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-5

Figure
A-11

LAI-6

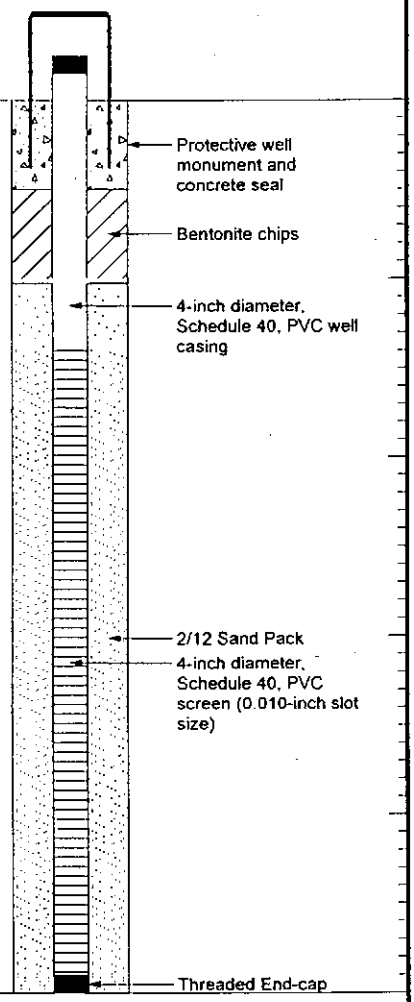
SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level
0						SP/SM	Light brown, fine to medium SAND with silt and gravel (moist) (no odor, no sheen)
4						SP	Gray, fine to medium SAND with gravel (wet) (very strong gasoline-like odor, medium sheen)
6							ATD ▽
10						ML	Brown, SILT with roots (moist) (no odor, no sheen)

Drilling Method: Hollow-stem Auger

Ground Elevation (ft):

Drilled By: Cascade Drilling Inc.

Detail



Boring Completed 01/20/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

7060002.012 2/10/03 \\EDMNAS\GINT\GINTWAPROJECTS\706002.GPJ WELL LOG

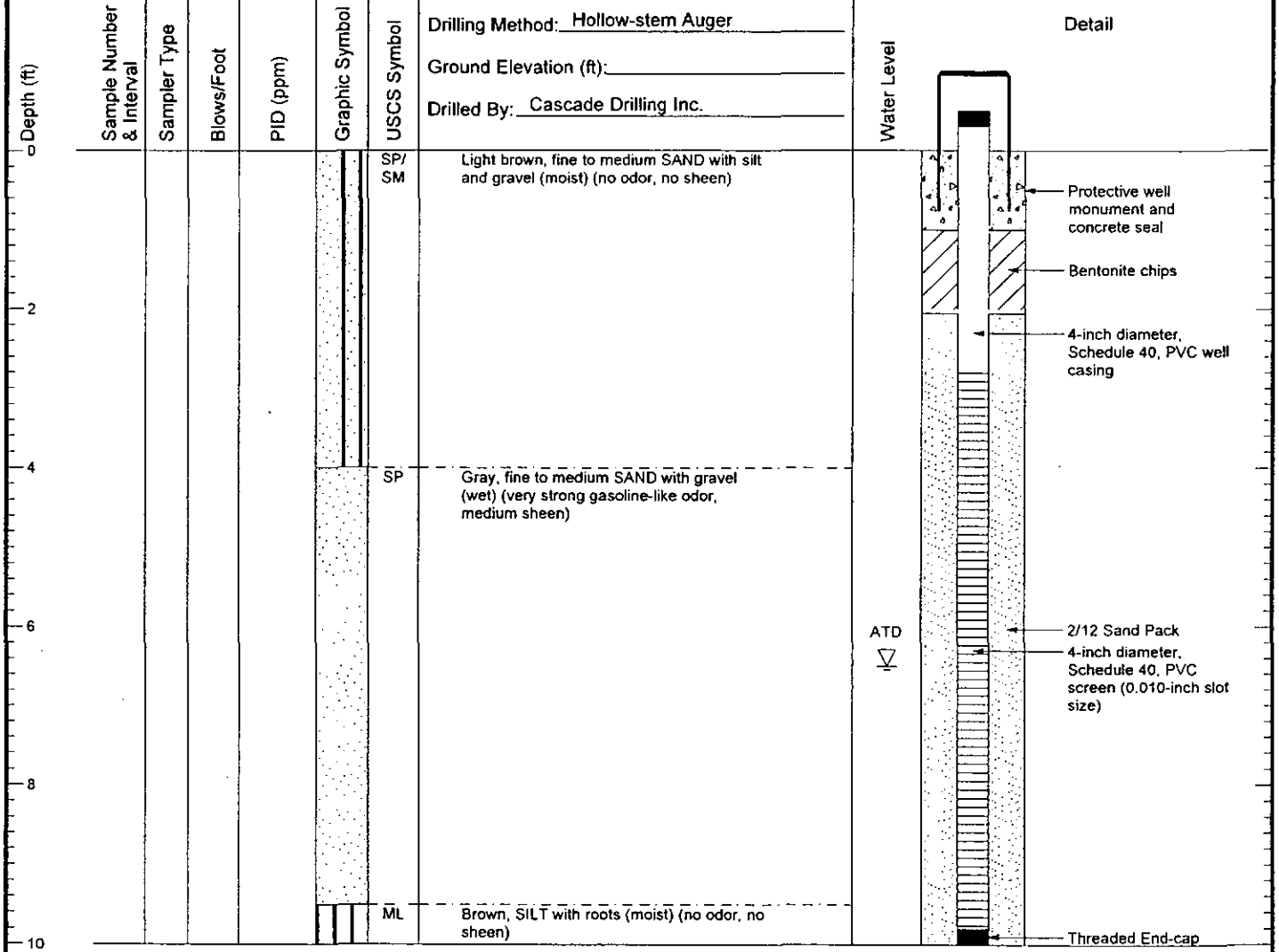
LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-6

Figure A-12

LAI-7



Boring Completed 01/21/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWP\PROJECTS\706002.GPJ WELL LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-7

Figure
A-13

LAI-8

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Water Level

Drilling Method: Hollow-stem Auger

Ground Elevation (ft):

Drilled By: Cascade Drilling Inc.

Depth (ft)	USCS Symbol	
0	SP/ SM	Light brown, fine to medium SAND with silt and gravel (moist) (no odor, no sheen)
4	SP	Gray, fine to medium SAND with gravel (wet) (very strong gasoline-like odor, medium sheen)
10	ML	Brown, SILT with roots (moist) (no odor, no sheen)

ATD

Detail

- Protective well monument and concrete seal
- Bentonite chips
- 4-inch diameter, Schedule 40, PVC well casing
- 2/12 Sand Pack
- 4-inch diameter, Schedule 40, PVC screen (0.010-inch slot size)
- Threaded End-cap

Boring Completed 01/21/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINT\WPROJECTS\706002.GPJ WELL LOG

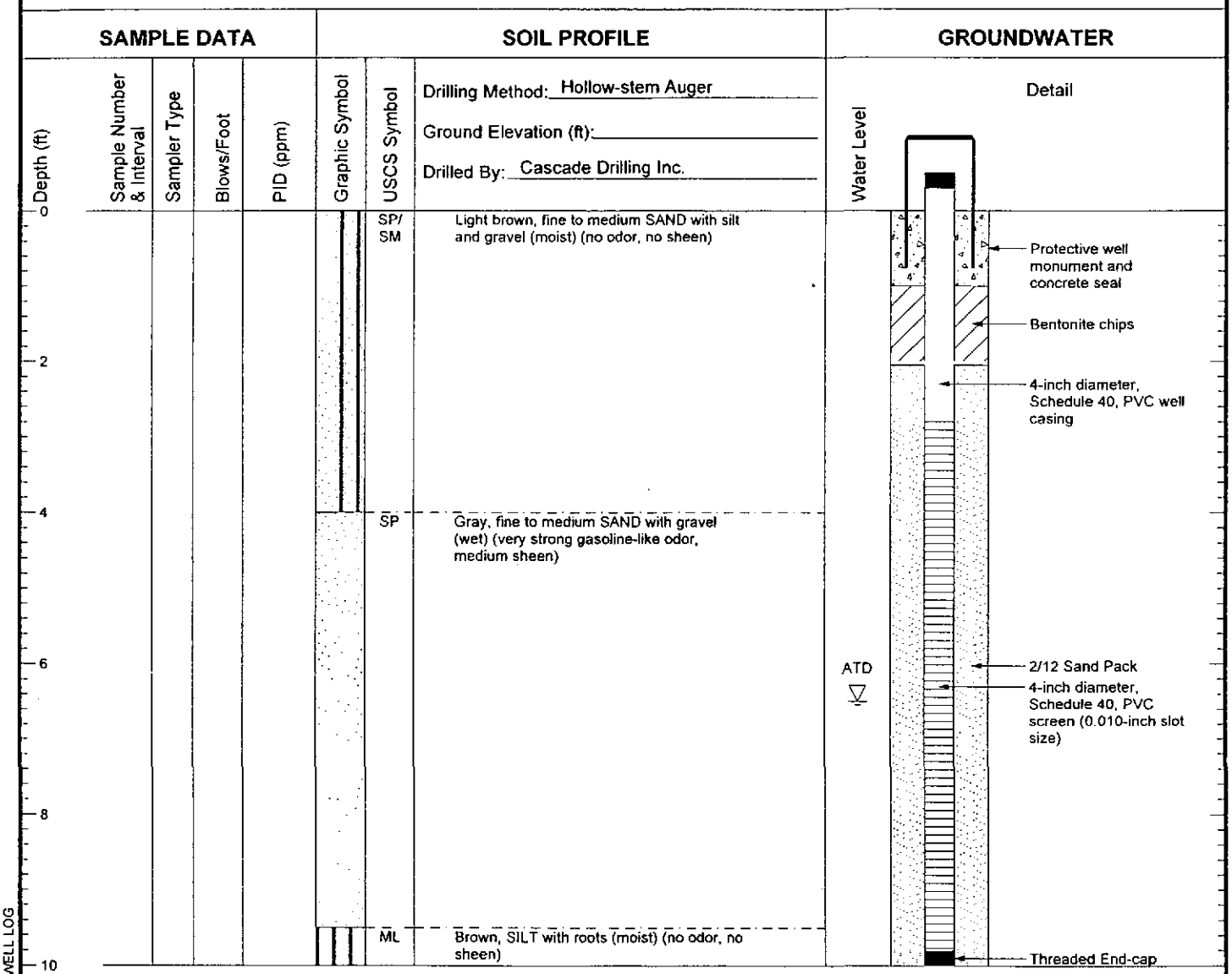
LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-8

Figure
A-14

LAI-9



Boring Completed 01/21/03
Total Depth of Boring = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ WELL LOG

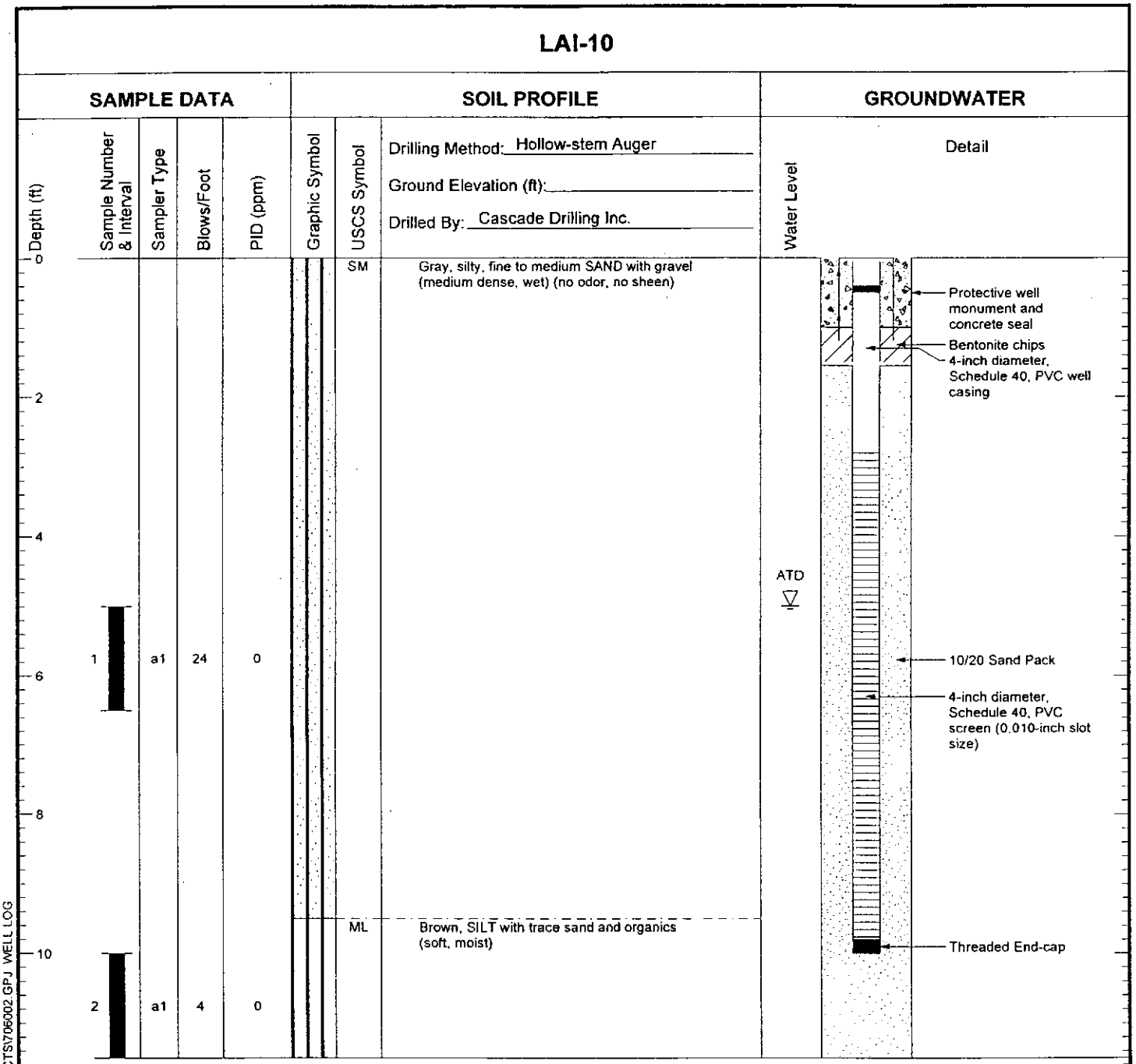
LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-9

Figure
A-15

LAI-10



Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWP\PROJECTS\706002.GPJ WELL LOG

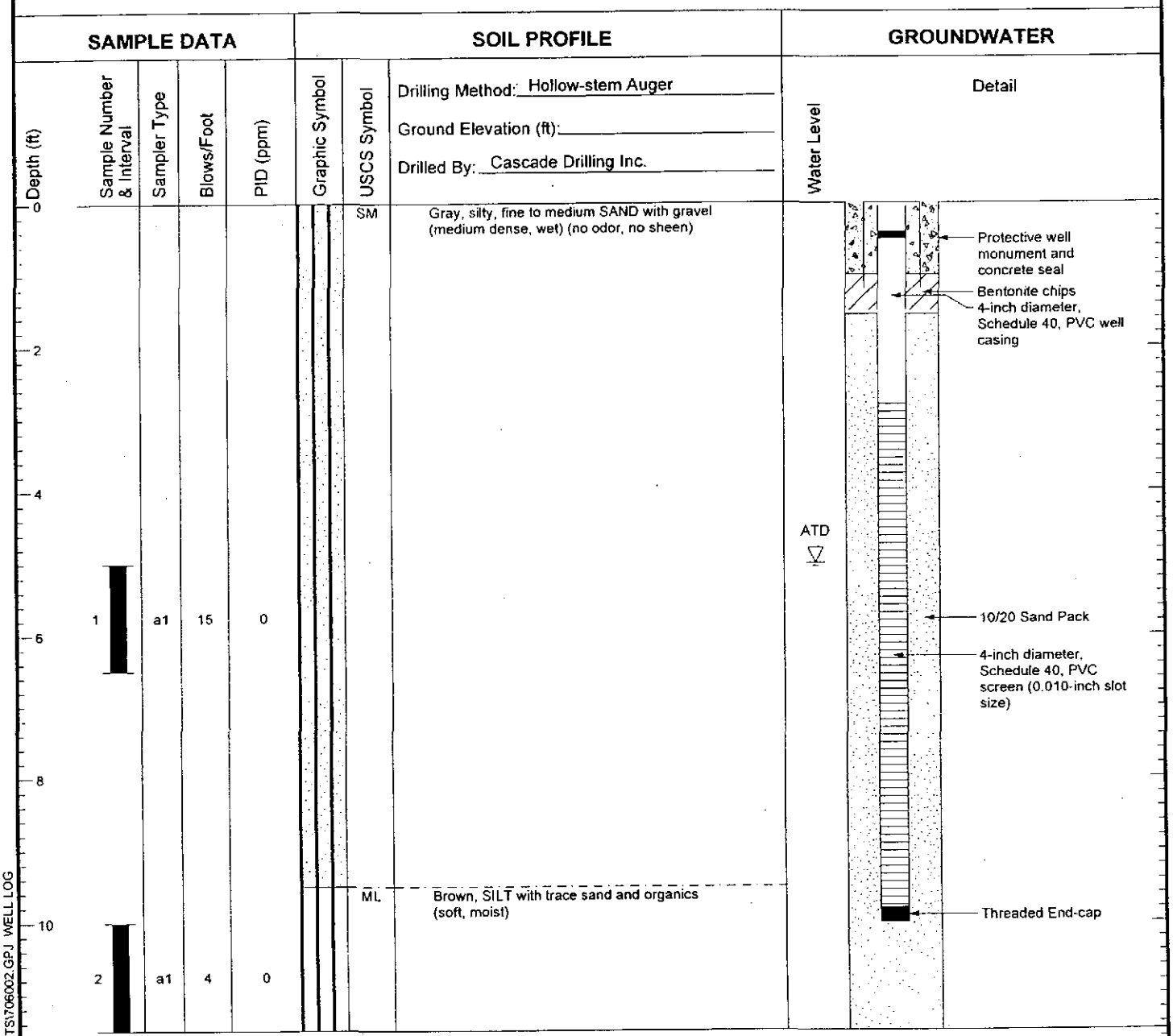
LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of LAI-10

Figure
A-16

LAI-11



Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/10/03 \\EDMNAS\GINT\GINTWAPROJECTS\706002.GPJ WELL LOG

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Renton, Washington

Log of LAI-11

Figure A-17

LAI-12

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SM	Gray, silty, fine to medium SAND with gravel (medium dense, wet) (no odor, no sheen)	
2								
4								▽ ATD
6	1	a1	26	0				
8								
10						ML	Brown, SILT with trace sand and organics (soft, moist)	
	2	a1	4	0				
12								
14								

Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/11/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

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Renton, Washington

Log of Boring LAI-12

Figure A-18

LAI-13

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SM	Gray, silty, fine to medium SAND with gravel (medium dense, wet) (no odor, no sheen)	
2								
4								▽ ATD
6	1	a1	23	0				
8								
10	2	a1	4	0				
12						ML	Brown, SILT with trace sand and organics (soft, moist)	
14								

Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/11/03 \\EDMNAS\GINT\GINTWPROJECTS\706002.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of Boring LAI-13

Figure
A-19

LAI-14

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SM	Gray, silty, fine to medium SAND with gravel (dense, wet) (no odor, no sheen)	
2								
4								▽ ATD
6	1	a1	32	0				
8								
10						ML	Brown, SILT with trace sand and organics (stiff, moist)	
	2	a1	11	0				
12								
14								

Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/11/03 \\EDMNAS\GINTG\INTWPROJECTS\706002.GPJ SOIL BORING LOG

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ConocoPhillips - Renton Terminal
Renton, Washington

Log of Boring LAI-14

Figure A-20

LAI-15

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SP/ SM	Light brown, fine to medium SAND with trace silt (loose, wet) (no odor, no sheen)	
2								
4								▽ ATD
6	1	a1	6	0				
8								
10						ML	Brown, sandy, SILT with organics (medium siff, moist)	
	2	a1	7	0				
12								
14								

Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/11/03 \\EDMNAS\GINTGINTWP\PROJECTS\706002.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of Boring LAI-15

Figure A-21

LAI-16

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-stem Auger Ground Elevation (ft): Drilled By: Cascade Drilling Inc.	Water Level
0						SM	Light brown, silty, fine to medium SAND with occasional gravel (loose, wet) (no odor, no sheen)	
2								
4								▽ ATD
6	1	a1	14	0				
8								
10						ML	Brown, SILT with trace sand and organics (medium siff, moist)	
	2	a1	4	0				
12								
14								

Boring Completed 01/29/03
Total Depth of Boring = 11.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

706002.012 2/11/03 \\EDMNAS\GINT\GINTWMPROJECTS\706002.GPJ SOIL BORING LOG

LANDAU ASSOCIATES

ConocoPhillips - Renton Terminal
Renton, Washington

Log of Boring LAI-16

Figure A-22

APPENDIX B

Groundwater Analytical Reports

DMTP

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

11 December 2002

DEC 16 2002

Jerry Ninteman
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129
RE: Tosco Terminal

Enclosed are the results of analyses for samples received by the laboratory on 11/25/02 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RW1-021124	B2K0572-01	Other wet	11/24/02 14:40	11/25/02 17:40
RW4-021124	B2K0572-02	Other wet	11/24/02 15:15	11/25/02 17:40
RW7-021124	B2K0572-03	Other wet	11/24/02 15:25	11/25/02 17:40
HA8-021124	B2K0572-04	Water	11/24/02 16:20	11/25/02 17:40
HA7-021125	B2K0572-05	Water	11/25/02 08:50	11/25/02 17:40
HA12-021125	B2K0572-06	Water	11/25/02 09:15	11/25/02 17:40
HA6-021125	B2K0572-07	Water	11/25/02 09:45	11/25/02 17:40
HA5-021125	B2K0572-08	Water	11/25/02 10:55	11/25/02 17:40
B4-021125	B2K0572-09	Water	11/25/02 12:10	11/25/02 17:40
B5-021125	B2K0572-10	Water	11/25/02 12:30	11/25/02 17:40
W2-021125	B2K0572-11	Water	11/25/02 16:00	11/25/02 17:40
HA13-021125	B2K0572-12	Water	11/25/02 15:20	11/25/02 17:40
HA14-021125	B2K0572-13	Water	11/25/02 15:00	11/25/02 17:40
W1-021125	B2K0572-14	Water	11/25/02 14:35	11/25/02 17:40
B3-021125	B2K0572-15	Other wet	11/25/02 13:10	11/25/02 17:40
B2-021125	B2K0572-16	Water	11/25/02 13:50	11/25/02 17:40
HA5-021122	B2K0572-17	Water	11/22/02 11:00	11/25/02 17:40
Trip Blanks	B2K0572-18	Water	11/25/02 12:00	11/25/02 17:40

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
RW1-021124 (B2K0572-01) Other wet	**Sampled: 11/24/02 14:40**		**Received: 11/25/02 17:40**						
Gx Range Hydrocarbons	**DET**	4000	mg/kg wet	20	2K27005	11/27/02	11/27/02	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Surrogate: 2-FBP	*%*	*50-150*			"	"	"	"	*S-01*
Surrogate: Octacosane	*%*	*50-150*			"	"	"	"	*S-01*
RW4-021124 (B2K0572-02) Other wet	**Sampled: 11/24/02 15:15**		**Received: 11/25/02 17:40**						
Gx Range Hydrocarbons	**DET**	4000	mg/kg wet	20	2K27005	11/27/02	11/27/02	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Surrogate: 2-FBP	*%*	*50-150*			"	"	"	"	*S-01*
Surrogate: Octacosane	*%*	*50-150*			"	"	"	"	*S-01*
RW7-021124 (B2K0572-03) Other wet	**Sampled: 11/24/02 15:25**		**Received: 11/25/02 17:40**						
Gx Range Hydrocarbons	**DET**	4000	mg/kg wet	20	2K27005	11/27/02	11/27/02	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Surrogate: 2-FBP	*%*	*50-150*			"	"	"	"	*S-01*
Surrogate: Octacosane	*%*	*50-150*			"	"	"	"	*S-01*

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
3-021125 (B2K0572-15) Other wet	**Sampled: 11/25/02 13:10**		**Received: 11/25/02 17:40**						
Gx Range Hydrocarbons	**DET**	4000	mg/kg wet	20	2K27005	11/27/02	11/27/02	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	10000	"	"	"	"	"	"	
Diesel Range Hydrocarbons	**DET**	10000	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	20000	"	"	"	"	"	"	
Surrogate: 2-FBP	*%*	*50-150*			"	"	"	"	*S-01*
Surrogate: Octacosane	*%*	*50-150*			"	"	"	"	*S-01*

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
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541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA8-021124 (B2K0572-04) Water	**Sampled: 11/24/02 16:20**		**Received: 11/25/02 17:40**						
Gasoline Range Hydrocarbons	**579**	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**5.78**	0.500	"	"	"	"	"	"	
Toluene	**16.9**	0.500	"	"	"	"	"	"	
Ethylbenzene	**12.6**	0.500	"	"	"	"	"	"	
Xylenes (total)	**57.8**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*90.8 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*80.8 %*	*62-120*			"	"	"	"	
HA7-021125 (B2K0572-05) Water	**Sampled: 11/25/02 08:50**		**Received: 11/25/02 17:40**						
Gasoline Range Hydrocarbons	**7840**	1000	ug/l	20	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**811**	10.0	"	"	"	"	"	"	
Toluene	**41.1**	10.0	"	"	"	"	"	"	
Ethylbenzene	**402**	10.0	"	"	"	"	"	"	
Xylenes (total)	**580**	20.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*86.9 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.1 %*	*62-120*			"	"	"	"	
HA12-021125 (B2K0572-06) Water	**Sampled: 11/25/02 09:15**		**Received: 11/25/02 17:40**						
Gasoline Range Hydrocarbons	**93.7**	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**0.957**	0.500	"	"	"	"	"	"	
Toluene	**3.85**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.52**	0.500	"	"	"	"	"	"	
Xylenes (total)	**10.8**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*82.9 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*79.6 %*	*62-120*			"	"	"	"	

Jeanne Garthwaite

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www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
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541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA6-021125 (B2K0572-07) Water	**Sampled: 11/25/02 09:45**	**Received: 11/25/02 17:40**							
Gasoline Range Hydrocarbons	**25600**	2500	ug/l	50	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**637**	25.0	"	"	"	"	"	"	
Toluene	**181**	25.0	"	"	"	"	"	"	
Ethylbenzene	**1320**	25.0	"	"	"	"	"	"	
Xylenes (total)	**5620**	50.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*91.5 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.0 %*	*62-120*			"	"	"	"	
HA5-021125 (B2K0572-08) Water	**Sampled: 11/25/02 10:55**	**Received: 11/25/02 17:40**							
Gasoline Range Hydrocarbons	**236**	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**2.94**	0.500	"	"	"	"	"	"	
Toluene	**1.67**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	**4.22**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*86.7 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.7 %*	*62-120*			"	"	"	"	
B4-021125 (B2K0572-09) Water	**Sampled: 11/25/02 12:10**	**Received: 11/25/02 17:40**							
Gasoline Range Hydrocarbons	**41700**	5000	ug/l	100	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**519**	50.0	"	"	"	"	"	"	
Toluene	**295**	50.0	"	"	"	"	"	"	
Ethylbenzene	**2180**	50.0	"	"	"	"	"	"	
Xylenes (total)	**10500**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*88.8 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.3 %*	*62-120*			"	"	"	"	

Jeanne Garthwaite

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www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B5-021125 (B2K0572-10) Water Sampled: 11/25/02 12:30 Received: 11/25/02 17:40									
Gasoline Range Hydrocarbons	**2270**	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**126**	2.50	"	5	"	"	12/04/02	"	
Toluene	**4.31**	0.500	"	1	"	"	12/04/02	"	
Ethylbenzene	**37.4**	0.500	"	"	"	"	"	"	
Xylenes (total)	**67.4**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*108 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*79.0 %*	*62-120*			"	"	"	"	
W2-021125 (B2K0572-11) Water Sampled: 11/25/02 16:00 Received: 11/25/02 17:40									
Gasoline Range Hydrocarbons	**104000**	5000	ug/l	100	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**15300**	100	"	200	"	"	12/04/02	"	
Toluene	**15800**	100	"	"	"	"	"	"	
Ethylbenzene	**1960**	50.0	"	100	"	"	12/04/02	"	
Xylenes (total)	**11700**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*90.0 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*80.8 %*	*62-120*			"	"	"	"	
HA13-021125 (B2K0572-12) Water Sampled: 11/25/02 15:20 Received: 11/25/02 17:40									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
Benzene	**0.569**	0.500	"	"	"	"	"	"	
Toluene	**1.80**	0.500	"	"	"	"	"	"	
Ethylbenzene	**0.667**	0.500	"	"	"	"	"	"	
Xylenes (total)	**5.74**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*85.4 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.1 %*	*62-120*			"	"	"	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

au Associates - Edmonds	Project: Tosco Terminal	
und View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
nds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
021125 (B2K0572-13) Water	**Sampled: 11/25/02 15:00**	**Received: 11/25/02 17:40**							
soline Range Hydrocarbons	**939**	50.0	ug/l	1	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
nzene	**141**	2.50	"	5	"	"	12/05/02	"	
ne	**15.7**	0.500	"	1	"	"	12/04/02	"	
benzene	**169**	2.50	"	5	"	"	12/05/02	"	
lenes (total)	**48.1**	1.00	"	1	"	"	12/04/02	"	
ate: 4-BFB (FID)	*100 %*	*57-125*			"	"	"	"	
gate: 4-BFB (PID)	*88.3 %*	*62-120*			"	"	"	"	
1-021125 (B2K0572-14) Water	**Sampled: 11/25/02 14:35**	**Received: 11/25/02 17:40**							
ne Range Hydrocarbons	**155000**	5000	ug/l	100	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
nzene	**17600**	250	"	500	"	"	12/05/02	"	
luene	**24800**	250	"	"	"	"	"	"	
benzene	**2950**	50.0	"	100	"	"	12/04/02	"	
es (total)	**19500**	100	"	"	"	"	"	"	
rogate: 4-BFB (FID)	*93.1 %*	*57-125*			"	"	"	"	
gate: 4-BFB (PID)	*83.5 %*	*62-120*			"	"	"	"	
-021125 (B2K0572-16) Water	**Sampled: 11/25/02 13:50**	**Received: 11/25/02 17:40**							
soline Range Hydrocarbons	**60500**	10000	ug/l	200	2L04008	12/04/02	12/04/02	NWTPH-Gx/8021B	
ne	**9850**	100	"	"	"	"	"	"	
luene	**1780**	100	"	"	"	"	"	"	
hylbenzene	**1280**	100	"	"	"	"	"	"	
es (total)	**9220**	200	"	"	"	"	"	"	
rogate: 4-BFB (FID)	*87.1 %*	*57-125*			"	"	"	"	
rrogate: 4-BFB (PID)	*80.6 %*	*62-120*			"	"	"	"	

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Lanne Garthwaite

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-021125 (B2K0572-09) Water Sampled: 11/25/02 12:10 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**5.46**	0.500	mg/l	2	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*90.4 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*78.8 %*	*43-126*			"	"	*12/02/02*	"	
B5-021125 (B2K0572-10) Water Sampled: 11/25/02 12:30 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**1.06**	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*75.5 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*85.8 %*	*43-126*			"	"	"	"	
W2-021125 (B2K0572-11) Water Sampled: 11/25/02 16:00 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**14.7**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**1.91**	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*43.4 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*77.2 %*	*43-126*			"	"	*12/02/02*	"	
W1-021125 (B2K0572-14) Water Sampled: 11/25/02 14:35 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**16.7**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*48.3 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*78.5 %*	*43-126*			"	"	*12/02/02*	"	
B2-021125 (B2K0572-16) Water Sampled: 11/25/02 13:50 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**13.2**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*33.1 %*	*36-119*			"	"	*12/03/02*	"	*S-01*
Surrogate: Octacosane	*83.4 %*	*43-126*			"	"	*12/02/02*	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
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Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA8-021124 (B2K0572-04) Water Sampled: 11/24/02 16:20 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*68.2 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*85.8 %*	*43-126*			"	"	"	"	
HA7-021125 (B2K0572-05) Water Sampled: 11/25/02 08:50 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**2.67**	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*81.1 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*86.1 %*	*43-126*			"	"	"	"	
HA12-021125 (B2K0572-06) Water Sampled: 11/25/02 09:15 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*62.9 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*78.8 %*	*43-126*			"	"	"	"	
HA6-021125 (B2K0572-07) Water Sampled: 11/25/02 09:45 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**1.43**	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*97.0 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*89.1 %*	*43-126*			"	"	"	"	
HA5-021125 (B2K0572-08) Water Sampled: 11/25/02 10:55 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*66.2 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*81.5 %*	*43-126*			"	"	"	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
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Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B4-021125 (B2K0572-09) Water Sampled: 11/25/02 12:10 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**5.46**	0.500	mg/l	2	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*90.4 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*78.8 %*	*43-126*			"	"	*12/02/02*	"	
B5-021125 (B2K0572-10) Water Sampled: 11/25/02 12:30 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**1.06**	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*75.5 %*	*36-119*			"	"	"	"	
Surrogate: Octacosane	*85.8 %*	*43-126*			"	"	"	"	
W2-021125 (B2K0572-11) Water Sampled: 11/25/02 16:00 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**14.7**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**1.91**	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*43.4 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*77.2 %*	*43-126*			"	"	*12/02/02*	"	
W1-021125 (B2K0572-14) Water Sampled: 11/25/02 14:35 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**16.7**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*48.3 %*	*36-119*			"	"	*12/03/02*	"	
Surrogate: Octacosane	*78.5 %*	*43-126*			"	"	*12/02/02*	"	
B2-021125 (B2K0572-16) Water Sampled: 11/25/02 13:50 Received: 11/25/02 17:40									
Diesel Range Hydrocarbons	**13.2**	2.50	mg/l	10	2K27024	11/27/02	12/03/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	1	"	"	12/02/02	"	
Surrogate: 2-FBP	*33.1 %*	*36-119*			"	"	*12/03/02*	"	*S-01*
Surrogate: Octacosane	*83.4 %*	*43-126*			"	"	*12/02/02*	"	

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

iau Associates - Edmonds	Project: Tosco Terminal	
ound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
onds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
021122 (B2K0572-17) Water	**Sampled: 11/22/02 11:00 Received: 11/25/02 17:40**								
esel Range Hydrocarbons	ND	0.250	mg/l	1	2K27024	11/27/02	12/02/02	NWTPH-Dx	
ibe Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
gate: 2-FBP	*67.9 %*	*36-119*			"	"	"	"	
rogate: Octacosane	*84.4 %*	*43-126*			"	"	"	"	

Jeanne Garthwaite

ane Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
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Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2L04008: Prepared 12/04/02 Using EPA 5030B (P/T)										
Matrix Spike Dup (2L04008-MSD1)					**Source: B2K0572-06**					
Gasoline Range Hydrocarbons	510	50.0	ug/l	502	93.7	82.9	70-130	4.03	25	
Benzene	7.11	0.500	"	6.20	0.957	99.2	80-134	1.56	40	
Toluene	37.3	0.500	"	38.1	3.85	87.8	68-114	2.44	40	
Ethylbenzene	9.68	0.500	"	8.94	1.52	91.3	72-128	0.622	40	
Xylenes (total)	50.0	1.00	"	44.0	10.8	89.1	67-125	1.01	40	
Surrogate: 4-BFB (FID)	*41.6*		"	*48.0*		*86.7*	*57-125*			
Surrogate: 4-BFB (PID)	*36.8*		"	*48.0*		*76.7*	*62-120*			

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Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2L04008: Prepared 12/04/02 Using EPA 5030B (P/T)										
Blank (2L04008-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*39.5*		"	*48.0*		*82.3*	*57-125*			
Surrogate: 4-BFB (PID)	*39.9*		"	*48.0*		*83.1*	*62-120*			
LCS (2L04008-BS1)										
Gasoline Range Hydrocarbons	483	50.0	ug/l	502		96.2	80-120			
Benzene	6.09	0.500	"	6.20		98.2	80-120			
Toluene	32.5	0.500	"	38.1		85.3	80-120			
Ethylbenzene	8.28	0.500	"	8.94		92.6	80-120			
Xylenes (total)	39.2	1.00	"	44.0		89.1	80-120			
Surrogate: 4-BFB (FID)	*43.6*		"	*48.0*		*90.8*	*57-125*			
Surrogate: 4-BFB (PID)	*37.0*		"	*48.0*		*77.1*	*62-120*			
LCS Dup (2L04008-BSD1)										
Gasoline Range Hydrocarbons	468	50.0	ug/l	502		93.2	80-120	3.15	25	
Benzene	5.92	0.500	"	6.20		95.5	80-120	2.83	40	
Toluene	31.7	0.500	"	38.1		83.2	80-120	2.49	40	
Ethylbenzene	7.99	0.500	"	8.94		89.4	80-120	3.56	40	
Xylenes (total)	38.0	1.00	"	44.0		86.4	80-120	3.11	40	
Surrogate: 4-BFB (FID)	*43.2*		"	*48.0*		*90.0*	*57-125*			
Surrogate: 4-BFB (PID)	*37.0*		"	*48.0*		*77.1*	*62-120*			
Matrix Spike (2L04008-MS1)					**Source: B2K0572-06**					
Gasoline Range Hydrocarbons	531	50.0	ug/l	502	93.7	87.1	70-130			
Benzene	7.00	0.500	"	6.20	0.957	97.5	80-134			
Toluene	36.4	0.500	"	38.1	3.85	85.4	68-114			
Ethylbenzene	9.62	0.500	"	8.94	1.52	90.6	72-128			
Xylenes (total)	49.5	1.00	"	44.0	10.8	88.0	67-125			
Surrogate: 4-BFB (FID)	*42.7*		"	*48.0*		*89.0*	*57-125*			
Surrogate: 4-BFB (PID)	*36.3*		"	*48.0*		*75.6*	*62-120*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2L04008: Prepared 12/04/02 Using EPA 5030B (P/T)										
Matrix Spike Dup (2L04008-MSD1)					**Source: B2K0572-06**					
Gasoline Range Hydrocarbons	510	50.0	ug/l	502	93.7	82.9	70-130	4.03	25	
Benzene	7.11	0.500	"	6.20	0.957	99.2	80-134	1.56	40	
Toluene	37.3	0.500	"	38.1	3.85	87.8	68-114	2.44	40	
Ethylbenzene	9.68	0.500	"	8.94	1.52	91.3	72-128	0.622	40	
Xylenes (total)	50.0	1.00	"	44.0	10.8	89.1	67-125	1.01	40	
Surrogate: 4-BFB (FID)	*41.6*		"	*48.0*		*86.7*	*57-125*			
Surrogate: 4-BFB (PID)	*36.8*		"	*48.0*		*76.7*	*62-120*			

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509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2K27024: Prepared 11/27/02 Using EPA 3520C										
Blank (2K27024-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.272*		"	*0.320*		*85.0*	*36-119*			
Surrogate: Octacosane	*0.294*		"	*0.320*		*91.9*	*43-126*			
LCS (2K27024-BS1)										
Diesel Range Hydrocarbons	1.54	0.250	mg/l	2.00		77.0	45-105			
Surrogate: 2-FBP	*0.271*		"	*0.320*		*84.7*	*36-119*			
LCS Dup (2K27024-BSD1)										
Diesel Range Hydrocarbons	1.74	0.250	mg/l	2.00		87.0	45-105	12.2	50	
Surrogate: 2-FBP	*0.305*		"	*0.320*		*95.3*	*36-119*			

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Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Landau Associates - Edmonds	Project: Tosco Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.010.011	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Jerry Ninteman	12/11/02 16:56

Notes and Definitions

S-01	The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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4720 [redacted] Creek [redacted] N, Su[redacted], Bot[redacted] A 980[redacted]3 [redacted] 420-[redacted] FAX [redacted]210
11720 East 11115 Montgomery, Suite B, Spokane, WA 98206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

Revised Chain of Custody

TOSCO CHAIN OF CUSTODY REPORT B2K0572

TOSCO INFORMATION

Facility Number:
Site Address: 2423 Lind
City, State, ZIP: Renton, WA
Project/AWO Code
Tosco Manager:
FACILITY TYPE: (check one) ☐ BP/ⓚ ☒ Terminal/Bulk Plant ☐ Brown Bear ☐ Former 76 Site ☐ Other

CONSULTANT INFORMATION

Firm: Landau Assoc. Inc. Project# 706002.010.011
Address: 130 2nd Ave So. Edmonds, WA 98020
Phone: (425) 778-0907 Fax (425) 778-6409
Project Manager: Jerry Nintema E-mail:
Sample Collection by: JPS/PLG

Quality Assurance Data Level: [A] [B]
A: Standard Summary
B: Standard + Chromatograms

Laboratory Turnaround Days: [10] [5] [3] [2] [1]
10 Day - Standard

○ OR ○ WA ○ AK ○ NW Series ○ ID

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONTAINERS	TPH-HCID	TPH-Gas	BTEX EPA 8021 Mod.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-Diesel Ext. w/SG Cleanup	Halogen. Volatiles EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS Semi Vols. EPA 8270	PAH's: 8270 SIM or 8310	Lead: Total or Dissolved	TCLP or RCRA Metals (8)	NCA SAMPLE NUMBER
1. W2-021125	11/25/02-1600	W	4				X			X								B2K0572-11
2. HA13-021125	1520	W	3				X											-12
3. HA14-021125	1500	W	3				X											-13
4. W1-021125	1435	W	4				X			X								-14
5. B3-021125	1310	W	1	X														-15
6. B2-021125	1350	W	4				X			X								-16
7. HA5-021125	11/25/02 1100	W	4				X			X								-17
8. Trip Blanks	—	W	2				X											-18
9.																		
10.																		

Samples were not @2-6C upon Receipt

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1.	LAT	11/25/02 1655		UCA	11/25/02 16:55
2.	NCA	11/25/02 17:40		NWA	11/25/02 1740
3.					

Comments:

Revised Chain of Custody

Page ___ of ___
Rev. Jan 3, 1999

Comments:

Distribution: White - Laboratory Yellow - Consultant Photocopy - Tosco

8-6 D/O

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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

TOSCO CHAIN OF CUSTODY REPORT B2K0572

TOSCO INFORMATION

Facility Number:
Site Address: 2423 2nd
City, State, ZIP: Renton, WA
Project/AWO Code
Tosco Manager:
FACILITY TYPE: (check one) ☐ BP/® ☒ Terminal/Bulk Plant
☐ Brown Bear ☐ Former 76 Site ☐ Other

CONSULTANT INFORMATION

Firm: Landau Assocs Inc. Project# 70[illegible].010.01
Address: 130 2nd Ave So
Edmonds, WA 98020
Phone: (425) 778-0907 Fax (425) 778-6409
Project Manager: Jerry Nintemann E-mail:
Sample Collection by: JPS/PLG

Quality Assurance Data Level: A B
A: Standard Summary
B: Standard + Chromatograms
Laboratory Turnaround Days: 10 5 3 2 1
10 Day - Standard

○ OR ○ WA ○ AK ○ NW Series ○ ID

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONTAINERS	TPH-HCID	TPH-Gas	BTEX EPA 8021 Mod.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-Diesel-Ext. w/SG Cleanup	Halogen. Volatiles EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS SemiVols. EPA 8270	PAH's: 8270 SIM or 8310	Lead: Total or Dissolved	TCLP or RCRA Metals (8)	NCA SAMPLE NUMBER
1. W2-021125	11/25/02-1600	W	4				X			X								B2K0572-01
2. HA13-021125	1520	W	3				X											-12
3. HA14-021125	1500	W	3				X											-13
4. W1-021125	1435	W	4				X			X								-14
5. B3-021125	1310	W	1	X														-15
6. B2-021125	1350	W	4															-16
7.																		
8.																		
9.																		
10.																		

N/A to Walsh

Samples were not @2-6C Upon Receipt

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1.	LAT	11/25/02 1655		UCA	11/25/02 16:55
2.	NCA	11/25/02 17:40		NCA	11/25/02 1740
3.					

Comments:

Page____of____
Rev. Tos3.3.2/99

Comments:

Distribution: White - Laboratory Yellow - Consultant Photocopy - Tosco

8 Coolers Rec'd

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Environmental Laboratory Network
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[redacted] 1720 [redacted] Creek [redacted] N. Su[redacted] Both[redacted] 980[redacted] [redacted]20-9[redacted] FAX [redacted]0
East 11115 Montgomery, Suite B, Spokane, WA 98206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

TOSCO CHAIN OF CUSTODY REPORT B2K0572

TOSCO INFORMATION

Facility Number:
Site Address: 2423 Lind
City, State, ZIP: Renton, WA
Project/AWO Code
Tosco Manager:
FACILITY TYPE: (check one) ☐ BP/Ⓚ ☒ Terminal/Bulk Plant
☐ Brown Bear ☐ Former 76 Site ☐ Other

CONSULTANT INFORMATION

Firm: Landau Associates Project# 706002.010.011
Address: 130 2nd Avenue South
Edmonds, WA 98020
Phone: 425-778-0907 Fax: 425-778-6409
Project Manager: J Ninteman E-mail:
Sample Collection by: J Swortz/P Glenn

Quality Assurance Data Level: ☐ A ☐ B
A: Standard Summary
B: Standard + Chromatograms

Laboratory Turnaround Days: ☒ 5 ☐ 3 ☐ 2 ☐ 1
10 Day - Standard

○ OR ○ WA ○ AK ○ NW Series ○ ID

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONTAINERS	TPH-HCID	TPH-Gas	BTEX EPA 8021 Mod.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-Diesel-Ext. w/SG Cleanup	Halogen. Volatiles EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS Semi Vols. EPA 8270	PAH's: 8270 SIM or 8310	Lead: Total or Dissolved	TCLP or RCRA Metals (8)	GC Fingerprint					NCA SAMPLE NUMBER
1. RW1-021124	11/24/02 1440	W O	1	X						X								X	Product				B2K0572-01
2. RW4-021124	↓ 1515	W O	1	X						X								X	↓				02
3. RW7-021124	↓ 1525	W O	1	X														X	Product				03
4. HA8-021124	11/24/02 1020	W	5		X	X				X													04
5. HA7-021125	0850/11-25-02	W	4		X	X				X													05
6. HA12-021125	0915/11-25-02	W	4		X	X				X													06
7. HA6-021125	0945/11-25	W	4		X	X				X													07
8. HA5-021125	1055/11-25	W	4		X	X				X													08
9. B4-021125	1210/11-25	W	4		X	X				X													09
10. B5-021125	1230/11-25	W	4		X	X				X													10

Please let settle decant upper portion

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1.	LAI	11/25/02 1655		NCA	11/25/02 16:55
2.	NCA	11/25/02 17:40			
3.					

Comments: Samples were not @2-6C Upon Receipt

Page ____ of ____
Rev. Tos3.3.2/99

Comments:

Distribution: White - Laboratory Yellow - Consultant Photocopy - Tosco

8-6° WD

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907.334.9200 fax 907.334.9210

28 January 2003

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: TOSCO Renton Terminal

Enclosed are the results of analyses for samples received by the laboratory on 01/15/03 14:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA-18	B3A0300-01	Water	01/14/03 10:30	01/15/03 14:56
HA-17	B3A0300-02	Water	01/14/03 10:40	01/15/03 14:56
HA-7	B3A0300-03	Water	01/14/03 11:20	01/15/03 14:56
HA-8	B3A0300-04	Water	01/14/03 11:10	01/15/03 14:56
HA-15	B3A0300-05	Water	01/14/03 10:50	01/15/03 14:56
HA-5	B3A0300-06	Water	01/14/03 11:00	01/15/03 14:56
LAI-1(MS/MSD)	B3A0300-07	Water	01/15/03 12:20	01/15/03 14:56
LAI-2	B3A0300-08	Water	01/15/03 12:45	01/15/03 14:56
LAI-3	B3A0300-09	Water	01/15/03 13:10	01/15/03 14:56
LAI-12	B3A0300-10	Water	01/15/03 12:55	01/15/03 14:56

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA-18 (B3A0300-01) Water Sampled: 01/14/03 10:30 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**11400**	1250	ug/l	25	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**40.3**	12.5	"	"	"	"	"	"	
Toluene	**75.9**	12.5	"	"	"	"	"	"	
Ethylbenzene	**810**	12.5	"	"	"	"	"	"	
Xylenes (total)	**2220**	25.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*101 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*104 %*	*62-120*			"	"	"	"	
HA-17 (B3A0300-02) Water Sampled: 01/14/03 10:40 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**548**	125	ug/l	2.5	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**10.2**	1.25	"	"	"	"	"	"	
Toluene	ND	1.25	"	"	"	"	"	"	
Ethylbenzene	**1.55**	1.25	"	"	"	"	"	"	
Xylenes (total)	**2.61**	2.50	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*94.8 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*98.1 %*	*62-120*			"	"	"	"	
HA-7 (B3A0300-03) Water Sampled: 01/14/03 11:20 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**13700**	2500	ug/l	50	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**421**	25.0	"	"	"	"	"	"	
Toluene	**56.2**	25.0	"	"	"	"	"	"	
Ethylbenzene	**261**	25.0	"	"	"	"	"	"	
Xylenes (total)	**2350**	50.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*96.9 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*62-120*			"	"	"	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA-8 (B3A0300-04) Water Sampled: 01/14/03 11:10 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**633**	50.0	ug/l	1	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**4.02**	0.500	"	"	"	"	"	"	
Toluene	**16.5**	0.500	"	"	"	"	"	"	
Ethylbenzene	**16.3**	0.500	"	"	"	"	"	"	
Xylenes (total)	**207**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*96.5 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*104 %*	*62-120*			"	"	"	"	
HA-15 (B3A0300-05) Water Sampled: 01/14/03 10:50 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**344**	50.0	ug/l	1	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**3.34**	0.500	"	"	"	"	"	"	
Toluene	**0.672**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	**2.51**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.9 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*89.8 %*	*62-120*			"	"	"	"	
HA-5 (B3A0300-06) Water Sampled: 01/14/03 11:00 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**14300**	1250	ug/l	25	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**3380**	25.0	"	50	"	"	01/24/03	"	
Toluene	**2870**	25.0	"	"	"	"	"	"	
Ethylbenzene	**43.6**	12.5	"	25	"	"	01/24/03	"	
Xylenes (total)	**151**	25.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*95.0 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*100 %*	*62-120*			"	"	"	"	

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509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-1(MS/MSD) (B3A0300-07) Water Sampled: 01/15/03 12:20 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**4120**	500	ug/l	10	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**728**	5.00	"	"	"	"	"	"	
Toluene	**935**	5.00	"	"	"	"	"	"	
Ethylbenzene	**22.8**	5.00	"	"	"	"	"	"	
Xylenes (total)	**120**	10.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*94.8 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*99.0 %*	*62-120*			"	"	"	"	
LAI-2 (B3A0300-08) Water Sampled: 01/15/03 12:45 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**72.6**	50.0	ug/l	1	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**2.78**	0.500	"	"	"	"	"	"	
Toluene	**2.20**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.10**	0.500	"	"	"	"	"	"	
Xylenes (total)	**9.33**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*95.4 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*103 %*	*62-120*			"	"	"	"	
LAI-3 (B3A0300-09) Water Sampled: 01/15/03 13:10 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**66.6**	50.0	ug/l	1	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	**3.19**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.36**	0.500	"	"	"	"	"	"	
Xylenes (total)	**8.45**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*95.2 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*104 %*	*62-120*			"	"	"	"	

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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907.334.9200 fax 907.334.9210

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LA1-12 (B3A0300-10) Water Sampled: 01/15/03 12:55 Received: 01/15/03 14:56									
Gasoline Range Hydrocarbons	**103**	50.0	ug/l	1	3A24001	01/24/03	01/24/03	NWTPH-Gx/8021B	
Benzene	**3.39**	0.500	"	"	"	"	"	"	
Toluene	**3.36**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.68**	0.500	"	"	"	"	"	"	
Xylenes (total)	**15.1**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*96.0 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*104 %*	*62-120*			"	"	"	"	

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3A24001: Prepared 01/24/03 Using EPA 5030B (P/T)										
Blank (3A24001-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*45.5*		"	*48.0*		*94.8*	*57-125*			
Surrogate: 4-BFB (PID)	*50.1*		"	*48.0*		*104*	*62-120*			
LCS (3A24001-BS1)										
Gasoline Range Hydrocarbons	499	50.0	ug/l	502		99.4	80-120			
Benzene	6.23	0.500	"	6.21		100	80-120			
Toluene	35.2	0.500	"	38.1		92.4	80-120			
Ethylbenzene	9.15	0.500	"	8.94		102	80-120			
Xylenes (total)	43.6	1.00	"	44.0		99.1	80-120			
Surrogate: 4-BFB (FID)	*49.3*		"	*48.0*		*103*	*57-125*			
Surrogate: 4-BFB (PID)	*47.9*		"	*48.0*		*99.8*	*62-120*			
LCS Dup (3A24001-BSD1)										
Gasoline Range Hydrocarbons	492	50.0	ug/l	502		98.0	80-120	1.41	25	
Benzene	6.26	0.500	"	6.21		101	80-120	0.480	40	
Toluene	36.5	0.500	"	38.1		95.8	80-120	3.63	40	
Ethylbenzene	9.10	0.500	"	8.94		102	80-120	0.548	40	
Xylenes (total)	43.7	1.00	"	44.0		99.3	80-120	0.229	40	
Surrogate: 4-BFB (FID)	*49.1*		"	*48.0*		*102*	*57-125*			
Surrogate: 4-BFB (PID)	*47.8*		"	*48.0*		*99.6*	*62-120*			
Matrix Spike (3A24001-MS1)					**Source: B3A0300-07**					
Gasoline Range Hydrocarbons	16800	1250	ug/l	12500	4120	101	70-130			
Benzene	914	12.5	"	155	728	120	80-134			
Toluene	1820	12.5	"	952	935	93.0	68-114			
Ethylbenzene	245	12.5	"	223	22.8	99.6	72-128			
Xylenes (total)	1180	25.0	"	1100	120	96.4	67-125			
Surrogate: 4-BFB (FID)	*49.3*		"	*48.0*		*103*	*57-125*			
Surrogate: 4-BFB (PID)	*47.2*		"	*48.0*		*98.3*	*62-120*			

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3A24001: Prepared 01/24/03 Using EPA 5030B (P/T)										
Matrix Spike Dup (3A24001-MSD1)					**Source: B3A0300-07**					
Gasoline Range Hydrocarbons	16500	1250	ug/l	12500	4120	99.0	70-130	1.80	25	
Benzene	888	12.5	"	155	728	103	80-134	2.89	40	
Toluene	1770	12.5	"	952	935	87.7	68-114	2.79	40	
Ethylbenzene	241	12.5	"	223	22.8	97.8	72-128	1.65	40	
Xylenes (total)	1160	25.0	"	1100	120	94.5	67-125	1.71	40	
Surrogate: 4-BFB (FID)	*49.4*		"	*48.0*		*103*	*57-125*			
Surrogate: 4-BFB (PID)	*47.3*		"	*48.0*		*98.5*	*62-120*			

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/28/03 15:36

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

LANDAU ASSOCIATES

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

Chain-of-Custody Record B3A0300

Date 1/15/03
Page 1 of 1

Project Name Tosco, Renton Project No. 706002.012
Project Location/Event Tosco Terminal, Renton
Sampler's Name Nate Joyce
Project Contact Martin Powers
Send Results To Martin Powers

Testing Parameters: NWTPH-G; BTEX

Turnaround Time
☑ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-G	BTEX	Observations/Comments
-01 HA-18	1/14/03	1030	H_2O	3	X	X	
-02 HA-17	1/14/03	1040		3	X	X	Let Settle Before Analysis
-03 HA-7	1/14/03	1120		3	X	X	
-04 HA-8	1/14/03	1110		3	X	X	
-05 HA-15	1/14/03	1050		3	X	X	Let Settle Before Analysis
-06 HA-5	1/14/03	1100		3	X	X	"
-07 LAI-1 (ms/msd)	1/15/03	1220		9	X	X	
-08 LAI-2	1/15/03	1245		3	X	X	
-09 LAT-3	1/15/03	1310		3	X	X	
-10 LAI-12	1/15/02	1255		3	X	X	

Special Shipment/Handling or Storage Requirements

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Nate Joyce	Signature: Colette Weaver	Signature:	Signature:
Printed Name: NATE JOYCE	Printed Name: Colette Weaver	Printed Name:	Printed Name:
Company: LANDAU Associates	Company: NA	Company:	Company:
Date: 1/15/03 Time:	Date: 1-15-03 Time: 1466	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

3.0 c w/o

Rev. 6/02

APPENDIX C

Bills of Lading for Liquid Disposal

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. WAD 000641530

Manifest Document No. 0103R

2. Page 1 of 1

3. Generator's Name and Mailing Address
CONOCOPHILLIPS
2423 LIND AVE NW
RENTON WA 98057

4. Generator's Phone (253) 228-6142

5. Transporter 1 Company Name: EMERALD SERVICES

6. US EPA ID Number: WAD053364647

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
CONOCOPHILLIPS
3901 UNICK ROAD
FERNDALE WA 0

10. US EPA ID Number: WAD009250360

E. State Facility's ID

F. Facility's Phone: 360-384-8331

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. MIXTURE IN GASOLINE AND WATER FROM RENTON DITCH SEEP	1	TT	4848	GAL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
(A) CONTAINS NO PCB'S, USED LUBE OILS, SOLVENTS OR RCW, DW. HAZWASTE

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: JOSEPH POZNIAK
Signature: Joseph Pozniak
Date: Month 01 Day 16 Year 03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Michael Clark
Signature:
Date: Month 01 Day 19 Year 03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name
Signature
Date: Month Day Year

GENERATOR | TRANSPORTER | FACILITY

NON-HAZARDOUS WASTE MANIFEST

(Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. WAD 020641530

Manifest Document No. 0203R

2. Page 1 of 1

3. Generator's Name and Mailing Address CONOCO PHILLIPS 2423 LIND AVE SW RENTON, WA 98055

4. Generator's Phone (425) 228-6142

5. Transporter 1 Company Name EMERALD SERVICES

6. US EPA ID Number WAD 053364647

A. State Transporter's ID

B. Transporter 1 Phone 206. 832. 3000

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address CONOCOPHILLIPS 3901 UNION ROAD FERNDALE WA

10. US EPA ID Number WAD 009250360

E. State Facility's ID

F. Facility's Phone 360-384-3331

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
MIXTURE OF GASOLINE AND WATER FROM RENTON DITCH SEEP	1	TT	3306	GAL

15. Descriptions for Materials Listed Above

CONTAINS NO PCB'S, USED LUBE OILS, SOLVENTS RCW, DW, HAZWASTE.

16. Handling Codes for Wastes Listed Above

17. Special Instructions and Additional Information

18. I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in the materials described on this manifest are not subject to federal hazardous waste regulations.

		Date
Generator's Signature	Daryl Yamada	Month Day Year 01/13/03
Transporter Signature (for Exports Only)		Month Day Year
Transporter Signature (for Imports Only)	Daniel Dorsey	Month Day Year 01/18/03

19. Discrepancy

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest, except as noted in item 19.

		Date
Signature		Month Day Year

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. WAD000641530

Manifest Document No. 0303R

2. Page 1 of 1

3. Generator's Name and Mailing Address CONOCOPHILLIPS
2423 LIND AVE SW
RENTON, WA. 98055

4. Generator's Phone 425 228-6142

5. Transporter 1 Company Name: EMERALD SERVICES

6. US EPA ID Number: WAD058364647

A. State Transporter's ID

B. Transporter 1 Phone 206.832.3000

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
CONOCOPHILLIPS
3901 UNICK ROAD
FERNDALE WA

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone 384-8331
360-[redacted]

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. MIXTURE IS WATER AND GASOLINE FROM RENTON DITCH SEEP	1	TT	4500	GAL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

(A) CONTAINS NO PCB'S, USED LUBE OILS, SOLVENTS, OR RCW DW HAZWASTE.

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date (Month Day Year)
Joseph Pozniak	Joseph Pozniak	01 18 05

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
[illegible]	[illegible]	1 18 05

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date (Month Day Year)

APPENDIX D

Recovered Water Analytical Report

www.ncalabs.com

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9338 fax 907.334.9339

15 January 2003

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: TOSCO Renton Terminal

Enclosed are the results of analyses for samples received by the laboratory on 12/31/02 12:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

www.ncalabs.com

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588 .
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9338 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BK-1	B2L0677-01	Water	12/30/02 11:45	12/31/02 12:10

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9338 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BK-1 (B2L0677-01) Water Sampled: 12/30/02 11:45 Received: 12/31/02 12:10									
Gasoline Range Hydrocarbons	**342000**	50000	ug/l	1000	3A09001	01/09/03	01/09/03	NWTPH-Gx/8021B	
Benzene	**26900**	500	"	"	"	"	"	"	
Toluene	**94300**	500	"	"	"	"	"	"	
Ethylbenzene	**6680**	500	"	"	"	"	"	"	
Xylenes (total)	**36000**	1000	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*91.9 %*	*57-125*			"	"	"	"	
Surrogate: 4-BFB (PID)	*97.3 %*	*62-120*			"	"	"	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9336 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
BK-1 (B2L0677-01) Water Sampled: 12/30/02 11:45 Received: 12/31/02 12:10									
Diesel Range Hydrocarbons	**27.5**	5.00	mg/l	20	3A04002	01/04/03	01/06/03	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*124 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*120 %*	*50-150*			"	"	"	"	

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4775
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9339 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3A09001: Prepared 01/09/03 Using EPA 5030B (P/T)										
Blank (3A09001-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*43.5*		"	*48.0*		*90.6*	*57-125*			
Surrogate: 4-BFB (PID)	*46.9*		"	*48.0*		*97.7*	*62-120*			
LCS (3A09001-BS1)										
Gasoline Range Hydrocarbons	491	50.0	ug/l	502		97.8	80-120			
Benzene	7.38	0.500	"	6.21		119	80-120			
Toluene	36.0	0.500	"	38.1		94.5	80-120			
Ethylbenzene	9.26	0.500	"	8.94		104	80-120			
Xylenes (total)	45.1	1.00	"	44.0		102	80-120			
Surrogate: 4-BFB (FID)	*47.0*		"	*48.0*		*97.9*	*57-125*			
Surrogate: 4-BFB (PID)	*45.1*		"	*48.0*		*94.0*	*62-120*			
LCS Dup (3A09001-BSD1)										
Gasoline Range Hydrocarbons	482	50.0	ug/l	502		96.0	80-120	1.85	25	
Benzene	7.05	0.500	"	6.21		114	80-120	4.57	40	
Toluene	36.3	0.500	"	38.1		95.3	80-120	0.830	40	
Ethylbenzene	9.24	0.500	"	8.94		103	80-120	0.216	40	
Xylenes (total)	45.4	1.00	"	44.0		103	80-120	0.663	40	
Surrogate: 4-BFB (FID)	*47.1*		"	*48.0*		*98.1*	*57-125*			
Surrogate: 4-BFB (PID)	*45.6*		"	*48.0*		*95.0*	*62-120*			
Matrix Spike (3A09001-MS1)					**Source: B2L0682-03**					
Gasoline Range Hydrocarbons	521	50.0	ug/l	502	ND	104	70-130			
Benzene	7.37	0.500	"	6.21	ND	119	80-134			
Toluene	37.4	0.500	"	38.1	0.140	97.8	68-114			
Ethylbenzene	9.69	0.500	"	8.94	ND	108	72-128			
Xylenes (total)	46.9	1.00	"	44.0	ND	107	67-125			
Surrogate: 4-BFB (FID)	*47.1*		"	*48.0*		*98.1*	*57-125*			
Surrogate: 4-BFB (PID)	*45.1*		"	*48.0*		*94.0*	*62-120*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9338 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3A09001: Prepared 01/09/03 Using EPA 5030B (P/T)										
Matrix Spike Dup (3A09001-MSD1)					**Source: B2L0682-03**					
Gasoline Range Hydrocarbons	518	50.0	ug/l	502	ND	103	70-130	0.577	25	
Benzene	7.38	0.500	"	6.21	ND	119	80-134	0.136	40	
Toluene	37.8	0.500	"	38.1	0.140	98.8	68-114	1.06	40	
Ethylbenzene	9.70	0.500	"	8.94	ND	109	72-128	0.103	40	
Xylenes (total)	47.3	1.00	"	44.0	ND	108	67-125	0.849	40	
Surrogate: 4-BFB (FID)	*47.5*		"	*48.0*		*99.0*	*57-125*			
Surrogate: 4-BFB (PID)	*45.5*		"	*48.0*		*94.8*	*62-120*			

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9330 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3A04002: Prepared 01/04/03 Using EPA 3520C										
Blank (3A04002-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.265*		"	*0.320*		*82.8*	*50-150*			
Surrogate: Octacosane	*0.309*		"	*0.320*		*96.6*	*50-150*			
LCS (3A04002-BS1)										
Diesel Range Hydrocarbons	1.61	0.250	mg/l	2.00		80.5	63-107			
Surrogate: 2-FBP	*0.310*		"	*0.320*		*96.9*	*50-150*			
LCS Dup (3A04002-BSD1)										
Diesel Range Hydrocarbons	1.58	0.250	mg/l	2.00		79.0	63-107	1.88	40	
Surrogate: 2-FBP	*0.314*		"	*0.320*		*98.1*	*50-150*			

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 3209 Denali Street, Anchorage, AK 99503
907.334.9330 fax 907.334.9339

Landau Associates - Edmonds	Project: TOSCO Renton Terminal	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-001	**Reported:**
Edmonds WA/USA, 98020-9129	Project Manager: Martin Powers	01/15/03 15:06

Notes and Definitions

D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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East 11115 Montgomery, Suite B, Spokane, WA 98206-4776 (509) 924-9200 FAX 924-9290
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210
20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

TOSCO CHAIN OF CUSTODY REPORT

TOSCO INFORMATION

Facility Number: WNO. 3485
Site Address: 2423 Lind Ave SW
City, State, ZIP: Renton, WA
Project/AWO Code 3485-LAI-001
Tosco Manager: Tim Johnson
FACILITY TYPE: (check one) ☐ BP/Ⓚ ☒ Terminal/Bulk Plant
☐ Brown Bear ☐ Former 76 Site ☐ Other _____

CONSULTANT INFORMATION

Firm: Landau Assoc. Project# 706002.012
Address: 130 2nd Ave S.
Edmonds, WA 98020
Phone: (425) 778-0907 Fax: 778-6409
Project Manager: M. Powers E-mail: mpowers@landauinc.com
Sample Collection by: Nathan Joyce

Quality Assurance Data Level: (A) B
A: Standard Summary
B: Standard + Chromatograms

Laboratory Turnaround Days: (10) 5 3 2 1
10 Day - Standard

○ OR ☒ WA ○ AK ○ NW Series ○ ID

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONTAINERS	TPH-HCID	TPH-Gas	BTEX EPA 8021 Mod.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel Extended	TPH-Diesel-Ext. w/SG Cleanup	Halogen. Volatiles EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS Semi Vols. EPA 8270	PAH's: 8270 SIM or 8310	Lead: Total or Dissolved	TCLP or RCRA Metals (8)	NCA SAMPLE NUMBER
1. BK-1	12/30/02 1145	W	5				X	X										BZL0677-01
2.																		
3.																		
4.																		
5.																		
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ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

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Date: October 26, 2004

Attn:
Project No.: 706002.012.028

RE: ConocoPhillips Renton Terminal

Copies	Description
	Semiannual Status Report, ConocoPhillips Renton Terminal, Renton, Washington

Please find enclosed the above-referenced report.

LANDAU ASSOCIATES, INC.

Martin T. Powers, P.E.
Senior Associate Engineer

MTP/rgm
Enclosure

DISTRIBUTION:

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Semiannual Status Report
ConocoPhillips Renton Terminal
Renton, Washington

October 25, 2004

Prepared for

ConocoPhillips Co.

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907

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INTRODUCTION

This status report provides a summary of remediation activities conducted from January through June 2004 at the ConocoPhillips bulk petroleum distribution terminal in Renton, Washington (site). Remediation activities conducted at the site and documented in this report are related to a 14,800-gallon petroleum product release, which occurred in November 2002. The petroleum release was reported to the Washington State Department of Ecology (Ecology) on November 14, 2002. A Release Notification Report (Landau Associates 2003a) was submitted to Ecology in February 2003. Summaries of the remedial actions conducted since November 2002 through January 2004 have also been submitted to Ecology (Landau Associates 2003b, 2004a).

BACKGROUND

The site is an active bulk petroleum distribution terminal located at 2423 Lind Avenue SW in Renton, Washington (Figure 1). The site is surrounded by industrial properties, public streets, and undeveloped areas. There are currently seven large aboveground storage tanks located in the tank farm at the site (Figure 2), which store premium and regular unleaded gasoline, kerosene, diesel fuel, and ethanol. Each tank is surrounded by concrete block walls which are approximately 3 ft high, and the entire tank area is surrounded by an earthen containment berm which provides secondary surface spill containment. Surface drainage in the tank area is controlled by a series of gate valves in the concrete containment walls, which are capable of directing flow to a sump in the western portion of the tank area. A large portion of the surface drainage water infiltrates through the earthen material surrounding the tanks and recharges the shallow groundwater table.

HISTORICAL RELEASE

A historical release at the site was discovered in 1986 when petroleum-contaminated soil was encountered in the vicinity of the tanker truck loading area. The responsible party for the release was determined to be Mobil Oil Company (currently ExxonMobil). A subsurface investigation was conducted, which revealed that contaminated groundwater and soil were present throughout the tanker truck loading area and extended south into the tank farm area. Liquid phase hydrocarbons (LPH) floating on the groundwater table were measured up to 3.55 ft thick as recently as May 2003. In response to a consent order by Ecology (Order No. DE 87-N301), an LPH recovery system was constructed and began operation in November 1987. Previous consultants documented that 57,000 gallons of LPH were removed by the product recovery system between December 1987 and November 1993. Based on an interview with the current environmental consultant (Kleinfelder, Inc.) working on behalf of ExxonMobil,

the remediation system in operation at the site consists of two recovery wells, an oil/water separator, a product holding tank, a batch tank, and an air stripper. This current configuration has been in operation since March 2003.

NOVEMBER 2002 RELEASE

The petroleum release in November 2002 consisted of 14,800 gallons of super-unleaded gasoline from the bulk storage tank designated as Tank 2 (Figure 2). Upon discovery of the gasoline release from Tank 2, site personnel began transferring the remaining gasoline from Tank 2 into some of the other large bulk tanks in the tank farm and into tanker trucks. On November 14, 2002, Landau Associates began coordinating efforts to assess the extent of impact and conduct interim action LPH recovery efforts. The initial assessment and LPH recovery activities conducted prior to January 21, 2003 were documented in the Release Notification Report (Landau Associates 2003a).

Initial assessment efforts included the installation of 24 postholes around the perimeter of Tank 2 and the monitoring of existing wells (HA-6, HA-7, HA-8, HA-12, HA-13, HA-14) to determine if LPH were present. Only one posthole (located northwest of Tank 2) reported any measurable LPH. No LPH were observed in postholes located to the south, southeast, and southwest of Tank 2. On November 15 and 16, 2002, Landau Associates oversaw the installation of a horizontal total fluids recovery well (HRW-1), seven vertical total fluids recovery wells (RW-1, RW-2, RW-3, RW-4, RW-5, RW-6, and RW-7), and four horizontal vapor recovery lines (VR-1, VR-2, VR-3, and VR-4) as shown on Figure 2. Monitoring data indicated that all vertical recovery wells contained measurable LPH by November 20, 2002.

On November 23 and 24, 2002, Landau Associates installed six groundwater monitoring wells (HA-15, HA-16, HA-17, HA-18, HA-19 and HA-20) inside the tank farm and near Tank 2 using hand auger techniques. Approximately 3.5 ft of LPH were observed in HA-20 on November 27, 2002. To delineate the LPH near HA-20, Landau Associates installed three 4-inch diameter total fluids recovery/monitoring wells (LAI-1 through LAI-3) along the outside of the tank farm on January 3, 2003 using hollow-stem auger drilling methods, as shown on Figure 2.

On January 17, 2003, LPH were discovered floating on the water surface of a stormwater retention pond located to the southeast of Tank 2. ConocoPhillips personnel contacted the Renton Fire Department and Ecology upon observing the LPH on the surface water on January 17, 2003. The Renton Fire Department, with assistance from ConocoPhillips, Emerald Petroleum Services, Inc. (Emerald), and Landau Associates, conducted the initial response. A diaphragm pump was installed in a small ditch located west of the pond, to limit the flow of water and LPH to the retention pond. In addition, a network

of Venturi style blowers were temporarily installed near the southern bank of the retention pond to abate vapor concentrations.

Between January 20 and 30, 2003, Landau Associates oversaw the installation of five monitoring wells (LAI-12 through LAI-16), six vertical total fluids recovery wells (LAI-4 through LAI-9) located inside the tank farm area and south-southeast of Tank 2, and two vertical total fluids recovery wells (LAI-10 and LAI-11) located outside the tank area and south-southwest of Tank 2.

REMEDIAL COMPONENTS

Remediation of the November 2002 gasoline release was initiated on November 17, 2002. Since the initiation of remedial efforts, a combination of methods—groundwater/LPH pumping using diaphragm pumps, surface water/LPH pumping using diaphragm pumps, LPH removal using hand bailing methods, groundwater/LPH pumping using downhole pneumatic pumps and soil vapor extraction/LPH volatilization using a dual phase vacuum extraction (DPVE) system—have been utilized in the vicinity of Tank 2. The current configuration of the remediation system being utilized at the site is provided in Figure 3.

DUAL PHASE VACUUM EXTRACTION SYSTEM

A DPVE component was installed and activated on February 12, 2003. During the reporting period, the DPVE utilized a positive displacement blower to apply a vacuum to seven vertical recovery wells (LAI-4, LAI-5, LAI-6, LAI-7, LAI-8, LAI-9, and RW-2) and to the eastern and western ends of a horizontal recovery well (HW-1). The amount of vacuum applied at each well was periodically adjusted to improve system efficiency. Discharged airflow from the water treatment air stripper and the DPVE vapors recovered from the wells by the DPVE blower are routed to a thermal/catalytic oxidizer for treatment prior to atmospheric discharge in accordance with the modified Notice of Construction (NoC) No. 8819 issued by the Puget Sound Clean Air Agency (PSCAA). Fresh air dilution valves were installed at five recovery wells (LAI-4, LAI-7, RW-2, RW-3 and RW-7) to keep the mixture of fresh air and recovered vapors at an optimal concentration for the thermal/catalytic oxidizer.

The oxidizer unit was modified from thermal mode to catalytic mode on November 18, 2003. Petroleum hydrocarbon concentrations in the extracted vapor were becoming low enough so that a catalytic oxydizer would operate with greater efficiency at a lower combustion temperature and require less supplemental fuel (propane).

The DPVE system was in operation for approximately 2,747 hours between January and June 2004. System downtime occurred during the reporting period due to freeze damage issues, replacement

of conductivity switches, replacement of switch relays, and replacement of a transfer pump. Landau Associates' field personnel conducted operation and maintenance checks on the system throughout the reporting period. In addition, H2Oil Recovery System (manufacturer of the remediation system) has performed bi-monthly maintenance from January through June 2004. Operational logs completed by maintenance personnel are provided in Appendix A.

GROUNDWATER TREATMENT SYSTEM

Dedicated down-hole pneumatic pumps at LAI-4, LAI-5, LAI-7, LAI-8, LAI-9 and RW-2 have been utilized for groundwater and LPH recovery since March 24, 2003. To optimize LPH recovery, the pneumatic pump at RW-2 was relocated to LAI-6 on July 24, 2003. The groundwater system consists of an oil/water separator, a product holding tank, a batch tank, an air-sparge tank, and an air stripper. The system design schematic is presented on Figure 3. On July 9, 2003, the disposal of treated groundwater was re-routed from the onsite storage in a Baker Tank (final disposal at Ferndale Refinery) to discharge through the sanitary sewer under King County Wastewater Discharge Authorization No. 4057-01.

A horizontal interceptor trench (HW-1) was installed near the southern property boundary south of Tank 2 on November 11, 2003 (Figure 2). The interceptor trench is oriented east-west, spanning 100 ft in length and varies from approximately 8 to 10 ft in depth. Recovery points HW-1E and HW-1W are situated at the east and west end points of the trench, respectively.

Landau Associates installed additional pneumatic groundwater pumps on December 3, 2003 at HW-1E, HW-1W and RW-2. The new pumps were installed to increase the area of groundwater table depression and to limit offsite migration of petroleum impacts.

Landau Associates installed a surface water containment dike in the southwest corner of the storm water retention pond (Figure 2) on November 22, 2003. The dike was installed as a contingency measure to limit the potential for LPH to impact a significant area of the surface water in the pond. In the winter of 2002-2003, LPH was observed in the pond and was determined to be entering the pond near the southwestern corner. The dike is constructed of pre-cast concrete with a flow-through valve that will normally remain closed during the "wet" season (approximately November through April).

Seasonal increases in groundwater table are problematic for LPH recovery. During seasonal high groundwater table conditions (approximately November through April), the pumps recover primarily water and very little, if any, LPH. To avoid the potential accumulation of groundwater in the LPH storage tank, the oil/water separation unit was temporarily bypassed from December 12, 2003 through March 22, 2004.

ADDITIONAL REMEDIAL ACTIVITIES

On June 1, 2004, Landau Associates received a telephone call from ConocoPhillips indicating the Washington State Department of Ecology (Ecology) received information of potential free phase gasoline product observed in the surface water in the stormwater detention pond, located southeast of Tank 2. Landau Associates and Ecology personnel visited the site on June 3, 2004 to investigate the stormwater detention pond. Three hand auger borings were completed to approximately 3 ft BGS. Recovered soil was field screened with a photoionization detector (PID) for volatile vapors. Discrete soil samples were collected from the three borings and analyzed for gasoline range total petroleum hydrocarbons (TPH-G), diesel and lube oil range petroleum hydrocarbons (TPH-Dx), and benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition to the soil samples, a water sample was collected from the standing water present in one of the borings. The water sample was analyzed for TPH-G and BTEX.

The results of the soil and groundwater samples indicate that free phase gasoline product is not impacting the soil or groundwater within the terminal stormwater detention pond (Landau Associates 2004b). The analytical results of the stormwater detention pond soil samples are provided in Table 1.

MONITORING DATA

GROUNDWATER AND PRODUCT ELEVATION MONITORING

Depths of groundwater and LPH, if present, have been measured monthly between January and June 2004 in five hand auger wells, five monitoring wells, one horizontal interceptor trench, and eighteen recovery wells. The wells were selected to allow for evaluation of groundwater elevation and LPH thickness in the vicinity of Tank 2. Depths to groundwater and LPH were measured from the northern portion of the PVC well casing using a decontaminated, intrinsically safe oil/water interface probe with readings recorded to the nearest 0.01 ft. Decontamination procedures consisted of removing any LPH (if present) from the probe using a paper towel, washing the probe with a tap water and alconox soap mixture, and rinsing the probe with distilled water.

The measured depths to groundwater, LPH thickness, and the calculated groundwater elevations are presented in Table 2. Depths to groundwater were converted to groundwater elevations based on previous vertical control surveys conducted at the site. A general decrease in groundwater potentiometric levels was observed from March through June 2004 due to the effect of groundwater pumping and lack of precipitation. As a result of the November 2002 release from Tank 2, measurable amounts of LPH have been consistently detected in wells HA-8, LAI-4, LAI-6 between January and June 2004. Measurable amounts of LPH have also been observed intermittently in wells LAI-5, LAI-7, LAI-8, LAI-9, HW-1 East, RW-3, RW-4, and HA-19 between January and June 2004.

Potentiometric maps have been developed from the depth to groundwater and LPH thickness data collected during the monthly sampling events. Potentiometric contours for January through June 2004 are provided in Figures 4 through 9, respectively. The groundwater potentiometric data compiled for January through June 2004 appear to indicate a natural radial pattern of groundwater flow outward from the tank farm; however, local alterations to the natural groundwater flow direction appear to be related to the active remediation activities at the site. Areas of groundwater depression are apparent around active groundwater pumping locations and mounds are apparent around DPVE recovery wells.

It is our understanding that ExxonMobil's environmental consultant has collected additional groundwater and LPH gauging data during the reporting period; however, this information has not been provided to Landau Associates.

ANALYTICAL DATA COLLECTION AND EVALUATION

GROUNDWATER ANALYTICAL MONITORING

Quarterly groundwater sampling events were conducted during March and June 2004. During quarterly sampling events, monitoring wells located outside the tank farm containment berm were purged using a non-dedicated centrifugal pump and sampled using non-dedicated peristaltic pumps with dedicated polyethylene tubing. Samples from monitoring wells located inside the containment berm of the tank farm were collected using disposable bailers. Authorization to use the centrifugal pump for groundwater purging was granted by the ConocoPhillips Renton Terminal management prior to use, per the requirements of the Health and Safety Plan. Wells were purged prior to sample collection by removing three well volumes of groundwater and noting the stabilization of field parameters. Field parameters consisted of pH, conductivity, and temperature. If the well was purged dry prior to the collection of three well volumes, then the well was considered adequately purged. Sample collection was conducted by slowly filling the laboratory-supplied containers in such a manner as to reduce aeration of the water. Sample containers for analyses that are sensitive to volatilization were completely filled so that no headspace remained. Samples were placed in coolers and packed in ice to keep samples at about 4°C. Groundwater samples were analyzed by North Creek Analytical, Inc. (NCA) for TPH-G using Method NWTPH-G, diesel and lube oil-range petroleum hydrocarbons (TPH-D) using Method NWTPH-Dx, and BTEX using Method 8021B. Groundwater analytical results are summarized in Table 3 and laboratory reports are provided in Appendix B.

Landau Associates reviewed all laboratory analytical results through a focused data validation process. The purpose of the validation was to verify if selected quality control parameters were within the limits specified by the analytical methods. The data validation was performed in accordance with

applicable portions of the EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA 1994). Some data was flagged as estimated based on the results of the data validation and labeled with an estimated flag "J" for detected compounds and "UJ" for non-detected compounds; however, all data was determined to be acceptable for monitoring purposes.

It is our understanding that ExxonMobil's environmental consultant has collected groundwater samples during the reporting period, but the analytical data has not been shared with Landau Associates.

SYSTEM VAPOR SAMPLING

Samples for this reporting period were collected from the influent and effluent sampling ports of the thermal (catalytic) oxidizer in February and March 2004. Samples were collected using 1-liter Tedlar™ bags. Samples were screened for volatile organic compounds (VOCs) using a portable photoionization detector (PID) meter. Samples were placed in a cooler without ice, for shipment to the laboratory under chain-of-custody documentation. Vapor samples were analyzed for BTEX and TPH-G by NCA using EPA Method 8021B. Influent and effluent analytical results are summarized in Table 4. The laboratory reports are provided in Appendix B.

GROUNDWATER TREATMENT SYSTEM SAMPLING

Groundwater treatment system samples were collected in January, February and March 2004. Samples were collected to comply with the wastewater permit requirement of semiannual sampling, and to assist with mass removal calculations. Water samples at dedicated sample ports were collected prior to entering the air sparge tank, after passing through the air stripper, and after passing through a granular activated carbon vessel, by slowly filling the laboratory supplied containers in such a manner as to reduce aeration of the water. Sample containers for analyses that are sensitive to volatilization were completely filled so that no headspace remained. Samples were placed in coolers and packed in ice to keep samples at about 4°C. Treatment samples were analyzed by NCA for TPH-G (Method NWTPH-G), and BTEX (EPA Method 8021B). Treatment system sample results are summarized in Table 5. The laboratory reports for the treatment system samples are provided in Appendix B.

GASOLINE VOLUME REMOVAL

As reported in the February 23, 2004 Semiannual Status Report (Landau Associates 2004a), approximately 11,013 gallons of gasoline were recovered from the vicinity of Tank 2 prior to January 1, 2004. The volume of gasoline removed by remedial efforts to date can be estimated by summarizing the following:

- Volume of gasoline recovered prior to January 2004
- Volume of LPH collected in the product storage tank and disposed at the ConocoPhillips Ferndale Refinery and the Emerald Airport Way Disposal Center
- Volume of dissolved phase gasoline removed based on the total volume of water recovered and the average TPH-G concentration of the recovered water influent samples
- Volume of vapor phase gasoline removed based on the vapor recovery flow rate and concentration exhibited by the DPVE system influent samples.

LPH Removal

Between January 1 and June 30, 2004 approximately 250 gallons of LPH have been separated and stored onsite in an above ground storage tank.

Dissolved Phase Gasoline Removal

Between January 1 and June 30, 2004 approximately 187,583 gallons of pumped groundwater has been treated onsite and discharged to the sanitary sewer under King County Wastewater Discharge Authorization No. 4057-01.

Analytical results from the influent sampling port of the groundwater treatment system indicate an average TPH concentration of 39.4 mg/L throughout the period from January through June 2004. Based on a total volume of approximately 187,583 gallons of water disposed, it is estimated that approximately 9.8 gallons of gasoline have been removed by the groundwater recovery operations between January 1 and June 30, 2004.

Vapor Phase Gasoline Removal

Hour-meter readings for the DPVE system indicate that the system has operated approximately 2,747 hours (114 days) between January and June 2004 and a total of 8,445 hours (352 days) hours since the commencement of the system (February 12, 2003). Periodic influent vapor sampling of the DPVE system (Table 6) indicate that the DPVE system has removed approximately 652 lbs (102 gallons) of gasoline between January 9, 2004 and June 28, 2004.

TOTAL VOLUME OF GASOLINE REMOVED

Based on the above information, approximately 11,371 gallons of gasoline has been recovered since the initial release on November 13, 2002. The total estimated volume of gasoline recovered is comprised of the following:

RECOVERY METHOD	GALLONS OF RECOVERED GASOLINE
Recovery Efforts Prior to December 2003: (as reported in previous status reports)	11,013
LPH Recovery (January – June 2004)	250
Dissolved Phase Recovery (January – June 2004)	9.8
Vapor Phase Recovery (January through June 2004)	102
Estimated Total Gasoline Recovered	11,375

CONCLUSIONS

The effectiveness of the remedial efforts being conducted can be evaluated on the following criteria:

- Control of the LPH to reduce migration to the stormwater retention pond and decrease the thickness in the vicinity of Tank 2.
- Control of the dissolved-phase TPH-G and benzene plumes to limit offsite impacts and co-mingling with the plume generated by the historical (Mobil Oil Company) gasoline release near the tanker truck loading racks.
- Discharge treated vapors and water in compliance with appropriate permits applicable to the remedial activities.

The three performance criteria identified are evaluated as follows:

LPH CONTROL

Based on the interpretations of the extent of LPH presented in Figures 10 through 13, it appears that the areal extent of LPH has remained relatively consistent since monitoring began in November 2002. In general, as documented in Table 2, the overall thickness of LPH floating on the water table appears to be decreasing. LPH have not been observed in the stormwater retention pond since March 2003, likely due to the effects of the groundwater and LPH pumping activities and the seasonal lack of precipitation during the dry months. The concrete dike installed in the retention pond in November 2003 is intended to limit the potential to impact a significant area of the surface water in the pond.

DISSOLVED-PHASE PLUME CONTROL

Based on the data interpreted in Figures 4 through 9, it appears that natural groundwater flow follows a radial pattern from the vicinity of Tank 2. The radial flow of groundwater creates the potential for the dissolved phase TPH-G and benzene plumes to co-mingle with the southern extent of the plume related to the historical Mobil Oil Company gasoline release, and it also creates the potential for the dissolved phase plume emanating from Tank 2 to migrate offsite to the south under SW 27th Street. The dissolved phase TPH-G (Figures 10 and 12) and benzene (Figures 11 and 13) concentration data from the March and June 2004 sampling events indicate that pumping groundwater through the treatment system has affected natural groundwater flow patterns and minimized migration to the southeast of Tank 2. The horizontal interceptor trench installed approximately parallel to SW 27th Street and south of the terminal fence line is intended to reduce the potential of offsite migration of the dissolved phase plume.

PERMIT COMPLIANCE

Two operational permits exist for the remediation system at the Renton Terminal.

A wastewater discharge authorization (No. 4057-01) was issued on June 2, 2003 by King County Wastewater Treatment Division. The permit limits the daily water discharge from the remediation system to 8,000 gallons per day and requires that the discharged water meet concentration limits of 130 micrograms per liter (µg/L) for benzene, 1,500 µg/L for toluene, and 1,400 µg/L for ethylbenzene. Monthly sampling of the system was conducted from January through March 2004. The results of the monthly sampling (Table 4) indicate that the system has been operational with no exceedances of the permit during the reporting period.

A PSCAA air permit for Notice of Construction (NoC) 8819 was issued on May 8, 2002 with a subsequent modification issued on July 8, 2003. The NoC limits the total vapor discharge flow rate to 800 cfm and TPH concentration in the vapor effluent to less than 30 ppmv. The conditions of the permit have been monitored between January and June 2004 with no exceedances of the permit, as indicated by information presented in Tables 5 and 6.

RECOMMENDATIONS

Based on the conclusions provided above, the following recommendations are made for the site:

- Continued quarterly sampling of groundwater monitoring wells and analysis for TPH-G and BTEX. The next groundwater sampling event is scheduled for September 2004. We will attempt to coordinate the groundwater sampling events with ExxonMobil's consultant to obtain site-wide information.

- Continued monthly gauging of groundwater and LPH. We will continue to attempt to coordinate these gauging events with ExxonMobil's consultant to obtain site-wide information.

- Continued operation of the DPVE and groundwater recovery and treatment systems. The goals of the remedial system remain to remove LPH and limit migration of LPH and the dissolved-phase plume.

- Preparation of a semi-annual progress report for the period from July through December 2004 and submittal of the report to Ecology by February 2005.

An application to conduct further remedial action at the site under the authority of the Ecology Voluntary Cleanup Program (VCP) was submitted in May 2004. We recommend working with the VCP to develop appropriate cleanup levels for groundwater at the site.

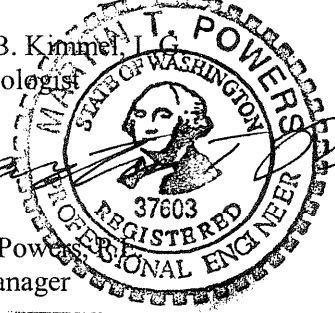
USE OF THIS REPORT

This remediation status report has been prepared for the exclusive use of ConocoPhillips Company for specific application to the ConocoPhillips Renton Terminal. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

LANDAU ASSOCIATES, INC.

Christine B. Kimmel, L.G.
Project Geologist



Martin T. Powers, P.E.
Project Manager

EXPIRES 09/29/05

CBK/MTP/rgm

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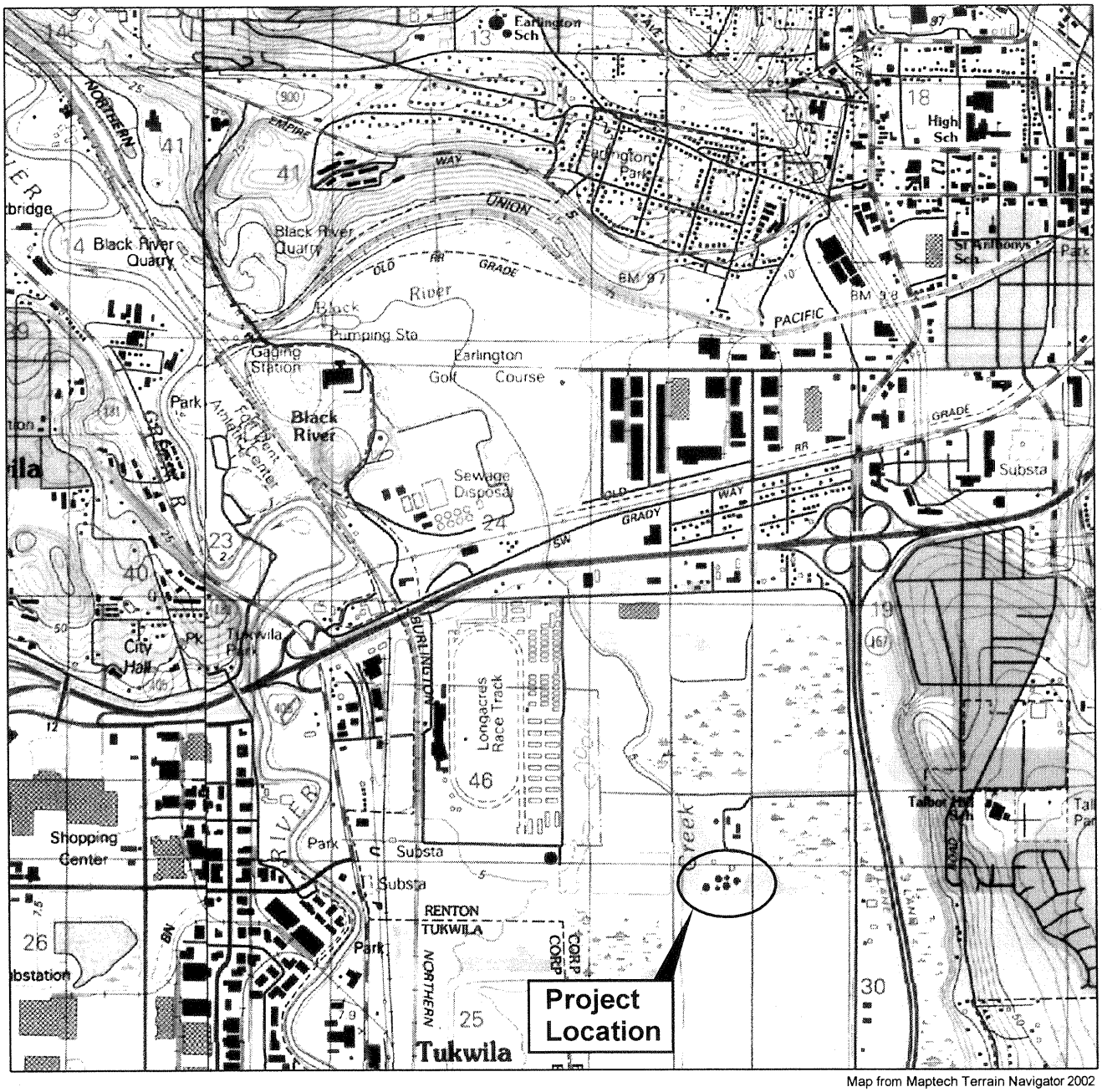

ConocoPhillips-Renton/GW Monitoring Report | X:\706\002\022\GW Monitoring Report\Fig1.dwg (A) "Figure 1" 10/25/2004

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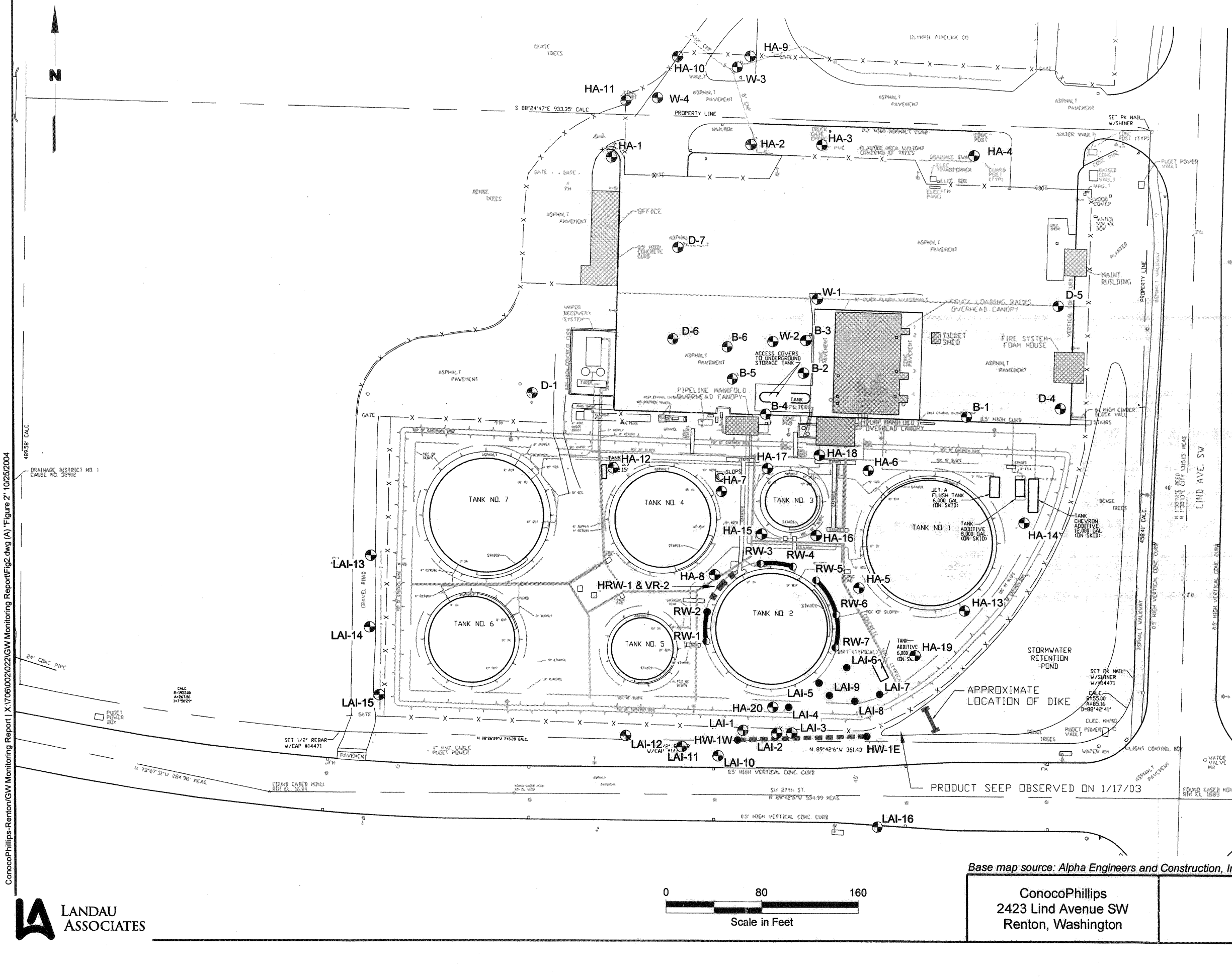
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Vicinity Map**	Figure 1



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- RFH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- STORM DRAIN MANHOLE
- MANHOLE
- CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

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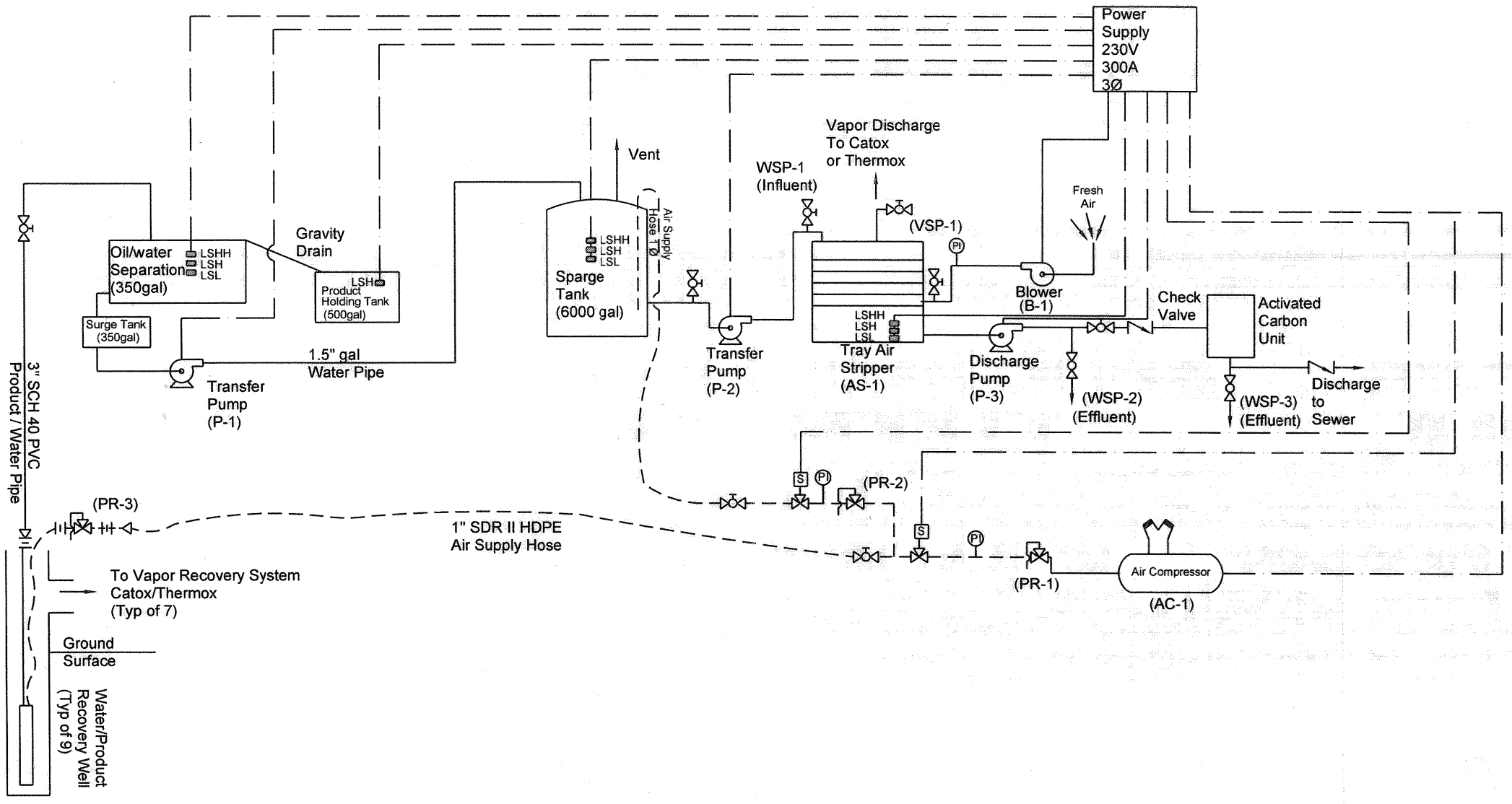
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Site Map**	Figure 2

ConocoPhillips-Renton\GW Monitoring Report | X:\706\002022\GW Monitoring Report\Fig2.dwg (A) "Figure 2" 10/25/2004



Not to Scale

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Groundwater Treatment System Process and Instrumentation Diagram**	Figure 3

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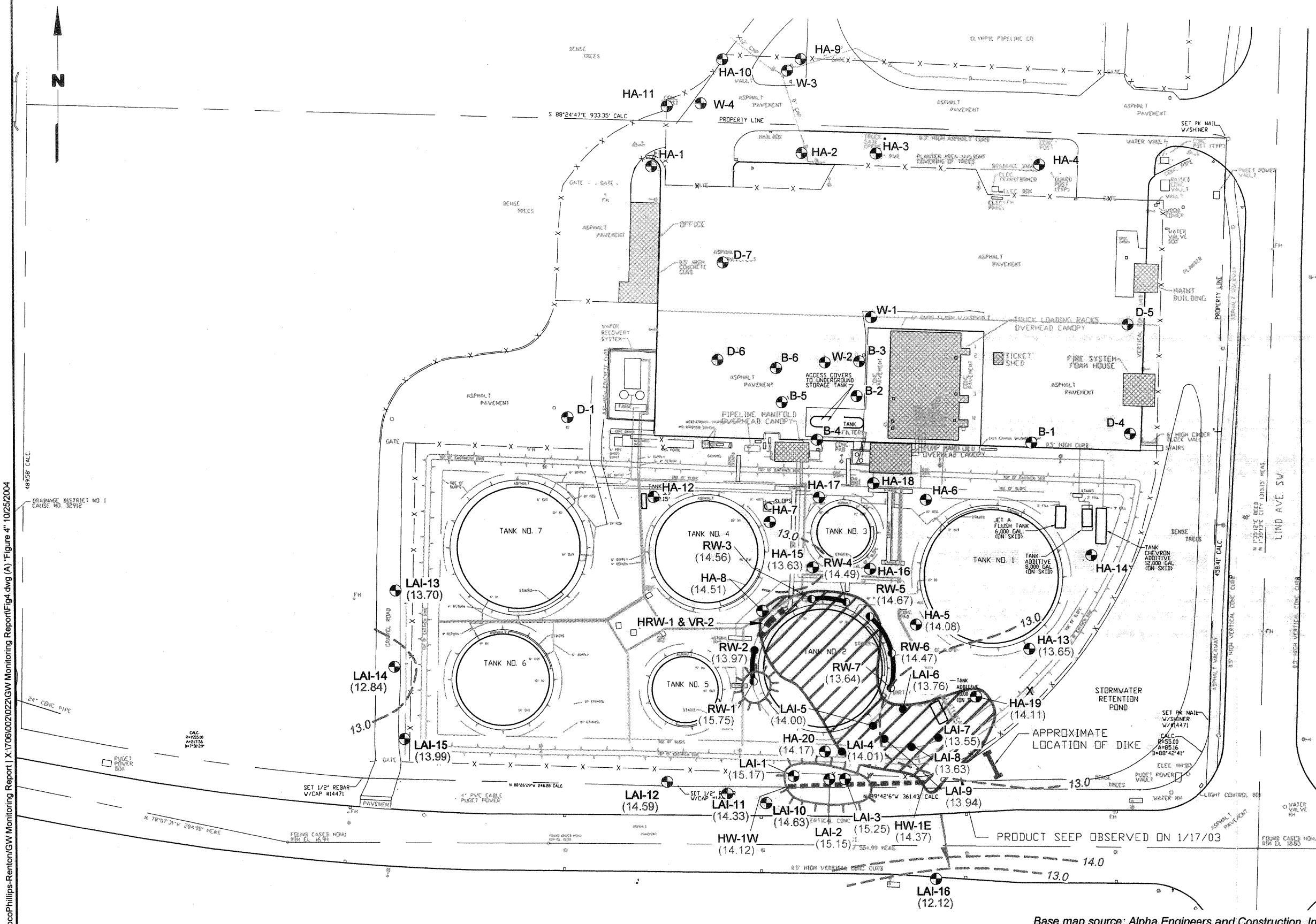
ConocoPhillips-Renton/GW Monitoring Report | X:\706\002\022\GW Monitoring Report\Fig3.dwg (A) "Figure 3" 10/25/2004



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- MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- LE INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- X Well Not Used for Contouring
- Approximate Extent of LPH

Note

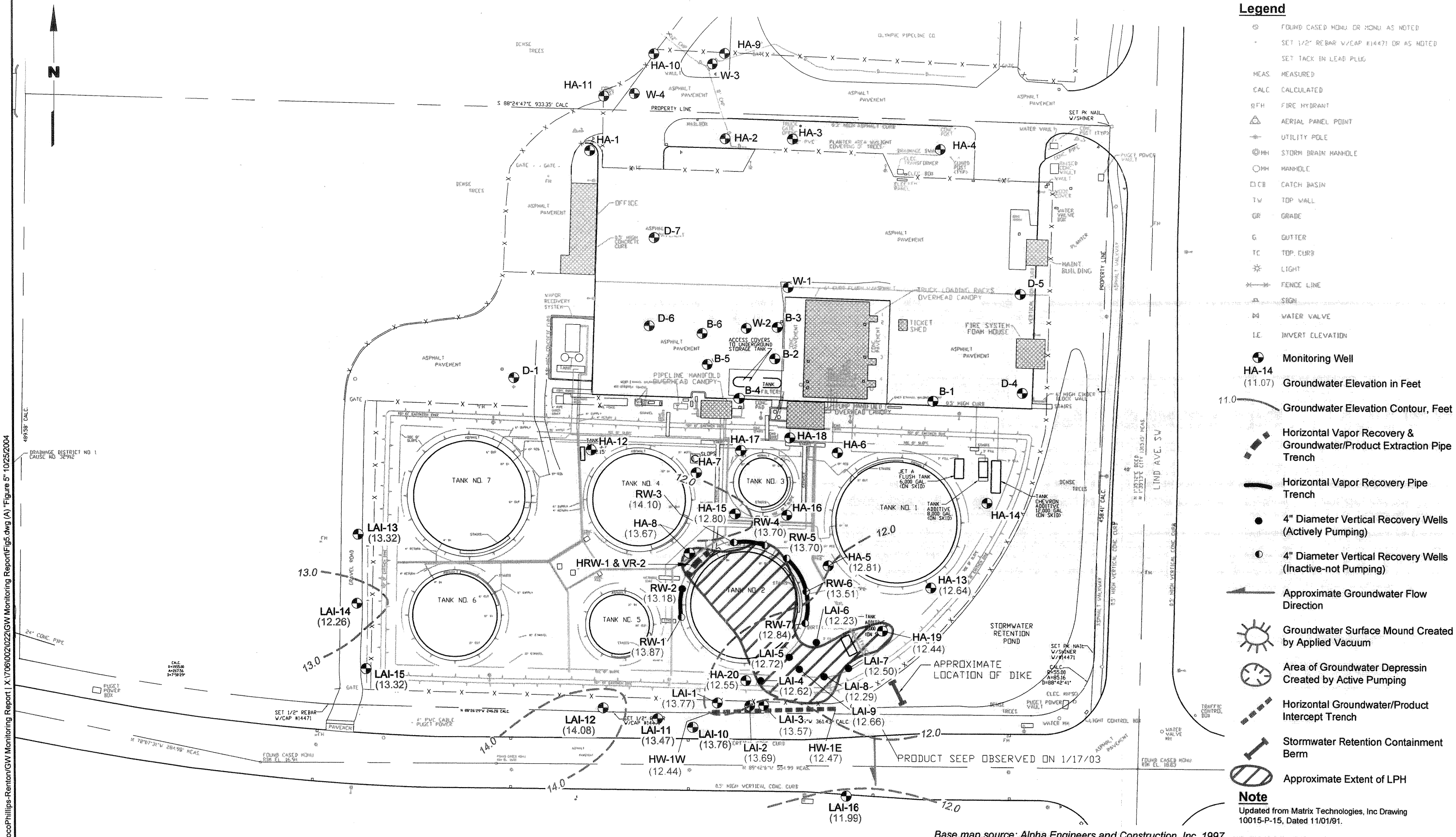
1. Treatment systems had been off line for several days proir to the collection of groundwater and product elevations.
2. Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map January 19, 2004**	Figure 4

ConocoPhillips-Renton\GW Monitoring Report | X:\706\0020\2022\GW Monitoring Report\Fig4.dwg (A) "Figure 4" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- Approximate Extent of LPH

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

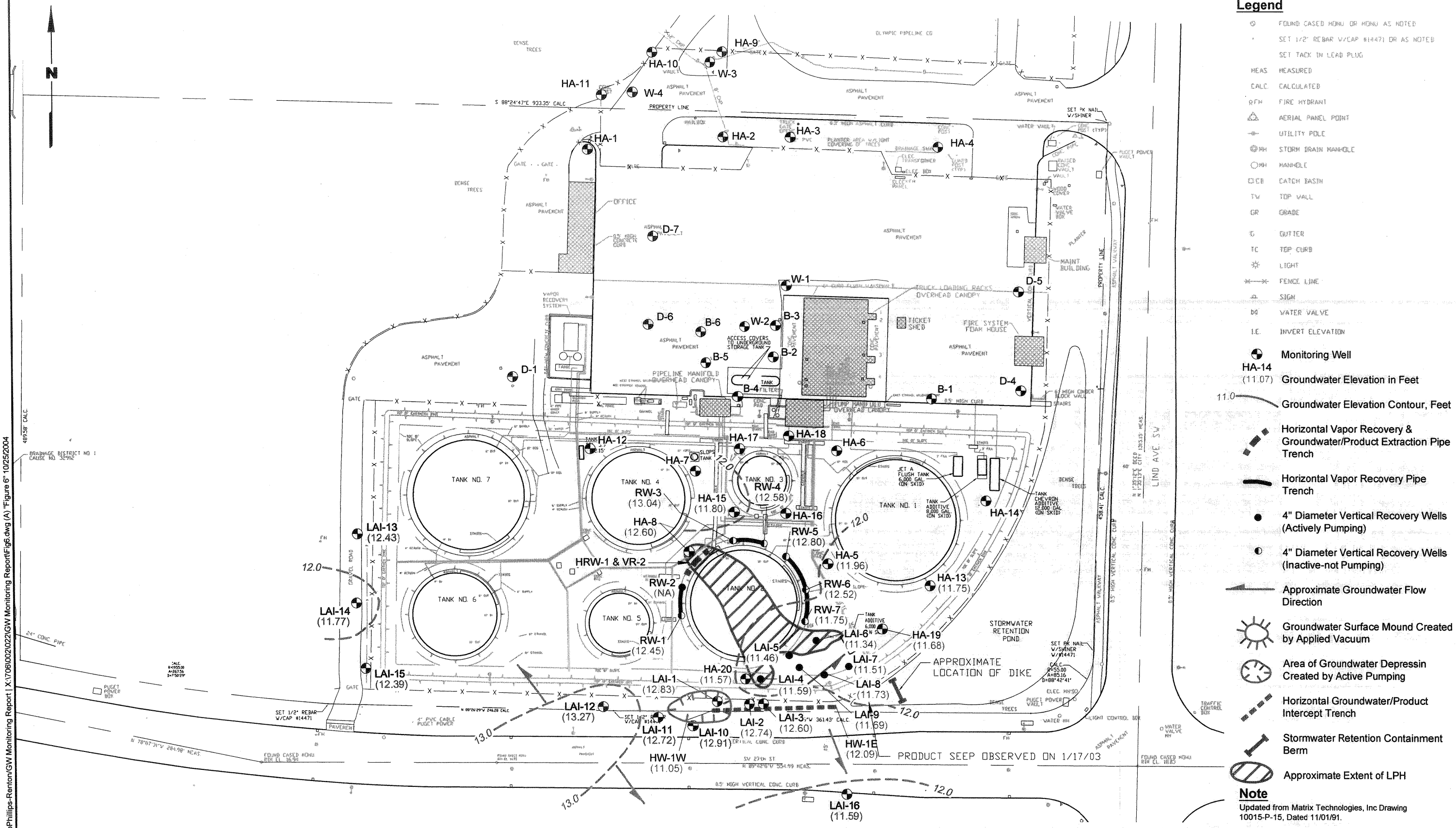
0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map February 24, 2004**	Figure 5

ConocoPhillips-Renton/GW Monitoring Report | X:\706\002\022\GW Monitoring Report\Fig5.dwg (A) "Figure 5" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- Approximate Extent of LPH

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

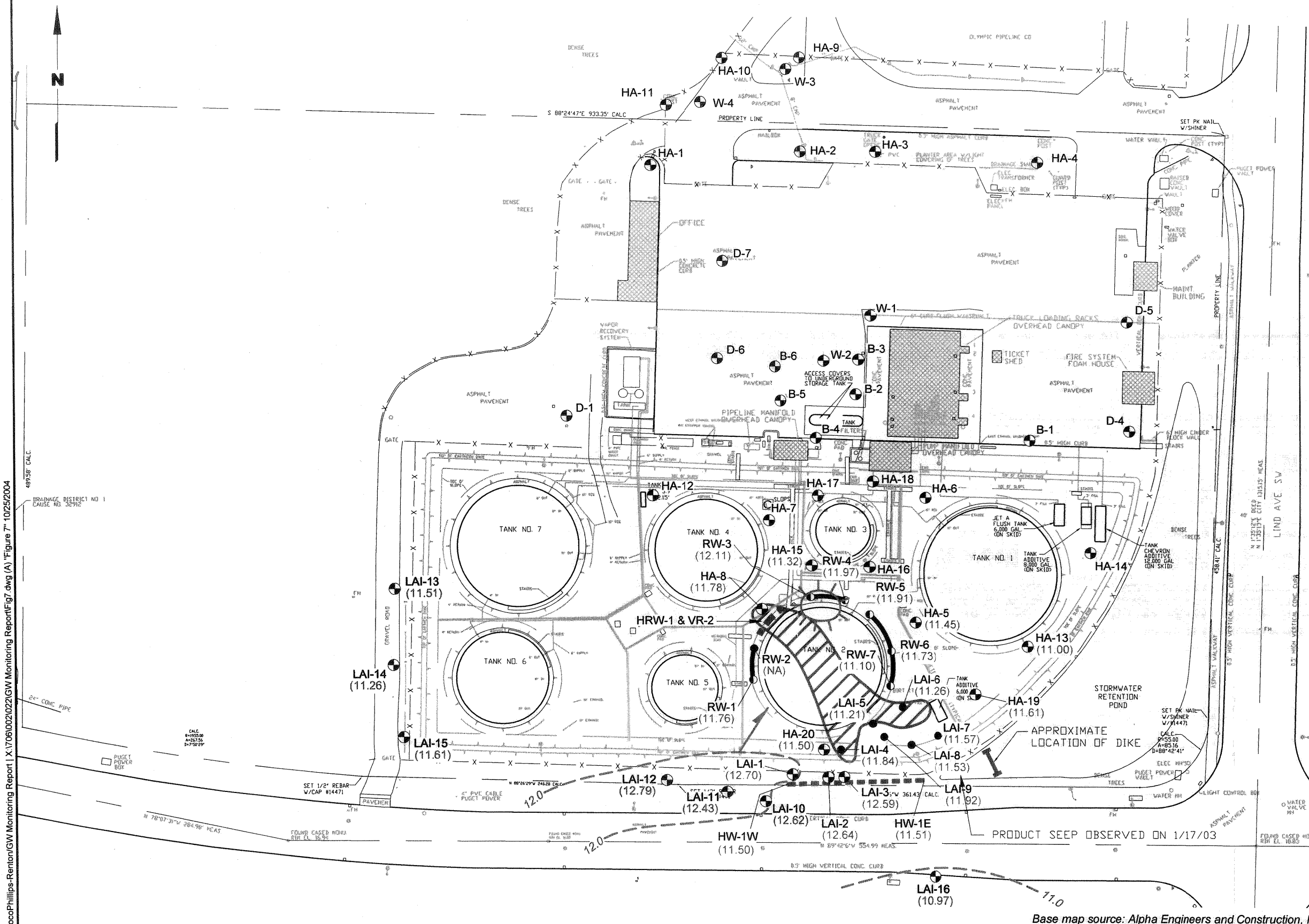
0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map March 15, 2004**	Figure 6

ConocoPhillips-Renton/GW Monitoring Report | X:\7061\002\022\[GW Monitoring ReportFig6.dwg (A) "Figure 6" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC. CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- Approximate Extent of LPH

Note

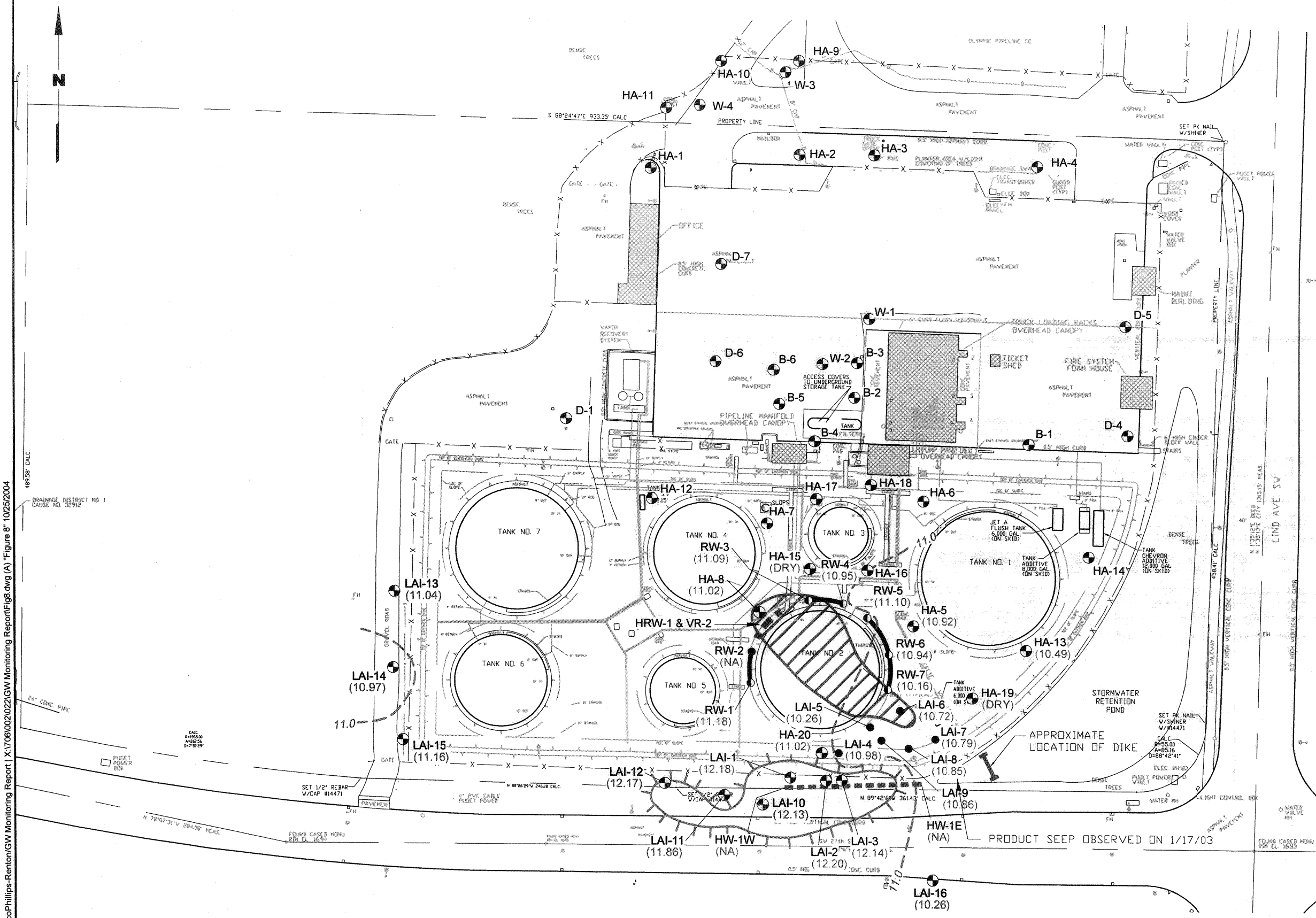
UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map April 19, 2004**	Figure 7

ConocoPhillips-Renton\GW Monitoring Report | X:\706\0021\022\GW Monitoring Report\Fig7.dwg (A) "Figure 7" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- LE INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- Approximate Extent of LPH

Note

Groundwater treatment system had been off for several days prior to data collection.

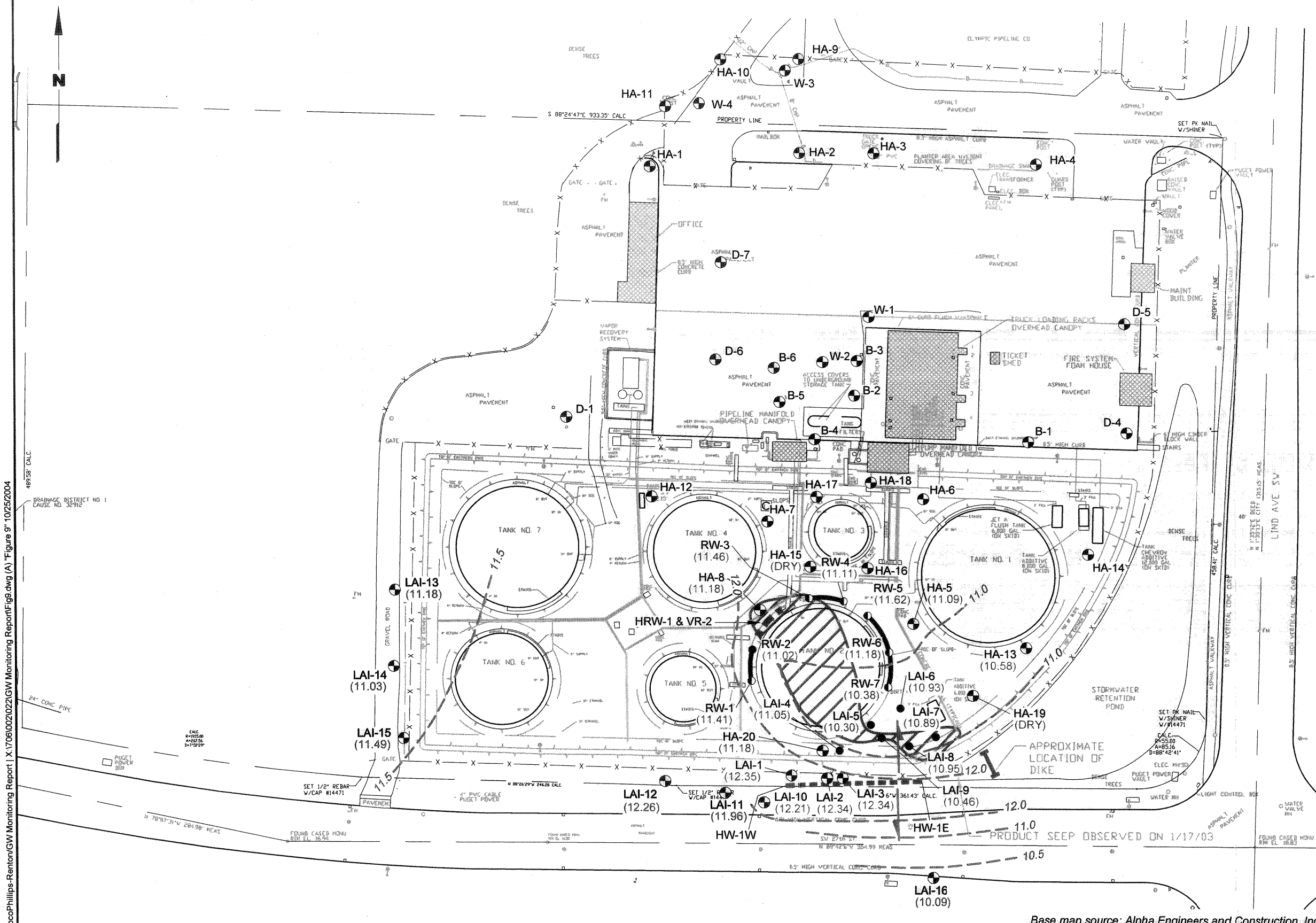
Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map May 17, 2004**	Figure 8

ConocoPhillips-Renton/GW Monitoring Report | X:\1706\002\022\GW Monitoring Report\Fig8.dwg (A) "Figure 8" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- Approximate Extent of LPH

Notes:

1. Treatment systems had been off line days proir to thre collection of groundwater and product elevations.
2. Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160
Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map June 22, 2004**	Figure 9

ConocoPhillips-Renton\GW Monitoring Report | X:\706\002\022\GW Monitoring Report\Fig9.dwg (A) "Figure 9" 10/25/2004

Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC CALCULATED
- HYD FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- W WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14
- (985) TPH-Gasoline Concentration (µg/L)
- 100 Isoconcentration Contour for TPH-Gasoline; µg/L
- ND Analytical Results Below Reporting Limit
- Estimated Extent of Free Product Related to November 2002 Release
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

PRODUCT SEEP OBSERVED ON 1/17/03

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**TPH-G Isoconcentration Contours - March 15, 2004**	Figure 10

ConocoPhillips-Renton\GW Monitoring Report | X:\706\002\022\[GW Monitoring Report\Fig10.dwg (A) "Figure 10" 10/25/2004

N

Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION

- Monitoring Well
- HA-14 (659) Benzene Concentration (µg/L)
- 100 Isoconcentration Contour for Benzene; µg/L
- ND Analytical Results Below Reporting Limit
- Estimated Extent of Free Product Related to November 2002 Release
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

PRODUCT SEEP OBSERVED ON 1/17/03

Base map source: Alpha Engineers and Construction, Inc. 1997

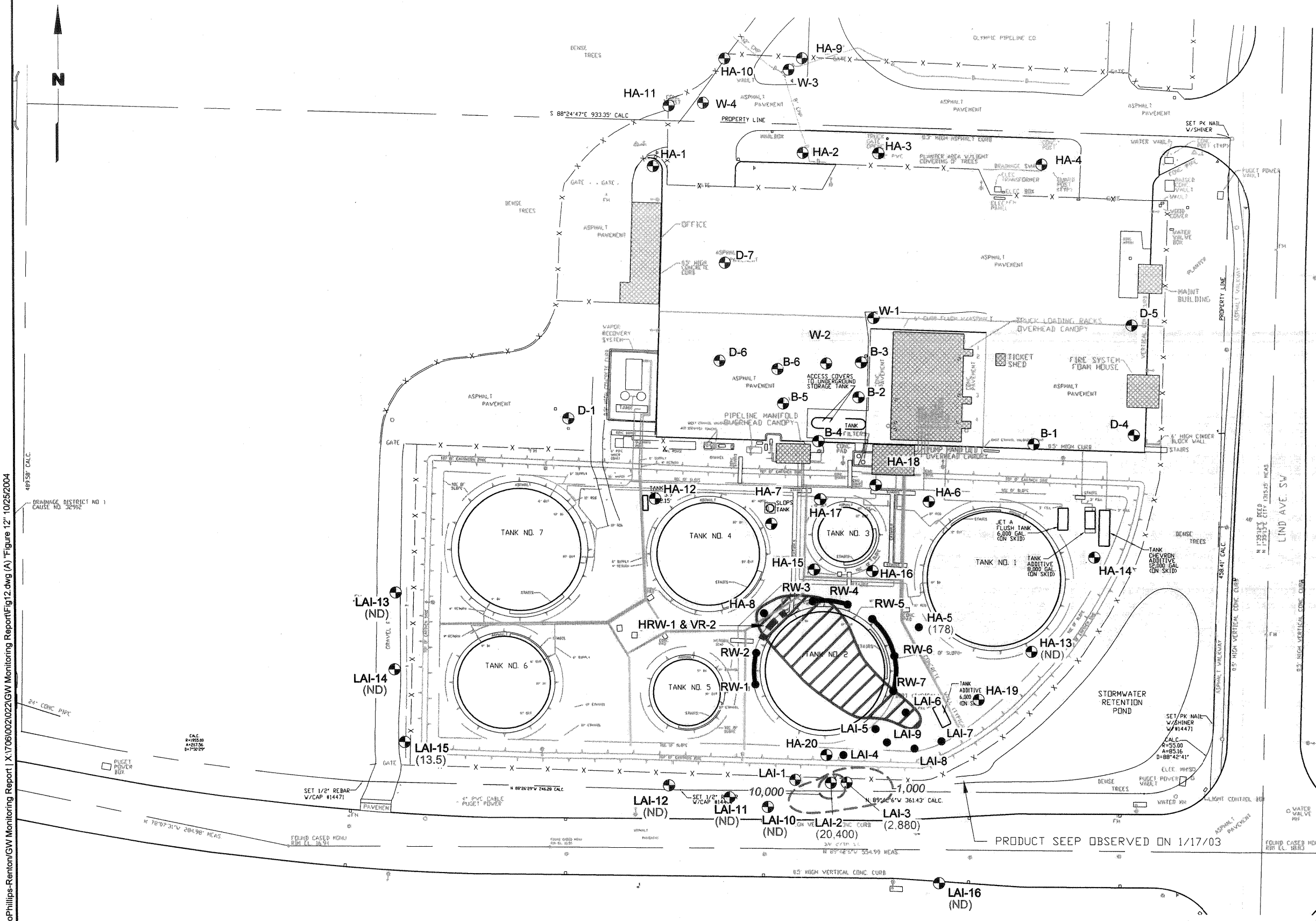
0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Benzene Isoconcentration Contours - March 15, 2004**	Figure 11

ConocoPhillips-Renton/GW Monitoring Report | X:\706\0020\2022\GW Monitoring Report\Fig11.dwg (A) "Figure 11" 10/25/2004



Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (985) TPH-Gasoline Concentration (µg/L)
- 100 Isoconcentration Contour for TPH-Gasoline; µg/L
- ND Analytical Results Below Reporting Limit
- Estimated Extent of Free Product Related to November 2002 Release
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**TPH-G Isoconcentration Contours - June 2004**	Figure 12

ConocoPhillips-Renton\GW Monitoring Report | X:\7060\2022\GW Monitoring Report\Fig12.dwg (A) "Figure 12" 10/25/2004

N

S 88°24'47"E 933.35' CALC.

PROPERTY LINE

OLYMPIC PIPELINE CO.

LIND AVE. SW

Legend

- FOUND CASED MONU OR MONU AS NOTED
- SET 1/2" REBAR W/CAP #14471 OR AS NOTED
- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC. CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION

HA-14 — Monitoring Well

(659) — Benzene Concentration (µg/L)

100 — Isoconcentration Contour for Benzene; µg/L

ND — Analytical Results Below Reporting Limit

Estimated Extent of Free Product Related to November 2002 Release

Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench

Horizontal Vapor Recovery Pipe Trench

4" Diameter Vertical Recovery Wells

Note

Updated from Matrix Technologies, Inc Drawing 10015-P-15, Dated 11/01/91.

PRODUCT SEEP OBSERVED ON 1/17/03

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160

Scale in Feet

LANDAU ASSOCIATES

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Benzene Isoconcentration Contours - June 2004**	Figure 13

ConocoPhillips-Renton\GW Monitoring Report | X:\706\002\022\GW Monitoring Report\Fig13.dwg (A) "Figure 13" 10/25/2004

TABLE 1
STORMWATER POND SOIL ANALYTICAL DATA
CONOCOPHILLIPS RENTON TERMINAL

Location:	B-1	B-2	B-2	D-1	
Depth (ft)	0.5-1.0	1.0-1.5	2.0-2.5	0-0.5	
Lab ID:	B4F0168-01	B4F0168-02	B4F0168-03	B4F0168-04	MTCA
Date Collected:	6/3/2004	6/3/2004	6/3/2004	6/3/2004	Method A
Matrix:	Soil	Soil	Soil	Soil	Level
NWTPH-Gx (mg/kg)					
Gasoline	46.8	8.45	27.3	7.83	30
BETX (mg/kg)					
Method 8021B					
Benzene	2.91	0.169	1.45	0.752	0.03
Toluene	3.01	0.483	0.376	0.379	7
Ethylbenzene	1.07	0.0500 U	0.229	0.200	6
Xylenes (total)	9.30	1.78	0.781	0.771	9
NWTPH-Dx (mg/kg)					
Diesel Range Hydrocarbons	16.4	10.0 U	20.2 U	10.0 U	2,000
Lube Oil Range Hydrocarbons	45.8	25.0 U	50.5 U	25.0 U	2,000
PID Reading, ppm	250	549	59.5	250	

Location:	D-1	
Lab ID:	B4F0168-05	MTCA
Date Collected:	6/3/2004	Method A
Matrix:	Water	Level
NWTPH-Gx (µg/L)		
Gasoline	36200	800
BETX (µg/L)		
Method 8021B		
Benzene	7860	5
Toluene	6920	1000
Ethylbenzene	792	700
Xylenes (total)	3260	1000

U = Indicates the compound was undetected at the reported concentration.

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-1	11/24/2002	19.50	N/A	N/A	N/A	5.71	13.79	13.79	
HA-3	11/24/2002	21.03	N/A	N/A	N/A	9.42	11.61	11.61	
HA-4	11/24/2002	20.24	N/A	N/A	N/A	8.78	11.46	11.46	
HA-5	11/24/2002	18.07	N/A	N/A	N/A	6.80	11.27	11.27	
HA-5	1/17/2003	18.07	4.37	13.70	0.00	4.37	13.70	13.70	
HA-5	1/20/2003	18.07	N/A	N/A	N/A	4.58	13.49	13.49	
HA-5	1/31/2003	18.07	N/A	N/A	N/A	4.49	13.58	13.58	
HA-5	2/7/2003	18.07	N/A	N/A	N/A	4.46	13.61	13.61	
HA-5	2/12/2003	18.07	N/A	N/A	N/A	4.93	13.14	13.14	
HA-5	2/18/2003	18.07	N/A	N/A	N/A	5.30	12.77	12.77	
HA-5	2/21/2003	18.07	N/A	N/A	N/A	5.14	12.93	12.93	
HA-5	2/24/2003	18.07	N/A	N/A	N/A	5.23	12.84	12.84	
HA-5	3/4/2003	18.07	N/A	N/A	N/A	5.55	12.52	12.52	
HA-5	3/12/2003	18.07	N/A	N/A	N/A	5.24	12.83	12.83	
HA-5	3/14/2003	18.07	5.25	12.82	0.01	5.26	12.81	12.82	
HA-5	3/26/2003	18.07	N/A	N/A	N/A	4.41	13.66	13.66	
HA-5	3/28/2003	18.07	N/A	N/A	N/A	4.98	13.09	13.09	
HA-5	4/2/2003	18.07	N/A	N/A	N/A	5.00	13.07	13.07	
HA-5	4/4/2003	18.07	N/A	N/A	N/A	5.44	12.63	12.63	
HA-5	4/8/2003	18.07	N/A	N/A	N/A	5.49	12.58	12.58	
HA-5	4/11/2003	18.07	N/A	N/A	N/A	5.53	12.54	12.54	
HA-5	4/15/2003	18.07	N/A	N/A	N/A	5.06	13.01	13.01	
HA-5	4/17/2003	18.07	N/A	N/A	N/A	5.70	12.37	12.37	
HA-5	4/22/2003	18.07	N/A	N/A	N/A	5.54	12.53	12.53	
HA-5	4/25/2003	18.07	N/A	N/A	N/A	5.92	12.15	12.15	
HA-5	5/2/2003	18.07	N/A	N/A	N/A	5.98	12.09	12.09	
HA-5	5/6/2003	18.07	N/A	N/A	N/A	6.02	12.05	12.05	
HA-5	5/9/2003	18.07	N/A	N/A	N/A	6.34	11.73	11.73	
HA-5	5/23/2003	18.07	N/A	N/A	N/A	6.95	11.12	11.12	
HA-5	5/28/2003	18.07	N/A	N/A	N/A	6.85	11.22	11.22	
HA-5	6/13/2003	18.07	N/A	N/A	N/A	7.22	10.85	10.85	
HA-5	6/18/2003	18.07	N/A	N/A	N/A	7.16	10.91	10.91	
HA-5	6/27/2003	18.07	N/A	N/A	N/A	7.14	10.93	10.93	
HA-5	7/7/2003	18.07	N/A	N/A	N/A	7.47	10.60	10.60	
HA-5	7/16/2003	18.07	N/A	N/A	N/A	7.57	10.50	10.50	
HA-5	7/31/2003	18.07	7.82	10.25	0.01	7.83	10.24	10.25	
HA-5	8/5/2003	18.07	N/A	N/A	N/A	7.90	10.17	10.17	
HA-5	8/11/2003	18.07	N/A	N/A	N/A	9.01	9.06	9.06	
HA-5	8/22/2003	18.07	9.24	8.83	0.01	9.25	8.82	8.83	
HA-5	8/26/2003	18.07	N/A	N/A	N/A	8.19	9.88	9.88	
HA-5	9/2/2003	18.07	N/A	N/A	N/A	8.48	9.59	9.59	
HA-5	9/9/2003	18.07	N/A	N/A	N/A	8.93	9.14	9.14	
HA-5	9/19/2003	18.07	8.80	9.27	0.01	8.81	9.26	9.27	
HA-5	10/14/2003	18.07	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-5	11/20/2003	18.07	N/A	N/A	N/A	N/A	N/A	N/A	Submerged well cap
HA-5	12/3/2003	18.07	N/A	N/A	N/A	4.44	13.63	13.63	Bailer in well
HA-5	1/19/2004	18.07	N/A	N/A	N/A	3.99	14.08	14.08	
HA-5	2/24/2004	18.07	N/A	N/A	N/A	5.26	12.81	12.81	
HA-5	3/15/2004	18.07	N/A	N/A	N/A	6.11	11.96	11.96	
HA-5	4/19/2004	18.07	N/A	N/A	N/A	6.62	11.45	11.45	
HA-5	5/17/2004	18.07	N/A	N/A	N/A	7.15	10.92	10.92	
HA-5	6/22/2004	18.07	N/A	N/A	N/A	6.98	11.09	11.09	
HA-6	11/24/2002	18.16	N/A	N/A	N/A	7.12	11.04	11.04	
HA-7	11/24/2002	18.44	N/A	N/A	N/A	7.25	11.19	11.19	
HA-8	11/24/2002	18.88	N/A	N/A	N/A	7.40	11.48	11.48	
HA-8	1/31/2003	18.88	N/A	N/A	N/A	4.04	14.84	14.84	
HA-8	2/7/2003	18.88	N/A	N/A	N/A	4.16	14.72	14.72	
HA-8	2/12/2003	18.88	N/A	N/A	N/A	4.71	14.17	14.17	
HA-8	2/18/2003	18.88	N/A	N/A	N/A	4.99	13.89	13.89	
HA-8	2/21/2003	18.88	N/A	N/A	N/A	5.16	13.72	13.72	
HA-8	2/24/2003	18.88	N/A	N/A	N/A	5.21	13.67	13.67	
HA-8	3/4/2003	18.88	N/A	N/A	N/A	5.89	12.99	12.99	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-8	3/12/2003	18.88	N/A	N/A	N/A	5.36	13.52	13.52	
HA-8	3/14/2003	18.88	5.21	13.67	0.01	5.22	13.66	13.67	
HA-8	3/26/2003	18.88	N/A	N/A	N/A	4.74	14.14	14.14	
HA-8	3/28/2003	18.88	N/A	N/A	N/A	5.21	13.67	13.67	
HA-8	4/2/2003	18.88	N/A	N/A	N/A	5.25	13.63	13.63	
HA-8	4/4/2003	18.88	N/A	N/A	N/A	5.57	13.31	13.31	
HA-8	4/8/2003	18.88	N/A	N/A	N/A	5.57	13.31	13.31	
HA-8	4/11/2003	18.88	N/A	N/A	N/A	5.77	13.11	13.11	
HA-8	4/15/2003	18.88	N/A	N/A	N/A	5.41	13.47	13.47	
HA-8	4/17/2003	18.88	N/A	N/A	N/A	5.91	12.97	12.97	
HA-8	4/22/2003	18.88	N/A	N/A	N/A	6.07	12.81	12.81	
HA-8	4/25/2003	18.88	N/A	N/A	N/A	6.37	12.51	12.51	
HA-8	5/2/2003	18.88	N/A	N/A	N/A	6.44	12.44	12.44	
HA-8	5/6/2003	18.88	N/A	N/A	N/A	6.62	12.26	12.26	
HA-8	5/9/2003	18.88	N/A	N/A	N/A	6.92	11.96	11.96	
HA-8	5/23/2003	18.88	N/A	N/A	N/A	7.38	11.50	11.50	
HA-8	5/28/2003	18.88	N/A	N/A	N/A	7.34	11.54	11.54	
HA-8	6/13/2003	18.88	N/A	N/A	N/A	7.66	11.22	11.22	
HA-8	6/18/2003	18.88	N/A	N/A	N/A	7.60	11.28	11.28	
HA-8	6/27/2003	18.88	N/A	N/A	N/A	7.65	11.23	11.23	
HA-8	7/7/2003	18.88	N/A	N/A	N/A	8.51	10.37	10.37	
HA-8	7/16/2003	18.88	N/A	N/A	N/A	8.24	10.64	10.64	
HA-8	7/31/2003	18.88	N/A	N/A	N/A	8.61	10.27	10.27	
HA-8	8/5/2003	18.88	N/A	N/A	N/A	9.62	9.26	9.26	
HA-8	8/11/2003	18.88	N/A	N/A	N/A	9.70	9.18	9.18	
HA-8	8/22/2003	18.88	10.02	8.86	0.01	10.03	8.85	8.86	
HA-8	8/26/2003	18.88	N/A	N/A	N/A	8.99	9.89	9.89	
HA-8	9/2/2003	18.88	N/A	N/A	N/A	9.02	9.86	9.86	
HA-8	9/9/2003	18.88	9.51	9.37	0.01	9.52	9.36	9.37	
HA-8	9/19/2003	18.88	10.40	8.48	0.10	10.50	8.38	8.46	
HA-8	10/14/2003	18.88	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-8	11/20/2003	18.88	7.22	11.66	0.32	7.54	11.34	11.58	
HA-8	12/3/2003	18.88	4.65	14.23	0.57	5.22	13.66	14.09	
HA-8	1/19/2004	18.88	4.23	14.65	0.55	4.78	14.10	14.51	
HA-8	2/24/2004	18.88	5.08	13.80	0.53	5.61	13.27	13.67	
HA-8	3/15/2004	18.88	6.15	12.73	0.51	6.66	12.22	12.60	
HA-8	4/19/2004	18.88	6.98	11.90	0.50	7.48	11.40	11.78	
HA-8	5/17/2004	18.88	7.74	11.14	0.49	8.23	10.65	11.02	
HA-8	6/22/2004	18.88	7.57	11.31	0.51	8.08	10.80	11.18	
HA-9	11/24/2002	19.40	N/A	N/A	N/A	8.20	11.20	11.20	
HA-10	11/24/2002	19.33	N/A	N/A	N/A	8.49	10.84	10.84	
HA-11	11/24/2002	18.51	N/A	N/A	N/A	8.33	10.18	10.18	
HA-12	11/24/2002	19.91	N/A	N/A	N/A	7.43	12.48	12.48	
HA-13	11/24/2002	19.56	N/A	N/A	N/A	8.60	10.96	10.96	
HA-13	1/17/2003	19.56	N/A	N/A	N/A	6.30	13.26	13.26	
HA-13	1/31/2003	19.56	N/A	N/A	N/A	4.49	15.07	15.07	
HA-13	2/7/2003	19.56	N/A	N/A	N/A	6.27	13.29	13.29	
HA-13	2/12/2003	19.56	N/A	N/A	N/A	6.78	12.78	12.78	
HA-13	2/18/2003	19.56	N/A	N/A	N/A	7.13	12.43	12.43	
HA-13	2/21/2003	19.56	N/A	N/A	N/A	6.99	12.57	12.57	
HA-13	2/24/2003	19.56	N/A	N/A	N/A	6.98	12.58	12.58	
HA-13	3/4/2003	19.56	N/A	N/A	N/A	7.49	12.07	12.07	
HA-13	3/12/2003	19.56	N/A	N/A	N/A	6.48	13.08	13.08	
HA-13	3/14/2003	19.56	N/A	N/A	N/A	5.16	14.40	14.40	
HA-13	3/26/2003	19.56	N/A	N/A	N/A	5.65	13.91	13.91	
HA-13	3/28/2003	19.56	N/A	N/A	N/A	6.34	13.22	13.22	
HA-13	4/2/2003	19.56	N/A	N/A	N/A	6.74	12.82	12.82	
HA-13	4/4/2003	19.56	N/A	N/A	N/A	7.08	12.48	12.48	
HA-13	4/8/2003	19.56	N/A	N/A	N/A	7.17	12.39	12.39	
HA-13	4/11/2003	19.56	N/A	N/A	N/A	7.31	12.25	12.25	
HA-13	4/15/2003	19.56	N/A	N/A	N/A	6.93	12.63	12.63	
HA-13	4/17/2003	19.56	N/A	N/A	N/A	7.32	12.24	12.24	
HA-13	4/22/2003	19.56	N/A	N/A	N/A	7.52	12.04	12.04	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-13	4/25/2003	19.56	N/A	N/A	N/A	7.81	11.75	11.75	
HA-13	5/2/2003	19.56	N/A	N/A	N/A	8.04	11.52	11.52	
HA-13	5/6/2003	19.56	N/A	N/A	N/A	8.13	11.43	11.43	
HA-13	5/9/2003	19.56	N/A	N/A	N/A	8.36	11.20	11.20	
HA-13	5/23/2003	19.56	N/A	N/A	N/A	8.93	10.63	10.63	
HA-13	5/28/2003	19.56	N/A	N/A	N/A	8.98	10.58	10.58	
HA-13	6/13/2003	19.56	N/A	N/A	N/A	6.08	13.48	13.48	
HA-13	6/18/2003	19.56	N/A	N/A	N/A	9.12	10.44	10.44	
HA-13	6/27/2003	19.56	N/A	N/A	N/A	9.07	10.49	10.49	
HA-13	7/7/2003	19.56	N/A	N/A	N/A	9.55	10.01	10.01	
HA-13	7/16/2003	19.56	N/A	N/A	N/A	9.42	10.14	10.14	
HA-13	7/31/2003	19.56	N/A	N/A	N/A	9.59	9.97	9.97	
HA-13	8/5/2003	19.56	N/A	N/A	N/A	9.63	9.93	9.93	
HA-13	8/11/2003	19.56	N/A	N/A	N/A	10.75	8.81	8.81	
HA-13	8/22/2003	19.56	N/A	N/A	N/A	11.26	8.30	8.30	
HA-13	8/26/2003	19.56	N/A	N/A	N/A	9.87	9.69	9.69	
HA-13	9/2/2003	19.56	N/A	N/A	N/A	10.31	9.25	9.25	
HA-13	9/9/2003	19.56	N/A	N/A	N/A	10.46	9.10	9.10	
HA-13	9/19/2003	19.56	N/A	N/A	N/A	10.46	9.10	9.10	
HA-13	10/14/2003	19.56	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-13	11/20/2003	19.56	N/A	N/A	N/A	5.70	13.86	13.86	
HA-13	12/3/2003	19.56	N/A	N/A	N/A	5.91	13.65	13.65	
HA-13	1/19/2004	19.56	N/A	N/A	N/A	5.91	13.65	13.65	
HA-13	2/24/2004	19.56	N/A	N/A	N/A	6.92	12.64	12.64	
HA-13	3/15/2004	19.56	N/A	N/A	N/A	7.81	11.75	11.75	
HA-13	4/19/2004	19.56	N/A	N/A	N/A	8.56	11.00	11.00	
HA-13	5/17/2004	19.56	N/A	N/A	N/A	9.07	10.49	10.49	
HA-13	6/22/2004	19.56	N/A	N/A	N/A	8.98	10.58	10.58	
HA-14	11/24/2002	20.02	N/A	N/A	N/A	9.67	10.35	10.35	
HA-15	1/31/2003	19.12	N/A	N/A	N/A	5.56	13.56	13.56	
HA-15	2/7/2003	19.12	N/A	N/A	N/A	5.31	13.81	13.81	
HA-15	2/12/2003	19.12	N/A	N/A	N/A	5.64	13.48	13.48	
HA-15	2/18/2003	19.12	N/A	N/A	N/A	6.09	13.03	13.03	
HA-15	2/21/2003	19.12	N/A	N/A	N/A	7.92	11.20	11.20	
HA-15	2/24/2003	19.12	N/A	N/A	N/A	6.04	13.08	13.08	
HA-15	3/4/2003	19.12	N/A	N/A	N/A	6.62	12.50	12.50	
HA-15	3/12/2003	19.12	N/A	N/A	N/A	6.02	13.10	13.10	
HA-15	3/26/2003	19.12	N/A	N/A	N/A	5.46	13.66	13.66	
HA-15	3/28/2003	19.12	N/A	N/A	N/A	5.96	13.16	13.16	
HA-15	4/2/2003	19.12	N/A	N/A	N/A	5.91	13.21	13.21	
HA-15	4/4/2003	19.12	N/A	N/A	N/A	6.22	12.90	12.90	
HA-15	4/8/2003	19.12	N/A	N/A	N/A	6.42	12.70	12.70	
HA-15	4/11/2003	19.12	N/A	N/A	N/A	6.63	12.49	12.49	
HA-15	4/15/2003	19.12	N/A	N/A	N/A	6.28	12.84	12.84	
HA-15	4/17/2003	19.12	N/A	N/A	N/A	6.49	12.63	12.63	
HA-15	4/22/2003	19.12	N/A	N/A	N/A	6.66	12.46	12.46	
HA-15	4/25/2003	19.12	N/A	N/A	N/A	7.07	12.05	12.05	
HA-15	5/2/2003	19.12	N/A	N/A	N/A	7.06	12.06	12.06	
HA-15	5/6/2003	19.12	N/A	N/A	N/A	7.32	11.80	11.80	
HA-15	5/9/2003	19.12	N/A	N/A	N/A	7.52	11.60	11.60	
HA-15	5/23/2003	19.12	N/A	N/A	N/A	7.83	11.29	11.29	
HA-15	5/28/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/13/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/18/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/27/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/7/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/16/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/31/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/5/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/11/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/22/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/26/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/2/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/9/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/19/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	10/14/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	

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GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-15	11/20/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	12/3/2003	19.12	N/A	N/A	N/A	6.08	13.04	13.04	
HA-15	1/19/2004	19.12	N/A	N/A	N/A	5.49	13.63	13.63	
HA-15	2/24/2004	19.12	N/A	N/A	N/A	6.32	12.80	12.80	
HA-15	3/15/2004	19.12	N/A	N/A	N/A	7.32	11.80	11.80	
HA-15	4/19/2004	19.12	N/A	N/A	N/A	7.80	11.32	11.32	
HA-15	5/17/2004	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/22/2004	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-16	12/5/2002	19.01	7.60	11.41	0.05	7.65	11.36	11.40	
HA-16	12/11/2002	19.01	7.40	11.61	0.68	8.08	10.93	11.44	
HA-16	12/13/2002	19.01	7.33	11.68	0.96	8.29	10.72	11.44	
HA-16	12/17/2002	19.01	6.67	12.34	1.54	8.21	10.80	11.96	
HA-16	1/2/2003	19.01	5.60	13.41	0.22	5.82	13.19	13.36	
HA-16	1/6/2003	19.01	5.08	13.93	0.02	5.1	13.91	13.93	
HA-16	1/7/2003	19.01	5.05	13.96	0.02	5.07	13.94	13.96	
HA-16	1/8/2003	19.01	4.95	14.06	0.03	4.98	14.03	14.05	
HA-16	1/9/2003	19.01	4.92	14.09	0.02	4.94	14.07	14.09	
HA-16	1/10/2003	19.01	4.94	14.07	0.02	4.96	14.05	14.07	
HA-16	1/14/2003	19.01	3.09	15.92	2.03	5.12	13.89	15.41	
HA-16	1/15/2003	19.01	5.00	14.01	0.05	5.05	13.96	14.00	
HA-16	1/16/2003	19.01	4.92	14.09	0.04	4.96	14.05	14.08	
HA-16	1/17/2003	19.01	4.95	14.06	0.02	4.97	14.04	14.06	
HA-16	1/20/2003	19.01	4.98	14.03	0.04	5.02	13.99	14.02	
HA-16	5/28/2003	19.01	7.35	11.66	0.77	8.12	10.89	11.47	
HA-17	8/11/2003		N/A	N/A	N/A	Dry	Dry	Dry	
HA-17	3/15/2004		N/A	N/A	N/A	6.66			Need MP Elev
HA-18	8/11/2003		N/A	N/A	N/A	Dry	Dry	Dry	
HA-18	3/15/2004		6.47			6.47			Need MP Elev
HA-19	--	19.62	--	--	--	--	--	--	
HA-19	4/2/2003	19.62	N/A	N/A	N/A	4.61	15.01	15.01	
HA-19	4/4/2003	19.62	7.10	N/A	N/A	7.13	12.49	12.49	
HA-19	4/8/2003	19.62	6.61			6.62	13.01	13.01	
HA-19	4/11/2003	19.62	5.69	13.93	0.00	5.69	13.93	13.93	
HA-19	4/15/2003	19.62	N/A	N/A	N/A	4.26	15.36	15.36	
HA-19	4/17/2003	19.62	N/A	N/A	N/A	5.62	14.00	14.00	
HA-19	4/22/2003	19.62	7.21	12.41	0.01	7.22	12.40	12.41	
HA-19	4/25/2003	19.62	7.23	12.39	0.00	7.23	12.39	12.39	
HA-19	5/2/2003	19.62	N/A	N/A	N/A	7.87	11.75	11.75	
HA-19	5/6/2003	19.62	N/A	N/A	N/A	7.80	11.82	11.82	
HA-19	5/9/2003	19.62	N/A	N/A	N/A	8.00	11.62	11.62	
HA-19	5/23/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	5/28/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/13/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/18/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/27/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/7/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/16/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/31/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/5/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/11/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/22/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/26/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/2/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/9/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/19/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	10/14/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	11/20/2003	19.62	N/A	N/A	N/A	4.74	14.88	14.88	
HA-19	12/3/2003	19.62	N/A	N/A	N/A	5.35	14.27	14.27	
HA-19	1/19/2004	19.62	5.51	14.11	0.005	5.52	14.11	14.11	
HA-19	2/24/2004	19.62	7.18	12.44	0.005	7.19	12.44	12.44	
HA-19	3/15/2004	19.62	N/A	N/A	N/A	7.94	11.68	11.68	
HA-19	4/19/2004	19.62	N/A	N/A	N/A	8.01	11.61	11.61	
HA-19	5/17/2004	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/22/2004	19.62	N/A	N/A	N/A	Dry	Dry	Dry	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-20	11/24/2002	18.17	N/A	N/A	N/A	7.49	10.68	10.68	
HA-20	11/27/2002	17.46	6.46	11.00	3.51	9.97	7.49	10.12	
HA-20	12/5/2002	17.46	6.25	11.21	3.57	9.82	7.64	10.32	
HA-20	12/11/2002	17.46	6.25	11.21	3.48	9.73	7.73	10.34	
HA-20	12/13/2002	17.46	6.12	11.34	3.55	9.67	7.79	10.45	
HA-20	12/17/2002	17.46	5.29	12.17	4.20	9.49	7.97	11.12	
HA-20	1/3/2003	17.46	3.26	14.20	4.39	7.65	9.81	13.10	
HA-20	1/6/2003	17.46	3.83	13.63	3.10	6.93	10.53	12.86	
HA-20	1/7/2003	17.46	4.45	13.01	1.16	5.61	11.85	12.72	
HA-20	1/8/2003	17.46	4.22	13.24	1.57	5.79	11.67	12.85	
HA-20	1/9/2003	17.46	3.97	13.49	3.11	7.08	10.38	12.71	
HA-20	1/10/2003	17.46	4.04	13.42	3.24	7.28	10.18	12.61	
HA-20	1/13/2003	17.46	4.75	12.71	0.92	5.67	11.79	12.48	
HA-20	1/14/2003	17.46	4.15	13.31	3.47	7.62	9.84	12.44	
HA-20	1/15/2003	17.46	4.05	13.41	3.10	7.15	10.31	12.64	
HA-20	1/16/2003	17.46	4.15	13.31	2.90	7.05	10.41	12.59	
HA-20	1/17/2003	17.46	4.18	13.28	2.82	7.00	10.46	12.58	
HA-20	1/20/2003	17.46	4.15	13.31	3.09	7.24	10.22	12.54	
HA-20	1/22/2003	17.46	3.30	14.16	6.50	9.80	7.66	12.54	
HA-20	1/23/2003	17.46	4.80	12.66	3.78	8.58	8.88	11.72	
HA-20	1/24/2003	17.46	4.55	12.91	3.66	8.21	9.25	12.00	
HA-20	1/27/2003	17.46	3.68	13.78	2.96	6.64	10.82	13.04	
HA-20	1/28/2003	17.46	3.82	13.64	3.68	7.50	9.96	12.72	
HA-20	1/29/2003	17.46	4.05	13.41	4.44	8.49	8.97	12.30	
HA-20	1/30/2003	17.46	4.26	13.20	4.06	8.32	9.14	12.19	
HA-20	2/3/2003	17.46	4.33	13.13	3.17	7.50	9.96	12.34	
HA-20	2/6/2003	20.01	4.59	15.42	1.80	6.39	13.62	14.97	
HA-20	2/11/2003	20.01	6.18	13.83	2.39	8.57	11.44	13.23	
HA-20	2/18/2003	20.01	7.40	12.61	0.88	8.28	11.73	12.39	
HA-20	2/21/2003	20.01	7.34	12.67	0.73	8.07	11.94	12.49	
HA-20	2/26/2003	20.01	6.09	13.92	0.11	6.20	13.81	13.89	
HA-20	3/4/2003	20.01	7.47	12.54	1.87	9.34	10.67	12.07	
HA-20	3/12/2003	20.01	7.05	12.96	2.63	9.68	10.33	12.30	
HA-20	3/14/2003	20.01	7.14	12.87	2.27	9.41	10.60	12.30	
HA-20	3/26/2003	20.01	5.64	14.37	3.93	9.57	10.44	13.39	
HA-20	3/28/2003	20.01	6.91	13.10	2.50	9.41	10.60	12.48	
HA-20	4/2/2003	20.01	6.47	13.54	2.65	9.12	10.89	12.88	
HA-20	4/4/2003	20.01	7.01	13.00	2.13	9.14	10.87	12.47	
HA-20	4/8/2003	20.01	7.16	12.85	1.49	8.65	11.36	12.48	
HA-20	4/11/2003	20.01	7.21	12.80	1.66	8.87	11.14	12.39	
HA-20	4/15/2003	20.01	6.91	13.10	0.40	7.31	12.70	13.00	
HA-20	4/17/2003	20.01	7.71	12.30	1.00	8.71	11.30	12.05	
HA-20	4/22/2003	20.01	7.28	12.73	1.39	8.67	11.34	12.38	
HA-20	4/25/2003	20.01	7.72	12.29	1.24	8.96	11.05	11.98	
HA-20	5/2/2003	20.01	7.46	12.55	2.41	9.87	10.14	11.95	
HA-20	5/6/2003	20.01	7.38	12.63	2.49	9.87	10.14	12.01	
HA-20	5/9/2003	20.01	8.05	11.96	1.95	10.00	10.01	11.47	
HA-20	5/23/2003	20.01	8.69	11.32	1.76	10.45	9.56	10.88	
HA-20	5/28/2003	20.01	8.50	11.51	1.49	9.99	10.02	11.14	
HA-20	6/13/2003	20.01	8.75	11.26	1.46	10.21	9.80	10.90	
HA-20	6/18/2003	20.01	8.68	11.33	1.57	10.25	9.76	10.94	
HA-20	6/27/2003	20.01	8.70	11.31	1.64	10.34	9.67	10.90	
HA-20	7/7/2003	20.01	9.64	10.37	0.73	10.37	9.64	10.19	
HA-20	7/16/2003	20.01	9.11	10.90	1.43	10.54	9.47	10.54	
HA-20	7/31/2003	20.01	9.40	10.61	1.48	10.88	9.13	10.24	
HA-20	8/5/2003	20.01	9.50	10.51	1.25	10.75	9.26	10.20	
HA-20	8/11/2003	20.01	10.65	9.36	1.37	12.02	7.99	9.02	
HA-20	8/22/2003	20.01	10.91	9.10	1.29	12.20	7.81	8.78	
HA-20	8/26/2003	20.01	N/A	N/A	N/A	9.81	10.20	10.20	
HA-20	9/2/2003	20.01	9.94	10.07	1.33	11.27	8.74	9.74	
HA-20	9/9/2003	20.01	10.40	9.61	0.36	10.76	9.25	9.52	
HA-20	9/19/2003	20.01	10.38	9.63	0.24	10.62	9.39	9.57	
HA-20	10/14/2003	20.01	10.26	9.75	0.75	11.01	9.00	9.56	
HA-20	11/20/2003	20.01	N/A	N/A	N/A	7.20	12.81	12.81	
HA-20	12/3/2003	20.01	N/A	N/A	N/A	6.21	13.80	13.80	
HA-20	1/19/2004	20.01	N/A	N/A	N/A	5.84	14.17	14.17	
HA-20	2/24/2004	20.01	N/A	N/A	N/A	7.46	12.55	12.55	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-20	3/15/2004	20.01	N/A	N/A	N/A	8.44	11.57	11.57	Oily trace
HA-20	4/19/2004	20.01	N/A	N/A	N/A	8.51	11.50	11.50	Trace product
HA-20	5/17/2004	20.01	N/A	N/A	N/A	8.99	11.02	11.02	
HA-20	6/22/2004	20.01	N/A	N/A	N/A	8.83	11.18	11.18	
LAI-1	1/17/2003	18.99	N/A	N/A	N/A	4.17	14.82	14.82	
LAI-1	1/20/2003	18.99	N/A	N/A	N/A	4.18	14.81	14.81	
LAI-1	1/31/2003	18.99	N/A	N/A	N/A	4.28	14.71	14.71	
LAI-1	2/7/2003	18.99	4.06	14.93	0.48	4.54	14.45	14.81	
LAI-1	2/12/2003	18.99	4.38	14.61	1.08	5.46	13.53	14.34	
LAI-1	2/18/2003	18.99	N/A	N/A	N/A	5.40	13.59	13.59	
LAI-1	2/21/2003	18.99	N/A	N/A	N/A	5.52	13.47	13.47	
LAI-1	2/24/2003	18.99	N/A	N/A	N/A	5.96	13.03	13.03	
LAI-1	3/3/2003	18.99	N/A	N/A	N/A	5.76	13.23	13.23	
LAI-1	3/12/2003	18.99	N/A	N/A	N/A	5.48	13.51	13.51	
LAI-1	3/14/2003	18.99	N/A	N/A	N/A	5.09	13.90	13.90	
LAI-1	3/26/2003	18.99	N/A	N/A	N/A	4.76	14.23	14.23	
LAI-1	3/28/2003	18.99	N/A	N/A	N/A	4.86	14.13	14.13	
LAI-1	4/2/2003	18.99	5.21	13.78	0.01	5.22	13.77	13.78	
LAI-1	4/4/2003	18.99	5.19	13.80	0.01	5.20	13.79	13.80	
LAI-1	4/8/2003	18.99	5.67	13.32	0.01	5.68	13.31	13.32	
LAI-1	4/11/2003	18.99	5.07	13.92	0.01	5.08	13.91	13.92	
LAI-1	4/15/2003	18.99	4.62	14.37	0.01	4.63	14.36	14.37	
LAI-1	4/17/2003	18.99	6.14	12.85	0.01	6.15	12.84	12.85	
LAI-1	4/22/2003	18.99	N/A	N/A	N/A	5.21	13.78	13.78	
LAI-1	4/25/2003	18.99	N/A	N/A	N/A	5.43	13.56	13.56	
LAI-1	5/2/2003	18.99	N/A	N/A	N/A	5.53	13.46	13.46	
LAI-1	5/6/2003	18.99	N/A	N/A	N/A	5.66	13.33	13.33	
LAI-1	5/9/2003	18.99	N/A	N/A	N/A	6.15	12.84	12.84	
LAI-1	5/16/2003	18.99	N/A	N/A	N/A	6.40	12.59	12.59	
LAI-1	5/23/2003	18.99	6.50	12.49	0.01	6.51	12.48	12.49	
LAI-1	5/28/2003	18.99	6.45	12.54	0.01	6.46	12.53	12.54	
LAI-1	6/13/2003	18.99	6.79	12.20	0.01	6.80	12.19	12.20	
LAI-1	6/18/2003	18.99	N/A	N/A	N/A	6.78	12.21	12.21	
LAI-1	6/27/2003	18.99	N/A	N/A	N/A	6.81	12.18	12.18	
LAI-1	7/7/2003	18.99	N/A	N/A	N/A	7.41	11.58	11.58	
LAI-1	7/16/2003	18.99	N/A	N/A	N/A	6.43	12.56	12.56	
LAI-1	7/31/2003	18.99	N/A	N/A	N/A	7.49	11.50	11.50	
LAI-1	8/5/2003	18.99	N/A	N/A	N/A	7.61	11.38	11.38	
LAI-1	8/11/2003	18.99	N/A	N/A	N/A	8.80	10.19	10.19	
LAI-1	8/22/2003	18.99	N/A	N/A	N/A	8.98	10.01	10.01	
LAI-1	8/26/2003	18.99	N/A	N/A	N/A	7.91	11.08	11.08	
LAI-1	9/2/2003	18.99	N/A	N/A	N/A	8.07	10.92	10.92	
LAI-1	9/9/2003	18.99	8.39	10.60	0.01	8.40	10.59	10.60	
LAI-1	9/19/2003	18.99	N/A	N/A	N/A	8.27	10.72	10.72	
LAI-1	10/14/2003	18.99	N/A	N/A	N/A	8.34	10.65	10.65	
LAI-1	11/20/2003	18.99	N/A	N/A	N/A	4.63	14.36	14.36	
LAI-1	12/3/2003	18.99	N/A	N/A	N/A	4.10	14.89	14.89	
LAI-1	1/19/2004	18.99	N/A	N/A	N/A	3.82	15.17	15.17	
LAI-1	2/24/2004	18.99	N/A	N/A	N/A	5.22	13.77	13.77	
LAI-1	3/15/2004	18.99	N/A	N/A	N/A	6.16	12.83	12.83	
LAI-1	4/19/2004	18.99	N/A	N/A	N/A	6.29	12.70	12.70	
LAI-1	5/17/2004	18.99	N/A	N/A	N/A	6.81	12.18	12.18	
LAI-1	6/22/2004	18.99	N/A	N/A	N/A	6.64	12.35	12.35	
LAI-2	1/17/2003	18.95	N/A	N/A	N/A	4.14	14.81	14.81	
LAI-2	1/20/2003	18.95	N/A	N/A	N/A	4.25	14.70	14.70	
LAI-2	1/31/2003	18.95	N/A	N/A	N/A	4.55	14.40	14.40	
LAI-2	2/7/2003	18.95	N/A	N/A	N/A	4.41	14.54	14.54	
LAI-2	2/12/2003	18.95	N/A	N/A	N/A	4.71	14.24	14.24	
LAI-2	2/18/2003	18.95	N/A	N/A	N/A	5.44	13.51	13.51	
LAI-2	2/21/2003	18.95	N/A	N/A	N/A	5.61	13.34	13.34	
LAI-2	2/24/2003	18.95	N/A	N/A	N/A	5.89	13.06	13.06	
LAI-2	3/3/2003	18.95	N/A	N/A	N/A	5.17	13.78	13.78	
LAI-2	3/12/2003	18.95	N/A	N/A	N/A	5.37	13.58	13.58	
LAI-2	3/14/2003	18.95	N/A	N/A	N/A	5.24	13.71	13.71	
LAI-2	3/26/2003	18.95	N/A	N/A	N/A	4.61	14.34	14.34	
LAI-2	3/28/2003	18.95	N/A	N/A	N/A	4.72	14.23	14.23	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-2	4/2/2003	18.95	N/A	N/A	N/A	5.51	13.44	13.44	
LAI-2	4/4/2003	18.95	N/A	N/A	N/A	5.48	13.47	13.47	
LAI-2	4/8/2003	18.95	N/A	N/A	N/A	5.55	13.40	13.40	
LAI-2	4/11/2003	18.95	N/A	N/A	N/A	5.19	13.76	13.76	
LAI-2	4/15/2003	18.95	N/A	N/A	N/A	4.80	14.15	14.15	
LAI-2	4/17/2003	18.95	N/A	N/A	N/A	5.96	12.99	12.99	
LAI-2	4/22/2003	18.95	N/A	N/A	N/A	5.33	13.62	13.62	
LAI-2	4/25/2003	18.95	N/A	N/A	N/A	5.49	13.46	13.46	
LAI-2	5/2/2003	18.95	N/A	N/A	N/A	5.78	13.17	13.17	
LAI-2	5/6/2003	18.95	N/A	N/A	N/A	5.42	13.53	13.53	
LAI-2	5/9/2003	18.95	N/A	N/A	N/A	6.30	12.65	12.65	
LAI-2	5/16/2003	18.95	N/A	N/A	N/A	6.54	12.41	12.41	
LAI-2	5/23/2003	18.95	N/A	N/A	N/A	6.63	12.32	12.32	
LAI-2	5/28/2003	18.95	N/A	N/A	N/A	6.51	12.44	12.44	
LAI-2	6/13/2003	18.95	N/A	N/A	N/A	6.91	12.04	12.04	
LAI-2	6/18/2003	18.95	N/A	N/A	N/A	6.86	12.09	12.09	
LAI-2	6/27/2003	18.95	N/A	N/A	N/A	6.87	12.08	12.08	
LAI-2	7/7/2003	18.95	N/A	N/A	N/A	7.40	11.55	11.55	
LAI-2	7/16/2003	18.95	N/A	N/A	N/A	6.52	12.43	12.43	
LAI-2	7/31/2003	18.95	N/A	N/A	N/A	7.48	11.47	11.47	
LAI-2	8/5/2003	18.95	N/A	N/A	N/A	7.56	11.39	11.39	
LAI-2	8/11/2003	18.95	N/A	N/A	N/A	8.81	10.14	10.14	
LAI-2	8/22/2003	18.95	N/A	N/A	N/A	8.99	9.96	9.96	
LAI-2	8/26/2003	18.95	N/A	N/A	N/A	7.86	11.09	11.09	
LAI-2	9/2/2003	18.95	8.03	10.92	0.01	8.04	10.91	10.92	
LAI-2	9/9/2003	18.95	N/A	N/A	N/A	8.46	10.49	10.49	
LAI-2	9/19/2003	18.95	N/A	N/A	N/A	8.15	10.80	10.80	
LAI-2	10/14/2003	18.95	N/A	N/A	N/A	8.25	10.70	10.70	
LAI-2	11/20/2003	18.95	N/A	N/A	N/A	4.82	14.13	14.13	
LAI-2	12/3/2003	18.95	N/A	N/A	N/A	4.13	14.82	14.82	
LAI-2	1/19/2004	18.95	N/A	N/A	N/A	3.80	15.15	15.15	
LAI-2	2/24/2004	18.95	N/A	N/A	N/A	5.26	13.69	13.69	
LAI-2	3/15/2004	18.95	N/A	N/A	N/A	6.21	12.74	12.74	
LAI-2	4/19/2004	18.95	N/A	N/A	N/A	6.31	12.64	12.64	
LAI-2	5/17/2004	18.95	N/A	N/A	N/A	6.75	12.20	12.20	
LAI-2	6/22/2004	18.95	N/A	N/A	N/A	6.61	12.34	12.34	
LAI-3	1/17/2003	18.80	N/A	N/A	N/A	4.37	14.43	14.43	
LAI-3	1/20/2003	18.80	N/A	N/A	N/A	4.28	14.52	14.52	
LAI-3	1/31/2003	18.80	N/A	N/A	N/A	4.94	13.86	13.86	
LAI-3	2/7/2003	18.80	N/A	N/A	N/A	4.41	14.39	14.39	
LAI-3	2/12/2003	18.80	N/A	N/A	N/A	4.70	14.10	14.10	
LAI-3	2/18/2003	18.80	N/A	N/A	N/A	5.21	13.59	13.59	
LAI-3	2/21/2003	18.80	N/A	N/A	N/A	5.58	13.22	13.22	
LAI-3	2/24/2003	18.80	N/A	N/A	N/A	5.66	13.14	13.14	
LAI-3	3/3/2003	18.80	N/A	N/A	N/A	5.13	13.67	13.67	
LAI-3	3/12/2003	18.80	N/A	N/A	N/A	5.32	13.48	13.48	
LAI-3	3/14/2003	18.80	N/A	N/A	N/A	5.16	13.64	13.64	
LAI-3	3/26/2003	18.80	N/A	N/A	N/A	4.65	14.15	14.15	
LAI-3	3/28/2003	18.80	N/A	N/A	N/A	4.75	14.05	14.05	
LAI-3	4/2/2003	18.80	N/A	N/A	N/A	5.57	13.23	13.23	
LAI-3	4/4/2003	18.80	N/A	N/A	N/A	5.53	13.27	13.27	
LAI-3	4/8/2003	18.80	N/A	N/A	N/A	5.69	13.11	13.11	
LAI-3	4/11/2003	18.80	N/A	N/A	N/A	5.15	13.65	13.65	
LAI-3	4/15/2003	18.80	N/A	N/A	N/A	4.75	14.05	14.05	
LAI-3	4/17/2003	18.80	N/A	N/A	N/A	6.08	12.72	12.72	
LAI-3	4/22/2003	18.80	N/A	N/A	N/A	5.27	13.53	13.53	
LAI-3	4/25/2003	18.80	N/A	N/A	N/A	5.45	13.35	13.35	
LAI-3	5/2/2003	18.80	N/A	N/A	N/A	5.76	13.04	13.04	
LAI-3	5/6/2003	18.80	N/A	N/A	N/A	5.61	13.19	13.19	
LAI-3	5/9/2003	18.80	N/A	N/A	N/A	6.30	12.50	12.50	
LAI-3	5/16/2003	18.80	N/A	N/A	N/A	6.53	12.27	12.27	
LAI-3	5/23/2003	18.80	N/A	N/A	N/A	6.57	12.23	12.23	
LAI-3	5/28/2003	18.80	N/A	N/A	N/A	6.44	12.36	12.36	
LAI-3	6/13/2003	18.80	N/A	N/A	N/A	6.85	11.95	11.95	
LAI-3	6/18/2003	18.80	N/A	N/A	N/A	6.81	11.99	11.99	
LAI-3	6/27/2003	18.80	N/A	N/A	N/A	6.83	11.97	11.97	
LAI-3	7/7/2003	18.80	N/A	N/A	N/A	7.32	11.48	11.48	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-3	7/16/2003	18.80	N/A	N/A	N/A	6.47	12.33	12.33	
LAI-3	7/31/2003	18.80	N/A	N/A	N/A	7.37	11.43	11.43	
LAI-3	8/5/2003	18.80	N/A	N/A	N/A	7.49	11.31	11.31	
LAI-3	8/11/2003	18.80	N/A	N/A	N/A	7.68	11.12	11.12	
LAI-3	8/22/2003	18.80	N/A	N/A	N/A	8.74	10.06	10.06	
LAI-3	8/26/2003	18.80	N/A	N/A	N/A	7.74	11.06	11.06	
LAI-3	9/2/2003	18.80	N/A	N/A	N/A	8.03	10.77	10.77	
LAI-3	9/9/2003	18.80	N/A	N/A	N/A	8.45	10.35	10.35	
LAI-3	9/19/2003	18.80	N/A	N/A	N/A	8.10	10.70	10.70	
LAI-3	10/14/2003	18.80	N/A	N/A	N/A	8.20	10.60	10.60	
LAI-3	11/20/2003	18.80	N/A	N/A	N/A	4.77	14.03	14.03	
LAI-3	12/3/2003	18.80	N/A	N/A	N/A	4.08	14.72	14.72	
LAI-3	1/19/2004	18.80	N/A	N/A	N/A	3.55	15.25	15.25	
LAI-3	2/24/2004	18.80	N/A	N/A	N/A	5.23	13.57	13.57	
LAI-3	3/15/2004	18.80	N/A	N/A	N/A	6.20	12.60	12.60	
LAI-3	4/19/2004	18.80	N/A	N/A	N/A	6.21	12.59	12.59	
LAI-3	5/17/2004	18.80	N/A	N/A	N/A	6.66	12.14	12.14	
LAI-3	6/22/2004	18.80	N/A	N/A	N/A	6.46	12.34	12.34	
LAI-4	1/22/2003	19.58	6.87	12.71	0.43	7.30	12.28	12.60	
LAI-4	1/23/2003	19.58	7.48	12.10	0.20	7.68	11.90	12.05	
LAI-4	1/24/2003	19.58	6.72	12.86	0.67	7.39	12.19	12.69	
LAI-4	1/27/2003	19.58	4.47	15.11	4.67	9.14	10.44	13.94	
LAI-4	1/28/2003	19.58	4.97	14.61	4.43	9.40	10.18	13.50	
LAI-4	1/29/2003	19.58	7.40	12.18	0.05	7.45	12.13	12.17	
LAI-4	1/30/2003	19.58	7.88	11.70	0.06	7.94	11.64	11.69	
LAI-4	2/3/2003	19.58	6.25	13.33	2.16	8.41	11.17	12.79	
LAI-4	2/6/2003	21.03	6.28	14.75	1.04	7.32	13.71	14.49	
LAI-4	2/11/2003	21.03	7.54	13.49	1.44	8.98	12.05	13.13	
LAI-4	2/18/2003	21.03	9.28	11.75	0.17	9.45	11.58	11.71	
LAI-4	2/21/2003	21.03	9.11	11.92	0.09	9.20	11.83	11.90	
LAI-4	2/26/2003	21.03	8.37	12.66	1.35	9.72	11.31	12.32	
LAI-4	3/3/2003	21.03	8.57	12.46	0.86	9.43	11.60	12.25	
LAI-4	3/12/2003	21.03	8.80	12.23	0.14	8.94	12.09	12.20	
LAI-4	3/14/2003	21.03	8.68	12.35	0.14	8.82	12.21	12.32	
LAI-4	3/26/2003	21.03	N/A	N/A	N/A	9.06	11.97	11.97	
LAI-4	3/28/2003	21.03	N/A	N/A	N/A	9.28	11.75	11.75	
LAI-4	4/2/2003	21.03	8.21	12.82	0.08	8.29	12.74	12.80	
LAI-4	4/4/2003	21.03	8.58	12.45	0.04	8.62	12.41	12.44	
LAI-4	4/8/2003	21.03	8.51	12.52	0.13	8.64	12.39	12.49	
LAI-4	4/11/2003	21.03	8.78	12.25	0.14	8.92	12.11	12.22	
LAI-4	4/15/2003	21.03	7.86	13.17	0.95	8.81	12.22	12.93	
LAI-4	4/17/2003	21.03	9.19	11.84	0.02	9.21	11.82	11.84	
LAI-4	4/22/2003	21.03	6.61	14.42	0.19	6.80	14.23	14.37	
LAI-4	4/25/2003	21.03	8.96	12.07	0.25	9.21	11.82	12.01	
LAI-4	5/2/2003	21.03	9.06	11.97	0.10	9.16	11.87	11.95	
LAI-4	5/6/2003	21.03	8.56	12.47	1.85	10.41	10.62	12.01	
LAI-4	5/9/2003	21.03	10.96	10.07	0.02	10.98	10.05	10.07	
LAI-4	5/23/2003	21.03	10.17	10.86	0.02	10.19	10.84	10.86	
LAI-4	5/28/2003	21.03	9.81	11.22	0.03	9.84	11.19	11.21	
LAI-4	6/13/2003	21.03	10.09	10.94	0.03	10.12	10.91	10.93	
LAI-4	6/18/2003	21.03	10.05	10.98	0.08	10.13	10.90	10.96	
LAI-4	6/27/2003	21.03	9.92	11.11	0.82	10.74	10.29	10.91	
LAI-4	7/7/2003	21.03	10.27	10.76	1.44	11.71	9.32	10.40	
LAI-4	7/16/2003	21.03	9.92	11.11	2.10	12.02	9.01	10.59	
LAI-4	7/31/2003	21.03	10.58	10.45	1.12	11.70	9.33	10.17	
LAI-4	8/5/2003	21.03	10.32	10.71	1.97	12.29	8.74	10.22	
LAI-4	8/11/2003	21.03	11.70	9.33	1.09	12.79	8.24	9.06	
LAI-4	8/22/2003	21.03	11.96	9.07	1.28	13.24	7.79	8.75	
LAI-4	8/26/2003	21.03	11.09	9.94	1.15	12.24	8.79	9.65	
LAI-4	9/2/2003	21.03	11.04	9.99	1.32	12.36	8.67	9.66	
LAI-4	9/9/2003	21.03	11.10	9.93	2.16	13.26	7.77	9.39	
LAI-4	9/19/2003	21.03	11.14	9.89	1.35	12.49	8.54	9.55	
LAI-4	10/14/2003	21.03	11.21	9.82	1.59	12.80	8.23	9.42	
LAI-4	11/20/2003	21.03	8.21	12.82	0.09	8.30	12.73	12.80	
LAI-4	12/3/2003	21.03	7.12	13.91	1.06	8.18	12.85	13.65	
LAI-4	1/19/2004	21.03	6.84	14.19	0.72	7.56	13.47	14.01	
LAI-4	2/24/2004	21.03	8.25	12.78	0.65	8.90	12.13	12.62	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-4	3/15/2004	21.03	9.42	11.61	0.09	9.51	11.52	11.59	Oily trace
LAI-4	4/19/2004	21.03	9.19	11.84	0.01	9.20	11.83	11.84	
LAI-4	5/17/2004	21.03	N/A	N/A	N/A	10.05	10.98	10.98	Trace product
LAI-4	6/22/2004	21.03	N/A	N/A	N/A	9.98	11.05	11.05	
LAI-5	1/22/2003	19.92	6.55	13.37	4.18	10.73	9.19	12.33	
LAI-5	1/23/2003	19.92	6.54	13.38	4.02	10.56	9.36	12.38	
LAI-5	1/24/2003	19.92	6.40	13.52	3.92	10.32	9.60	12.54	
LAI-5	1/27/2003	19.92	5.51	14.41	3.66	9.17	10.75	13.50	
LAI-5	1/28/2003	19.92	6.85	13.07	0.55	7.40	12.52	12.93	
LAI-5	1/29/2003	19.92	6.20	13.72	4.20	10.40	9.52	12.67	
LAI-5	1/30/2003	19.92	6.31	13.61	4.04	10.35	9.57	12.60	
LAI-5	2/3/2003	19.92	6.36	13.56	3.29	9.65	10.27	12.74	
LAI-5	2/6/2003	21.40	7.18	14.22	3.57	10.75	10.65	13.33	
LAI-5	2/11/2003	21.40	7.53	13.87	3.64	11.17	10.23	12.96	
LAI-5	2/18/2003	21.40	6.50	14.90	4.75	11.25	10.15	13.71	
LAI-5	2/21/2003	21.40	8.21	13.19	3.30	11.51	9.89	12.37	
LAI-5	2/26/2003	21.40	7.78	13.62	3.23	11.01	10.39	12.81	
LAI-5	3/4/2003	21.40	7.78	13.62	3.23	11.01	10.39	12.81	
LAI-5	3/12/2003	21.40	8.32	13.08	3.36	11.68	9.72	12.24	
LAI-5	3/14/2003	21.40	8.36	13.04	3.08	11.44	9.96	12.27	
LAI-5	3/26/2003	21.40	N/A	N/A	N/A	10.01	11.39	11.39	
LAI-5	3/28/2003	21.40	N/A	N/A	N/A	9.96	11.44	11.44	
LAI-5	4/2/2003	21.40	8.52	12.88	0.83	9.35	12.05	12.67	
LAI-5	4/4/2003	21.40	8.90	12.50	0.68	9.58	11.82	12.33	
LAI-5	4/8/2003	21.40	8.96	12.44	0.55	9.51	11.89	12.30	
LAI-5	4/11/2003	21.40	8.72	12.68	1.62	10.34	11.06	12.28	
LAI-5	4/15/2003	21.40	8.01	13.39	2.43	10.44	10.96	12.78	
LAI-5	4/17/2003	21.40	9.60	11.80	0.16	9.76	11.64	11.76	
LAI-5	4/22/2003	21.40	9.04	12.36	0.39	9.43	11.97	12.26	
LAI-5	4/25/2003	21.40	9.05	12.35	2.10	11.15	10.25	11.83	
LAI-5	5/2/2003	21.40	9.48	11.92	0.24	9.72	11.68	11.86	
LAI-5	5/6/2003	21.40	8.94	12.46	2.24	11.18	10.22	11.90	
LAI-5	5/9/2003	21.40	10.28	11.12	0.07	10.35	11.05	11.10	
LAI-5	5/23/2003	21.40	10.65	10.75	0.02	10.67	10.73	10.75	
LAI-5	5/28/2003	21.40	10.36	11.04	0.09	10.45	10.95	11.02	
LAI-5	6/13/2003	21.40	10.58	10.82	0.05	10.63	10.77	10.81	
LAI-5	6/18/2003	21.40	10.51	10.89	0.01	10.52	10.88	10.89	
LAI-5	6/27/2003	21.40	10.08	11.32	1.63	11.71	9.69	10.91	
LAI-5	7/7/2003	21.40	10.52	10.88	1.85	12.37	9.03	10.42	
LAI-5	7/16/2003	21.40	10.30	11.10	2.15	12.45	8.95	10.56	
LAI-5	7/31/2003	21.40	10.77	10.63	1.67	12.44	8.96	10.21	
LAI-5	8/5/2003	21.40	11.30	10.10	2.35	13.65	7.75	9.51	
LAI-5	8/11/2003	21.40	N/A	N/A	N/A	12.22	9.18	9.18	
LAI-5	8/22/2003	21.40	N/A	N/A	N/A	12.34	9.06	9.06	
LAI-5	8/26/2003	21.40	12.39	9.01	1.29	13.68	7.72	8.69	
LAI-5	9/2/2003	21.40	11.57	9.83	0.03	11.60	9.80	9.82	
LAI-5	9/9/2003	21.40	11.14	10.26	2.49	13.63	7.77	9.64	
LAI-5	9/19/2003	21.40	11.89	9.51	0.57	12.46	8.94	9.37	
LAI-5	10/14/2003	21.40	12.13	9.27	0.45	12.58	8.82	9.16	
LAI-5	11/20/2003	21.40	NA	NA	NA	8.72	12.68	12.68	
LAI-5	12/3/2003	21.40	7.76	13.64	0.33	8.09	13.31	13.56	
LAI-5	1/19/2004	21.40	7.38	14.02	0.07	7.45	13.95	14.00	
LAI-5	2/24/2004	21.40	8.65	12.75	0.11	8.76	12.64	12.72	
LAI-5	3/15/2004	21.40	N/A	N/A	N/A	9.94	11.46	11.46	Oily trace
LAI-5	4/19/2004	21.40	N/A	N/A	N/A	10.19	11.21	11.21	Trace product
LAI-5	5/17/2004	21.40	N/A	N/A	N/A	11.14	10.26	10.26	Trace product
LAI-5	6/22/2004	21.40	11.10	10.30	0.01	11.11	10.29	10.30	
LAI-6	1/22/2003	19.78	6.67	13.11	3.78	10.45	9.33	12.17	
LAI-6	1/23/2003	19.78	6.45	13.33	3.85	10.30	9.48	12.37	
LAI-6	1/24/2003	19.78	6.32	13.46	4.00	10.32	9.46	12.46	
LAI-6	1/27/2003	19.78	5.68	14.10	3.37	9.05	10.73	13.26	
LAI-6	1/28/2003	19.78	6.91	12.87	0.93	7.84	11.94	12.64	
LAI-6	1/29/2003	19.78	6.51	13.27	2.53	9.04	10.74	12.64	
LAI-6	1/30/2003	19.78	6.36	13.42	3.60	9.96	9.82	12.52	
LAI-6	2/3/2003	19.78	6.27	13.51	3.69	9.96	9.82	12.59	
LAI-6	2/6/2003	19.78	5.79	13.99	3.79	9.58	10.20	13.04	

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GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-6	2/11/2003	19.78	6.03	13.75	3.61	9.64	10.14	12.85	
LAI-6	2/18/2003	19.78	7.98	11.80	0.42	8.40	11.38	11.70	
LAI-6	2/21/2003	19.78	7.57	12.21	0.54	8.11	11.67	12.08	
LAI-6	2/26/2003	19.78	7.15	12.63	0.47	7.62	12.16	12.51	
LAI-6	3/3/2003	19.78	8.01	11.77	0.45	8.46	11.32	11.66	
LAI-6	3/12/2003	19.78	7.46	12.32	0.23	7.69	12.09	12.26	
LAI-6	3/14/2003	19.78	7.72	12.06	0.19	7.91	11.87	12.01	
LAI-6	3/26/2003	19.78	6.37	13.41	1.45	7.82	11.96	13.05	
LAI-6	3/28/2003	19.78	7.10	12.68	1.65	8.75	11.03	12.27	
LAI-6	4/2/2003	19.78	6.65	13.13	2.15	8.80	10.98	12.59	
LAI-6	4/4/2003	19.78	7.06	12.72	1.74	8.80	10.98	12.29	
LAI-6	4/8/2003	19.78	7.13	12.65	1.70	8.83	10.95	12.23	
LAI-6	4/11/2003	19.78	7.22	12.56	0.88	8.10	11.68	12.34	
LAI-6	4/15/2003	19.78	6.56	13.22	1.82	8.38	11.40	12.77	
LAI-6	4/17/2003	19.78	7.61	12.17	1.74	9.35	10.43	11.74	
LAI-6	4/22/2003	19.78	7.16	12.62	1.65	8.81	10.97	12.21	
LAI-6	4/25/2003	19.78	7.70	12.08	0.83	8.53	11.25	11.87	
LAI-6	5/2/2003	19.78	7.61	12.17	1.65	9.26	10.52	11.76	
LAI-6	5/6/2003	19.78	8.45	11.33	0.99	9.44	10.34	11.08	
LAI-6	5/9/2003	19.78	8.00	11.78	1.95	9.95	9.83	11.29	
LAI-6	5/23/2003	19.78	8.41	11.37	2.00	10.41	9.37	10.87	
LAI-6	5/28/2003	19.78	8.23	11.55	1.78	10.01	9.77	11.11	
LAI-6	6/13/2003	19.78	8.50	11.28	2.11	10.61	9.17	10.75	
LAI-6	6/18/2003	19.78	8.46	11.32	2.10	10.56	9.22	10.80	
LAI-6	6/27/2003	19.78	9.91	9.87	0.77	10.68	9.10	9.68	
LAI-6	7/7/2003	19.78	8.98	10.80	2.08	11.06	8.72	10.28	
LAI-6	7/16/2003	19.78	8.75	11.03	2.20	10.95	8.83	10.48	
LAI-6	7/31/2003	19.78	9.14	10.64	2.06	11.20	8.58	10.13	
LAI-6	8/5/2003	19.78	9.15	10.63	2.01	11.16	8.62	10.13	
LAI-6	8/11/2003	19.78	10.24	9.54	1.97	12.21	7.57	9.05	
LAI-6	8/22/2003	19.78	10.45	9.33	1.90	12.35	7.43	8.86	
LAI-6	8/26/2003	19.78	9.78	10.00	0.02	9.80	9.98	10.00	
LAI-6	9/2/2003	19.78	10.13	9.65	0.90	11.03	8.75	9.43	
LAI-6	9/9/2003	19.78	10.48	9.30	0.79	11.27	8.51	9.10	
LAI-6	9/19/2003	19.78	10.44	9.34	0.61	11.05	8.73	9.19	
LAI-6	10/14/2003	19.78	9.11	10.67	0.91	10.02	9.76	10.44	
LAI-6	11/20/2003	19.78	7.22	12.56	0.01	7.23	12.55	12.56	
LAI-6	12/3/2003	19.78	6.30	13.48	0.35	6.65	13.13	13.39	
LAI-6	1/19/2004	19.78	5.85	13.93	0.71	6.56	13.22	13.75	
LAI-6	2/24/2004	19.78	7.52	12.26	0.11	7.63	12.15	12.23	
LAI-6	3/15/2004	19.78	8.32	11.46	0.50	8.82	10.96	11.34	
LAI-6	4/19/2004	19.78	8.52	11.26	0.02	8.54	11.24	11.26	
LAI-6	5/17/2004	19.78	9.05	10.73	0.03	9.08	10.70	10.72	
LAI-6	6/22/2004	19.78	NA	NA	NA	8.85	10.93	10.93	Trace product
LAI-7	1/22/2003	19.76	8.10	11.66	1.10	9.20	10.56	11.39	
LAI-7	1/23/2003	19.76	7.58	12.18	1.07	8.65	11.11	11.91	
LAI-7	1/24/2003	19.76	6.99	12.77	2.36	9.35	10.41	12.18	
LAI-7	1/27/2003	19.76	5.18	14.58	5.30	10.48	9.28	13.26	
LAI-7	1/28/2003	19.76	7.08	12.68	0.90	7.98	11.78	12.46	
LAI-7	1/29/2003	19.76	7.41	12.35	0.44	7.85	11.91	12.24	
LAI-7	1/30/2003	19.76	8.11	11.65	0.26	8.37	11.39	11.59	
LAI-7	2/3/2003	19.76	8.90	10.86	0.06	8.96	10.80	10.85	
LAI-7	2/6/2003	21.22	7.82	13.40	1.56	9.38	11.84	13.01	
LAI-7	2/11/2003	21.22	8.23	12.99	1.56	9.79	11.43	12.60	
LAI-7	2/18/2003	21.22	9.45	11.77	0.20	9.65	11.57	11.72	
LAI-7	2/21/2003	21.22	8.57	12.65	2.34	10.91	10.31	12.07	
LAI-7	2/26/2003	21.22	8.53	12.69	3.18	11.71	9.51	11.90	
LAI-7	3/3/2003	21.22	9.53	11.69	0.18	9.71	11.51	11.65	
LAI-7	3/12/2003	21.22	8.99	12.23	0.19	9.18	12.04	12.18	
LAI-7	3/14/2003	21.22	9.18	12.04	0.18	9.36	11.86	12.00	
LAI-7	3/26/2003	21.22	N/A	N/A	N/A	9.97	11.25	11.25	
LAI-7	3/28/2003	21.22	N/A	N/A	N/A	9.95	11.27	11.27	
LAI-7	4/2/2003	21.22	8.79	12.43	0.08	8.87	12.35	12.41	
LAI-7	4/4/2003	21.22	9.04	12.18	0.08	9.12	12.10	12.16	
LAI-7	4/8/2003	21.22	8.53	12.69	0.10	8.63	12.59	12.67	
LAI-7	4/11/2003	21.22	9.06	12.16	0.17	9.23	11.99	12.12	
LAI-7	4/15/2003	21.22	8.41	12.81	0.94	9.35	11.87	12.58	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-7	4/17/2003	21.22	9.55	11.67	0.17	9.72	11.50	11.63	
LAI-7	4/22/2003	21.22	9.03	12.19	0.34	9.37	11.85	12.11	
LAI-7	4/25/2003	21.22	9.00	12.22	0.31	9.31	11.91	12.14	
LAI-7	5/2/2003	21.22	9.60	11.62	0.05	9.65	11.57	11.61	
LAI-7	5/6/2003	21.22	9.17	12.05	1.19	10.36	10.86	11.75	
LAI-7	5/9/2003	21.22	10.04	11.18	0.06	10.10	11.12	11.17	
LAI-7	5/23/2003	21.22	10.60	10.62	0.02	10.62	10.60	10.62	
LAI-7	5/28/2003	21.22	10.21	11.01	0.01	10.22	11.00	11.01	
LAI-7	6/13/2003	21.22	9.90	11.32	0.55	10.45	10.77	11.18	
LAI-7	6/18/2003	21.22	10.57	10.65	0.02	10.59	10.63	10.65	
LAI-7	6/27/2003	21.22	10.42	10.80	0.63	11.05	10.17	10.64	
LAI-7	7/7/2003	21.22	10.85	10.37	0.52	11.37	9.85	10.24	
LAI-7	7/16/2003	21.22	10.43	10.79	1.65	12.08	9.14	10.38	
LAI-7	7/31/2003	21.22	11.06	10.16	0.31	11.37	9.85	10.08	
LAI-7	8/5/2003	21.22	10.66	10.56	0.90	11.56	9.66	10.34	
LAI-7	8/11/2003	21.22	12.45	8.77	0.01	12.46	8.76	8.77	
LAI-7	8/22/2003	21.22	12.40	8.82	0.20	12.60	8.62	8.77	
LAI-7	8/26/2003	21.22	11.32	9.90	1.43	12.75	8.47	9.54	
LAI-7	9/2/2003	21.22	11.61	9.61	0.20	11.81	9.41	9.56	
LAI-7	9/9/2003	21.22	11.66	9.56	1.64	13.30	7.92	9.15	
LAI-7	9/19/2003	21.22	11.66	9.56	1.35	13.01	8.21	9.22	
LAI-7	10/14/2003	21.22	11.59	9.63	1.46	13.05	8.17	9.27	
LAI-7	11/20/2003	21.22	NA	NA	NA	8.67	12.55	12.55	
LAI-7	12/3/2003	21.22	7.98	13.24	0.23	8.21	13.01	13.18	
LAI-7	1/19/2004	21.22	7.59	13.63	0.32	7.91	13.31	13.55	
LAI-7	2/24/2004	21.22	N/A	N/A	N/A	8.72	12.50	12.50	
LAI-7	3/15/2004	21.22	N/A	N/A	N/A	9.71	11.51	11.51	Oily trace
LAI-7	4/19/2004	21.22	N/A	N/A	N/A	9.65	11.57	11.57	Trace product
LAI-7	5/17/2004	21.22	N/A	N/A	N/A	10.43	10.79	10.79	Trace product
LAI-7	6/22/2004	21.22	10.33	10.89	0.01	10.34	10.88	10.89	
LAI-8	1/22/2003	20.02	8.10	11.92	0.91	9.01	11.01	11.69	
LAI-8	1/23/2003	20.02	7.72	12.30	0.88	8.60	11.42	12.08	
LAI-8	1/24/2003	20.02	7.50	12.52	1.55	9.05	10.97	12.13	
LAI-8	1/27/2003	20.02	5.34	14.68	5.08	10.42	9.60	13.41	
LAI-8	1/28/2003	20.02	6.90	13.12	1.75	8.65	11.37	12.68	
LAI-8	1/29/2003	20.02	7.99	12.03	0.31	8.30	11.72	11.95	
LAI-8	1/30/2003	20.02	7.90	12.12	0.69	8.59	11.43	11.95	
LAI-8	2/3/2003	20.02	8.47	11.55	0.01	8.48	11.54	11.55	
LAI-8	2/6/2003	21.44	6.46	14.98	2.95	9.41	12.03	14.24	
LAI-8	2/11/2003	21.44	8.45	12.99	1.22	9.67	11.77	12.69	
LAI-8	2/18/2003	21.44	6.85	14.59	5.75	12.60	8.84	13.15	
LAI-8	2/21/2003	21.44	8.49	12.95	3.16	11.65	9.79	12.16	
LAI-8	2/26/2003	21.44	7.92	13.52	4.02	11.94	9.50	12.52	
LAI-8	3/4/2003	21.44	7.46	13.98	5.02	12.48	8.96	12.73	
LAI-8	3/12/2003	21.44	8.67	12.77	3.03	11.70	9.74	12.01	
LAI-8	3/14/2003	21.44	8.88	12.56	2.53	11.41	10.03	11.93	
LAI-8	3/26/2003	21.44	8.63	12.81	0.88	9.51	11.93	12.59	
LAI-8	3/28/2003	21.44	N/A	N/A	N/A	9.48	11.96	11.96	
LAI-8	4/2/2003	21.44	8.97	12.47	0.14	9.11	12.33	12.44	
LAI-8	4/4/2003	21.44	9.32	12.12	0.04	9.36	12.08	12.11	
LAI-8	4/8/2003	21.44	9.25	12.19	0.03	9.28	12.16	12.18	
LAI-8	4/11/2003	21.44	9.21	12.23	0.46	9.67	11.77	12.12	
LAI-8	4/15/2003	21.44	8.57	12.87	1.13	9.70	11.74	12.59	
LAI-8	4/17/2003	21.44	9.82	11.62	0.08	9.90	11.54	11.60	
LAI-8	4/22/2003	21.44	9.28	12.16	0.23	9.51	11.93	12.10	
LAI-8	4/25/2003	21.44	9.61	11.83	0.25	9.86	11.58	11.77	
LAI-8	5/2/2003	21.44	9.71	11.73	0.40	10.11	11.33	11.63	
LAI-8	5/6/2003	21.44	9.36	12.08	1.40	10.76	10.68	11.73	
LAI-8	5/9/2003	21.44	N/A	N/A	N/A	10.23	11.21	11.21	
LAI-8	5/23/2003	21.44	10.80	10.64	0.01	10.81	10.63	10.64	
LAI-8	5/28/2003	21.44	10.51	10.93	0.03	10.54	10.90	10.92	
LAI-8	6/13/2003	21.44	10.20	11.24	1.56	11.76	9.68	10.85	
LAI-8	6/18/2003	21.44	10.35	11.09	1.85	12.20	9.24	10.63	
LAI-8	6/27/2003	21.44	10.62	10.82	0.49	11.11	10.33	10.70	
LAI-8	7/7/2003	21.44	10.67	10.77	2.18	12.85	8.59	10.23	
LAI-8	7/16/2003	21.44	10.45	10.99	1.37	11.82	9.62	10.65	
LAI-8	7/31/2003	21.44	10.96	10.48	1.79	12.75	8.69	10.03	

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GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-8	8/5/2003	21.44	10.82	10.62	2.23	13.05	8.39	10.06	
LAI-8	8/11/2003	21.44	12.12	9.32	1.57	13.69	7.75	8.93	
LAI-8	8/22/2003	21.44	12.40	9.04	1.66	14.06	7.38	8.63	
LAI-8	8/26/2003	21.44	11.44	10.00	1.44	12.88	8.56	9.64	
LAI-8	9/2/2003	21.44	11.45	9.99	1.78	13.23	8.21	9.55	
LAI-8	9/9/2003	21.44	11.54	9.90	1.68	13.22	8.22	9.48	
LAI-8	9/19/2003	21.44	11.61	9.83	1.64	13.25	8.19	9.42	
LAI-8	10/14/2003	21.44	11.58	9.86	1.60	13.18	8.26	9.46	
LAI-8	11/20/2003	21.44	8.87	12.57	0.07	8.94	12.50	12.55	
LAI-8	12/3/2003	21.44	8.01	13.43	0.41	8.42	13.02	13.33	
LAI-8	1/19/2004	21.44	7.70	13.74	0.44	8.14	13.30	13.63	
LAI-8	2/24/2004	21.44	N/A	N/A	N/A	9.15	12.29	12.29	
LAI-8	3/15/2004	21.44	N/A	N/A	N/A	9.71	11.73	11.73	
LAI-8	4/19/2004	21.44	N/A	N/A	N/A	9.91	11.53	11.53	Trace product
LAI-8	5/17/2004	21.44	N/A	N/A	N/A	10.59	10.85	10.85	Trace product
LAI-8	6/22/2004	21.44	10.48	10.96	0.030	10.51	10.93	10.95	
LAI-9	1/22/2003	19.32	N/A	N/A	N/A	7.90	11.42	11.42	
LAI-9	1/23/2003	19.32	N/A	N/A	N/A	8.38	10.94	10.94	
LAI-9	1/24/2003	19.32	7.10	12.22	0.04	7.14	12.18	12.21	
LAI-9	1/27/2003	19.32	5.32	14.00	1.54	6.86	12.46	13.62	
LAI-9	1/28/2003	19.32	5.90	13.42	1.50	7.40	11.92	13.05	
LAI-9	1/29/2003	19.32	N/A	N/A	N/A	8.44	10.88	10.88	
LAI-9	1/30/2003	19.32	N/A	N/A	N/A	8.40	10.92	10.92	
LAI-9	2/3/2003	19.32	6.57	12.75	0.70	7.27	12.05	12.58	
LAI-9	2/6/2003	20.77	7.53	13.24	0.15	7.68	13.09	13.20	
LAI-9	2/11/2003	20.77	7.93	12.84	0.11	8.04	12.73	12.81	
LAI-9	2/18/2003	20.77	5.50	15.27	2.50	8.00	12.77	14.65	
LAI-9	2/21/2003	20.77	7.63	13.14	3.68	11.31	9.46	12.22	
LAI-9	2/26/2003	20.77	6.94	13.83	3.54	10.48	10.29	12.95	
LAI-9	3/4/2003	20.77	6.98	13.79	3.94	10.92	9.85	12.81	
LAI-9	3/12/2003	20.77	7.82	12.95	3.39	11.21	9.56	12.10	
LAI-9	3/14/2003	20.77	8.09	12.68	2.21	10.30	10.47	12.13	
LAI-9	3/26/2003	20.77	N/A	N/A	N/A	8.95	11.82	11.82	
LAI-9	3/28/2003	20.77	N/A	N/A	N/A	9.04	11.73	11.73	
LAI-9	4/2/2003	20.77	8.08	12.69	0.32	8.40	12.37	12.61	
LAI-9	4/4/2003	20.77	8.34	12.43	0.48	8.82	11.95	12.31	
LAI-9	4/8/2003	20.77	8.10	12.67	0.49	8.59	12.18	12.55	
LAI-9	4/11/2003	20.77	8.36	12.41	0.49	8.85	11.92	12.29	
LAI-9	4/15/2003	20.77	7.81	12.96	0.21	8.02	12.75	12.91	
LAI-9	4/17/2003	20.77	9.11	11.66	0.13	9.24	11.53	11.63	
LAI-9	4/22/2003	20.77	8.41	12.36	0.35	8.76	12.01	12.27	
LAI-9	4/25/2003	20.77	8.32	12.45	0.80	9.12	11.65	12.25	
LAI-9	5/2/2003	20.77	8.99	11.78	0.01	9.00	11.77	11.78	
LAI-9	5/6/2003	20.77	8.66	12.11	0.85	9.51	11.26	11.90	
LAI-9	5/9/2003	20.77	9.75	11.02	0.02	9.77	11.00	11.02	
LAI-9	5/23/2003	20.77	N/A	N/A	N/A	10.10	10.67	10.67	
LAI-9	5/28/2003	20.77	10.50	10.27	0.01	10.51	10.26	10.27	
LAI-9	6/13/2003	20.77	9.91	10.86	0.37	10.28	10.49	10.77	
LAI-9	6/18/2003	20.77	9.81	10.96	0.51	10.32	10.45	10.83	
LAI-9	6/27/2003	20.77	9.91	10.86	0.33	10.24	10.53	10.78	
LAI-9	7/7/2003	20.77	10.21	10.56	0.83	11.04	9.73	10.35	
LAI-9	7/16/2003	20.77	10.03	10.74	0.84	10.87	9.90	10.53	
LAI-9	7/31/2003	20.77	10.44	10.33	0.95	11.39	9.38	10.09	
LAI-9	8/5/2003	20.77	10.25	10.52	1.19	11.44	9.33	10.22	
LAI-9	8/11/2003	20.77	11.89	8.88	0.12	12.01	8.76	8.85	
LAI-9	8/22/2003	20.77	11.92	8.85	0.08	12.00	8.77	8.83	
LAI-9	8/26/2003	20.77	11.03	9.74	0.64	11.67	9.10	9.58	
LAI-9	9/2/2003	20.77	10.96	9.81	1.03	11.99	8.78	9.55	
LAI-9	9/9/2003	20.77	11.12	9.65	0.51	11.63	9.14	9.52	
LAI-9	9/19/2003	20.77	10.89	9.88	1.58	12.47	8.30	9.49	
LAI-9	10/14/2003	20.77	11.75	9.02	1.07	12.82	7.95	8.75	
LAI-9	11/20/2003	20.77	NA	NA	NA	8.05	12.72	12.72	
LAI-9	12/3/2003	20.77	7.21	13.56	0.01	7.22	13.55	13.56	
LAI-9	1/19/2004	20.77	6.83	13.94	0.01	6.84	13.93	13.94	
LAI-9	2/24/2004	20.77	NA	NA	NA	8.11	12.66	12.66	
LAI-9	3/15/2004	20.77	NA	NA	NA	9.08	11.69	11.69	Trace product
LAI-9	4/19/2004	20.77	NA	NA	NA	8.85	11.92	11.92	Trace product

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CONOCOPHILLIPS RENTON TERMINAL

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LAI-9	5/17/2004	20.77	NA	NA	NA	9.91	10.86	10.86	Trace product
LAI-9	8/18/2004	20.77	NA	NA	NA	11.10	9.67	9.67	Trace product
LAI-10	1/31/2003	17.92	N/A	N/A	N/A	4.34	13.58	13.58	
LAI-10	2/12/2003	17.92	N/A	N/A	N/A	3.93	13.99	13.99	
LAI-10	2/18/2003	17.92	N/A	N/A	N/A	4.51	13.41	13.41	
LAI-10	2/21/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	2/24/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	3/3/2003	17.92	N/A	N/A	N/A	4.38	13.54	13.54	
LAI-10	3/12/2003	17.92	N/A	N/A	N/A	4.31	13.61	13.61	
LAI-10	3/14/2003	17.92	N/A	N/A	N/A	4.08	13.84	13.84	
LAI-10	3/26/2003	17.92	N/A	N/A	N/A	4.78	13.14	13.14	
LAI-10	3/28/2003	17.92	N/A	N/A	N/A	4.82	13.10	13.10	
LAI-10	4/2/2003	17.92	N/A	N/A	N/A	4.25	13.67	13.67	
LAI-10	4/4/2003	17.92	N/A	N/A	N/A	4.21	13.71	13.71	
LAI-10	4/8/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	4/11/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	4/15/2003	17.92	N/A	N/A	N/A	4.09	13.83	13.83	
LAI-10	4/17/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	4/22/2003	17.92	N/A	N/A	N/A	4.45	13.47	13.47	
LAI-10	4/25/2003	17.92	N/A	N/A	N/A	4.58	13.34	13.34	
LAI-10	5/2/2003	17.92	N/A	N/A	N/A	4.23	13.69	13.69	
LAI-10	5/6/2003	17.92	N/A	N/A	N/A	4.86	13.06	13.06	
LAI-10	5/9/2003	17.92	N/A	N/A	N/A	5.10	12.82	12.82	
LAI-10	5/16/2003	17.92	N/A	N/A	N/A	5.38	12.54	12.54	
LAI-10	5/23/2003	17.92	N/A	N/A	N/A	6.50	11.42	11.42	
LAI-10	5/28/2003	17.92	N/A	N/A	N/A	5.55	12.37	12.37	
LAI-10	6/13/2003	17.92	N/A	N/A	N/A	6.17	11.75	11.75	
LAI-10	6/18/2003	17.92	N/A	N/A	N/A	5.86	12.06	12.06	
LAI-10	6/27/2003	17.92	N/A	N/A	N/A	5.89	12.03	12.03	
LAI-10	7/7/2003	17.92	N/A	N/A	N/A	6.51	11.41	11.41	
LAI-10	7/16/2003	17.92	N/A	N/A	N/A	5.53	12.39	12.39	
LAI-10	7/31/2003	17.92	N/A	N/A	N/A	6.61	11.31	11.31	
LAI-10	8/5/2003	17.92	N/A	N/A	N/A	6.68	11.24	11.24	
LAI-10	8/11/2003	17.92	N/A	N/A	N/A	7.15	10.77	10.77	
LAI-10	8/22/2003	17.92	N/A	N/A	N/A	8.68	9.24	9.24	
LAI-10	8/26/2003	17.92	N/A	N/A	N/A	7.03	10.89	10.89	
LAI-10	9/2/2003	17.92	N/A	N/A	N/A	7.15	10.77	10.77	
LAI-10	9/9/2003	17.92	7.33	10.59	0.01	7.34	10.58	10.59	
LAI-10	9/19/2003	17.92	N/A	N/A	N/A	7.37	10.55	10.55	
LAI-10	10/14/2003	17.92	N/A	N/A	N/A	7.75	10.17	10.17	
LAI-10	11/20/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	12/3/2003	17.92	N/A	N/A	N/A	3.58	14.34	14.34	
LAI-10	1/19/2004	17.92	N/A	N/A	N/A	3.29	14.63	14.63	
LAI-10	2/24/2004	17.92	N/A	N/A	N/A	4.16	13.76	13.76	
LAI-10	3/15/2004	17.92	N/A	N/A	N/A	5.01	12.91	12.91	
LAI-10	4/19/2004	17.92	N/A	N/A	N/A	5.30	12.62	12.62	
LAI-10	5/17/2004	17.92	N/A	N/A	N/A	5.79	12.13	12.13	
LAI-10	6/22/2004	17.92	N/A	N/A	N/A	5.71	12.21	12.21	
LAI-11	1/31/2003	18.66	N/A	N/A	N/A	4.55	14.11	14.11	
LAI-11	2/12/2003	18.66	N/A	N/A	N/A	4.92	13.74	13.74	
LAI-11	2/18/2003	18.66	N/A	N/A	N/A	5.41	13.25	13.25	
LAI-11	2/21/2003	18.66	N/A	N/A	N/A	5.51	13.15	13.15	
LAI-11	2/24/2003	18.66	N/A	N/A	N/A	5.48	13.18	13.18	
LAI-11	3/3/2003	18.66	N/A	N/A	N/A	5.38	13.28	13.28	
LAI-11	3/12/2003	18.66	N/A	N/A	N/A	5.32	13.34	13.34	
LAI-11	3/14/2003	18.66	N/A	N/A	N/A	5.19	13.47	13.47	
LAI-11	3/26/2003	18.66	N/A	N/A	N/A	4.81	13.85	13.85	
LAI-11	3/28/2003	18.66	N/A	N/A	N/A	4.89	13.77	13.77	
LAI-11	4/2/2003	18.66	N/A	N/A	N/A	5.28	13.38	13.38	
LAI-11	4/4/2003	18.66	N/A	N/A	N/A	5.33	13.33	13.33	
LAI-11	4/8/2003	18.66	N/A	N/A	N/A	5.41	13.25	13.25	
LAI-11	4/11/2003	18.66	N/A	N/A	N/A	5.42	13.24	13.24	
LAI-11	4/15/2003	18.66	N/A	N/A	N/A	5.08	13.58	13.58	
LAI-11	4/17/2003	18.66	N/A	N/A	N/A	5.46	13.20	13.20	
LAI-11	4/22/2003	18.66	N/A	N/A	N/A	5.47	13.19	13.19	
LAI-11	4/25/2003	18.66	N/A	N/A	N/A	5.67	12.99	12.99	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-11	5/2/2003	18.66	N/A	N/A	N/A	5.12	13.54	13.54	
LAI-11	5/6/2003	18.66	N/A	N/A	N/A	5.81	12.85	12.85	
LAI-11	5/9/2003	18.66	N/A	N/A	N/A	6.00	12.66	12.66	
LAI-11	5/16/2003	18.66	N/A	N/A	N/A	6.30	12.36	12.36	
LAI-11	5/23/2003	18.66	N/A	N/A	N/A	6.58	12.08	12.08	
LAI-11	5/28/2003	18.66	N/A	N/A	N/A	6.44	12.22	12.22	
LAI-11	6/13/2003	18.66	N/A	N/A	N/A	6.70	11.96	11.96	
LAI-11	6/18/2003	18.66	N/A	N/A	N/A	6.80	11.86	11.86	
LAI-11	6/27/2003	18.66	N/A	N/A	N/A	6.81	11.85	11.85	
LAI-11	7/7/2003	18.66	N/A	N/A	N/A	7.51	11.15	11.15	
LAI-11	7/16/2003	18.66	N/A	N/A	N/A	6.42	12.24	12.24	
LAI-11	7/31/2003	18.66	N/A	N/A	N/A	8.91	9.75	9.75	
LAI-11	8/5/2003	18.66	N/A	N/A	N/A	8.51	10.15	10.15	
LAI-11	8/11/2003	18.66	N/A	N/A	N/A	8.79	9.87	9.87	
LAI-11	8/22/2003	18.66	N/A	N/A	N/A	8.43	10.23	10.23	
LAI-11	8/26/2003	18.66	N/A	N/A	N/A	8.92	9.74	9.74	
LAI-11	9/2/2003	18.66	N/A	N/A	N/A	8.95	9.71	9.71	
LAI-11	9/9/2003	18.66	N/A	N/A	N/A	9.24	9.42	9.42	
LAI-11	9/19/2003	18.66	N/A	N/A	N/A	8.99	9.67	9.67	
LAI-11	10/14/2003	18.66	N/A	N/A	N/A	9.15	9.51	9.51	
LAI-11	11/20/2003	18.66	N/A	N/A	N/A	5.31	13.35	13.35	
LAI-11	12/3/2003	18.66	N/A	N/A	N/A	4.50	14.16	14.16	
LAI-11	1/19/2004	18.66	N/A	N/A	N/A	4.33	14.33	14.33	
LAI-11	2/24/2004	18.66	N/A	N/A	N/A	5.19	13.47	13.47	
LAI-11	3/15/2004	18.66	N/A	N/A	N/A	5.94	12.72	12.72	
LAI-11	4/19/2004	18.66	N/A	N/A	N/A	6.23	12.43	12.43	
LAI-11	5/17/2004	18.66	N/A	N/A	N/A	6.80	11.86	11.86	
LAI-11	6/22/2004	18.66	N/A	N/A	N/A	6.70	11.96	11.96	
LAI-12	1/31/2003	18.40	N/A	N/A	N/A	3.28	15.12	15.12	
LAI-12	2/12/2003	18.40	N/A	N/A	N/A	3.98	14.42	14.42	
LAI-12	2/18/2003	18.40	N/A	N/A	N/A	4.50	13.90	13.90	
LAI-12	2/21/2003	18.40	N/A	N/A	N/A	4.60	13.80	13.80	
LAI-12	2/24/2003	18.40	N/A	N/A	N/A	4.58	13.82	13.82	
LAI-12	3/3/2003	18.40	N/A	N/A	N/A	4.61	13.79	13.79	
LAI-12	3/12/2003	18.40	N/A	N/A	N/A	4.38	14.02	14.02	
LAI-12	3/14/2003	18.40	N/A	N/A	N/A	4.17	14.23	14.23	
LAI-12	3/26/2003	18.40	N/A	N/A	N/A	4.04	14.36	14.36	
LAI-12	3/28/2003	18.40	N/A	N/A	N/A	4.10	14.30	14.30	
LAI-12	4/2/2003	18.40	N/A	N/A	N/A	4.34	14.06	14.06	
LAI-12	4/4/2003	18.40	N/A	N/A	N/A	4.45	13.95	13.95	
LAI-12	4/8/2003	18.40	N/A	N/A	N/A	4.58	13.82	13.82	
LAI-12	4/11/2003	18.40	N/A	N/A	N/A	4.65	13.75	13.75	
LAI-12	4/15/2003	18.40	N/A	N/A	N/A	4.25	14.15	14.15	
LAI-12	4/17/2003	18.40	N/A	N/A	N/A	4.69	13.71	13.71	
LAI-12	4/22/2003	18.40	N/A	N/A	N/A	4.69	13.71	13.71	
LAI-12	4/25/2003	18.40	N/A	N/A	N/A	4.81	13.59	13.59	
LAI-12	5/2/2003	18.40	N/A	N/A	N/A	4.98	13.42	13.42	
LAI-12	5/6/2003	18.40	N/A	N/A	N/A	5.22	13.18	13.18	
LAI-12	5/9/2003	18.40	N/A	N/A	N/A	5.46	12.94	12.94	
LAI-12	5/16/2003	18.40	N/A	N/A	N/A	5.74	12.66	12.66	
LAI-12	5/23/2003	18.40	N/A	N/A	N/A	5.27	13.13	13.13	
LAI-12	5/28/2003	18.40	N/A	N/A	N/A	5.88	12.52	12.52	
LAI-12	6/13/2003	18.40	N/A	N/A	N/A	5.45	12.95	12.95	
LAI-12	6/18/2003	18.40	N/A	N/A	N/A	6.18	12.22	12.22	
LAI-12	6/27/2003	18.40	N/A	N/A	N/A	6.22	12.18	12.18	
LAI-12	7/7/2003	18.40	N/A	N/A	N/A	6.95	11.45	11.45	
LAI-12	7/16/2003	18.40	N/A	N/A	N/A	5.84	12.56	12.56	
LAI-12	7/31/2003	18.40	N/A	N/A	N/A	6.97	11.43	11.43	
LAI-12	8/5/2003	18.40	N/A	N/A	N/A	7.05	11.35	11.35	
LAI-12	8/11/2003	18.40	N/A	N/A	N/A	6.80	11.60	11.60	
LAI-12	8/22/2003	18.40	N/A	N/A	N/A	8.19	10.21	10.21	
LAI-12	8/26/2003	18.40	N/A	N/A	N/A	7.33	11.07	11.07	
LAI-12	9/2/2003	18.40	N/A	N/A	N/A	7.45	10.95	10.95	
LAI-12	9/9/2003	18.40	N/A	N/A	N/A	7.64	10.76	10.76	
LAI-12	9/19/2003	18.40	N/A	N/A	N/A	7.93	10.47	10.47	
LAI-12	10/14/2003	18.40	N/A	N/A	N/A	7.48	10.92	10.92	
LAI-12	11/20/2003	18.40	N/A	N/A	N/A	4.06	14.34	14.34	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-12	12/3/2003	18.40	N/A	N/A	N/A	3.37	15.03	15.03	
LAI-12	1/19/2004	18.40	N/A	N/A	N/A	3.81	14.59	14.59	
LAI-12	2/24/2004	18.40	N/A	N/A	N/A	4.32	14.08	14.08	
LAI-12	3/15/2004	18.40	N/A	N/A	N/A	5.13	13.27	13.27	
LAI-12	4/19/2004	18.40	N/A	N/A	N/A	5.61	12.79	12.79	
LAI-12	5/17/2004	18.40	N/A	N/A	N/A	6.23	12.17	12.17	
LAI-12	6/22/2004	18.40	N/A	N/A	N/A	6.14	12.26	12.26	
LAI-13	1/31/2003	19.09	N/A	N/A	N/A	5.25	13.84	13.84	
LAI-13	2/12/2003	19.09	N/A	N/A	N/A	6.28	12.81	12.81	
LAI-13	2/18/2003	19.09	N/A	N/A	N/A	6.15	12.94	12.94	
LAI-13	2/21/2003	19.09	N/A	N/A	N/A	6.29	12.80	12.80	
LAI-13	2/24/2003	19.09	N/A	N/A	N/A	6.65	12.44	12.44	
LAI-13	3/3/2003	19.09	N/A	N/A	N/A	6.88	12.21	12.21	
LAI-13	3/12/2003	19.09	N/A	N/A	N/A	6.87	12.22	12.22	
LAI-13	3/14/2003	19.09	N/A	N/A	N/A	6.62	12.47	12.47	
LAI-13	3/26/2003	19.09	6.16	12.93	0.00	6.16	12.93	12.93	
LAI-13	3/28/2003	19.09	N/A	N/A	N/A	6.21	12.88	12.88	
LAI-13	4/2/2003	19.09	N/A	N/A	N/A	6.25	12.84	12.84	
LAI-13	4/4/2003	19.09	N/A	N/A	N/A	6.25	12.84	12.84	
LAI-13	4/8/2003	19.09	N/A	N/A	N/A	6.69	12.40	12.40	
LAI-13	4/11/2003	19.09	N/A	N/A	N/A	6.69	12.40	12.40	
LAI-13	4/15/2003	19.09	N/A	N/A	N/A	6.61	12.48	12.48	
LAI-13	4/17/2003	19.09	N/A	N/A	N/A	6.66	12.43	12.43	
LAI-13	4/22/2003	19.09	N/A	N/A	N/A	6.87	12.22	12.22	
LAI-13	4/25/2003	19.09	N/A	N/A	N/A	6.92	12.17	12.17	
LAI-13	5/2/2003	19.09	N/A	N/A	N/A	6.71	12.38	12.38	
LAI-13	5/6/2003	19.09	N/A	N/A	N/A	7.25	11.84	11.84	
LAI-13	5/9/2003	19.09	N/A	N/A	N/A	7.36	11.73	11.73	
LAI-13	5/16/2003	19.09	N/A	N/A	N/A	7.63	11.46	11.46	
LAI-13	5/23/2003	19.09	N/A	N/A	N/A	7.78	11.31	11.31	
LAI-13	5/28/2003	19.09	N/A	N/A	N/A	7.80	11.29	11.29	
LAI-13	6/13/2003	19.09	N/A	N/A	N/A	8.01	11.08	11.08	
LAI-13	6/18/2003	19.09	N/A	N/A	N/A	8.02	11.07	11.07	
LAI-13	6/27/2003	19.09	N/A	N/A	N/A	8.06	11.03	11.03	
LAI-13	7/7/2003	19.09	N/A	N/A	N/A	8.45	10.64	10.64	
LAI-13	7/16/2003	19.09	N/A	N/A	N/A	7.71	11.38	11.38	
LAI-13	7/31/2003	19.09	N/A	N/A	N/A	8.51	10.58	10.58	
LAI-13	8/5/2003	19.09	N/A	N/A	N/A	8.54	10.55	10.55	
LAI-13	8/11/2003	19.09	N/A	N/A	N/A	8.62	10.47	10.47	
LAI-13	8/22/2003	19.09	N/A	N/A	N/A	9.81	9.28	9.28	
LAI-13	8/26/2003	19.09	N/A	N/A	N/A	8.81	10.28	10.28	
LAI-13	9/2/2003	19.09	N/A	N/A	N/A	8.88	10.21	10.21	
LAI-13	9/9/2003	19.09	N/A	N/A	N/A	8.91	10.18	10.18	
LAI-13	9/19/2003	19.09	N/A	N/A	N/A	10.94	8.15	8.15	
LAI-13	10/14/2003	19.09	N/A	N/A	N/A	9.08	10.01	10.01	
LAI-13	11/20/2003	19.09	N/A	N/A	N/A	5.94	13.15	13.15	
LAI-13	12/3/2003	19.09	N/A	N/A	N/A	5.52	13.57	13.57	
LAI-13	1/19/2004	19.09	N/A	N/A	N/A	5.39	13.70	13.70	
LAI-13	2/24/2004	19.09	N/A	N/A	N/A	5.77	13.32	13.32	
LAI-13	3/15/2004	19.09	N/A	N/A	N/A	6.66	12.43	12.43	
LAI-13	4/19/2004	19.09	N/A	N/A	N/A	7.58	11.51	11.51	
LAI-13	5/17/2004	19.09	N/A	N/A	N/A	8.05	11.04	11.04	
LAI-13	6/22/2004	19.09	N/A	N/A	N/A	7.91	11.18	11.18	
LAI-14	1/31/2003	19.29	N/A	N/A	N/A	6.12	13.17	13.17	
LAI-14	2/12/2003	19.29	N/A	N/A	N/A	7.11	12.18	12.18	
LAI-14	2/18/2003	19.29	N/A	N/A	N/A	7.17	12.12	12.12	
LAI-14	2/21/2003	19.29	N/A	N/A	N/A	7.25	12.04	12.04	
LAI-14	2/24/2003	19.29	N/A	N/A	N/A	7.25	12.04	12.04	
LAI-14	3/3/2003	19.29	N/A	N/A	N/A	7.50	11.79	11.79	
LAI-14	3/12/2003	19.29	N/A	N/A	N/A	7.40	11.89	11.89	
LAI-14	3/14/2003	19.29	N/A	N/A	N/A	7.23	12.06	12.06	
LAI-14	3/26/2003	19.29	N/A	N/A	N/A	7.04	12.25	12.25	
LAI-14	3/28/2003	19.29	N/A	N/A	N/A	7.07	12.22	12.22	
LAI-14	4/2/2003	19.29	N/A	N/A	N/A	7.00	12.29	12.29	
LAI-14	4/4/2003	19.29	N/A	N/A	N/A	7.24	12.05	12.05	
LAI-14	4/8/2003	19.29	N/A	N/A	N/A	7.41	11.88	11.88	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-14	4/11/2003	19.29	N/A	N/A	N/A	7.36	11.93	11.93	
LAI-14	4/15/2003	19.29	N/A	N/A	N/A	7.34	11.95	11.95	
LAI-14	4/17/2003	19.29	N/A	N/A	N/A	7.39	11.90	11.90	
LAI-14	4/22/2003	19.29	N/A	N/A	N/A	7.53	11.76	11.76	
LAI-14	4/25/2003	19.29	N/A	N/A	N/A	7.62	11.67	11.67	
LAI-14	5/2/2003	19.29	N/A	N/A	N/A	7.20	12.09	12.09	
LAI-14	5/6/2003	19.29	N/A	N/A	N/A	7.82	11.47	11.47	
LAI-14	5/9/2003	19.29	N/A	N/A	N/A	7.86	11.43	11.43	
LAI-14	5/16/2003	19.29	N/A	N/A	N/A	8.00	11.29	11.29	
LAI-14	5/23/2003	19.29	N/A	N/A	N/A	8.03	11.26	11.26	
LAI-14	5/28/2003	19.29	N/A	N/A	N/A	8.14	11.15	11.15	
LAI-14	6/13/2003	19.29	N/A	N/A	N/A	8.30	10.99	10.99	
LAI-14	6/18/2003	19.29	N/A	N/A	N/A	8.33	10.96	10.96	
LAI-14	6/27/2003	19.29	N/A	N/A	N/A	8.35	10.94	10.94	
LAI-14	7/7/2003	19.29	N/A	N/A	N/A	8.65	10.64	10.64	
LAI-14	7/16/2003	19.29	N/A	N/A	N/A	7.83	11.46	11.46	
LAI-14	7/31/2003	19.29	N/A	N/A	N/A	8.41	10.88	10.88	
LAI-14	8/5/2003	19.29	N/A	N/A	N/A	8.73	10.56	10.56	
LAI-14	8/11/2003	19.29	N/A	N/A	N/A	8.80	10.49	10.49	
LAI-14	8/22/2003	19.29	N/A	N/A	N/A	9.89	9.40	9.40	
LAI-14	8/26/2003	19.29	N/A	N/A	N/A	9.04	10.25	10.25	
LAI-14	9/2/2003	19.29	N/A	N/A	N/A	9.07	10.22	10.22	
LAI-14	9/9/2003	19.29	N/A	N/A	N/A	9.14	10.15	10.15	
LAI-14	9/19/2003	19.29	N/A	N/A	N/A	9.14	10.15	10.15	
LAI-14	10/14/2003	19.29	N/A	N/A	N/A	9.30	9.99	9.99	
LAI-14	11/20/2003	19.29	N/A	N/A	N/A	6.59	12.70	12.70	
LAI-14	12/3/2003	19.29	N/A	N/A	N/A	6.53	12.76	12.76	
LAI-14	1/19/2004	19.29	N/A	N/A	N/A	6.45	12.84	12.84	
LAI-14	2/24/2004	19.29	N/A	N/A	N/A	7.03	12.26	12.26	
LAI-14	3/15/2004	19.29	N/A	N/A	N/A	7.52	11.77	11.77	
LAI-14	4/19/2004	19.29	N/A	N/A	N/A	8.03	11.26	11.26	
LAI-14	5/17/2004	19.29	N/A	N/A	N/A	8.32	10.97	10.97	
LAI-14	6/22/2004	19.29	N/A	N/A	N/A	8.26	11.03	11.03	
LAI-15	1/31/2003	17.58	N/A	N/A	N/A	6.13	11.45	11.45	
LAI-15	2/12/2003	17.58	N/A	N/A	N/A	4.23	13.35	13.35	
LAI-15	2/18/2003	17.58	N/A	N/A	N/A	4.51	13.07	13.07	
LAI-15	2/21/2003	17.58	N/A	N/A	N/A	4.72	12.86	12.86	
LAI-15	2/24/2003	17.58	N/A	N/A	N/A	4.74	12.84	12.84	
LAI-15	3/3/2003	17.58	N/A	N/A	N/A	4.96	12.62	12.62	
LAI-15	3/12/2003	17.58	N/A	N/A	N/A	4.81	12.77	12.77	
LAI-15	3/14/2003	17.58	N/A	N/A	N/A	4.14	13.44	13.44	
LAI-15	3/26/2003	17.58	N/A	N/A	N/A	3.82	13.76	13.76	
LAI-15	3/28/2003	17.58	N/A	N/A	N/A	3.85	13.73	13.73	
LAI-15	4/2/2003	17.58	N/A	N/A	N/A	4.40	13.18	13.18	
LAI-15	4/4/2003	17.58	N/A	N/A	N/A	4.49	13.09	13.09	
LAI-15	4/8/2003	17.58	N/A	N/A	N/A	4.71	12.87	12.87	
LAI-15	4/11/2003	17.58	N/A	N/A	N/A	4.80	12.78	12.78	
LAI-15	4/15/2003	17.58	N/A	N/A	N/A	4.75	12.83	12.83	
LAI-15	4/17/2003	17.58	N/A	N/A	N/A	4.77	12.81	12.81	
LAI-15	4/22/2003	17.58	N/A	N/A	N/A	4.99	12.59	12.59	
LAI-15	4/25/2003	17.58	N/A	N/A	N/A	5.09	12.49	12.49	
LAI-15	5/2/2003	17.58	N/A	N/A	N/A	5.13	12.45	12.45	
LAI-15	5/6/2003	17.58	N/A	N/A	N/A	5.55	12.03	12.03	
LAI-15	5/9/2003	17.58	N/A	N/A	N/A	5.68	11.90	11.90	
LAI-15	5/16/2003	17.58	N/A	N/A	N/A	4.90	12.68	12.68	
LAI-15	5/23/2003	17.58	N/A	N/A	N/A	6.12	11.46	11.46	
LAI-15	5/28/2003	17.58	N/A	N/A	N/A	6.13	11.45	11.45	
LAI-15	6/13/2003	17.58	N/A	N/A	N/A	6.33	11.25	11.25	
LAI-15	6/18/2003	17.58	N/A	N/A	N/A	6.35	11.23	11.23	
LAI-15	6/27/2003	17.58	N/A	N/A	N/A	6.39	11.19	11.19	
LAI-15	7/7/2003	17.58	N/A	N/A	N/A	6.75	10.83	10.83	
LAI-15	7/16/2003	17.58	N/A	N/A	N/A	6.03	11.55	11.55	
LAI-15	7/31/2003	17.58	N/A	N/A	N/A	6.83	10.75	10.75	
LAI-15	8/5/2003	17.58	N/A	N/A	N/A	6.85	10.73	10.73	
LAI-15	8/11/2003	17.58	N/A	N/A	N/A	6.93	10.65	10.65	
LAI-15	8/22/2003	17.58	N/A	N/A	N/A	8.04	9.54	9.54	
LAI-15	8/26/2003	17.58	N/A	N/A	N/A	7.11	10.47	10.47	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-15	9/2/2003	17.58	N/A	N/A	N/A	7.21	10.37	10.37	
LAI-15	9/9/2003	17.58	N/A	N/A	N/A	7.23	10.35	10.35	
LAI-15	9/19/2003	17.58	N/A	N/A	N/A	N/A	N/A	N/A	
LAI-15	10/14/2003	17.58	N/A	N/A	N/A	7.45	10.13	10.13	
LAI-15	11/20/2003	17.58	N/A	N/A	N/A	4.11	13.47	13.47	
LAI-15	12/3/2003	17.58	N/A	N/A	N/A	3.65	13.93	13.93	
LAI-15	1/19/2004	17.58	N/A	N/A	N/A	3.59	13.99	13.99	
LAI-15	2/24/2004	17.58	N/A	N/A	N/A	4.26	13.32	13.32	
LAI-15	3/15/2004	17.58	N/A	N/A	N/A	5.19	12.39	12.39	
LAI-15	4/19/2004	17.58	N/A	N/A	N/A	5.97	11.61	11.61	
LAI-15	5/17/2004	17.58	N/A	N/A	N/A	6.42	11.16	11.16	
LAI-15	6/22/2004	17.58	N/A	N/A	N/A	6.09	11.49	11.49	
LAI-16	1/31/2003	18.61	N/A	N/A	N/A	6.28	12.33	12.33	
LAI-16	2/12/2003	18.61	N/A	N/A	N/A	6.65	11.96	11.96	
LAI-16	2/18/2003	18.61	N/A	N/A	N/A	6.70	11.91	11.91	
LAI-16	2/21/2003	18.61	N/A	N/A	N/A	6.73	11.88	11.88	
LAI-16	2/24/2003	18.61	N/A	N/A	N/A	6.74	11.87	11.87	
LAI-16	3/3/2003	18.61	N/A	N/A	N/A	6.86	11.75	11.75	
LAI-16	3/12/2003	18.61	N/A	N/A	N/A	6.52	12.09	12.09	
LAI-16	3/14/2003	18.61	N/A	N/A	N/A	6.39	12.22	12.22	
LAI-16	3/26/2003	18.61	N/A	N/A	N/A	6.48	12.13	12.13	
LAI-16	3/28/2003	18.61	N/A	N/A	N/A	7.46	11.15	11.15	
LAI-16	4/2/2003	18.61	N/A	N/A	N/A	6.63	11.98	11.98	
LAI-16	4/4/2003	18.61	N/A	N/A	N/A	6.71	11.90	11.90	
LAI-16	4/8/2003	18.61	N/A	N/A	N/A	6.90	11.71	11.71	
LAI-16	4/11/2003	18.61	N/A	N/A	N/A	6.75	11.86	11.86	
LAI-16	4/15/2003	18.61	N/A	N/A	N/A	6.68	11.93	11.93	
LAI-16	4/17/2003	18.61	N/A	N/A	N/A	6.73	11.88	11.88	
LAI-16	4/22/2003	18.61	N/A	N/A	N/A	6.87	11.74	11.74	
LAI-16	4/25/2003	18.61	N/A	N/A	N/A	6.99	11.62	11.62	
LAI-16	5/2/2003	18.61	N/A	N/A	N/A	6.78	11.83	11.83	
LAI-16	5/6/2003	18.61	N/A	N/A	N/A	7.26	11.35	11.35	
LAI-16	5/9/2003	18.61	N/A	N/A	N/A	7.35	11.26	11.26	
LAI-16	5/16/2003	18.61	N/A	N/A	N/A	7.60	11.01	11.01	
LAI-16	5/23/2003	18.61	N/A	N/A	N/A	8.08	10.53	10.53	
LAI-16	5/28/2003	18.61	N/A	N/A	N/A	7.87	10.74	10.74	
LAI-16	6/13/2003	18.61	N/A	N/A	N/A	8.31	10.30	10.30	
LAI-16	6/18/2003	18.61	N/A	N/A	N/A	8.45	10.16	10.16	
LAI-16	6/27/2003	18.61	N/A	N/A	N/A	8.08	10.53	10.53	
LAI-16	7/7/2003	18.61	N/A	N/A	N/A	N/A	N/A	N/A	Faulty meter
LAI-16	7/16/2003	18.61	N/A	N/A	N/A	8.00	10.61	10.61	
LAI-16	7/31/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/5/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/11/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/22/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/26/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/2/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/9/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/19/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	10/14/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	11/20/2003	18.61	N/A	N/A	N/A	6.95	11.66	11.66	
LAI-16	12/3/2003	18.61	N/A	N/A	N/A	6.68	11.93	11.93	
LAI-16	1/19/2004	18.61	N/A	N/A	N/A	6.49	12.12	12.12	
LAI-16	2/24/2004	18.61	N/A	N/A	N/A	6.62	11.99	11.99	
LAI-16	3/15/2004	18.61	N/A	N/A	N/A	7.02	11.59	11.59	
LAI-16	4/19/2004	18.61	N/A	N/A	N/A	7.64	10.97	10.97	
LAI-16	5/17/2004	18.61	N/A	N/A	N/A	8.35	10.26	10.26	
LAI-16	6/22/2004	18.61	N/A	N/A	N/A	8.52	10.09	10.09	
R-1	11/24/2002	16.94	N/A	N/A	N/A	5.90	11.04	11.04	
R-2	11/24/2002	17.52	N/A	N/A	N/A	6.69	10.83	10.83	
RW-1	11/20/2002	21.68	8.25	13.43	0.95	9.2	12.48	13.19	
RW-1	11/21/2002	21.68	8.25	13.43	1.15	9.4	12.28	13.14	
RW-1	11/22/2002	21.68	8.22	13.46	1.20	9.42	12.26	13.16	
RW-1	11/24/2002	21.68	8.35	13.33	1.06	9.41	12.27	13.07	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-1	1/2/2003	21.68	5.61	16.07	0.21	5.82	15.86	16.02	
RW-1	1/3/2003	21.68	5.51	16.17	0.21	5.72	15.96	16.12	
RW-1	1/6/2003	21.68	5.35	16.33	0.29	5.64	16.04	16.26	
RW-1	1/7/2003	21.68	5.68	16.00	0.28	5.96	15.72	15.93	
RW-1	1/8/2003	21.68	5.95	15.73	0.28	6.23	15.45	15.66	
RW-1	1/9/2003	21.68	6.03	15.65	0.29	6.32	15.36	15.58	
RW-1	1/10/2003	21.68	6.20	15.48	0.30	6.5	15.18	15.41	
RW-1	1/13/2003	21.68	6.00	15.68	0.32	6.32	15.36	15.60	
RW-1	1/14/2003	21.68	5.72	15.96	0.73	6.45	15.23	15.78	
RW-1	1/15/2003	21.68	5.99	15.69	0.19	6.18	15.50	15.64	
RW-1	1/16/2003	21.68	6.10	15.58	0.30	6.4	15.28	15.51	
RW-1	1/17/2003	21.68	6.15	15.53	0.30	6.45	15.23	15.46	
RW-1	1/20/2003	21.68	6.34	15.34	0.35	6.69	14.99	15.25	
RW-1	1/22/2003	21.68	5.60	16.08	0.29	5.89	15.79	16.01	
RW-1	1/23/2003	21.68	5.80	15.88	0.35	6.15	15.53	15.79	
RW-1	1/24/2003	21.68	5.37	16.31	0.38	5.75	15.93	16.22	
RW-1	1/27/2003	21.68	4.68	17.00	0.47	5.15	16.53	16.88	
RW-1	1/28/2003	21.68	4.66	17.02	0.45	5.11	16.57	16.91	
RW-1	1/29/2003	21.68	4.67	17.01	0.46	5.13	16.55	16.90	
RW-1	1/30/2003	21.68	4.90	16.78	0.44	5.34	16.34	16.67	
RW-1	2/3/2003	21.68	5.65	16.03	0.41	6.06	15.62	15.93	
RW-1	2/6/2003	21.32	6.76	14.56	0.40	7.16	14.16	14.46	
RW-1	2/11/2003	21.32	7.35	13.97	0.42	7.77	13.55	13.87	
RW-1	2/18/2003	21.32	N/A	N/A	N/A	6.55	14.77	14.77	
RW-1	2/21/2003	21.32	7.90	13.42	0.93	8.83	12.49	13.19	
RW-1	2/26/2003	21.32	7.70	13.62	0.81	8.51	12.81	13.42	
RW-1	3/4/2003	21.32	7.11	14.21	0.63	7.74	13.58	14.05	
RW-1	3/12/2003	21.32	7.30	14.02	0.46	7.76	13.56	13.91	
RW-1	3/14/2003	21.32	6.85	14.47	N/A	7.31	14.01	14.01	
RW-1	3/26/2003	21.32	6.39	14.93	0.13	6.52	14.80	14.90	
RW-1	3/28/2003	21.32	7.41	13.91	0.15	7.56	13.76	13.87	
RW-1	4/2/2003	21.32	7.45	13.87	0.10	7.55	13.77	13.85	
RW-1	4/4/2003	21.32	7.70	13.62	0.05	7.75	13.57	13.61	
RW-1	4/8/2003	21.32	7.25	14.07	0.02	7.27	14.05	14.07	
RW-1	4/11/2003	21.32	7.15	14.17	0.03	7.18	14.14	14.16	
RW-1	4/15/2003	21.32	6.57	14.75	0.02	6.59	14.73	14.75	
RW-1	4/17/2003	21.32	7.52	13.80	0.02	7.54	13.78	13.80	
RW-1	4/22/2003	21.32	7.53	13.79	0.02	7.55	13.77	13.79	
RW-1	4/25/2003	21.32	7.42	13.90	0.01	7.43	13.89	13.90	
RW-1	5/2/2003	21.32	8.84	12.48	0.01	8.85	12.47	12.48	
RW-1	5/6/2003	21.32	N/A	N/A	N/A	9.02	12.30	12.30	
RW-1	5/9/2003	21.32	N/A	N/A	N/A	9.21	12.11	12.11	
RW-1	5/23/2003	21.32	N/A	N/A	N/A	9.26	12.06	12.06	
RW-1	5/28/2003	21.32	9.35	11.97	0.01	9.36	11.96	11.97	
RW-1	6/13/2003	21.32	9.52	11.80	0.49	10.01	11.31	11.68	
RW-1	6/18/2003	21.32	9.22	12.10	0.91	10.13	11.19	11.87	
RW-1	6/27/2003	21.32	N/A	N/A	N/A	9.81	11.51	11.51	
RW-1	7/7/2003	21.32	10.26	11.06	0.03	10.29	11.03	11.05	
RW-1	7/16/2003	21.32	10.09	11.23	0.26	10.35	10.97	11.17	
RW-1	7/31/2003	21.32	10.34	10.98	0.01	10.35	10.97	10.98	
RW-1	8/5/2003	21.32	10.32	11.00	0.08	10.40	10.92	10.98	
RW-1	8/11/2003	21.32	11.34	9.98	0.01	11.35	9.97	9.98	
RW-1	8/22/2003	21.32	11.34	9.98	0.01	11.35	9.97	9.98	
RW-1	8/26/2003	21.32	N/A	N/A	N/A	10.36	10.96	10.96	
RW-1	9/2/2003	21.32	N/A	N/A	N/A	10.36	10.96	10.96	
RW-1	9/9/2003	21.32	10.33	10.99	0.05	10.38	10.94	10.98	
RW-1	9/19/2003	21.32	10.33	10.99	0.03	10.36	10.96	10.98	
RW-1	10/14/2003	21.32	N/A	N/A	N/A	10.30	11.02	11.02	
RW-1	11/20/2003	21.32	N/A	N/A	N/A	5.52	15.80	15.80	
RW-1	12/3/2003	21.32	N/A	N/A	N/A	5.44	15.88	15.88	
RW-1	1/19/2004	21.32	N/A	N/A	N/A	5.57	15.75	15.75	
RW-1	2/24/2004	21.32	N/A	N/A	N/A	7.45	13.87	13.87	
RW-1	3/15/2004	21.32	N/A	N/A	N/A	8.87	12.45	12.45	
RW-1	4/19/2004	21.32	N/A	N/A	N/A	9.56	11.76	11.76	
RW-1	5/17/2004	21.32	N/A	N/A	N/A	10.14	11.18	11.18	
RW-1	6/22/2004	21.32	N/A	N/A	N/A	9.91	11.41	11.41	
RW-2	11/20/2002	21.49	8.05	13.44	1.35	9.4	12.09	13.10	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-2	11/21/2002	21.49	8.00	13.49	1.40	9.4	12.09	13.14	
RW-2	11/22/2002	21.49	8.00	13.49	1.41	9.41	12.08	13.14	
RW-2	11/24/2002	21.49	8.21	13.28	1.49	9.70	11.79	12.91	
RW-2	1/2/2003	21.49	6.11	15.38	2.27	8.38	13.11	14.81	
RW-2	1/6/2003	21.49	5.40	16.09	2.78	8.18	13.31	15.40	
RW-2	1/7/2003	21.49	6.41	15.08	0.54	6.95	14.54	14.95	
RW-2	1/8/2003	21.49	7.67	13.82	0.01	7.68	13.81	13.82	
RW-2	1/9/2003	21.49	8.72	12.77	0.01	8.73	12.76	12.77	
RW-2	1/10/2003	21.49	6.38	15.11	0.54	6.92	14.57	14.98	
RW-2	1/13/2003	21.49	8.42	13.07	0.10	8.52	12.97	13.05	
RW-2	1/14/2003	21.49	6.17	15.32	1.32	7.49	14.00	14.99	
RW-2	1/15/2003	21.49	5.95	15.54	0.85	6.80	14.69	15.33	
RW-2	1/16/2003	21.49	6.51	14.98	1.00	7.51	13.98	14.73	
RW-2	1/17/2003	21.49	6.40	15.09	1.12	7.52	13.97	14.81	
RW-2	1/20/2003	21.49	6.35	15.14	1.59	7.94	13.55	14.74	
RW-2	1/22/2003	21.49	5.86	15.63	2.74	8.60	12.89	14.95	
RW-2	1/23/2003	21.49	5.92	15.57	3.23	9.15	12.34	14.76	
RW-2	1/24/2003	21.49	5.37	16.12	0.62	5.99	15.50	15.97	
RW-2	1/27/2003	21.49	4.69	16.80	0.53	5.22	16.27	16.67	
RW-2	1/28/2003	21.49	4.83	16.66	3.71	8.54	12.95	15.73	
RW-2	1/29/2003	21.49	4.82	16.67	3.66	8.48	13.01	15.76	
RW-2	1/30/2003	21.49	4.95	16.54	0.94	5.89	15.60	16.31	
RW-2	2/3/2003	21.49	5.29	16.20	3.82	9.11	12.38	15.25	
RW-2	2/6/2003	21.10	6.16	14.94	3.48	9.64	11.46	14.07	
RW-2	2/11/2003	21.10	6.61	14.49	3.17	9.78	11.32	13.70	
RW-2	2/18/2003	21.10	7.46	13.64	2.72	10.18	10.92	12.96	
RW-2	2/21/2003	21.10	7.40	13.70	2.76	10.16	10.94	13.01	
RW-2	2/26/2003	21.10	7.66	13.44	0.69	8.35	12.75	13.27	
RW-2	3/4/2003	21.10	7.15	13.95	1.42	8.57	12.53	13.60	
RW-2	3/12/2003	21.10	7.60	13.50	0.02	7.62	13.48	13.50	
RW-2	3/14/2003	21.10	7.38	13.72	1.61	8.99	12.11	13.32	
RW-2	3/26/2003	21.10	6.85	14.25	0.70	7.55	13.55	14.08	
RW-2	3/28/2003	21.10	7.48	13.62	0.87	8.35	12.75	13.40	
RW-2	4/2/2003	21.10	7.55	13.55	0.86	8.41	12.69	13.34	
RW-2	4/4/2003	21.10	7.95	13.15	0.56	8.51	12.59	13.01	
RW-2	4/8/2003	21.10	8.02	13.08	0.03	8.05	13.05	13.07	
RW-2	4/11/2003	21.10	8.22	12.88	0.01	8.23	12.87	12.88	
RW-2	4/15/2003	21.10	NA	N/A	N/A	7.68	13.42	13.42	
RW-2	4/17/2003	21.10	8.34	12.76	0.06	8.40	12.70	12.75	
RW-2	4/22/2003	21.10	8.36	12.74	0.16	8.52	12.58	12.70	
RW-2	4/25/2003	21.10	8.30	12.80	0.11	8.41	12.69	12.77	
RW-2	5/2/2003	21.10	8.75	12.35	0.31	9.06	12.04	12.27	
RW-2	5/6/2003	21.10	8.82	12.28	0.61	9.43	11.67	12.13	
RW-2	5/9/2003	21.10	9.16	11.94	0.62	9.78	11.32	11.79	
RW-2	5/23/2003	21.10	9.15	11.95	1.42	10.57	10.53	11.60	
RW-2	5/28/2003	21.10	8.95	12.15	1.49	10.44	10.66	11.78	
RW-2	6/13/2003	21.10	9.24	11.86	1.35	10.59	10.51	11.52	
RW-2	6/18/2003	21.10	9.20	11.90	1.31	10.51	10.59	11.57	
RW-2	6/27/2003	21.10	9.23	11.87	1.26	10.49	10.61	11.56	
RW-2	7/7/2003	21.10	10.01	11.09	0.42	10.43	10.67	10.99	
RW-2	7/16/2003	21.10	9.83	11.27	0.71	10.54	10.56	11.09	Had to pull pump to measure
RW-2	7/31/2003	21.10	10.31	10.79	0.15	10.46	10.64	10.75	
RW-2	8/5/2003	21.10	10.28	10.82	0.22	10.50	10.60	10.77	
RW-2	8/11/2003	21.10	NA	N/A	N/A	11.38	9.72	9.72	
RW-2	8/22/2003	21.10	NA	N/A	N/A	11.38	9.72	9.72	
RW-2	8/26/2003	21.10	NA	N/A	N/A	11.26	9.84	9.84	
RW-2	9/2/2003	21.10	NA	N/A	N/A	10.40	10.70	10.70	
RW-2	9/9/2003	21.10	10.34	10.76	0.06	10.40	10.70	10.75	
RW-2	9/19/2003	21.10	NA	N/A	N/A	10.70	10.40	10.40	
RW-2	10/14/2003	21.10	NA	N/A	N/A	10.38	10.72	10.72	
RW-2	11/20/2003	21.10	NA	N/A	N/A	7.66	13.44	13.44	
RW-2	12/3/2003	21.10	NA	N/A	N/A	6.65	14.45	14.45	
RW-2	1/19/2004	21.10	NA	N/A	N/A	7.13	13.97	13.97	
RW-2	2/24/2004	21.10	NA	N/A	N/A	7.92	13.18	13.18	
RW-2	3/15/2004	21.10	NA	NA	NA	NA	NA	NA	No water above pump
RW-2	4/19/2004	21.10	NA	NA	NA	10.01	NA	NA	
RW-2	5/17/2004	21.10	NA	NA	NA	NA	NA	NA	
RW-2	6/22/2004	21.10	NA	NA	NA	10.08	11.02	11.02	Trace product

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-3	11/20/2002	20.00	8.45	11.55	0.80	9.25	10.75	11.35	
RW-3	11/21/2002	20.00	8.27	11.73	1.20	9.47	10.53	11.43	
RW-3	11/22/2002	20.00	8.18	11.82	1.28	9.46	10.54	11.50	
RW-3	11/24/2002	20.00	7.94	12.06	1.68	9.62	10.38	11.64	
RW-3	1/2/2003	20.00	6.52	13.48	0.04	6.56	13.44	13.47	
RW-3	1/3/2003	20.00	6.38	13.62	0.23	6.61	13.39	13.56	
RW-3	1/6/2003	20.00	5.92	14.08	0.03	5.95	14.05	14.07	
RW-3	1/7/2003	20.00	5.81	14.19	0.04	5.85	14.15	14.18	
RW-3	1/8/2003	20.00	5.74	14.26	0.05	5.79	14.21	14.25	
RW-3	1/9/2003	20.00	5.78	14.22	0.05	5.83	14.17	14.21	
RW-3	1/10/2003	20.00	5.88	14.12	0.05	5.93	14.07	14.11	
RW-3	1/13/2003	20.00	6.02	13.98	0.08	6.10	13.90	13.96	
RW-3	1/14/2003	20.00	5.97	14.03	0.09	6.06	13.94	14.01	
RW-3	1/15/2003	20.00	5.87	14.13	0.12	5.99	14.01	14.10	
RW-3	1/16/2003	20.00	5.89	14.11	0.09	5.98	14.02	14.09	
RW-3	1/17/2003	20.00	5.85	14.15	0.07	5.92	14.08	14.13	
RW-3	1/20/2003	20.00	5.98	14.02	0.13	6.11	13.89	13.99	
RW-3	1/22/2003	20.00	5.91	14.09	0.09	6.00	14.00	14.07	
RW-3	1/23/2003	20.00	6.20	13.80	0.49	6.69	13.31	13.68	
RW-3	1/24/2003	20.00	6.02	13.98	0.24	6.26	13.74	13.92	
RW-3	1/27/2003	20.00	5.57	14.43	0.08	5.65	14.35	14.41	
RW-3	1/28/2003	20.00	5.55	14.45	0.07	5.62	14.38	14.43	
RW-3	1/29/2003	20.00	5.44	14.56	0.06	5.50	14.50	14.55	
RW-3	1/30/2003	20.00	5.56	14.44	0.06	5.62	14.38	14.43	
RW-3	2/3/2003	20.00	5.75	14.25	0.10	5.85	14.15	14.23	
RW-3	2/6/2003	20.82	6.44	14.38	0.12	6.56	14.26	14.35	
RW-3	2/11/2003	20.82	6.81	14.01	0.32	7.13	13.69	13.93	
RW-3	2/18/2003	20.82	7.29	13.53	0.88	8.17	12.65	13.31	
RW-3	2/21/2003	20.82	7.19	13.63	0.75	7.94	12.88	13.44	
RW-3	2/26/2003	20.82	6.73	14.09	0.31	7.04	13.78	14.01	
RW-3	3/4/2003	20.82	6.83	13.99	0.34	7.17	13.65	13.91	
RW-3	3/12/2003	20.82	7.38	13.44	0.06	7.44	13.38	13.43	
RW-3	3/14/2003	20.82	7.21	13.61	0.07	7.28	13.54	13.59	
RW-3	3/26/2003	20.82	6.52	14.30	0.01	6.53	14.29	14.30	
RW-3	3/28/2003	20.82	N/A	N/A	N/A	7.09	13.73	13.73	
RW-3	4/2/2003	20.82	N/A	N/A	N/A	7.05	13.77	13.77	
RW-3	4/4/2003	20.82	N/A	N/A	N/A	7.26	13.56	13.56	
RW-3	4/8/2003	20.82	N/A	N/A	N/A	6.90	13.92	13.92	
RW-3	4/11/2003	20.82	N/A	N/A	N/A	7.51	13.31	13.31	
RW-3	4/15/2003	20.82	N/A	N/A	N/A	6.67	14.15	14.15	
RW-3	4/17/2003	20.82	N/A	N/A	N/A	7.61	13.21	13.21	
RW-3	4/22/2003	20.82	N/A	N/A	N/A	7.61	13.21	13.21	
RW-3	4/25/2003	20.82	N/A	N/A	N/A	7.22	13.60	13.60	
RW-3	5/2/2003	20.82	8.21	12.61	0.25	8.46	12.36	12.55	
RW-3	5/6/2003	20.82	8.51	12.31	0.24	8.75	12.07	12.25	
RW-3	5/9/2003	20.82	8.71	12.11	0.12	8.83	11.99	12.08	
RW-3	5/23/2003	20.82	9.74	11.08	0.03	9.77	11.05	11.07	
RW-3	5/28/2003	20.82	8.75	12.07	0.01	8.76	12.06	12.07	
RW-3	6/13/2003	20.82	9.19	11.63	0.02	9.21	11.61	11.63	
RW-3	6/18/2003	20.82	9.16	11.66	0.06	9.22	11.60	11.65	
RW-3	6/27/2003	20.82	N/A	N/A	N/A	9.50	11.32	11.32	
RW-3	7/7/2003	20.82	10.05	10.77	0.06	10.11	10.71	10.76	
RW-3	7/16/2003	20.82	10.02	10.80	0.01	10.03	10.79	10.80	
RW-3	7/31/2003	20.82	10.18	10.64	0.11	10.29	10.53	10.61	
RW-3	8/5/2003	20.82	N/A	N/A	N/A	Dry	Dry	Dry	
RW-3	8/11/2003	20.82	11.00	9.82	0.30	11.30	9.52	9.75	
RW-3	8/22/2003	20.82	10.98	9.84	0.29	11.27	9.55	9.77	
RW-3	8/26/2003	20.82	N/A	N/A	N/A	11.14	9.68	9.68	
RW-3	9/2/2003	20.82	N/A	N/A	N/A	10.28	10.54	10.54	
RW-3	9/9/2003	20.82	N/A	N/A	N/A	10.29	10.53	10.53	
RW-3	9/19/2003	20.82	N/A	N/A	N/A	10.29	10.53	10.53	
RW-3	10/14/2003	20.82	N/A	N/A	N/A	10.30	10.52	10.52	
RW-3	11/20/2003	20.82	7.16	13.66	1.29	8.45	12.37	13.34	
RW-3	12/3/2003	20.82	6.72	14.10	0.05	6.77	14.05	14.09	
RW-3	1/19/2004	20.82	N/A	N/A	N/A	6.26	14.56	14.56	
RW-3	2/24/2004	20.82	N/A	N/A	N/A	6.72	14.10	14.10	
RW-3	3/15/2004	20.82	N/A	N/A	N/A	7.78	13.04	13.04	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-3	4/19/2004	20.82	N/A	N/A	N/A	8.71	12.11	12.11	
RW-3	5/17/2004	20.82	9.73	11.09	0.01	9.74	11.08	11.09	
RW-3	6/22/2004	20.82	9.36	11.46	0.02	9.38	11.44	11.46	
RW-4	11/20/2002	19.92	7.50	12.42	2.64	10.14	9.78	11.76	
RW-4	11/21/2002	19.92	7.50	12.42	2.64	10.14	9.78	11.76	
RW-4	11/22/2002	19.92	8.37	11.55	0.77	9.14	10.78	11.36	
RW-4	11/24/2002	19.92	7.57	12.35	2.52	10.09	9.83	11.72	
RW-4	1/3/2003	19.92	6.31	13.61	0.50	6.81	13.11	13.49	
RW-4	1/6/2003	19.92	6.02	13.90	0.04	6.06	13.86	13.89	
RW-4	1/7/2003	19.92	5.74	14.18	0.18	5.92	14.00	14.14	
RW-4	1/8/2003	19.92	5.67	14.25	0.14	5.81	14.11	14.22	
RW-4	1/9/2003	19.92	5.67	14.25	0.19	5.86	14.06	14.20	
RW-4	1/10/2003	19.92	5.76	14.16	0.25	6.01	13.91	14.10	
RW-4	1/13/2003	19.92	5.80	14.12	0.35	6.15	13.77	14.03	
RW-4	1/14/2003	19.92	5.85	14.07	0.29	6.14	13.78	14.00	
RW-4	1/15/2003	19.92	5.05	14.87	1.80	6.85	13.07	14.42	
RW-4	1/16/2003	19.92	5.78	14.14	0.27	6.05	13.87	14.07	
RW-4	1/17/2003	19.92	5.72	14.20	0.27	5.99	13.93	14.13	
RW-4	1/20/2003	19.92	5.84	14.08	0.30	6.14	13.78	14.01	
RW-4	1/22/2003	19.92	5.82	14.10	0.34	6.16	13.76	14.02	
RW-4	1/23/2003	19.92	6.12	13.80	0.58	6.70	13.22	13.66	
RW-4	1/24/2003	19.92	5.97	13.95	0.38	6.35	13.57	13.86	
RW-4	1/27/2003	19.92	5.51	14.41	0.13	5.64	14.28	14.38	
RW-4	1/28/2003	19.92	5.50	14.42	0.10	5.60	14.32	14.40	
RW-4	1/29/2003	19.92	5.36	14.56	0.07	5.43	14.49	14.54	
RW-4	1/30/2003	19.92	5.45	14.47	0.13	5.58	14.34	14.44	
RW-4	2/3/2003	19.92	5.66	14.26	0.21	5.87	14.05	14.21	
RW-4	2/6/2003	20.68	6.35	14.33	0.28	6.63	14.05	14.26	
RW-4	2/11/2003	20.68	6.75	13.93	0.39	7.14	13.54	13.83	
RW-4	2/18/2003	20.68	7.22	13.46	1.07	8.29	12.39	13.19	
RW-4	2/21/2003	20.68	7.10	13.58	0.97	8.07	12.61	13.34	
RW-4	2/26/2003	20.68	6.74	13.94	0.84	7.58	13.10	13.73	
RW-4	3/4/2003	20.68	7.08	13.60	0.14	7.22	13.46	13.57	
RW-4	3/12/2003	20.68	7.34	13.34	0.41	7.75	12.93	13.24	
RW-4	3/14/2003	20.68	7.20	13.48	0.64	7.84	12.84	13.32	
RW-4	3/26/2003	20.68	6.61	14.07	0.40	7.01	13.67	13.97	
RW-4	3/28/2003	20.68	7.15	13.53	0.47	7.62	13.06	13.41	
RW-4	4/2/2003	20.68	7.21	13.47	0.24	7.45	13.23	13.41	
RW-4	4/4/2003	20.68	7.52	13.16	0.15	7.67	13.01	13.12	
RW-4	4/8/2003	20.68	N/A	N/A	N/A	7.26	13.42	13.42	
RW-4	4/11/2003	20.68	7.72	12.96	0.03	7.75	12.93	12.95	
RW-4	4/15/2003	20.68	7.14	13.54	0.06	7.20	13.48	13.53	
RW-4	4/17/2003	20.68	7.82	12.86	0.08	7.90	12.78	12.84	
RW-4	4/22/2003	20.68	7.87	12.81	0.08	7.95	12.73	12.79	
RW-4	4/25/2003	20.68	7.91	12.77	0.11	8.02	12.66	12.74	
RW-4	5/2/2003	20.68	8.32	12.36	0.13	8.45	12.23	12.33	
RW-4	5/6/2003	20.68	8.50	12.18	0.31	8.81	11.87	12.10	
RW-4	5/9/2003	20.68	8.72	11.96	0.36	9.08	11.60	11.87	
RW-4	5/23/2003	20.68	8.92	11.76	1.11	10.03	10.65	11.48	
RW-4	5/28/2003	20.68	8.80	11.88	0.02	8.82	11.86	11.88	
RW-4	6/13/2003	20.68	8.90	11.78	1.72	10.62	10.06	11.35	
RW-4	6/18/2003	20.68	8.85	11.83	1.96	10.81	9.87	11.34	
RW-4	6/27/2003	20.68	9.40	11.28	1.42	10.82	9.86	10.93	
RW-4	7/7/2003	20.68	9.54	11.14	1.27	10.81	9.87	10.82	
RW-4	7/16/2003	20.68	9.41	11.27	1.40	10.81	9.87	10.92	
RW-4	7/31/2003	20.68	9.95	10.73	0.85	10.80	9.88	10.52	
RW-4	8/5/2003	20.68	9.82	10.86	0.98	10.80	9.88	10.62	
RW-4	8/11/2003	20.68	10.84	9.84	0.94	11.78	8.90	9.61	
RW-4	8/22/2003	20.68	10.87	9.81	0.92	11.79	8.89	9.58	
RW-4	8/26/2003	20.68	10.36	10.32	0.44	10.80	9.88	10.21	
RW-4	9/2/2003	20.68	10.22	10.46	0.58	10.80	9.88	10.32	
RW-4	9/9/2003	20.68	N/A	N/A	N/A	10.80	9.88	9.88	
RW-4	9/19/2003	20.68	N/A	N/A	N/A	10.81	9.87	9.87	
RW-4	10/14/2003	20.68	N/A	N/A	N/A	10.80	9.88	9.88	
RW-4	11/20/2003	20.68	7.96	12.72	1.54	9.50	11.18	12.34	
RW-4	12/3/2003	20.68	6.75	13.93	1.03	7.78	12.90	13.67	
RW-4	1/19/2004	20.68	6.18	14.50	0.06	6.24	14.44	14.49	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-4	2/24/2004	20.68	6.97	13.71	0.06	7.03	13.65	13.70	
RW-4	3/15/2004	20.68	N/A	N/A	N/A	8.10	12.58	12.58	Oily trace
RW-4	4/19/2004	20.68	N/A	N/A	N/A	8.71	11.97	11.97	
RW-4	5/17/2004	20.68	N/A	N/A	N/A	9.73	10.95	10.95	
RW-4	6/22/2004	20.68	N/A	N/A	N/A	9.57	11.11	11.11	Trace product
RW-5	11/20/2002	20.64	8.65	11.99	0.02	8.67	11.97	11.99	
RW-5	11/21/2002	20.64	8.30	12.34	0.10	8.4	12.24	12.32	
RW-5	11/22/2002	20.64	8.46	12.18	0.06	8.52	12.12	12.17	
RW-5	11/24/2002	20.64	8.63	12.01	0.28	8.91	11.73	11.94	
RW-5	1/2/2003	20.64	6.87	13.77	0.04	6.91	13.73	13.76	
RW-5	1/3/2003	20.64	6.77	13.87	0.03	6.8	13.84	13.86	
RW-5	1/6/2003	20.64	6.46	14.18	0.04	6.5	14.14	14.17	
RW-5	1/7/2003	20.64	6.36	14.28	0.06	6.42	14.22	14.27	
RW-5	1/8/2003	20.64	6.13	14.51	0.03	6.16	14.48	14.50	
RW-5	1/9/2003	20.64	6.25	14.39	0.03	6.28	14.36	14.38	
RW-5	1/10/2003	20.64	6.43	14.21	0.04	6.47	14.17	14.20	
RW-5	1/13/2003	20.64	6.48	14.16	0.03	6.51	14.13	14.15	
RW-5	1/14/2003	20.64	6.44	14.20	0.05	6.49	14.15	14.19	
RW-5	1/15/2003	20.64	6.37	14.27	0.04	6.41	14.23	14.26	
RW-5	1/16/2003	20.64	6.40	14.24	0.02	6.42	14.22	14.24	
RW-5	1/17/2003	20.64	6.37	14.27	0.04	6.41	14.23	14.26	
RW-5	1/20/2003	20.64	6.57	14.07	0.05	6.62	14.02	14.06	
RW-5	1/22/2003	20.64	6.60	14.04	0.08	6.68	13.96	14.02	
RW-5	1/23/2003	20.64	6.83	13.81	0.07	6.90	13.74	13.79	
RW-5	1/24/2003	20.64	6.69	13.95	0.03	6.72	13.92	13.94	
RW-5	1/27/2003	20.64	5.97	14.67	0.06	6.03	14.61	14.66	
RW-5	1/28/2003	20.64	5.95	14.69	0.09	6.04	14.60	14.67	
RW-5	1/29/2003	20.64	5.82	14.82	0.12	5.94	14.70	14.79	
RW-5	1/30/2003	20.64	5.90	14.74	0.10	6.00	14.64	14.72	
RW-5	2/3/2003	20.64	6.34	14.30	0.07	6.41	14.23	14.28	
RW-5	2/6/2003	21.38	7.12	14.26	0.06	7.18	14.20	14.25	
RW-5	2/11/2003	21.38	7.63	13.75	0.07	7.70	13.68	13.73	
RW-5	2/18/2003	21.38	8.11	13.27	0.14	8.25	13.13	13.24	
RW-5	2/21/2003	21.38	7.99	13.39	0.03	8.02	13.36	13.38	
RW-5	2/26/2003	21.38	7.74	13.64	0.01	7.75	13.63	13.64	
RW-5	3/4/2003	21.38	N/A	N/A	N/A	7.59	13.79	13.79	
RW-5	3/12/2003	21.38	8.04	13.34	0.01	8.05	13.33	13.34	
RW-5	3/14/2003	21.38	7.84	13.54	0.01	7.85	13.53	13.54	
RW-5	3/26/2003	21.38	N/A	N/A	N/A	7.19	14.19	14.19	
RW-5	3/28/2003	21.38	N/A	N/A	N/A	7.71	13.67	13.67	
RW-5	4/2/2003	21.38	N/A	N/A	N/A	7.85	13.53	13.53	
RW-5	4/4/2003	21.38	N/A	N/A	N/A	8.16	13.22	13.22	
RW-5	4/8/2003	21.38	7.71	13.67	0.00	7.72	13.67	13.67	
RW-5	4/11/2003	21.38	N/A	N/A	N/A	7.78	13.60	13.60	
RW-5	4/15/2003	21.38	7.44	13.94	0.01	7.45	13.93	13.94	
RW-5	4/17/2003	21.38	N/A	N/A	N/A	7.91	13.47	13.47	
RW-5	4/22/2003	21.38	N/A	N/A	N/A	7.75	13.63	13.63	
RW-5	4/25/2003	21.38	N/A	N/A	N/A	7.84	13.54	13.54	
RW-5	5/2/2003	21.38	N/A	N/A	N/A	8.78	12.60	12.60	
RW-5	5/6/2003	21.38	9.05	12.33	0.01	9.06	12.32	12.33	
RW-5	5/9/2003	21.38	9.06	12.32	0.05	9.11	12.27	12.31	
RW-5	5/23/2003	21.38	9.08	12.30	0.01	9.09	12.29	12.30	
RW-5	5/28/2003	21.38	9.27	12.11	0.01	9.28	12.10	12.11	
RW-5	6/13/2003	21.38	9.85	11.53	0.06	9.91	11.47	11.52	
RW-5	6/18/2003	21.38	9.81	11.57	0.08	9.89	11.49	11.55	
RW-5	6/27/2003	21.38	9.26	12.12	0.22	9.48	11.90	12.07	
RW-5	7/7/2003	21.38	10.51	10.87	0.19	10.70	10.68	10.82	
RW-5	7/16/2003	21.38	10.29	11.09	0.16	10.45	10.93	11.05	
RW-5	7/31/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	8/5/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	8/11/2003	21.38	N/A	N/A	N/A	11.68	9.70	9.70	
RW-5	8/22/2003	21.38	11.57	9.81	0.08	11.65	9.73	9.79	
RW-5	8/26/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	9/2/2003	21.38	N/A	N/A	N/A	10.67	10.71	10.71	
RW-5	9/9/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	9/19/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	10/14/2003	21.38	N/A	N/A	N/A	10.65	10.73	10.73	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-5	11/20/2003	21.38	N/A	N/A	N/A	8.20	13.18	13.18	
RW-5	12/3/2003	21.38	N/A	N/A	N/A	7.15	14.23	14.23	
RW-5	1/19/2004	21.38	N/A	N/A	N/A	6.71	14.67	14.67	
RW-5	2/24/2004	21.38	N/A	N/A	N/A	7.68	13.70	13.70	
RW-5	3/15/2004	21.38	N/A	N/A	N/A	8.58	12.80	12.80	
RW-5	4/19/2004	21.38	N/A	N/A	N/A	9.47	11.91	11.91	
RW-5	5/17/2004	21.38	N/A	N/A	N/A	10.28	11.10	11.10	
RW-5	6/22/2004	21.38	N/A	N/A	N/A	9.76	11.62	11.62	
RW-6	11/20/2002	20.34	8.05	12.29	2.05	10.1	10.24	11.78	
RW-6	11/21/2002	20.34	8.40	11.94	0.15	8.55	11.79	11.90	
RW-6	11/22/2002	20.34	8.45	11.89	0.24	8.69	11.65	11.83	
RW-6	11/24/2002	20.34	8.65	11.69	0.33	8.98	11.36	11.61	
RW-6	1/2/2003	20.34	6.70	13.64	0.87	7.57	12.77	13.42	
RW-6	1/7/2003	20.34	6.50	13.84	0.26	6.76	13.58	13.78	
RW-6	1/8/2003	20.34	6.09	14.25	0.51	6.6	13.74	14.12	
RW-6	1/9/2003	20.34	6.28	14.06	0.38	6.66	13.68	13.97	
RW-6	1/10/2003	20.34	6.42	13.92	0.23	6.65	13.69	13.86	
RW-6	1/13/2003	20.34	8.16	12.18	0.07	8.23	12.11	12.16	
RW-6	1/14/2003	20.34	6.73	13.61	0.20	6.93	13.41	13.56	
RW-6	1/15/2003	20.34	6.30	14.04	0.60	6.90	13.44	13.89	
RW-6	1/16/2003	20.34	6.28	14.06	0.65	6.93	13.41	13.90	
RW-6	1/17/2003	20.34	6.29	14.05	0.00	6.29	14.05	14.05	
RW-6	1/20/2003	20.34	6.31	14.03	0.63	6.94	13.40	13.87	
RW-6	1/22/2003	20.34	6.41	13.93	0.75	7.16	13.18	13.74	
RW-6	1/23/2003	20.34	6.60	13.74	0.80	7.40	12.94	13.54	
RW-6	1/24/2003	20.34	6.45	13.89	0.76	7.21	13.13	13.70	
RW-6	1/27/2003	20.34	5.82	14.52	0.62	6.44	13.90	14.37	
RW-6	1/28/2003	20.34	5.90	14.44	0.39	6.29	14.05	14.34	
RW-6	1/29/2003	20.34	5.81	14.53	0.35	6.16	14.18	14.44	
RW-6	1/30/2003	20.34	5.92	14.42	0.28	6.20	14.14	14.35	
RW-6	2/3/2003	20.34	6.25	14.09	0.19	6.44	13.90	14.04	
RW-6	2/6/2003	21.09	6.96	14.13	0.18	7.14	13.95	14.09	
RW-6	2/11/2003	21.09	7.44	13.65	0.31	7.75	13.34	13.57	
RW-6	2/18/2003	21.09	7.90	13.19	0.51	8.41	12.68	13.06	
RW-6	2/21/2003	21.09	7.86	13.23	0.47	8.33	12.76	13.11	
RW-6	2/26/2003	21.09	7.76	13.33	0.01	7.77	13.32	13.33	
RW-6	3/4/2003	21.09	N/A	N/A	N/A	7.46	13.63	13.63	
RW-6	3/12/2003	21.09	8.01	13.08	0.01	8.02	13.07	13.08	
RW-6	3/14/2003	21.09	N/A	N/A	N/A	7.81	13.28	13.28	
RW-6	3/26/2003	21.09	N/A	N/A	N/A	7.02	14.07	14.07	
RW-6	3/28/2003	21.09	N/A	N/A	N/A	7.62	13.47	13.47	
RW-6	4/2/2003	21.09	N/A	N/A	N/A	7.74	13.35	13.35	
RW-6	4/4/2003	21.09	N/A	N/A	N/A	8.07	13.02	13.02	
RW-6	4/8/2003	21.09	N/A	N/A	N/A	7.69	13.40	13.40	
RW-6	4/11/2003	21.09	7.61	13.48	0.01	7.62	13.47	13.48	
RW-6	4/15/2003	21.09	N/A	N/A	N/A	7.29	13.80	13.80	
RW-6	4/17/2003	21.09	7.78	13.31	0.01	7.79	13.30	13.31	
RW-6	4/22/2003	21.09	N/A	N/A	N/A	7.81	13.28	13.28	
RW-6	4/25/2003	21.09	N/A	N/A	N/A	7.75	13.34	13.34	
RW-6	5/2/2003	21.09	N/A	N/A	N/A	8.66	12.43	12.43	
RW-6	5/6/2003	21.09	8.84	12.25	0.28	9.12	11.97	12.18	
RW-6	5/9/2003	21.09	8.82	12.27	0.43	9.25	11.84	12.16	
RW-6	5/23/2003	21.09	8.85	12.24	0.86	9.71	11.38	12.03	
RW-6	5/28/2003	21.09	8.93	12.16	1.08	10.01	11.08	11.89	
RW-6	6/13/2003	21.09	9.28	11.81	0.81	10.09	11.00	11.61	
RW-6	6/18/2003	21.09	9.22	11.87	1.53	10.75	10.34	11.49	
RW-6	6/27/2003	21.09	9.60	11.49	1.22	10.82	10.27	11.19	
RW-6	7/7/2003	21.09	9.90	11.19	0.91	10.81	10.28	10.96	
RW-6	7/16/2003	21.09	9.68	11.41	1.08	10.76	10.33	11.14	
RW-6	7/31/2003	21.09	10.34	10.75	0.42	10.76	10.33	10.65	
RW-6	8/5/2003	21.09	10.30	10.79	0.45	10.75	10.34	10.68	
RW-6	8/11/2003	21.09	11.35	9.74	0.39	11.74	9.35	9.64	
RW-6	8/22/2003	21.09	11.10	9.99	0.64	11.74	9.35	9.83	
RW-6	8/26/2003	21.09	10.71	10.38	0.05	10.76	10.33	10.37	
RW-6	9/2/2003	21.09	10.61	10.48	0.14	10.75	10.34	10.45	
RW-6	9/9/2003	21.09	N/A	N/A	N/A	10.76	10.33	10.33	
RW-6	9/19/2003	21.09	N/A	N/A	N/A	10.76	10.33	10.33	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-6	10/14/2003	21.09	N/A	N/A	N/A	10.75	10.34	10.34	
RW-6	11/20/2003	21.09	N/A	N/A	N/A	8.50	12.59	12.59	
RW-6	12/3/2003	21.09	N/A	N/A	N/A	7.08	14.01	14.01	
RW-6	1/19/2004	21.09	N/A	N/A	N/A	6.62	14.47	14.47	
RW-6	2/24/2004	21.09	N/A	N/A	N/A	7.58	13.51	13.51	
RW-6	3/15/2004	21.09	N/A	N/A	N/A	8.57	12.52	12.52	
RW-6	4/19/2004	21.09	N/A	N/A	N/A	9.36	11.73	11.73	
RW-6	5/17/2004	21.09	N/A	N/A	N/A	10.15	10.94	10.94	
RW-6	6/22/2004	21.09	N/A	N/A	N/A	9.91	11.18	11.18	
RW-7	11/20/2002	19.95	7.65	12.30	2.46	10.11	9.84	11.69	
RW-7	11/21/2002	19.95	7.60	12.35	2.51	10.11	9.84	11.72	
RW-7	11/22/2002	19.95	8.03	11.92	1.75	9.78	10.17	11.48	
RW-7	11/24/2002	19.95	8.23	11.72	1.26	9.49	10.46	11.41	
RW-7	1/2/2003	19.95	6.44	13.51	0.40	6.84	13.11	13.41	
RW-7	1/3/2003	19.95	6.28	13.67	0.40	6.68	13.27	13.57	
RW-7	1/6/2003	19.95	5.93	14.02	0.12	6.05	13.90	13.99	
RW-7	1/7/2003	19.95	5.84	14.11	0.20	6.04	13.91	14.06	
RW-7	1/8/2003	19.95	5.66	14.29	0.20	5.86	14.09	14.24	
RW-7	1/9/2003	19.95	5.72	14.23	0.33	6.05	13.90	14.15	
RW-7	1/10/2003	19.95	5.90	14.05	0.25	6.15	13.80	13.99	
RW-7	1/13/2003	19.95	5.98	13.97	0.37	6.35	13.60	13.88	
RW-7	1/14/2003	19.95	5.97	13.98	0.27	6.24	13.71	13.91	
RW-7	1/15/2003	19.95	5.95	14.00	0.30	6.25	13.70	13.93	
RW-7	1/16/2003	19.95	5.84	14.11	0.41	6.25	13.70	14.01	
RW-7	1/17/2003	19.95	5.85	14.10	0.35	6.20	13.75	14.01	
RW-7	1/20/2003	19.95	6.02	13.93	0.53	6.55	13.40	13.80	
RW-7	1/22/2003	19.95	6.11	13.84	0.80	6.91	13.04	13.64	
RW-7	1/23/2003	19.95	6.25	13.70	1.05	7.30	12.65	13.44	
RW-7	1/24/2003	19.95	6.16	13.79	1.03	7.19	12.76	13.53	
RW-7	1/27/2003	19.95	5.60	14.35	0.58	6.18	13.77	14.21	
RW-7	1/28/2003	19.95	5.65	14.30	0.63	6.28	13.67	14.14	
RW-7	1/29/2003	19.95	5.55	14.40	0.65	6.20	13.75	14.24	
RW-7	1/30/2003	19.95	5.65	14.30	0.67	6.32	13.63	14.13	
RW-7	2/3/2003	19.95	5.91	14.04	0.76	6.67	13.28	13.85	
RW-7	2/6/2003	20.72	6.55	14.17	0.79	7.34	13.38	13.97	
RW-7	2/11/2003	20.72	6.99	13.73	1.08	8.07	12.65	13.46	
RW-7	2/21/2003	20.72	7.42	13.30	0.99	8.41	12.31	13.05	
RW-7	2/26/2003	20.72	7.24	13.48	0.04	7.28	13.44	13.47	
RW-7	3/4/2003	20.72	N/A	N/A	N/A	6.96	13.76	13.76	
RW-7	3/12/2003	19.95	Trace	N/A	N/A	7.71	12.24	12.24	
RW-7	3/14/2003	19.95	N/A	N/A	N/A	7.51	12.44	12.44	
RW-7	3/26/2003	19.95	N/A	N/A	N/A	6.68	13.27	13.27	
RW-7	3/28/2003	19.95	N/A	N/A	N/A	7.25	12.70	12.70	
RW-7	4/2/2003	19.95	N/A	N/A	N/A	7.42	12.53	12.53	
RW-7	4/4/2003	19.95	N/A	N/A	N/A	7.64	12.31	12.31	
RW-7	4/8/2003	19.95	N/A	N/A	N/A	7.22	12.73	12.73	
RW-7	4/11/2003	19.95	N/A	N/A	N/A	7.16	12.79	12.79	
RW-7	4/15/2003	19.95	N/A	N/A	N/A	6.81	13.14	13.14	
RW-7	4/17/2003	19.95	N/A	N/A	N/A	7.38	12.57	12.57	
RW-7	4/22/2003	19.95	N/A	N/A	N/A	7.34	12.61	12.61	
RW-7	4/25/2003	19.95	N/A	N/A	N/A	7.21	12.74	12.74	
RW-7	5/2/2003	19.95	8.30	11.65	0.03	8.33	11.62	11.64	
RW-7	5/6/2003	19.95	8.52	11.43	0.08	8.6	11.35	11.41	
RW-7	5/9/2003	19.95	8.54	11.41	0.03	8.57	11.38	11.40	
RW-7	5/23/2003	19.95	8.55	11.40	1.03	9.58	10.37	11.14	
RW-7	5/28/2003	19.95	8.57	11.38	1.55	10.12	9.83	10.99	
RW-7	6/13/2003	19.95	8.92	11.03	1.64	10.56	9.39	10.62	
RW-7	6/18/2003	19.95	8.88	11.07	1.87	10.75	9.20	10.60	
RW-7	6/27/2003	19.95	9.26	10.69	1.55	10.81	9.14	10.30	
RW-7	7/7/2003	19.95	9.54	10.41	1.21	10.75	9.20	10.11	
RW-7	7/16/2003	19.95	9.42	10.53	1.30	10.72	9.23	10.21	
RW-7	7/31/2003	19.95	9.98	9.97	0.76	10.74	9.21	9.78	
RW-7	8/5/2003	19.95	10.88	9.07	0.74	11.62	8.33	8.89	
RW-7	8/11/2003	19.95	11.00	8.95	0.69	11.69	8.26	8.78	
RW-7	8/22/2003	19.95	10.70	9.25	1.01	11.71	8.24	9.00	
RW-7	8/26/2003	19.95	11.28	8.67	0.37	11.65	8.30	8.58	
RW-7	9/2/2003	19.95	10.36	9.59	0.36	10.72	9.23	9.50	

TABLE 2
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-7	9/9/2003	19.95	10.75	9.20	0.01	10.76	9.19	9.20	
RW-7	9/19/2003	19.95	N/A	N/A	N/A	10.76	9.19	9.19	
RW-7	10/14/2003	19.95	N/A	N/A	N/A	10.77	9.18	9.18	
RW-7	11/20/2003	19.95	N/A	N/A	N/A	8.24	11.71	11.71	
RW-7	12/3/2003	19.95	N/A	N/A	N/A	6.79	13.16	13.16	
RW-7	1/19/2004	19.95	N/A	N/A	N/A	6.31	13.64	13.64	
RW-7	2/24/2004	19.95	N/A	N/A	N/A	7.11	12.84	12.84	
RW-7	3/15/2004	19.95	N/A	N/A	N/A	8.20	11.75	11.75	
RW-7	4/19/2004	19.95	N/A	N/A	N/A	8.85	11.10	11.10	
RW-7	5/17/2004	19.95	N/A	N/A	N/A	9.79	10.16	10.16	
RW-7	6/22/2004	19.95	N/A	N/A	N/A	9.57	10.38	10.38	Trace product
HW-1East	11/20/2003	17.93	N/A	N/A	N/A	4.61	13.32	13.32	
HW-1East	12/3/2003	17.93	N/A	N/A	N/A	4.00	13.93	13.93	
HW-1East	1/19/2004	17.93	3.56	14.37	0.005	3.57	14.37	14.37	
HW-1East	2/24/2004	17.93	N/A	N/A	N/A	5.46	12.47	12.47	
HW-1East	3/15/2004	17.93	N/A	N/A	N/A	5.84	12.09	12.09	
HW-1East	4/19/2004	17.93	N/A	N/A	N/A	6.42	11.51	11.51	Slight product smell
HW-1East	5/17/2004	17.93	N/A	N/A	N/A	N/A	N/A	N/A	
HW-1East	6/22/2004	17.93	N/A	N/A	N/A	N/A	N/A	N/A	
HW-1West	11/20/2003	17.40	N/A	N/A	N/A	4.32	13.08	13.08	
HW-1West	12/3/2003	17.40	N/A	N/A	N/A	3.56	13.84	13.84	
HW-1West	1/19/2004	17.40	N/A	N/A	N/A	3.28	14.12	14.12	
HW-1West	2/24/2004	17.40	N/A	N/A	N/A	4.96	12.44	12.44	
HW-1West	3/15/2004	17.40	N/A	N/A	N/A	6.35	11.05	11.05	
HW-1West	4/19/2004	17.40	N/A	N/A	N/A	5.90	11.50	11.50	
HW-1West	5/17/2004	17.40	N/A	N/A	N/A	N/A	N/A	N/A	
HW-1West	6/22/2004	17.40	N/A	N/A	N/A	N/A	N/A	N/A	
W-1	11/24/2002	18.86	N/A	N/A	N/A	7.95	10.91	10.91	
W-2	11/24/2002	18.28	N/A	N/A	N/A	7.39	10.89	10.89	
W-3	11/24/2002	17.10	N/A	N/A	N/A	6.05	11.05	11.05	
W-4	11/24/2002	18.03	7.44	10.59	0.01	7.45	10.58	10.59	
B-1	11/24/2002	18.62	N/A	N/A	N/A	7.85	10.77	10.77	
B-2	11/24/2002	18.60	N/A	N/A	N/A	7.86	10.74	10.74	
B-3	11/24/2002	18.73	8.18	10.55	2.63	10.81	7.92	9.89	
B-4	11/24/2002	18.09	N/A	N/A	N/A	7.22	10.87	10.87	
B-5	11/24/2002	17.97	N/A	N/A	N/A	6.93	11.04	11.04	
B-6	11/24/2002	17.94	N/A	N/A	N/A	7.53	10.41	10.41	
D-1	11/24/2002	18.03	N/A	N/A	N/A	6.27	11.76	11.76	
D-2	11/24/2002	19.14	---	---	---	---	---	---	
D-4	11/24/2002	17.82	---	---	---	---	---	---	
D-5	11/24/2002	18.12	N/A	N/A	N/A	Dry	Dry		
D-6	11/24/2002	17.74	N/A	N/A	N/A	6.55	11.19	11.19	
D-7	11/24/2002	17.69	N/A	N/A	N/A	6.93	10.76	10.76	

N/A Not Applicable. No free product detected.

TABLE 3
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
B2	B2K0572-16	11/25/2002	9850	1780	1280	9220	60500	13.2	0.500 U
B3	B2K0572-15	11/25/2002	NA	NA	NA	NA	NA	NA	NA
B4	B2K0572-09	11/25/2002	519	295	2180	10500	41700	5.46	0.500 U
B5	B2K0572-10	11/25/2002	126	4.31	37.4	67.4	2270	1.06	0.500 U
B6	B2K0619-05	11/26/2002	5230	5410	525	5460	43000	5.31 J	2.51 J
Dup of B6 (B17)	B2K0619-06	11/26/2002	4850	5010	464	5430	43500	7.04 J	3.63 J
D1	B2K0619-04	11/26/2002	0.500 U	1.12	0.500 U	2.16	185	0.434	1.01
D6	B2K0619-11	11/26/2002	121	10.7	1.20	5.59	385	0.250 U	0.500 U
D7	B2K0619-07	11/26/2002	2.82	0.614	0.500 U	1.12	50.0 U	0.435	1.26
HA1	B2K0619-08	11/26/2002	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
HA5	B2K0471-01	11/19/2002	3.39	5.63	0.581	5.87	223	NA	NA
HA5	B2K0572-08	11/25/2002	2.94	1.67	0.500 U	4.22	236	0.250 U	0.500 U
Dup of HA5 (HA5-021122)	B2K0572-17	11/25/2002	2.78	1.51	0.500 U	3.81	243	0.250 U	0.500 U
HA5	B3A0300-06	1/14/2003	3380	2870	43.6	151	14300	NA	NA
HA5	B3B0527-01	2/24/2003	8620	17200	685	3260	65000	0.476	0.500 U
HA5	B3C0615-05	3/25/2003	6550	14700	657	2900	54700	0.388	0.500 U
HA5	B3D0437-08	4/18/2003	7550	16800	857	3960	66600	0.250 U	0.500 U
HA5	B3H0266-09	8/11/2003	659	232	26.7	187	2810	0.512	0.500 U
HA5	B4C0493-11	3/15/2004	21.2	1.38	41.5	6.55	708	2.38	0.500 U
HA5	B4F0732-11	6/22/2004	2.85	0.500 U	0.559	1.00 U	178	0.250 U	0.500 U
HA6	B2K0572-07	11/25/2002	637	181	1320	5620	25600	1.43	0.500 U
HA7	B2K0471-02	11/19/2002	587	31.3	259	324	5510	NA	NA
HA7	B2K0572-05	11/25/2002	811	41.1	402	580	7840	2.67	0.500 U
HA7	B3A0300-03	1/14/2003	421	56.2	261	2350	13700	NA	NA
HA8	B2K0471-03	11/19/2002	2.07	4.11	1.76	7.42	135	NA	NA
HA8	B2K0572-04	11/24/2002	5.78	16.9	12.6	57.8	579	0.250 U	0.500 U
HA8	B3A0300-04	1/14/2003	4.02	16.5	16.3	207	633	NA	NA
HA8	B3B0527-02	2/24/2003	14.6	74.5	232	1570	5720	0.767	0.500 U
HA8	B3C0615-06	3/25/2003	6.17	22.0	73.0	445	1950	0.544	0.500 U
HA8	B3D0437-10	4/18/2003	12.1	35.9	160	708	3040	0.250 U	0.500 U
Dup of HA8	B3D0437-06	4/18/2003	11.9	41.1	164	762	3650	0.257	0.500 U
HA9	B2K0619-10	11/26/2002	249	3.55	349	187	6110 J	NA	NA

TABLE 3
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
HA12	B2K0572-06	11/25/2002	0.957	3.85	1.52	10.8	93.7	0.250 U	0.500 U
HA13	B2K0572-12/B2K0619-02	11/25/2002	0.569	1.80	0.667	5.74	50.0 U	0.250 U	0.500 U
HA13	B3B0527-03	2/24/2003	0.500 U	0.500 U	0.500 U	1.08	50.0 U	0.250 U	0.500 U
HA13	B3C0615-07	3/25/2003	0.500 U	0.580	0.500 U	1.00 U	98.4	0.250 U	0.500 U
HA13	B3D0437-07	4/18/2003	0.500 U	0.500 U	0.500	1.00 U	50.0 U	0.250 U	0.500 U
HA13	B3I0408-03	9/11/2003	3.38	28.9	7.87	60.6	498	NA	NA
HA13	B3K0600-11	11/21/2003	0.500 U	0.877	0.500 U	1.15	50 U	0.250 U	0.500 U
HA13	B4C0493-12	3/15/2004	0.500 U	0.500 U	0.500 U	1.00 U	50 U	0.250 U	0.500 U
HA13	B4F0732-12	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50 U	0.250 U	0.500 U
HA14	B2K0572-13/B2K0619-03	11/25/2002	141	15.7	169	48.1	939	0.250 U	0.500 U
HA14	B3D0437-13	4/18/2003	133	8.87	228	23.7	1190	0.250 U	0.500 U
HA15	B3A0300-05	1/14/2003	3.34	0.672	0.500 U	2.51	344	NA	NA
HA15	B3B0527-04	2/24/2003	12.9	5.57	9.80	69.6	1250	0.481	0.500 U
HA15	B3C0615-08	3/25/2003	7.47	1.55	1.12	3.99	910	0.486	0.500 U
HA15	B3D0437-09	4/18/2003	7.21	1.88	0.716	6.47	658	0.250 U	0.500 U
HA15	B4C0493-13	3/15/2004	5.85	0.765	0.500 U	1.34	336	1.22	0.500 U
HA17	B3A0300-02	1/14/2003	10.2	1.25 U	1.55	2.61	548	NA	NA
HA17	B3E0729-10	5/29/2003	50.0	129	80.1	322	2090	0.250 UJ	0.500 UJ
HA17	B3K0600-02	11/20/2003	8.9	0.500 U	0.500 U	1.00 U	585	0.620	0.500 U
HA17	B4C0493-14	3/15/2004	0.500 U	0.500 U	0.500 U	1.00 U	50 U	0.250 UJ	0.500 UJ
HA18	B3A0300-01	1/14/2003	40.3	75.9	810	2220	11400	NA	NA
HA18	B3E0729-11	5/29/2003	95.0	157	2440	7840	31000	7.51	0.500 U
HA18	B3K0600-01	11/20/2003	284.0	178	1950	6400	28000	6.87	0.500 U
LAI-1	B3A0300-07	1/15/2003	728	935	22.8	120	4120	NA	NA
LAI-1	B3B0527-05	2/26/2003	2150	3680	116	979	15100	1.02	0.500 U
LAI-1	B3C0577-01	3/24/2003	7970	15000	739	4250	47500	1.49	0.500 U

TABLE 3
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
LAI-2	B3A0300-08	1/15/2003	2.78	2.20 J	1.10 J	9.33 J	72.6 J	NA	NA
Dup of LAI-2 (LAI-12)	B3A0300-10	1/15/2003	3.39	3.36 J	1.68 J	15.1 J	103 J	NA	NA
LAI-2	B3E0729-12	5/29/2003	2940	6100	235	1680	18100	0.250 U	0.500 U
Dup of LAI-2 (LAI-20)	B3E0729-09	5/29/2003	2840	6320	235	1680	18800	0.299 J	0.500 U
LAI-2	B3H0266-06	8/11/2003	1880	2150 J	135	907	8950 J	0.516	0.562 U
Dup of LAI-2 (LAI-21)	B3H0266-01	8/11/2003	1750	1340 J	104	678	6620 J	0.550	0.500 U
LAI-2	B3K0600-09	11/20/2003	580	1.98	35.3	235	1330	0.304	0.500 U
LAI-2	B4C0493-01	3/16/2004	23600	27700	2370	11300	120000	1.95	0.500 U
LAI-2	B4F0732-01	6/22/2004	4390	53.3	889	1190	17600	0.283 (a)	0.500 U
Dup of LAI-2 (LAI-22)	B4F0732-10	6/22/2004	4960	51.4	1020	1340	20400	0.250 U	0.500 U
LAI-3	B3A0300-09	1/15/2003	0.500 U	3.19	1.36	8.45	66.6	NA	NA
LAI-3	B3B0527-06	2/26/2003	70.1	159	6.42	32.6	558	0.250 U	0.500 U
LAI-3	B3C0615-01	3/25/2003	61.6	176	8.43	39.5	573	0.250 U	0.500 U
LAI-3	B3D0437-05	4/17/2003	7.56	24.5	4.00	29.4	154	0.250 U	0.500 U
LAI-3	B3E0729-13	5/29/2003	151	40.7	0.951	4.6	301	0.250 U	0.500 U
LAI-3	B3H0266-07	8/11/2003	329	18.4	2.470	7.27	985	0.250 U	0.500 U
LAI-3	B3K0600-10	11/20/2003	9.2	0.500 U	0.500 U	1.00 U	50 U	0.250 U	0.500 U
LAI-3	B4C0493-02	3/16/2004	2030	94.9	113	225	4670	0.272	0.500 U
LAI-3	B4F0732-02	6/22/2004	1580	5.00 U	50.7	69.4	2880	0.250 U	0.500 U
LAI-10	B3B0527-07	2/26/2003	0.500 U	0.991	0.500 U	1.37	50.0 U	0.250 U	0.500 U
Dup of LAI-10 (LAI-17)	B3B0527-12	2/26/2003	0.500 U	0.757	0.500 U	1.18	50.0 U	0.250 U	0.500 U
LAI-10	B3C0577-02	3/24/2003	1.35	2.67	0.500 U	1.36	50.0 U	0.250 UJ	0.500 U
LAI-10	B3D0437-02	4/17/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-10	B3E0729-08	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-10	B3H0266-08	8/11/2003	0.500 U	1.75	0.757	4.54	50.0 U	0.250 U	0.500 U
LAI-10	B3K0600-06	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	1.95	0.500 U
LAI-10	B4C0493-03	3/16/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-10	B4F0732-03	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B3B0527-08	2/26/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.401	0.500 U
LAI-11	B3C0577-03	3/24/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.429	0.500 U
LAI-11	B3D0437-03	4/17/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B3E0729-02	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B3K0600-07	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B4C0493-04	3/16/2004	0.500 U	0.634	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B4F0732-04	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U

TABLE 3
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
LAI-12	B3E0729-03	5/28/2003	0.500 U	0.500 U	0.500 U	1.81	50.0 U	0.250 U	0.500 U
LAI-12	B3H0266-02	8/11/2003	0.500 U	0.500 U	0.500 U	2.21	50.0 U	0.354	0.500 U
LAI-12	B3K0600-08	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	60.7	0.250 U	0.500 U
LAI-12	B4C0493-05	3/16/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-12	B4F0732-05	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B3E0729-06	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B3H0266-05	8/11/2003	0.500 U	0.647	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B3K0600-03	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B4C0493-06	3/15/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B4F0732-06	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3B0527-09	2/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0	0.269	0.500 U
LAI-14	B3C0615-02	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	66.3	0.250 U	0.500 U
LAI-14	B3D0437-11	4/18/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3E0729-05	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3H0266-04	8/11/2003	0.500 U	0.631	0.500 U	1.00 U	50.0 U	0.278	0.500 U
LAI-14	B3K0600-04	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B4C0493-07	3/15/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B4F0732-07	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-15	B3E0729-04	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	104	0.250 U	0.500 U
LAI-15	B3H0266-03	8/11/2003	0.500 U	0.641	0.500 U	1.95	158	0.334	0.500 U
LAI-15	B3K0600-05	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	53.9	0.250 U	0.500 U
LAI-15	B4C0493-08	3/15/2004	0.500 U	0.500 U	0.500 U	1.00 U	154	0.250 U	0.500 U
LAI-15	B4F0732-08	6/22/2004	0.500 U	0.500 U	0.500 U	1.00 U	135	0.250 U	0.500 U
LAI-16	B3B0527-10	2/25/2003	0.500 U	0.679	0.500 U	1.09	50.0 U	0.250 U	0.500 U
LAI-16	B3C0615-03	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.288	0.500 U
Dup of LAI-16 (LAI-26)	B3C0615-04	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.330	0.500 U
LAI-16	B3D0437-04	4/17/2003	3.51	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-16	B3E0729-07	5/28/2003	523	14.9	1.00 U	2.25	705 J	0.250 U	0.500 U
LAI-16	B3K0600-12	11/21/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
Dup of LAI-16 (LAI-25)	B3K0600-13	11/21/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-16	B4C0493-09	3/16/2004	2.70 J	0.796	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
Dup of LAI-16 (LAI-17)	B4C0493-10	3/16/2004	4.76 J	0.630	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-16	B4F0732-09	6/22/2004	8.52	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U

TABLE 3
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
W1	B2K0572-14	11/25/2002	17600	24800	2950	19500	155000	16.7	0.500 U
W2	B2K0572-11	11/25/2002	15300	15800	1960	11700	104000	14.7	1.91
W3	B2K0619-09	11/26/2002	455	156	463	1570	14100	4.89	0.500 U
W4	B2K0619-01	11/25/2002	1830	38.2	2550	4220	39900	19.2	0.648

(a) Results in the diesel organics range are primarily due to overlap from a gasoline range product.
NA = Not analyzed.
U = Not detected above reporting limit.
J = Indicates that the analyte was positively identified; the associated numercial value is the approximate concentration of the analyte in the sample.

TABLE 4
INFLUENT AND EFFLUENT VAPOR ANALYTICAL RESULTS - REMEDIATION SYSTEM
CONOCOPHILLIPS RENTON TERMINAL

	Influent 203134-01 2/13/2003	Effluent 203134-02 2/13/2003	Influent 203145-01 2/24/2003	Effluent 203145-02 2/24/2003	Influent 203249-01 4/8/2003	Effluent 203249-02 4/8/2003	Influent 203284-01 4/17/2003	Effluent 203284-02 4/17/2003	Influent B3F0471-01 6/20/2003	Effluent B3F0471-02 6/20/2003	Influent B3G0287-01 7/11/2003	Effluent B3G0287-02 7/11/2003	Influent B3H0121-01 8/7/2003
BTEX EPA Method 8021B (mg/m^3)													
Benzene	9.162	0.002 U	62.322	NA	28.845	0.002 U	34.874	0.002 U	84	0.064	80.5	0.641	63.5
Toluene	14.379	0.002	226.045	NA	106.648	0.001 U	153.375	0.001 U	189.000	0.026 U	101.000	0.086	111.000
Ethylbenzene	0.598	0.001 U	17.387	NA	10.811	0.001 U	16.712	0.001 U	17.100	0.023 U	17.500	0.023 U	6.610
m-xylene (p-xylene)	1.869	0.003	61.785	NA	44.347	0.002 U	73.891	0.002 U	NA	NA	NA	NA	NA
o-Xylene	0.595	0.002 U	22.02	NA	17.856	0.002 U	30.883	0.003 U	NA	NA	NA	NA	NA
Xylenes, total	NA	NA	NA	NA	NA	NA	NA	NA	93.500	0.045 U	81.600	0.045 U	31.400
TPH as Gasoline	708.443	0.023	1859.64	NA	1124.34	0.022	1551.2	NA	1860	2.36 U	1900	2.36 U	1170
TPH as Diesel	NA	NA	867.833	NA	524.692	0.013 U	723.893	NA	NA	NA	NA	NA	NA
BTEX EPA Method 8021B (ppmV)													
Metyl tert butyl ether	NA	NA	NA	0.3 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
m & p-Xylene	NA	NA	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	2.8 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetraethyl Lead	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isooctane	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methanol	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumene	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4
INFLUENT AND EFFLUENT VAPOR ANALYTICAL RESULTS - REMEDIATION SYSTEM
CONOCOPHILLIPS RENTON TERMINAL

	Effluent B3H0121-02 8/7/2003	Influent B3J0424-01 10/15/2003	Effluent B3J0424-02 10/15/2003	Influent B3L0669-03 12/18/2003	Effluent B3L0669-03 12/18/2003	Influent B3B0139-04 2/5/2004	Effluent B3B0139-05 2/5/2004	Influent B4C0493-15 3/16/2004	Effluent B4C0493-16 3/16/2004	Influent B4G0069-04 7/2/2004	Effluent B4G0563-01 7/21/2004	Influent B4H0533-01 8/20/2004
BTEX EPA Method 8021B (mg/m^3)												
Benzene	0.0308 U	43.2	0.0308 U	14.8	0.100 U	3.45	0.100 U	7.81	0.156	23.5	0.358	69.7
Toluene	0.089	91.500	0.026 U	64.4	0.100 U	6.8	0.359	15.5	0.134	68.5	0.436	181
Ethylbenzene	0.023 U	6.510	0.023 U	9.27	0.100 U	0.924	0.100 U	1.96	0.100 U	5.61	0.100 U	13.8
m-xylene (p-xylene)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, total	0.067	34.100	0.045 U	54.8	0.200 U	6.7	0.338	15.6	0.200 U	57.6	0.397	93.7
TPH as Gasoline	2.36 U	779	2.36 U	497	10 U	45.5	10 U	252	10 U	927	21.2	2130
TPH as Diesel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BTEX EPA Method 8021B (ppmV)												
Metyl tert butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m & p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetraethyl Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isooctane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methanol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cumene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Analysis prior to June 2003 completed using TO-14 and TO-15 testing methods
U = Not detected above the listed reporting limit.
NA = Not analyzed.

TABLE 5
INFLUENT AND EFFLUENT GROUNDWATER TREATMENT ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

	Effluent Permit Levels	Influent B3G0160-02 7/7/2003	Effluent B3G0160-01 7/7/2003	Influent B3I0408-01 9/11/2003	Effluent B3I0408-02 9/11/2003	Influent (a) B3L0669-01 12/18/2003	Effluent B3L0669-02 12/18/2003	Influent (a) B4A0540-03 1/23/2004	Effluent B4A0540-01 1/23/2004	Stripper Effluent B4A0540-02 1/23/2004	Influent (a) B4B0139-01 2/5/2004
BETX (µg/L)											
Method 8021B											
Benzene	130	45,200	4.87	37,500	11.6	4060	284	389	0.500 U	10.5	3180
Toluene	1500	81,200	18.5	76,700	23.7	14500	1110	3900	0.500 U	28.4	6930
Ethylbenzene	1400	3840	1.63	2,810	5 U	1690	135	68.6	0.500 U	3.38	783
Xylenes (total)		21,700	16.7	22,400	68.7	11800	1080	7140	1.00 U	119	5350
m,p-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-Gx (µg/L)											
Gasoline		331,000	345	320,000	2480	73100	7550	34700	50.0 U	4010	40000
NWTPH-Dx (mg/L)											
Diesel Range Hydrocarbons		3.47	2.42	2.74	NA	34.8	22.1	NA	NA	NA	NA
Lube Oil Range Hydrocarbons		0.630	0.500 U	0.500 U	NA	10 U	5 U	NA	NA	NA	NA
CONVENTIONALS											
Oil & Grease (HEM) (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (SGT-HEM) (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 5
INFLUENT AND EFFLUENT GROUNDWATER TREATMENT ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

	Effluent Permit Levels	Stripper Effluent B4B0139-02 2/5/2004	Effluent B4B0139-03 2/5/2004	Influent B4C0478-01 3/16/2004	Stripper Effluent B4C0478-02 3/16/2004	Effluent B4C0478-03 3/16/2004
BETX (µg/L)						
Method 8021B						
Benzene	130	24.7	0.500 U	5530	244	0.500 U
Toluene	1500	39.9	0.500 U	9480	483	0.500 U
Ethylbenzene	1400	9.38	0.500 U	520	34.7	0.500 U
Xylenes (total)		76.9	1.00 U	4810	359	1.00 U
m,p-Xylene		NA	NA	NA	NA	NA
o-Xylene		NA	NA	NA	NA	NA
NWTPH-Gx (µg/L)						
Gasoline		2370	50 U	43500	4710	50 U
NWTPH-Dx (mg/L)						
Diesel Range Hydrocarbons		NA	NA	NA	NA	NA
Lube Oil Range Hydrocarbons		NA	NA	NA	NA	NA
CONVENTIONALS						
Oil & Grease (HEM) (mg/L)		NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (SGT-HEM) (mg/L)		NA	NA	NA	NA	NA
pH		NA	NA	NA	NA	NA

Note:
Influent is collected prior to air stripper; effluent is collected at discharge pump from air stripper.
U = Not detected above the method detection limit (MDL).
(a) = Oil water separator is bypassed, influent sample collected from sampling port on air sparge tank

TABLE 6
ESTIMATED DPVE MASS REMOVAL SUMMARY
CONOCOPHILLIPS RENTON TERMINAL

Date	PID (ppm)	TPH-G&D (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethyl-benzene (ppmv)	Xylenes (b) (ppmv)	Flow Rate (scfm)	Removal Rate TPH (lbs/day)	Removal Rate Benzene (lbs/day)	Panel Hour Meter (hrs)	Duration of Operation (days)	Mass Removed Total TPH (lbs)	Mass Removed Total Benzene (lbs)	Mass Removed Total TPH (Gallons)	Mass Removed Total Benzene (Gallons)
2/12/2003	330	NC	NC	NC	NC	NC	300	NC	NC	21591	0	0			
2/13/2003	200	708.4 (a)	9.16	14.38	0.60	2.46	300	77	1	21610	0.8	0	0	0	0
2/24/2003	942	2727.5	62.32	226.05	17.39	83.81	300	397	6	21875	11.9	4396	61	687	10
4/8/2003	NR	1649.0	28.85	106.65	10.81	62.20	290	232	2	22610	42.5	11506	137	1798	21
4/17/2003	801	2275.1	34.87	153.38	16.71	104.77	290	320	3	22823	51.3	14347	164	2242	26
6/20/2003	1479	1860.0 (a)	84.00	189.00	17.10	93.50	290	206	7	23802	92.1	22751	455	3555	71
7/11/2003	1099	1900.0	80.50	101.00	17.50	81.60	291	211	7	24040	102.0	24842	522	3882	82
8/7/2003	NR	1170.0	63.50	111.00	6.61	31.40	420	188	8	24540	122.9	28767	685	4495	107
10/15/2003	NR	779.0 (a)	43.20	91.50	6.51	34.10	420	125	5	25993	183.4	36342	1005	5678	157
11/21/2003	86	88.7 (a)	3.09	5.68	0.571	4.39	185	6	0.2	26464	203.1	36465	1009	5698	158
12/18/2003	23.8	117.0 (a)	4.57	16.80	2.10	12.40	270	12	0.4	27112 (c)	230.1	36791	1018	5749	159
12/24/2003	NR	NR	NR	NR	NR	NR	270 (c)	12 (c)	0.4 (c)	27289	237.5	36880	1021	5763	160
1/9/2004	NR	NR	NR	NR	NR	NR	290	12 (c)	0.4 (c)	27289	237.5	36880	1021	5762	160
2/5/2004	7.6	10.7 (a)	1.06	1.79	0.21	1.52	270	1.1	0.1	27758	257.0	36902	1023	5766	160
3/17/2004	45	0.70 (a)	2.41	4.04	0.45	3.54	270	6.1	0.2	28563	290.5	37107	1029	5798	161
4/19/2004	58	0.70 (c)	2.41	4.04	0.45	3.54	288	6.5	0.2	29137	314.5	37263	1034	5822	162
5/7/2004	NR	0.70 (c)	2.41	4.04	0.45	3.54	288	6.5	0.2	29137	314.5	37263	1034	5822	162
6/28/2004	NR	0.70 (c)	2.41	4.04	0.45	3.54	316	7.2	0.2	30036	351.9	37532	1042	5864	163

Notes:
TPH-G & D = Gasoline and Diesel Range Total Petroleum Hydrocarbons
ppmv = parts per million by volume
mg/m3 = milligrams per cubic meter (assuming 60 degrees F and 1 atmosphere of pressure)
mg/m3 concentration for TPH based on a molecular weight of 92 g/g-mol

NC = Not Collected
(a) Only TPH-G analyzed
(b) Combined total reported for m, p, and o-xylenes
(c) Extrapolated value
Analytical results prior to June 20, 2003 reported from TO-14/15 analysis using Suma canisters.
Analytical results from June 20, 2003 forward reported from NWTPH Modified Method analysis using tedlar bags.

APPENDIX A

Remedial System Operational Logs

ConocoPhillips

Equipment Maintenance Report

ConocoPhillips Contact: Mr. Tim Johnson — Date: 06/25/04

Consultant & Contact: Landau Associates - Martin Powers — Time: 12:00 PM

Contractor & Contact: H2 Oil Recovery Equipment, Inc. - Scott Wakefield — Weather: 70's & Sunny

1.0 System Description: *Site #3485 , 2423 Lind Ave, Renton WA*

H2-250G Gas Fired Thermal Oxidizer with catalyst plate and DR505 2 hp combustion blower, Sutorbilt 4MP SVE blower with a 10 hp motor (230v, 1 ph, 1725 rpm), 55 gal 3" moisture separator with a Goulds 1/2 hp (230 vac, 1ph) moisture separator pump, all mounted on a trailer; Campbell-Hausfeld (Mod #C1071080VMS, Ser # 020393L 999231) 7.5 hp air compressor (230v, 3480 rpm) and (6) Clean Environment AP3 down well pneumatic pumps

SVE belts - (1) 5VX630
Compressor V-belt - (2) B66

(attach schematic including manufacturer and date of purchase)

3.0 Routine Maintenance Required and Performed:

Description	Interval
Observe complete system operation. Change oil in SVE blower. Check filters,	Monthly
clean or replace, if needed. Change air compressor oil and drain condensation.	
Check belt tension, adjust if needed, and record belt deflection. Record amps	
on blowers, pump and compressor. Calibrate CGM.	

4.0 Equipment Readings and Measurements:

	Date 6/25/2004
SVE blower (4MP) amps - 41.7/40.8 @ 40" wc	
MS pump (Goulds) amps - off - no water in separator	Temp controller - 551
Air compressor amps - 37.0/36.5 @ 110 psi	Burner temp - 542
Fresh air blower amps - 6.5/6.8	Cat temp - 601
	% LEL - 4.6%
T.S. blower amps - 3.5/3.4/3.3 @ 14" wc	
Aeration blower amps - 5.5/5.4	hrs - 29967.0
OWS thickness - 1/8" product	Stripper Effluent Water Meter - 173770 gal
Product tank volume - 20.5" liquid	
Stripper effluent - 2.8/2.5 @ 14 gpm/ stripper influent - 1.5/1.6/1.5	

5.0 Other Repairs Performed, parts needed, etc.:

6.0 Equipment Status and Reasons for Downtime:

System manually off upon arrival. Landau advised to restart system. R-14 in panel found to be faulty, signaling false high level to water treatment system. Replaced air prover switch - original stuck in open position not allowing oxidizer to start.

Individual Completing this form, including company

Scott Wakefield - H2 Oil Recovery Equipment, Inc.

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No: 706002 Report No: _____

Client: Conoco Phillips Date: Monday June 1, 2004

Project Name: Conoco Phillips- Renton Terminal

Location: Renton, WA

Weather Conditions: Clear

Prepared By: MLR

(Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

0800 On site

- SVE system was down upon arrival. Checked all panels and tanks to determine reason of shut off. Reason of shut down was undetermined, although noticed that gas delivery was set at 4psi instead of the usual 6psi delivery pressure.
- Attempted to initiate SVE system, but when the system reached nominal temperature, the automatic dilution valve was not closing. Noticed that the burner's panel was not giving any legible numbers either.
- H2Oil was contacted about this issue, and both H2Oil and LAI determined that the burner's reading panel needed to be replaced. H2Oil will send new panel and LAI will replace on next visit.
- Inspected lift station for modification.

1000 Off Site

Water meter reading: **171145.9 gallons**

Visitors: _____

Unsatisfactory Conditions and Recommended Corrections _____

_____

Attachments _____

Distribution _____ Signed _____

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: MLR Date: 5/3/04 Time: 0835
Weather Conditions: Partially Cloudy

Vapor Extraction and Treatment System

Operating Upon Arrival: (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	29467.6	hours
Burner Temperature	538	deg F
Catalyst Temperature	548	deg F
LEL %	1.3	
4" Valve % Open	100	
Total Vacuum Reading	24	in. H2O
Total Flowrate	288	cfm
Total VOCs of thermox influent	59.7	ppm (PID)
Total VOCs of Thermox effluent	0.5	ppm (PID)
Fill level in LP tank	60 %	Delivery Pressure 6 psi

Water Treatment System

Operating Upon Arrival: (Yes) / No

If No please explain why, for how long and what alarms active.

Magnahelic	0.5	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	1.95	ft.
Transfer Tank Water Level	1.01	ft.
Storage Tank Oil Level	0.07 ft 0.1 /	ft. 1.36 ft H_2O
Flow Meter Reading	269902.5	gallons
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	Yes	11	90
RW-3	NO	9	90
RW-4	NO	13	90
LAI-4	Yes	7	90
LAI-5	Yes	11	90
LAI-6	Yes	—	—
LAI-7	Yes	9	90
LAI-8	Yes	11	90
LAI-9	Yes	10	90
HW-1E	Yes	—	—
HW-1W	Yes	—	—

Comments (activities conducted, changes to the systems, general site conditions)

Brought direction flow arrows, will place in water/air lines next visit

PID readings: Air Sparge 158 ppm
Transfer tank 3845 ppm
Storage Tank (oil) 4572 ppm

Adjusted weir (product) on o/w separator

update field book (3/c/04) →

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No: 706002 Report No: _____

Client: Conoco Phillips Date: 5/7/04

Project Name: Conoco Phillips- Renton Terminal

Location: Renton, WA

Weather Conditions: Clear

Prepared By: MLR

(Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

1550 - Arrived on site

- Upon arrival, SVE system was off. Proceeded to check all panels to determine the reason of shut down. Light bulbs in all panels were checked to see if any of them were burned out. All light bulbs in main panel are working fine.
- Proceeded to turn system on, but was not able to get any reading at the burner's display panel. It was only reading 8s across the display. The other two display panels (Catalytic, and main temperature) were working fine. The automatic valve that pulls fresh air does not close and therefore does not allow any vacuum on the KO drum. As the burner reaches a set temperature, the valve should automatically shut off and allow a vacuum at the KO drum, but in this case that wasn't happening.
- Proceeded to shut system down for the weekend. No O&M log sheet was filled at this time, but the flow meter reading was collected.

Flow meter: 171,145.8 gallons

1700 - Departed from the site

Visitors: _____

Unsatisfactory Conditions and Recommended Corrections _____

Attachments _____

Distribution _____ Signed _____

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLR Date 3/30 Time 1430
Weather Conditions

Vapor Extraction and Treatment System

Operating Upon Arrival Yes / (No)

If No indicate active alarms below and restart system
ACTIVE ALARMS: High alarm on transfer tank

Hourmeter Reading	28788.5	hours
Burner Temperature	541	deg F
Catalyst Temperature	546	deg F
LEL %	1.20	
4" Valve % Open	100	
Total Vacuum Reading	24	in. H2O
Total Flowrate	306	cfm
Total VOCs of thermox influent	NR	ppm (PID)
Total VOCs of Thermox effluent	NR	ppm (PID)
Fill level in LP tank	94 %	Delivery Pressure 4.25 psi

Water Treatment System

Operating Upon Arrival Yes / (No)

If No please explain why, for how long and what alarms active.
* High alarm on transfer tank

Magnahelic	15	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	1.84	ft.
Transfer Tank Water Level	0.90	ft.
Storage Tank Oil Level	1.35 H_2O	ft.
Flow Meter Reading	136691	gallons
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	No	9	95
RW-3	No	10	85
RW-4	No	14	85
LAI-4	Yes	9	85
LAI-5	Yes	13	95
LAI-6	Yes	—	85
LAI-7	Yes	10	85
LAI-8	Yes	10	85
LAI-9	Yes	10	85
HW-1E	Yes	—	—
HW-1W	Yes	—	—

Comments (activities conducted, changes to the systems, general site conditions)

* Noticed that the rotation of transfer tank was opposite (electrician may have wired pump incorrectly). After electrician corrected the rotation, system was started and log sheet was filled.

Upon departure, system was operating.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLR Date 4/2/04 Time 0935
Weather Conditions Clear

Vapor Extraction and Treatment System

Operating Upon Arrival Yes / (No)

If No indicate active alarms below and restart system
ACTIVE ALARMS: No high alarms were noticed

Hourmeter Reading	28826.5	hours
Burner Temperature	544	deg F
Catalyst Temperature	549	deg F
LEL %	0.7	
4" Valve % Open	100	
Total Vacuum Reading	24	in. H2O
Total Flowrate	298	cfm
Total VOCs of thermox influent	NR	ppm (PID)
Total VOCs of Thermox effluent	NR	ppm (PID)
Fill level in LP tank	87 %	Delivery Pressure 6.0 psi

Water Treatment System

Operating Upon Arrival Yes / (No)

If No please explain why, for how long and what alarms active.
Stripper on high alarm

Magnahelic	15+	in. H_2O
Hour Meter	———	
Sparge Tank Water Level		ft.
Transfer Tank Water Level		ft.
Storage Tank Oil Level		ft.
Flow Meter Reading	138893.0	gallons @ 0937
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (InH2O)	4" manifold opening (%)
RW-2	No	10	85
RW-3	No	10	85
RW-4	No	12	85
LAI-4	Yes	10	85
LAI-5	Yes	14	85
LAI-6	Yes	—	—
LAI-7	Yes	10	85
LAI-8	Yes	10	85
LAI-9	Yes		85
HW-1E	Yes		—
HW-1W	Yes		—

Comments (activities conducted, changes to the systems, general site conditions)

- Weir was modified on O/W Separator
- Water flow was reduced at manifold to ½ Way
- Left site at 0950

Attn: Chris Kimmel 425-778-6409

ConocoPhillips

Equipment Maintenance Report

ConocoPhillips Contact: Mr. Tim Johnson — Date: 04/22/04

Consultant & Contact: Landau Associates - Martin Powers — Time: 4:30 PM

Contractor & Contact: H2 Oil Recovery Equipment, Inc. - Scott Wakefield — Weather: 70's & Sunny

1.0 System Description: *Site #3485 , 2423 Lind Ave, Renton WA*

H2-250G Gas Fired Thermal Oxidizer with catalyst plate and DR505 2 hp combustion blower, Sutorbilt 4MP SVE blower with a 10 hp motor (230v, 1 ph, 1725 rpm), 55 gal 3" moisture separator with a Goulds 1/2 hp (230 vac, 1ph) moisture separator pump, all mounted on a trailer; Campbell-Hausfeld (Mod #C1071080VMS, Ser # 020393L 999231) 7.5 hp air compressor (230v, 3480 rpm) and (6) Clean Environment AP3 down well pneumatic pumps

SVE belts - (1) 5VX630
Compressor V-belt - (2) B66

(attach schematic including manufacturer and date of purchase)

3.0 Routine Maintenance Required and Performed:

Description	Interval
Observe complete system operation. Change oil in SVE blower. Check filters,	Monthly
clean or replace, if needed. Change air compressor oil and drain condensation.	
Check belt tension, adjust if needed, and record belt deflection. Record amps	
on blowers, pump and compressor. Calibrate CGM.	

4.0 Equipment Readings and Measurements:

	Date 4/22/04
SVE blower (4MP) amps - 31.0/31.0 @ 21" wc	
MS pump (Goulds) amps - 2.0/2.0	Temp controller - 550
Air compressor amps - 36.0/37.0 @ 110 psi	Burner temp - 540
Fresh air blower amps - 6.5/7.0	Cat temp - 555
PID - 60 ppm	% LEL - 1.8%
T.S. blower amps - 3.5/3.7/3.7 @ 15" wc	cfm - 275 SVE
Aeration blower amps - 5.5/5.9	hrs - 29213.9
OWS thickness - 1/2" product	Stripper Effluent Water Meter - 162750 gal
Product tank volume - 20.75" liquid	
Stripper effluent - 2.5/2.5 @ 12 gpm/ stripper influent - 1.5/1.5/1.4	

5.0 Other Repairs Performed, parts needed, etc.:

Oil water separator is plumbed back into water treatment process. Replaced OWS high level float because of damage.

6.0 Equipment Status and Reasons for Downtime:

System operating upon arrival and departure.

Individual Completing this form, including company

Scott Wakefield - H2 Oil Recovery Equipment, Inc.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLR Date 4/5/04 Time 1610
Weather Conditions

Vapor Extraction and Treatment System

Operating Upon Arrival (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	28904.5	hours
Burner Temperature	548	deg F
Catalyst Temperature	551	deg F
LEL %	0.7	
4" Valve % Open	100	
Total Vacuum Reading	24	in. H2O
Total Flowrate	270	cfm
Total VOCs of thermox influent	78.4	ppm (PID)
Total VOCs of Thermox effluent	0.1	ppm (PID)
Fill level in LP tank	60 %	Delivery Pressure 6.0 psi

Water Treatment System

Operating Upon Arrival Yes (No)

If No please explain why, for how long and what alarms active.
Stripper sump on high level

Magnahelic	15+	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	2.41 ft H_2O / 0.13 ft product	
Transfer Tank Water Level	0.81	ft.
Storage Tank Oil Level	1.49 ft H_2O / 0.28 ft product	
Flow Meter Reading	139515.0	gallons @ 1615
Check Pressure Relief Valve	(Yes) / No	← flow @ 12gpm
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	No	10	85
RW-3	↓	10	85
RW-4	↓	13	85
LAI-4	Yes	9	85
LAI-5	↓	13	85
LAI-6	↓	—	—
LAI-7	↓	10	85
LAI-8	↓	10	85
LAI-9	↓	10	85
HW-1E	↓	—	—
HW-1W	↓	—	—

Comments (activities conducted, changes to the systems, general site conditions)

Checked levels in all tanks, checked air stripper
Reduced water flow at influent pump
(1/8 of turn)

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No: 706002.012 Report No: _____
Client: Conoco Phillips Date: 3/17/04
Project Name: Conoco Phillips – Renton Terminal
Location: Renton
Weather Conditions: Cloudy
Prepared By: MLR

(Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)

3/15 – Conducted GW & Product Level Measurements
– Collected GW Samples on LAI-13, 14, 15, HA-5, 13, 15 & 17, (For these samples only 1L amber was collected due to the low water volume in well)

3/16 - Continued collecting GW samples outside farm
- Collected System samples (H2O & Air)
- Filled O&M log sheet on system.
- GW System was turned on after GW Sampling

Visitors: _____
Unsatisfactory Conditions and Recommended Corrections - Transfer pump needs replacement (Casing is cracked since the freeze)
Attachments _____
Distribution _____ Signed _____

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLR Date 3/22/04 Time 1350
Weather Conditions Partly Cloudy

Vapor Extraction and Treatment System

Operating Upon Arrival (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	28702.2	hours
Burner Temperature	536	deg F
Catalyst Temperature	548	deg F
LEL %	1.3	
4" Valve % Open	100	
Total Vacuum Reading	24	in. H2O
Total Flowrate	270	cfm
Total VOCs of thermox influent	NR	ppm (PID)
Total VOCs of Thermox effluent	NR	ppm (PID)
Fill level in LP tank	55 %	Delivery Pressure 5.75 psi

Water Treatment System

Operating Upon Arrival Yes / (No)

If No please explain why, for how long and what alarms active.
Holding tank on high level

Magnahelic	0.5	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	2.98 ft H_2O / 0.12 ft product	
Transfer Tank Water Level	0.50	ft.
Storage Tank Oil Level	1.44 ft H_2O / 0.16 ft product	
Flow Meter Reading	132557.5	gallons
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	No	12	85%
RW-3	↓	8	↓
RW-4	↓	12	↓
LAI-4	Yes	9	↓
LAI-5	↓	12	↓
LAI-6	↓	—	↓
LAI-7	↓	9	↓
LAI-8	↓	9	↓
LAI-9	↓	8	↓
HW-1E	↓	—	↓
HW-1W	↓	—	↓

Comments (activities conducted, changes to the systems, general site conditions)

Converted LAI-4 to top-loading. Others were checked and those that had same configuration were LAI-5, 7, 8 and 9

Oil Separator was put online. Gary Maxwell installed new transfer pump.

REMEDIATION S. . .EM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLR Date 3/16/04 Time 1850
Weather Conditions Cloudy

Vapor Extraction and Treatment System

Operating Upon Arrival (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	28563.4	hours
Burner Temperature	549	deg F
Catalyst Temperature	542	deg F
LEL %	0.3	
4" Valve % Open	100%	
Total Vacuum Reading	24	in. H2O
Total Flowrate	270	cfm
Total VOCs of thermox influent	44.7	ppm (PID)
Total VOCs of Thermox effluent	0.7	ppm (PID)
Fill level in LP tank	90 %	Delivery Pressure 6.0 psi

Water Treatment System

Operating Upon Arrival (Yes) / No

If No please explain why, for how long and what alarms active.
System was off while collecting GW samples
System was turn on after sampling was done

Magnahelic	0.5	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	NR	ft.
Transfer Tank Water Level	NR	ft.
Storage Tank Oil Level	NR	ft.
Flow Meter Reading	130663.2	gallons
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N	NR	100
RW-3	N		—
RW-4	N		100
LAI-4	Y		100
LAI-5	Y		100
LAI-6	Y		—
LAI-7	Y		100
LAI-8	Y		100
LAI-9	Y		100
HW-1E	Y		—
HW-1W	Y		—

Comments (activities conducted, changes to the systems, general site conditions)

Pump that feeds air sparge (from transfer tank) is broken at the casing. Needs to be replaced in order to put o/w separator online.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: MLR Date: 3/2/04 Time: 0850
Weather Conditions: Clear

Vapor Extraction and Treatment System

Operating Upon Arrival: (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	28217.9	hours
Burner Temperature	538	deg F
Catalyst Temperature	545	deg F
LEL %	LL	
4" Valve % Open	100%	
Total Vacuum Reading	24	in. H2O
Total Flowrate	270	cfm
Total VOCs of thermox influent	50.5	ppm (PID)
Total VOCs of Thermox effluent	1.3	ppm (PID)
Fill level in LP tank	55 %	Delivery Pressure 7.0 psi

Water Treatment System

Operating Upon Arrival: (Yes) / No

If No please explain why, for how long and what alarms active.

Magnahelic	0.5 in. H_2O
Hour Meter	—
Sparge Tank Water Level	2.65 ft.
Transfer Tank Water Level	4.5 in
Storage Tank Oil Level	0.7 in oil / 1.6 ft H_2O
Flow Meter Reading	91069.1 gallons
Check Pressure Relief Valve	(Yes) / No
Leaving System On (Comments)	Yes

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N	5	80
RW-3	N	7	80
RW-4	N	11	80
LAI-4	Y	10	80
LAI-5	Y	10	80
LAI-6	Y	—	—
LAI-7	Y	6	100
LAI-8	Y	9	100
LAI-9	Y	4	80
HW-1E	Y	—	—
HW-1W	Y	—	—

Comments (activities conducted, changes to the systems, general site conditions)

PID reading on Sparge tank = 575 ppm (need respirator to check it)
Added LAI-5 to increase flow into Sparge tank. Will need a 2" Cmale camlock to install hosing to manifold for the pump at RW-2.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: MLR Date: 2/9/04 Time: 1810
Weather Conditions: Clear

Vapor Extraction and Treatment System

Operating Upon Arrival: Yes / (No)

If No indicate active alarms below and restart system
ACTIVE ALARMS: Power loss shutdown

Hourmeter Reading	27804.0	hours
Burner Temperature	548	deg F
Catalyst Temperature	597	deg F
LEL %	LL	
4" Valve % Open	100%	
Total Vacuum Reading	22	in. H2O
Total Flowrate	297	cfm
Total VOCs of thermox influent	306	ppm (PID)
Total VOCs of Thermox effluent	0.6	ppm (PID)
Fill level in LP tank	85 %	Delivery Pressure 7.0 psi

Water Treatment System

Operating Upon Arrival: Yes / (No)

If No please explain why, for how long and what alarms active.
Power loss shut down.

Magnahelic	>15.0	in. H_2O
Hour Meter		
Sparge Tank Water Level	3.5	ft.
Transfer Tank Water Level	NR	ft.
Storage Tank Oil Level	.9 in oil / 1.2 ft. H_2O	
Flow Meter Reading	148415.0	gallons @ 1818
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Left influent valve @ 1/4 turn

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2			
RW-3			
RW-6			
LAI-4			
LAI-5			
LAI-6			
LAI-7			
LAI-8			
LAI-9			
HW-1E			
HW-1W			

Comments (activities conducted, changes to the systems, general site conditions)

Upon arrival, System was down (Power loss shut down)
Proceeded to transfer product from air Sparge tank to product holding tank.
Turned system on and ~~[illegible]~~ Stripper would go on high alarm. Modified Influent flow into air stripper to 1 1/4 turn.
Effluent pump turns on every 55 seconds and processes about 35.5 gallons every ~~[illegible]~~ 42 seconds.

S:\SHAREDOC\706\002\Operation Log Sheet1

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No.: 706002 Report No.:

Client: ConocoPhillips Date: 2/6/04

Project Name: ConocoPhillips – Renton

Location: Lind Ave., Renton Washington

Weather Conditions: Raining

Prepared By: ERG

Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not).

Arrived onsite to meet Gary Maxwell @ 1600. He had been to the site this morning to check conductivity switches in the A.S. Tank. He was asked to check if voltage was continuous in switch, then call me. He arrived ~~at the~~ this m at the sight mistakenly anticipating my arrival. He was unreachable during his site visit (His cell phone did not pick up). However, he eventually evaluated conductivity switches and came to the conclusion that the high and low switches were wired opposite from what they should be. So he swapped the wires, and tested the pump and left the sight. I later got in touch with him and discussed these activities. I wanted to turn the system on later so I asked if he could meet me to ensure proper operation. We tested the switches out of the tank. The pump did not behave sporadically like it had the previous day when Mario checked the system. I turned on LAI-7, 8, 9, 4 and Trench –

Visitors: _____

Unsatisfactory Conditions & Recommended Correction: _____

Attachments: _____

Distribution: _____ Signed _____

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No.: 706002 Report No.: _____

Client: Conoco Phillips Date: 2/6/04

Project Name: Renton

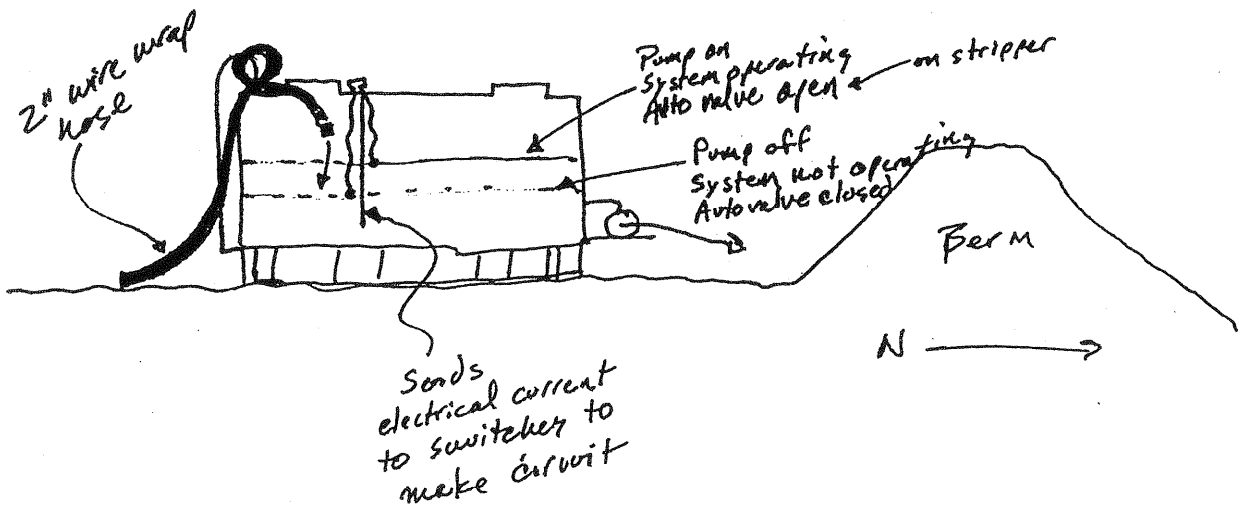
Location: Washington

Weather Conditions: Raining

Prepared By: ERG

Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not).

I removed fire hose extension to A.S. tank for uninhibited flow. Now it is just 2" wire wrap hosing to tank. I waited until 1830 for operation. Looks good. Leave site.



Visitors: _____

Unsatisfactory Conditions & Recommended Correction: _____

Attachments: _____

Distribution: _____ Signed _____

FORM C-1

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Report No. ____
Page 1 of 1

Project 706002 Job No. ____

Location Renton Client Conoco/Phillips Date 2/5/04

Weather Conditions Overcast Prepared By MLP

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

Arrived on site @ 11:00

Upon arrival, system was running, Compressor was off, thus proceeded to reset it.

- Conducted O&M on the vapor/water treatment systems.
- Collected air and water samples from the system. Sample were hand-delivered to NCA lab for a 24-hr turn around.
- Noticed that the pump that delivers water to the air stripper was running sporadically. The switch on the control panel would blink on and off continuously. Checked the conductivity switches inside the Sparge tank. Cleaned the filter on the pump and tested the performance of the pump on manual. The pump runs fine on manual, but it doesn't on auto mode. Conductivity switches were taken off and left them out to be replaced/checked by Gary from Rogers
- Turned GW system off. (Solenoid and Influent pump only)

- Off site @ 1630.

HW-1E : 6.75 ft
HW-1W : 5.4 ft

Visitors ____

Unsatisfactory Conditions & Recommended Correction ____

Attachments ____

Distribution ____ Signed [signature]

ConocoPhillips

Equipment Maintenance Report

ConocoPhillips Contact: Mr. Tim Johnson — Date: 02/17/04

Consultant & Contact: Landau Associates - Martin Powers — Time: 12:10 PM

Contractor & Contact: H2 Oil Recovery Equipment, Inc. - Scott Wakefield — Weather: 50's & Overcast

1.0 System Description: *Site #3485 , 2423 Lind Ave, Renton WA*

H2-250G Gas Fired Thermal Oxidizer with catalyst plate and DR505 2 hp combustion blower, Sutorbilt 4MP SVE blower with a 10 hp motor (230v, 1 ph, 1725 rpm), 55 gal 3" moisture separator with a Goulds 1/2 hp (230 vac, 1ph) moisture separator pump, all mounted on a trailer; Campbell-Hausfeld (Mod #C1071080VMS, Ser # 020393L 999231) 7.5 hp air compressor (230v, 3480 rpm) and (6) Clean Environment AP3 down well pneumatic pumps

SVE belts - (1) 5VX630
Compressor V-belt - (2) B66

(attach schematic including manufacturer and date of purchase)

3.0 Routine Maintenance Required and Performed:

Description	Interval
Observe complete system operation. Change oil in SVE blower. Check filters,	Monthly
clean or replace, if needed. Change air compressor oil and drain condensation.	
Check belt tension, adjust if needed, and record belt deflection. Record amps	
on blowers, pump and compressor. Calibrate CGM.	

4.0 Equipment Readings and Measurements:

	Date 2/17/2004
SVE blower (4MP) amps - 31.6/30.7 @ 22" wc	
MS pump (Goulds) amps - 2.2/2.2	Temp controller - 550
Air compressor amps - 37.0/36.0 @ 110 psi	Burner temp - 551
Fresh air blower amps - 6.9/7.0	Cat temp - 550
PID - 10 ppm	% LEL - .6%
T.S. blower amps - 3.8/3.8/3.6 @ 15" wc	cfm - 270 SVE
Aeration blower amps - 5.9/6.1	hrs - 27895.7
OWS thickness - 1/2" product	Stripper Effluent Water Meter - 44360 gal
Product tank volume - 20" liquid	
Stripper effluent - 2.7/2.4 @ 14.5 gpm/ stripper influent - 1.6/1.6/1.2	

5.0 Other Repairs Performed, parts needed, etc.:

Water meter fouled - cleaned and tested.

Oil water separator and 275 gal batch tank are not in use. Well pumps discharge directly to air sparge tank.

6.0 Equipment Status and Reasons for Downtime:

SVE operating upon arrival. Water treatment in alarm due to stripper sump high level. System operating upon departure.

Individual Completing this form, including company

Scott Wakefield - H2 Oil Recovery Equipment, Inc.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials MLK Date 4/10/04 Time 1200
Weather Conditions: Clear, Sunny

Vapor Extraction and Treatment System

Operating Upon Arrival Yes / (No)

If No indicate active alarms below and restart system
ACTIVE ALARMS:
Unable to determine (see comments)

Hourmeter Reading	27818.9	hours
Burner Temperature	557	deg F
Catalyst Temperature	539	deg F
LEL %	L	
4" Valve % Open	100%	
Total Vacuum Reading	24	in. H2O
Total Flowrate	288	cfm
Total VOCs of thermox influent	15.4	ppm (PID)
Total VOCs of Thermox effluent	0.1	ppm (PID)
Fill level in LP tank	80 %	Delivery Pressure 7.0 psi

Water Treatment System

Operating Upon Arrival Yes (No)

If No please explain why, for how long and what alarms active.
- Whole system was off @ arrival, no alarms were on

Magnahelic	0.5	in. H_2O
Hour Meter	—	
Sparge Tank Water Level		ft.
Transfer Tank Water Level	Not online	ft.
Storage Tank Oil Level	not online	ft.
Flow Meter Reading	22215.8	gallons
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Left LAI-4, LAI-6, LAI-7, LAI-8 MW-2E, and MW-1W online. Turned off LAI-5 and LAI-9.	

Wells	Extracting (Y/N)		Vacuum (inH2O)	4" manifold opening (%)
RW-2	N		7	50
RW-3	N		10	85
RW-4	N		15	85
LAI-4	Y	5 sec	14	50
+ LAI-5	Y	5 sec	14	85
LAI-6	Y	15 sec	[illegible]	—
LAI-7	Y	7 sec	Unable pressure	100
LAI-8	Y	10 sec	5	100
+ LAI-9	Y	18 sec	8	80
HW-1E	Y			—
HW-1W	Y			—

Comments (activities conducted, changes to the systems, general site conditions)

- Upon arrival, system was off, no particular reason why it was off, but noticed dilution valves on air stripper, ko drum and SVE were covered with a layer of ice.
- Ice was removed and system was started at 0900

+ Closed @ departure

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: MLR Date: 2/5/04 Time: 1120
Weather Conditions:

Vapor Extraction and Treatment System

Operating Upon Arrival: (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading	27758.1	hours
Burner Temperature	546	deg F
Catalyst Temperature	539 ~~550~~	deg F
LEL %	LL	
4" Valve % Open	100%	
Total Vacuum Reading	23	in. H2O
Total Flowrate	270 S	cfm
Total VOCs of thermox influent	7.6	ppm (PID)
Total VOCs of Thermox effluent	0.6	ppm (PID)
Fill level in LP tank	75 %	Delivery Pressure 7 psi

Water Treatment System

Operating Upon Arrival: (Yes) / No

If No please explain why, for how long and what alarms active.

Magnahelic	14	in. H_2O
Hour Meter	NR	
Sparge Tank Water Level	25 in Oil / 1.74 ft. H_2O	
Transfer Tank Water Level	NE	ft.
Storage Tank Oil Level	NE	ft.
Flow Meter Reading	13912.6	gallons @ 1130
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Conductivity Switches are faulty. Upon departure flow meter=14213.6 water system was turned off	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N	10	80
RW-3	N	14	80
~~RW-4~~ RW-7	N	14	80
LAI-4	N	19	80
LAI-5	N	21	80
LAI-6	N	—	—
LAI-7	Y	15	100
LAI-8	N	16	100
LAI-9	N	20	90
HW-1E	Y	NR	—
HW-1W	Y	NR	—

Comments (activities conducted, changes to the systems, general site conditions)

* Noticed that influent pump was not running correctly (switch would go on/off repeatedly)
- Cleaned filter and conductivity switches, but there was no change in performance of the pump.
- Pump runs correctly when it is on manual

‡ Flow of water into sparge tank was low, thus added LAI-7 to the wells extracting water to the system

☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Tigard) (503) 443-6010
☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 2/5/04
Page 1 of 1

Project Name Conoco/Phillips Project No. 706002
Project Location/Event Renton / System Sampling
Sampler's Name Mario Lopez
Project Contact Martin Powers
Send Results To Martin Powers

Testing Parameters

Turnaround Time
☐ Standard
☒ 24 hrs

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	BTEX	Observations/Comments
Influent	2/5/04	1323	H_2O	3	X	X	
Stripper Effluent	↓	1319	↓	3	X	X	
Effluent		1315	↓	3	X	X	
Influent		1300	Air	2	X	X	
Effluent	↓	1255	Air	2	X	X	

Special Shipment/Handling or Storage Requirements: Hand delivered Water samples in ice

Method of Shipment:

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Mario Lopez	Printed Name	Printed Name	Printed Name
Landau Inc.	N/A	Company	Company
Date 2/5/04 Time 1717	Date 2/5/04 Time 1717	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 6/02

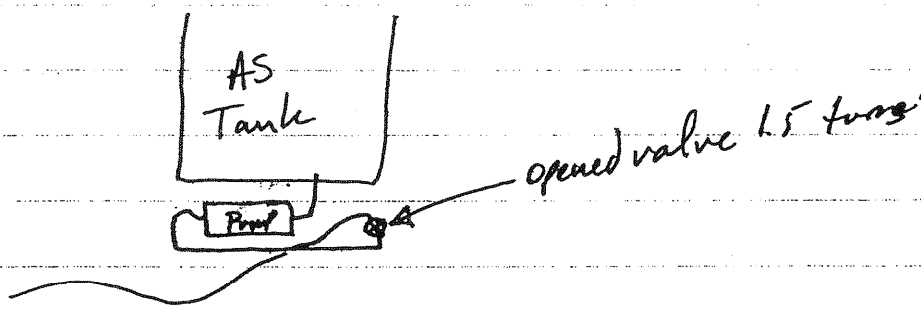
ConocoPhillips - Renton

2/4/04 ERG

Arrived onsite @ 1630
- Vapor system on
- Water system in alarm - Air sparge tank H-L

Meter upon arrival: 5050

Got system out of alarm and turned water system back on - GW pumps (HW-1W and 1E) must have pumped at a higher rate than the ~~effluent~~ Influent pump. So, I opened valve on influent pump to 1.5 turns.



AS Tank on arrival was @ 4/5 full.
Meter reading @ 1720 was 6140.0 gal

Marcio will be here tomorrow to collect in/eff Treatment samples

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

* New Flow meter - meter (46810 gal - previous ending reading)

Operator Initials ERG Date Friday 1/30/04 Time 1700
Weather Conditions Partly Cloudy

Vapor Extraction and Treatment System

Operating Upon Arrival (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:
NA

Hourmeter Reading	27621.6	hours
Burner Temperature	538	deg F
Catalyst Temperature	534	deg F
LEL %	<LL>	
4" Valve % Open	100	
Total Vacuum Reading	20	in. H2O
Total Flowrate	275	cfm
Total VOCs of thermox influent	NA	ppm (PID)
Total VOCs of Thermox effluent	NA	ppm (PID)
Fill level in LP tank	90 %	Delivery Pressure 5 psi

Water Treatment System

Operating Upon Arrival Yes / (No)

If No please explain why, for how long and what alarms active.
See notes

Magnahelic	15	in. H_2O
Hour Meter	NA	
Sparge Tank Water Level	3/4	ft.
Transfer Tank Water Level	NA	ft. > Bi-passed
Storage Tank Oil Level	NA	ft.
Flow Meter Reading	0.0	gallons @ 1700 = 190 gal
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes System will run for over the Weekend and will be checked Monday	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N	10	80
RW-3		15	80
RW-~~4~~7		20	80
LAI-4		10	80
LAI-5		10	80
LAI-6		—	~~80~~ 60
LAI-7		~~40~~ 0	100 — must be water in line
LAI-8		7	100
LAI-9	Y	10	100
HW-1E	Y		—
HW-1W	Y		—

Comments (activities conducted, changes to the systems, general site conditions)

Onsite. @ 0800 - Checked pump that was serviced by Western Mechanical (Dave Richmond) - Pump still operated sporadically - Pump ran continuous however water discharged off and on - After much investigation and trial - discovered crack on flow meter base plate (Fig 1.) Called Dave and ordered new meter + attachments - Scott Wakefield indicated the flow meter would be better positioned on the discharge side of the pump so as not to inhibit flow to the pump intake. Meter was same make and model - installed ball valve on discharge side of flow meter for ease of servicing (Fig. 2)

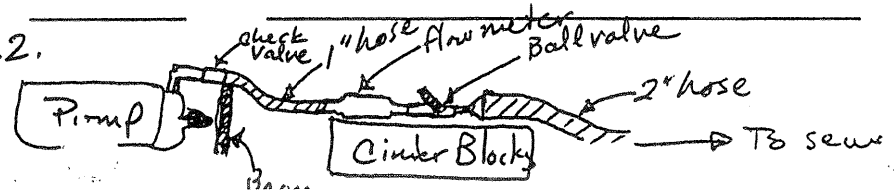
- Began Discharging water through carbon @ 1630

System Configuration:
GW pump → Air sparge tank → Stripper → Carbon → Sewer

Fig 1.

Underside of flow meter w/ crack.

Fig. 2.



REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: ERG Date: 1/29/04 Time: 0700
Weather Conditions: Raining

Vapor Extraction and Treatment System

Operating Upon Arrival Yes / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Hourmeter Reading		hours
Burner Temperature		deg F
Catalyst Temperature		deg F
LEL %		
4" Valve % Open		
Total Vacuum Reading		in. H2O
Total Flowrate		cfm
Total VOCs of thermox influent		ppm (PID)
Total VOCs of Thermox effluent		ppm (PID)
Fill level in LP tank	%	Delivery Pressure psi

Water Treatment System

Operating Upon Arrival Yes / No

If No please explain why, for how long and what alarms active.

Magnahelic		in. H_2O
Hour Meter		
Sparge Tank Water Level		ft.
Transfer Tank Water Level		ft.
Storage Tank Oil Level		ft.
Flow Meter Reading		gallons
Check Pressure Relief Valve	Yes / No	
Leaving System On (Comments)		

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2			
RW-3			
RW-6			
LAI-4			
LAI-5			
LAI-6			
LAI-7			
LAI-8			
LAI-9			
HW-1E			
HW-1W			

Comments (activities conducted, changes to the systems, general site conditions)

Met w/ Dave Richmond to show him pump and discuss what should be done. He suggested his shop could reassemble it and guarantee that it is in good operating conditions. Called Gary Maxwell w/ DW Close to disconnect electrical – he was in the area and swung by @ 0730 while Dave was still onsite. He disconnected it w/in 15 minutes → Dave the pump to Dave → Both Gary and Dave will meet back @ 4:00 this afternoon to reconnect the pump.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: ERG Date: 1/27/04 Time: 1100
Weather Conditions: Clear

Vapor Extraction and Treatment System

Operating Upon Arrival: Yes (No)

If No indicate active alarms below and restart system
ACTIVE ALARMS:
NA

Hourmeter Reading	275017	hours
Burner Temperature	553	deg F
Catalyst Temperature	539	deg F
LEL %	<LL 7	
4" Valve % Open	100	
Total Vacuum Reading	20	in. H2O
Total Flowrate	270	cfm
Total VOCs of thermox influent	NA	ppm (PID)
Total VOCs of Thermox effluent	NA	ppm (PID)
Fill level in LP tank	60 %	Delivery Pressure 5 psi

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N		
RW-3			
RW-6			
LAI-4			
LAI-5			
LAI-6			
LAI-7			
LAI-8			
LAI-9			
HW-1E	Y		
HW-1W	Y		

Water Treatment System

Operating Upon Arrival: Yes (No)

If No please explain why, for how long and what alarms active.
high level in stripper Sump – Turned back on

Magnahelic	14	in. H_2O
Hour Meter	—	
Sparge Tank Water Level	3/4	ft.
Transfer Tank Water Level	—NA—	ft. > Bypassed
Storage Tank Oil Level	—NA—	ft.
Flow Meter Reading	46710	gallons
Check Pressure Relief Valve	Yes (No)	
Leaving System On (Comments)	No	

46710
44500
2210.0

Comments (activities conducted, changes to the systems, general site conditions)
When I arrived pump was spinning, but no flow was discharging. ~~??~~ Processed 2210 gal last night. Turned back on and began discharging H_2O again → pump returned to sporadic activity after short period of time. Took pump apart and noticed that a seal had burned out (most likely from the spinning). Call Dave Richmond from Western Measurement and discussed problem w/him. He wants to keep the pump to do step for inspection and repair. We will meet Thurs. Morning @ 0730.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials: ERG Date: 1/26/04 Time: 1430
Weather Conditions: Overcast (± 40°F)

Vapor Extraction and Treatment System

Operating Upon Arrival: (Yes) / No

If No indicate active alarms below and restart system
ACTIVE ALARMS:
No

Hourmeter Reading	27534.1	hours
Burner Temperature	533	deg F
Catalyst Temperature	540	deg F
LEL %	LL	
4" Valve % Open	100 %	
Total Vacuum Reading	20	in. H2O
Total Flowrate	270	cfm - from wells only
Total VOCs of thermox influent	NA	ppm (PID)
Total VOCs of Thermox effluent	NA	ppm (PID)
Fill level in LP tank	65 %	Delivery Pressure 5 psi

Water Treatment System

Operating Upon Arrival: Yes (No)

If No please explain why, for how long and what alarms active.
Pump was repaired last Friday - collected influent/effluent samples - Received results today - effluent is clean. Turned on system @ 1445.

Magnahelic	14.0	in. H_2O
Hour Meter	NA	
Sparge Tank Water Level	½ Full	
Transfer Tank Water Level	NA	ft.
Storage Tank Oil Level	NA	ft.
Flow Meter Reading	44360.0	gallons 44500.0 @ 1615
Check Pressure Relief Valve	(Yes) / No	
Leaving System On (Comments)	Yes	

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2	N	~~7~~ 2	~~50~~
RW-3		9	~~80~~
RW-~~1~~7		10	~~80~~
LAI-4		10	~~80~~
LAI-5		16	~~80~~
LAI-6		—	~~80~~
LAI-7	~~Y~~ N	0	100
LAI-8	N	6	100
LAI-9	N	18	100
HW-1E	Y	—	—
HW-1W	Y	—	—

US Filter
Matt Fitzgibbons
(206) 979-1440
(Carbon Vessel)

Comments (activities conducted, changes to the systems, general site conditions)
Had Trouble w/ pump initially flowing through Carbon - operating sporadically.

REMEDIATION SYSTEM OPERATION LOG
ConocoPhillip Renton Terminal

Operator Initials ERG Date 1/23/04 Time 1300
Weather Conditions Overcast Raining

Is system currently operating? (circle one) (YES) NO

If No indicate active alarms below and restart system
ACTIVE ALARMS:

Turned system on after being off during maintenance related to the freeze destruction.

Hourmeter Reading	27460.1	hours	4" System Manifold (% Open) 100
Burner Temperature	552	deg F	
Catalyst Temperature	536	deg F	
LEL %	LL		
Total Vacuum Reading	20	in. H2O	
Total Flowrate	270	cfm	
Total VOCs of thermox influent	—	ppm (PID)	
Total VOCs of Thermox effluent	—	ppm (PID)	
Fill level in LP tank	95 %	Delivery Pressure	5 psi

List Wells Currently Being Extracted From and Vacuum Recorded:

Wells	Extracting (Y/N)	Vacuum (inH2O)	4" manifold opening (%)
RW-2			
RW-3			
RW-6			
LAI-4			
LAI-5			
LAI-6			
LAI-7			
LAI-8			
LAI-9			
HW-1E			
HW-1W			

Water Treatment System

On upon arrival	Y (N)	
Why and time down:	Freeze damage to effluent pump.	
Magnahelic		in. H_2O
Hour Meter		
Sparge Tank Water Level		
Transfer Tank Water Level		ft.
Storage Tank Oil Level		ft.
Flow Meter Reading	44350	gallons
Check Pressure Relief Valve Leaving System On	Y/(N)	

Comments (activities conducted, changes to the systems, general site conditions)
Effluent pump fixed by installing new metal pump housing and impellar (Fig 1.). Started systems @ 1400 — Collected samples @ 1500. (Fig 2.)

Fig 1. Side views

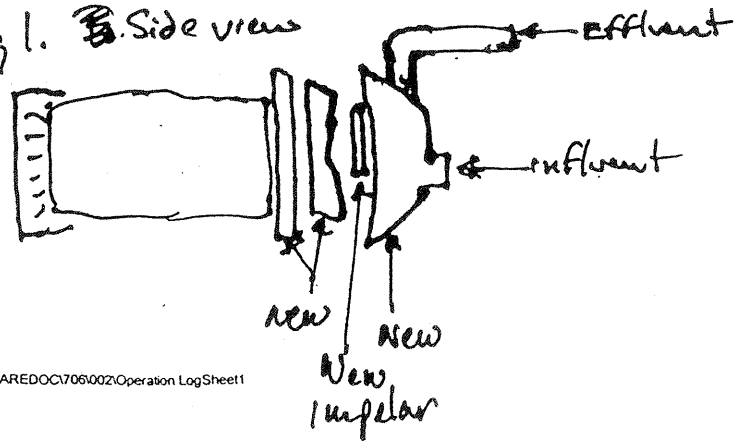
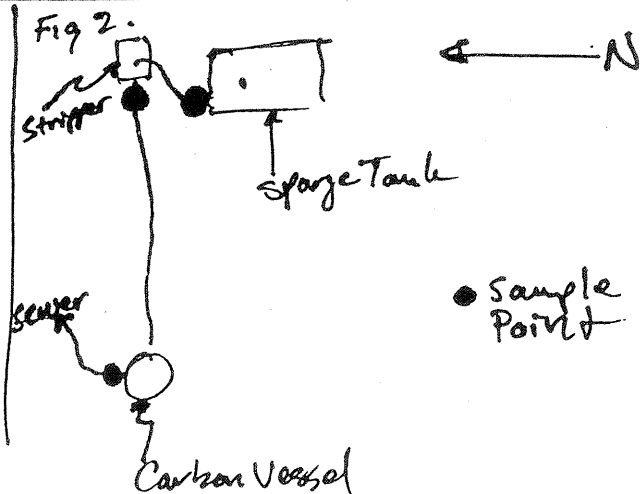


Fig 2.



Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Report No. _____
Page _____ of _____

Project Renton Terminal 706002 Job No. _____

Location Renton, WA Client Conoco Phillips Date 1/20/04

Weather Conditions Overcast Prepared By MLR

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

Arrived to the site to tend to the effluent pump. Switches at main panel were turned to the off position to cut any power to the effluent pump. Closed suction and discharge valves and drained the water in the system. Followed instructions to replace mechanical seal, gasket and O-ring with new parts. After reassembling the motor, conected suction hose and reprimed the pump with water. Before starting the pump, the effluent valve near the discharge point was opened. At startup, noticed that water was still coming out of the sides of the casing. Check that gasket was placed correctly and that all nuts were tight. Tested pump again, but there was water still coming out of the sides of the casing. Notified Martin Powers and was advised to leave it.

Left the system off at departure. (Circuit breakers were left on the off position).

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
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Fax: (425) 778-6409

Field Report

Report No. _____
Page 1 of 1

Project Renton Terminal 206202.012 Job No. _____
Location Renton, WA Client Conoco Phillips Date 1/19/04
Weather Conditions Overcast Prepared By MLR

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

Arrived on site @ 1430 to prime GAC cylinder and to conduct water levels.

Summary:

Hooked up hosing to main water line, and closed effluent valve next to discharging point. Filled GAC cylinder with tap water and left it overnight for priming.

Proceeded to collect water levels inside/outside terminal. Wells with product were: HA-8, LAI-4, LAI-5, LAI-6, LAI-7, LAI-8, LAI-9, HA-E RW-3, RW-4.

Inspected Retention dike and made measurements to update report figure. N/A

* Need to fill sides of dike with soil as the level of water upstream is creeping over through the sides.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No.: 706002.012 Report No.:

Client: Conoco Phillips Date: 1/16/04

Project Name: Renton Terminal

Location: 2423 Lind Ave. Renton, WA

Weather Conditions: Overcast

Prepared By: ERG

Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not).

MLR & ERG onsite @ 0600 to install Carbon Canister (Associated hosing) and new influent hosing w/ secondary containment.

Summary:

Discussed plan of action w/ both Garys and aquired safe work permit. We cut 3" PVC influent line located on berm into ~30 ft' sections. 2" wire wrapped hosing was then threaded through the 3" PVC. 300' of hosing was used. A new galvanized manifold was installed on top of berm and plumbed into system. 1-3' of 2" hosing was left to stick out of either end of PVC containment for later grouting.

Wessy Cranes checked out the plan @ ~1030 prior to actual Crane work. He faxed over credatials of Crane and Crane operator for Conocophillips. The Carbon Canister was installed ~1415 by Crane. We used existing discharge hosing ~~to the~~ for influent line to the carbon canister. New 2" wire wrap effluent hosing was installed The new hose is 100' long, however only ~60' was used. Excess hose was coiled and zip tied near carbon canister.

Visitors: _____

Unsatisfactory Conditions & Recommended Correction: _____

Attachments: _____

Distribution: _____ Signed _____

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No.: 706002 Report No.:

Client: ConocoPhillips Date: 1/16/04

Project Name: Renton Term.

Location: Renton

Weather Conditions: Overcast

Prepared By: ERG

Description of work done, locations, equipment used, quantity estimate (indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not).

After Carbon Vessel and all hosing was installed, the System was turned on and tested. All GW pumps operated fine. Discharge pump to Carbon leaked water from casing. determined it was pump failure. Will come back Monday to fix. System was left off (entire system).

ERG Leave site @ 1640

MLR Leave site @ 1730

Visitors:

Unsatisfactory Conditions & Recommended Correction:

Attachments:

Distribution: Signed

Field Report

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project No.: 706002.012 Report No.:

Client: C.P. Date: 1/16/04

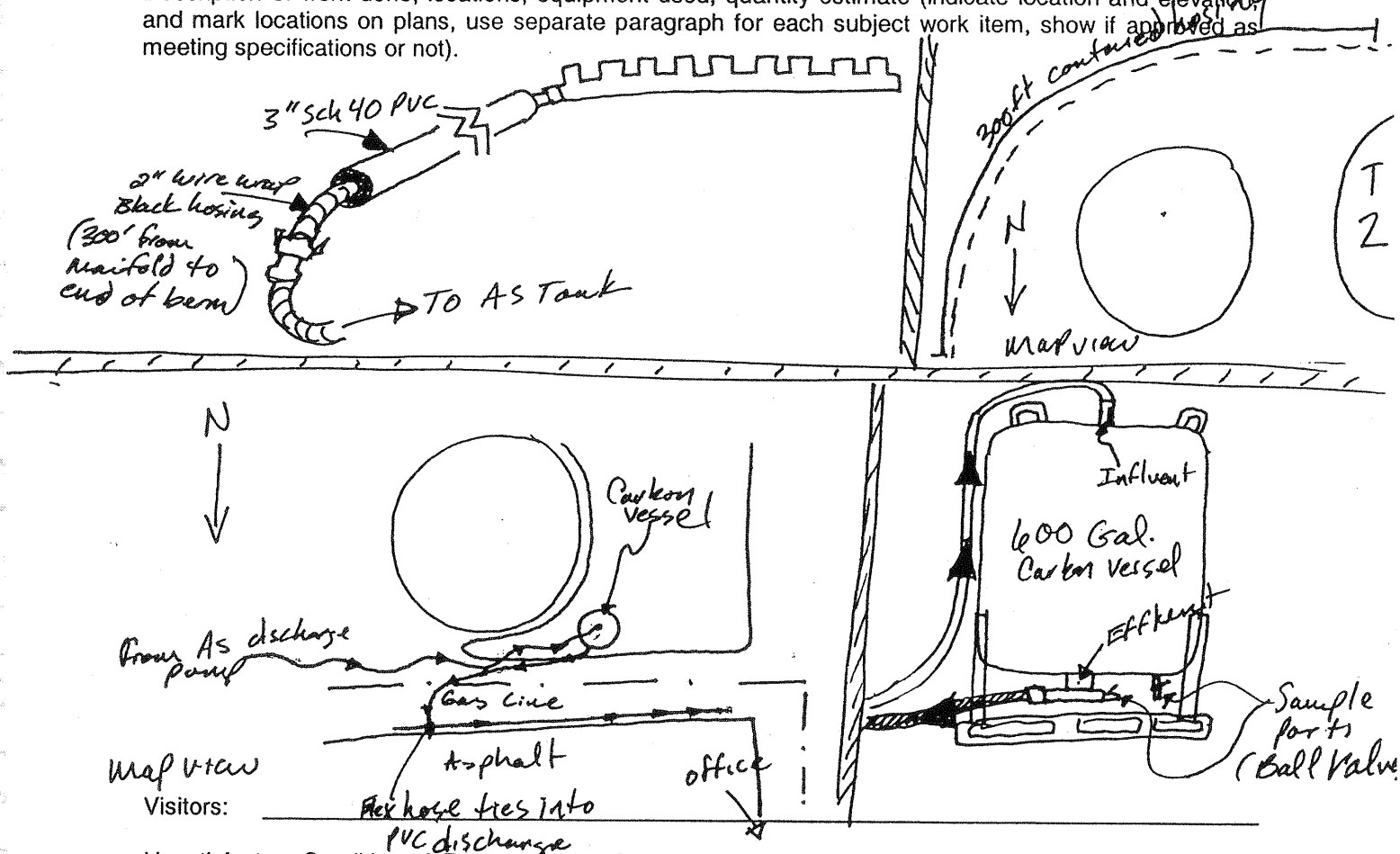
Project Name: Renton

Location: Renton

Weather Conditions: Overcast

Prepared By: ERG

Description of work done, locations, equipment used, quantity estimate (indicate location and elevation and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not).



Visitors:

Unsatisfactory Conditions & Recommended Correction:

Attachments:

Distribution: Signed

FORM C-1

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Report No. _____
Page 1 of 1

Project ConocoPhillips Job No. _____

Location Renton Client ConocoPhillips Date 1/15/04

Weather Conditions Raining Prepared By MLR

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

2:30 Arrived on site to receive hosing and to drop manifold and fittings for Carbon unit. Lined up 300 ft of the hosing over the vern. Put together the fittings for the GAC cylinder. Assembled connections for the air flow meter.

Discussed with Jim the plan of action for the GAC cylinder delivery and lining of hose over the vern to replace PVC piping.

SVE system was running, GW system was off.

Left site @ 1800.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

ConocoPhillips Renton Terminal
Operator Log Sheet
Dual Phase Vacuum Extraction System
2423 Lind Ave. SW
Renton, Washington

Operator Initials: ERG

Date of Readings: 1/9/04

Time of Readings: 1410 ← Started System @ 1355

Weather Conditions: Overcast

Is system currently operating? (circle one) YES NO

If No indicate active alarms below and restart system
ACTIVE ALARMS:
System was turned off by conocoph. this morning @ ~0530 - They used Response guide to do so. The water return Line had fractured due to ice formation. However, the H2O system has been off for ~3 weeks (?) - Because of freezing

Hourmeter Reading: 27289.3 hours

~~Thermox~~ Burner Temperature ~~Combustor~~: 531 deg F

Catalyst Temperature: 541 deg F

LEL %: <LL>

Total Vacuum Reading: 35 in. H2O

Total Flowrate: 290 cfm

Total VOCs of thermox influent: NA ppm (PID)

Total VOCs of Thermox effluent: NA ppm (PID)

Fill level in LP tank: 100 % Delivery Pressure: 5 psi

4" System Manifold (% Open): 100

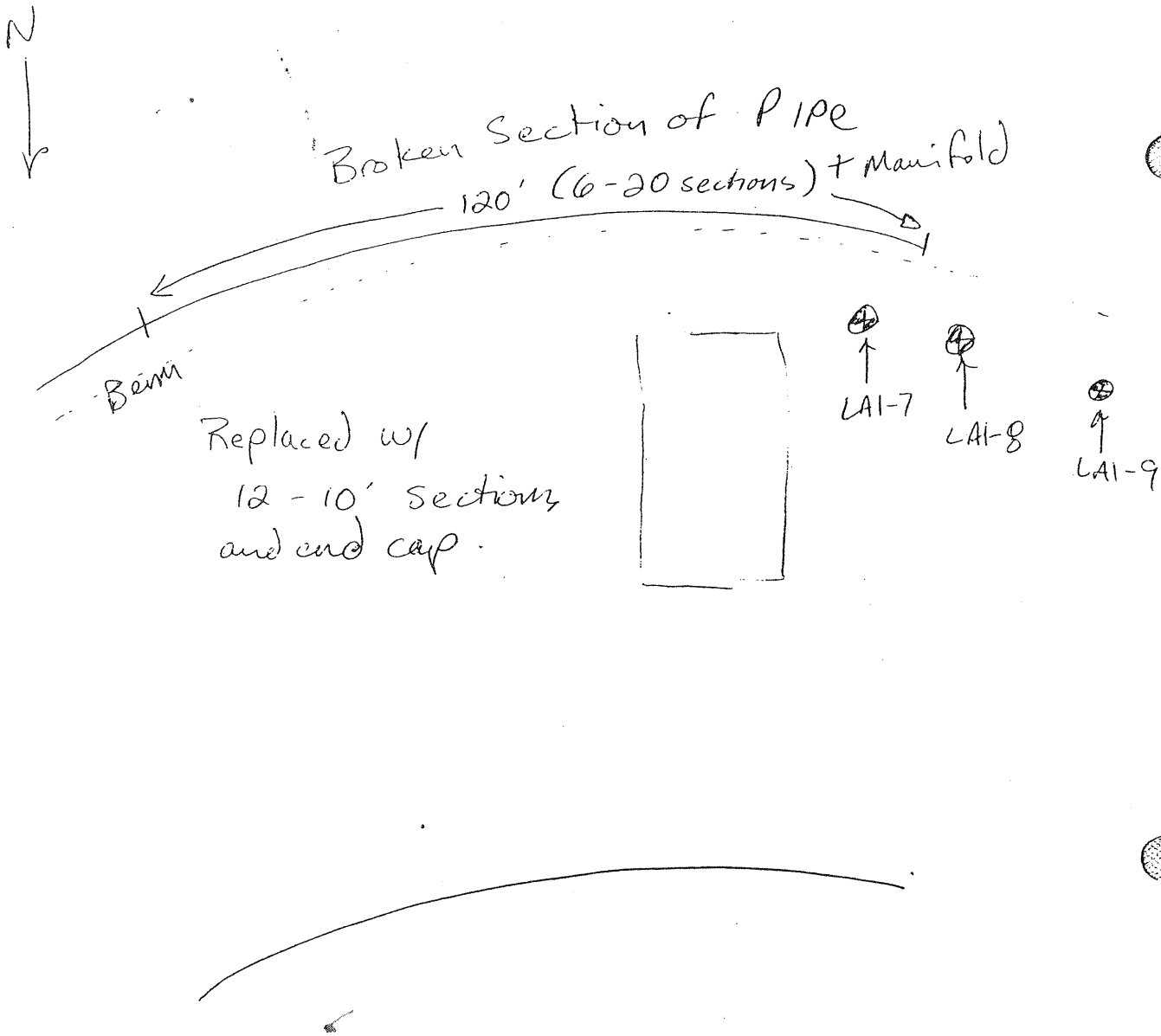
List Wells Currently Being Extracted From and Vacuum Recorded:

Wells	Vacuum in. H_2O	4" manifold opening (%)
LAI-7	0	~~100~~ 85
LAI-8	10	85
LAI-6	11	85
LAI-5	15	85
LAI-4	14	50
RW-2	10	85
RW-3	18	85
RW-7	20	85

Water Treatment

On upon arrival	Y / N	
Magnahelic	NA	in. H_2O
Water Level in AS TK		
Water Level in Transfer TK		ft.
Oil Level in Storage TK		ft.
Flow Meter Reading		gallons
Check Pressure Relief Valve	Y / N	

As described above - Water return Line on berm including water return manifold had fractured significantly due to ice expansion. Cathy and I cut up broken sections of the 3" PVC (sch 40) and removed the ice cores to dispose in the AS tank.
The old PVC was stored in the well farm - wrapped in visquene - also stored some near Catox unit near other scraps - wrapped in visquene. 120' of PVC sch. 40 was replaced. The end was capped - The manifold was not reconstructed - we will dispose of the


N
Broken Section of PIPE
120' (6-20 sections) + Manifold
Beam
Replaced w/
12 - 10' Sections
and end cap.
LAI-7
LAI-8
LAI-9

APPENDIX B

Laboratory Analytical Results

www.ncalabs.com

Seattle 11720 North Creek Pkwy N. Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

26 January 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129
RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 01/23/04 16:51. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

www.ncalabs.com

Seattle 11720 North Creek Pkwy N. Suite 400, Bothell, WA 98011-6244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	01/26/04 11:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EFFLUENT	B4A0540-01	Water	01/23/04 15:05	01/23/04 16:51
STRIPPER EFFLUENT	B4A0540-02	Water	01/23/04 15:10	01/23/04 16:51
INFLUENT	B4A0540-03	Water	01/23/04 15:15	01/23/04 16:51

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	01/26/04 11:40

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EFFLUENT (B4A0540-01) Water Sampled: 01/23/04 15:05 Received: 01/23/04 16:51									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4A25001	01/25/04	01/25/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*99.8 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*96.2 %*	*72-127*			"	"	"	"	
STRIPPER EFFLUENT (B4A0540-02) Water Sampled: 01/23/04 15:10 Received: 01/23/04 16:51									
Gasoline Range Hydrocarbons	**4010**	125	ug/l	2.5	4A25001	01/25/04	01/25/04	NWTPH-Gx/8021B	
Benzene	**10.5**	1.25	"	"	"	"	"	"	
Toluene	**28.4**	1.25	"	"	"	"	"	"	
Ethylbenzene	**3.38**	1.25	"	"	"	"	"	"	
Xylenes (total)	**119**	2.50	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*104 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*109 %*	*72-127*			"	"	"	"	
INFLUENT (B4A0540-03) Water Sampled: 01/23/04 15:15 Received: 01/23/04 16:51									
Gasoline Range Hydrocarbons	**34700**	5000	ug/l	100	4A25001	01/25/04	01/25/04	NWTPH-Gx/8021B	
Benzene	**389**	50.0	"	"	"	"	"	"	
Toluene	**3900**	50.0	"	"	"	"	"	"	
Ethylbenzene	**68.6**	50.0	"	"	"	"	"	"	
Xylenes (total)	**7140**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*99.0 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	01/26/04 11:40

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A25001: Prepared 01/25/04 Using EPA 5030B (P/T)										
Blank (4A25001-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*44.4*		"	*48.0*		*92.5*	*62-127*			
Surrogate: 4-BFB (PID)	*46.6*		"	*48.0*		*97.1*	*72-127*			
LCS (4A25001-BS1)										
Gasoline Range Hydrocarbons	491	50.0	ug/l	500		98.2	80-120			
Benzene	6.72	0.500	"	7.35		91.4	80-120			
Toluene	32.5	0.500	"	34.8		93.4	80-120			
Ethylbenzene	8.63	0.500	"	8.20		105	80-120			
Xylenes (total)	41.0	1.00	"	39.6		104	80-120			
Surrogate: 4-BFB (FID)	*53.3*		"	*48.0*		*111*	*62-127*			
Surrogate: 4-BFB (PID)	*46.4*		"	*48.0*		*96.7*	*72-127*			
LCS Dup (4A25001-BSD1)										
Gasoline Range Hydrocarbons	442	50.0	ug/l	500		88.4	80-120	10.5	25	
Benzene	6.27	0.500	"	7.35		85.3	80-120	6.93	40	
Toluene	32.8	0.500	"	34.8		94.3	80-120	0.919	40	
Ethylbenzene	8.70	0.500	"	8.20		106	80-120	0.808	40	
Xylenes (total)	41.5	1.00	"	39.6		105	80-120	1.21	40	
Surrogate: 4-BFB (FID)	*50.2*		"	*48.0*		*105*	*62-127*			
Surrogate: 4-BFB (PID)	*47.9*		"	*48.0*		*99.8*	*72-127*			
Matrix Spike (4A25001-MS1)					**Source: B4A0452-01**					
Gasoline Range Hydrocarbons	436	50.0	ug/l	500	11.5	84.9	72-119			
Benzene	6.68	0.500	"	7.35	ND	90.9	70-129			
Toluene	33.0	0.500	"	34.8	0.259	94.1	73-114			
Ethylbenzene	8.68	0.500	"	8.20	ND	106	82-120			
Xylenes (total)	41.7	1.00	"	39.6	0.511	104	74-118			
Surrogate: 4-BFB (FID)	*50.3*		"	*48.0*		*105*	*62-127*			
Surrogate: 4-BFB (PID)	*48.3*		"	*48.0*		*101*	*72-127*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	01/26/04 11:40

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4A25001: Prepared 01/25/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4A25001-MSD1)					**Source: B4A0452-01**					
Gasoline Range Hydrocarbons	445	50.0	ug/l	500	11.5	86.7	72-119	2.04	25	
Benzene	6.32	0.500	"	7.35	ND	86.0	70-129	5.54	40	
Toluene	33.1	0.500	"	34.8	0.259	94.4	73-114	0.303	40	
Ethylbenzene	8.73	0.500	"	8.20	ND	106	82-120	0.574	40	
Xylenes (total)	41.9	1.00	"	39.6	0.511	105	74-118	0.478	40	
Surrogate: 4-BFB (FID)	*51.1*		"	*48.0*		*106*	*62-127*			
Surrogate: 4-BFB (PID)	*48.1*		"	*48.0*		*100*	*72-127*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	01/26/04 11:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

Chain-of-Custody Record

Date 1/23/04
Page 1 of 1

Project Name Conoco Phillips-Renton Project No. 706002
Project Location/Event Renton / Treatment
Sampler's Name Erik Gerking
Project Contact Martin Powers
Send Results To ↓

Testing Parameters

Turnaround Time
☐ Standard
☒ Accelerated
by ☒ Mon. 1200 (1/26/04)

Sample I.D.	Date	Time	Matrix	No. of Containers	TPH-G	BTEX	Observations/Comments
Effluent	1/23/04	1505	H_2O	4	X	X	01
Stripper Effluent	↓	1510	↓	4	X	X	02
Influent	↓	1515	↓	4	X	X	03

Special Shipment/Handling or Storage Requirements: Store on ice @ 4°C

Method of Shipment: Hand Delivery

Relinquished by	Received by	Relinquished by	Received by
Signature: Erik R. Ger	Signature: Jenny Stalter	Signature:	Signature:
Printed Name: Erik Gerking	Printed Name: Jenny Stalter	Printed Name:	Printed Name:
Company: LAI	Company: NCA w/o 3.2	Company:	Company:
Date: 1/23/04 Time: 16:51	Date: 01-23-04 Time: 16:57	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
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907.563.9200 fax 907.563.9210

06 February 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 02/05/04 17:17. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite
Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Influent	B4B0139-01	Water	02/05/04 13:23	02/05/04 17:17
Stripper Effluent	B4B0139-02	Water	02/05/04 13:19	02/05/04 17:17
Effluent	B4B0139-03	Water	02/05/04 13:15	02/05/04 17:17
Influent	B4B0139-04	Air	02/05/04 13:00	02/05/04 17:17
Effluent	B4B0139-05	Air	02/05/04 12:55	02/05/04 17:17

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (B4B0139-01) Water Sampled: 02/05/04 13:23 Received: 02/05/04 17:17									
Gasoline Range Hydrocarbons	**40000**	2500	ug/l	50	4B05004	02/05/04	02/05/04	NWTPH-Gx/8021B	
Benzene	**3180**	25.0	"	"	"	"	"	"	
Toluene	**6930**	100	"	200	"	"	02/06/04	"	
Ethylbenzene	**783**	25.0	"	50	"	"	02/05/04	"	
Xylenes (total)	**5350**	50.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*97.7 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*97.1 %*	*72-127*			"	"	"	"	
Stripper Effluent (B4B0139-02) Water Sampled: 02/05/04 13:19 Received: 02/05/04 17:17									
Gasoline Range Hydrocarbons	**2370**	50.0	ug/l	1	4B05004	02/05/04	02/05/04	NWTPH-Gx/8021B	
Benzene	**24.7**	0.500	"	"	"	"	"	"	
Toluene	**39.9**	0.500	"	"	"	"	"	"	
Ethylbenzene	**9.38**	0.500	"	"	"	"	"	"	
Xylenes (total)	**76.9**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*109 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*88.3 %*	*72-127*			"	"	"	"	
Effluent (B4B0139-03) Water Sampled: 02/05/04 13:15 Received: 02/05/04 17:17									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4B05004	02/05/04	02/05/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.9 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (B4B0139-04) Air Sampled: 02/05/04 13:00 Received: 02/05/04 17:17									
Gasoline Range Hydrocarbons	**45.5**	10.0	mg/m³ Air	1	4B05008	02/05/04	02/05/04	NWTPH Modified	
Benzene	**3.45**	0.100	"	"	"	"	"	"	
Toluene	**6.84**	0.100	"	"	"	"	"	"	
Ethylbenzene	**0.924**	0.100	"	"	"	"	"	"	
Xylenes (total)	**6.69**	0.200	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*88.1 %*	*65-132*			"	"	"	"	
Surrogate: 4-BFB (PID)	*94.5 %*	*75-136*			"	"	"	"	
Gasoline Range Hydrocarbons (v/v)	**10.7**	2.36	ppmv	"	"	"	"	"	
Benzene (v/v)	**1.06**	0.0308	"	"	"	"	"	"	
Toluene (v/v)	**1.79**	0.0261	"	"	"	"	"	"	
Ethylbenzene (v/v)	**0.209**	0.0227	"	"	"	"	"	"	
Xylenes, total (v/v)	**1.52**	0.0454	"	"	"	"	"	"	
Effluent (B4B0139-05) Air Sampled: 02/05/04 12:55 Received: 02/05/04 17:17									
Gasoline Range Hydrocarbons	ND	10.0	mg/m³ Air	1	4B05008	02/05/04	02/05/04	NWTPH Modified	
Benzene	ND	0.100	"	"	"	"	"	"	
Toluene	**0.359**	0.100	"	"	"	"	"	"	
Ethylbenzene	ND	0.100	"	"	"	"	"	"	
Xylenes (total)	**0.338**	0.200	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*72.9 %*	*65-132*			"	"	"	"	
Surrogate: 4-BFB (PID)	*97.3 %*	*75-136*			"	"	"	"	
Gasoline Range Hydrocarbons (v/v)	ND	2.36	ppmv	"	"	"	"	"	
Benzene (v/v)	ND	0.0308	"	"	"	"	"	"	
Toluene (v/v)	**0.0939**	0.0261	"	"	"	"	"	"	
Ethylbenzene (v/v)	ND	0.0227	"	"	"	"	"	"	
Xylenes, total (v/v)	**0.0767**	0.0454	"	"	"	"	"	"	

North Creek Analytical - Bothell

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05004: Prepared 02/05/04 Using EPA 5030B (P/T)										
Blank (4B05004-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*42.6*		"	*48.0*		*88.8*	*62-127*			
Surrogate: 4-BFB (PID)	*49.1*		"	*48.0*		*102*	*72-127*			
LCS (4B05004-BS1)										
Gasoline Range Hydrocarbons	445	50.0	ug/l	500		89.0	80-120			
Benzene	6.78	0.500	"	7.35		92.2	80-120			
Toluene	30.6	0.500	"	34.8		87.9	80-120			
Ethylbenzene	7.87	0.500	"	8.20		96.0	80-120			
Xylenes (total)	36.5	1.00	"	39.6		92.2	80-120			
Surrogate: 4-BFB (FID)	*47.9*		"	*48.0*		*99.8*	*62-127*			
Surrogate: 4-BFB (PID)	*45.6*		"	*48.0*		*95.0*	*72-127*			
LCS Dup (4B05004-BSD1)										
Gasoline Range Hydrocarbons	425	50.0	ug/l	500		85.0	80-120	4.60	25	
Benzene	7.08	0.500	"	7.35		96.3	80-120	4.33	40	
Toluene	32.3	0.500	"	34.8		92.8	80-120	5.41	40	
Ethylbenzene	8.25	0.500	"	8.20		101	80-120	4.71	40	
Xylenes (total)	38.4	1.00	"	39.6		97.0	80-120	5.07	40	
Surrogate: 4-BFB (FID)	*44.2*		"	*48.0*		*92.1*	*62-127*			
Surrogate: 4-BFB (PID)	*46.1*		"	*48.0*		*96.0*	*72-127*			
Matrix Spike (4B05004-MS1)					**Source: B4B0118-10**					
Gasoline Range Hydrocarbons	490	50.0	ug/l	500	34.1	91.2	72-119			
Benzene	6.86	0.500	"	7.35	0.192	90.7	70-129			
Toluene	31.3	0.500	"	34.8	0.432	88.7	73-114			
Ethylbenzene	7.84	0.500	"	8.20	0.160	93.7	82-120			
Xylenes (total)	37.4	1.00	"	39.6	0.779	92.5	74-118			
Surrogate: 4-BFB (FID)	*49.7*		"	*48.0*		*104*	*62-127*			
Surrogate: 4-BFB (PID)	*46.1*		"	*48.0*		*96.0*	*72-127*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05004: Prepared 02/05/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4B05004-MSD1)					**Source: B4B0118-10**					
Gasoline Range Hydrocarbons	486	50.0	ug/l	500	34.1	90.4	72-119	0.820	25	
Benzene	7.24	0.500	"	7.35	0.192	95.9	70-129	5.39	40	
Toluene	32.6	0.500	"	34.8	0.432	92.4	73-114	4.07	40	
Ethylbenzene	8.33	0.500	"	8.20	0.160	99.6	82-120	6.06	40	
Xylenes (total)	38.8	1.00	"	39.6	0.779	96.0	74-118	3.67	40	
Surrogate: 4-BFB (FID)	*48.3*		"	*48.0*		*101*	*62-127*			
Surrogate: 4-BFB (PID)	*45.3*		"	*48.0*		*94.4*	*72-127*			

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509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05008: Prepared 02/05/04 Using EPA 5030B (P/T)										
Blank (4B05008-BLK1)										
Gasoline Range Hydrocarbons	ND	10.0	mg/m³ Air							
Benzene	ND	0.100	"							
Toluene	ND	0.100	"							
Ethylbenzene	ND	0.100	"							
Xylenes (total)	ND	0.200	"							
Surrogate: 4-BFB (FID)	*7.92*		"	*9.60*		*82.5*	*65-132*			
Surrogate: 4-BFB (PID)	*9.28*		"	*9.60*		*96.7*	*75-136*			
Gasoline Range Hydrocarbons (v/v)	ND	2.36	ppmv							
Benzene (v/v)	ND	0.0308	"							
Toluene (v/v)	ND	0.0261	"							
Ethylbenzene (v/v)	ND	0.0227	"							
Xylenes, total (v/v)	ND	0.0454	"							
LCS (4B05008-BS1)										
Benzene	1.65	0.100	mg/m³ Air	2.00		82.5	50-150			
Toluene	1.58	0.100	"	2.00		79.0	50-150			
Ethylbenzene	1.54	0.100	"	1.96		78.6	50-150			
Xylenes (total)	4.79	0.200	"	6.00		79.8	50-150			
Surrogate: 4-BFB (PID)	*9.52*		"	*9.60*		*99.2*	*75-136*			
LCS (4B05008-BS2)										
Gasoline Range Hydrocarbons	61.3	10.0	mg/m³ Air	100		61.3	50-150			
Surrogate: 4-BFB (FID)	*8.27*		"	*9.60*		*86.1*	*65-132*			
LCS Dup (4B05008-BSD1)										
Benzene	1.22	0.100	mg/m³ Air	2.00		61.0	50-150	30.0	50	
Toluene	1.15	0.100	"	2.00		57.5	50-150	31.5	50	
Ethylbenzene	1.13	0.100	"	1.96		57.7	50-150	30.7	50	
Xylenes (total)	3.54	0.200	"	6.00		59.0	50-150	30.0	50	
Surrogate: 4-BFB (PID)	*9.37*		"	*9.60*		*97.6*	*75-136*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B05008: Prepared 02/05/04 Using EPA 5030B (P/T)										
LCS Dup (4B05008-BSD2)										
Gasoline Range Hydrocarbons	59.7	10.0	mg/m³ Air	100		59.7	50-150	2.64	50	
Surrogate: 4-BFB (FID)	*8.82*		"	*9.60*		*91.9*	*65-132*			
Duplicate (4B05008-DUP1)					**Source: B4B0112-02**					
Gasoline Range Hydrocarbons	704	25.0	mg/m³ Air		731			3.76	30	
Surrogate: 4-BFB (FID)	*9.78*		"	*9.60*		*102*	*65-132*			

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	02/06/04 16:46

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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☐ **Tacoma** (253) 926-2493
☐ **Spokane** (509) 327-9737
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☐ _____

LANDAU ASSOCIATES

Chain-of-Custody Record

Date 2/5/04

Page 1 of 1

Project Name Cr. Phillips Project No. 701002

Project Location/Event Renton / System Sampling

Sampler's Name Mario Lopez

Project Contact Martin Bowers

Send Results To Martin Bowers

Testing Parameters

Turnaround Time
☐ Standard
☐ Accelerated
☒ 24 hrs

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx	BTEX	Observations/Comments
Influent	2/5/04	1323	H_2O	3	X	X	
Stripper Effluent	↓	1319	↓	3	X	X	
Effluent	↓	1315	↓	3	X	X	
Influent	↓	1300	Air	2	X	X	
Effluent	↓	1255	Air	2	X	X	

Special Shipment/Handling or Storage Requirements: Hand delivered Water samples in ice

Method of Shipment:

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Mario Lopez	Tony Tan		
Printed Name	Printed Name	Printed Name	Printed Name
Landau Inc.	N/A		
Company	Company	Company	Company
Date 2/5/04 Time 1417	Date 2/6/04 Time 1125	Date Time	Date Time

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

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18 March 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 03/17/04 13:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite
Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Influent	B4C0478-01	Water	03/16/04 14:45	03/17/04 13:10
Stripper Effluent	B4C0478-02	Water	03/16/04 15:10	03/17/04 13:10
Effluent	B4C0478-03	Water	03/16/04 14:22	03/17/04 13:10

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (B4C0478-01) Water Sampled: 03/16/04 14:45 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**43500**	500	ug/l	10	4C17006	03/17/04	03/17/04	NWTPH-Gx/8021B	
Benzene	**5530**	50.0	"	100	"	"	03/17/04	"	
Toluene	**9480**	50.0	"	"	"	"	"	"	
Ethylbenzene	**520**	5.00	"	10	"	"	03/17/04	"	
Xylenes (total)	**4810**	100	"	100	"	"	03/17/04	"	
Surrogate: 4-BFB (FID)	*124 %*	*62-127*			"	"	*03/17/04*	"	
Surrogate: 4-BFB (PID)	*105 %*	*72-127*			"	"	"	"	
Stripper Effluent (B4C0478-02) Water Sampled: 03/16/04 15:10 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**4710**	100	ug/l	2	4C17006	03/17/04	03/17/04	NWTPH-Gx/8021B	
Benzene	**244**	5.00	"	10	"	"	03/17/04	"	
Toluene	**483**	5.00	"	"	"	"	"	"	
Ethylbenzene	**34.7**	1.00	"	2	"	"	03/17/04	"	
Xylenes (total)	**359**	2.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*112 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*103 %*	*72-127*			"	"	"	"	
Effluent (B4C0478-03) Water Sampled: 03/16/04 14:22 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C17006	03/17/04	03/17/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*104 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*101 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (B4C0478-01) Water Sampled: 03/16/04 14:45 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**14.1**	2.50	mg/l	10	4C17040	03/17/04	03/18/04	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	**2.65**	0.500	"	1	"	"	03/17/04	"	D-06
Surrogate: 2-FBP	*120 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*136 %*	*50-150*			"	"	"	"	
Stripper Effluent (B4C0478-02) Water Sampled: 03/16/04 15:10 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**12.3**	2.50	mg/l	10	4C17040	03/17/04	03/18/04	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	**2.59**	0.500	"	1	"	"	03/17/04	"	D-06
Surrogate: 2-FBP	*109 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*130 %*	*50-150*			"	"	"	"	
Effluent (B4C0478-03) Water Sampled: 03/16/04 14:22 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C17040	03/17/04	03/18/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*80.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*110 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C17006: Prepared 03/17/04 Using EPA 5030B (P/T)										
Blank (4C17006-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*45.3*		"	*48.0*		*94.4*	*62-127*			
Surrogate: 4-BFB (PID)	*47.6*		"	*48.0*		*99.2*	*72-127*			
LCS (4C17006-BS1)										
Gasoline Range Hydrocarbons	448	50.0	ug/l	500		89.6	80-120			
Benzene	5.98	0.500	"	7.35		81.4	80-120			
Toluene	31.3	0.500	"	34.8		89.9	80-120			
Ethylbenzene	8.16	0.500	"	8.20		99.5	80-120			
Xylenes (total)	39.5	1.00	"	39.6		99.7	80-120			
Surrogate: 4-BFB (FID)	*52.2*		"	*48.0*		*109*	*62-127*			
Surrogate: 4-BFB (PID)	*47.7*		"	*48.0*		*99.4*	*72-127*			
LCS Dup (4C17006-BSD1)										
Gasoline Range Hydrocarbons	481	50.0	ug/l	500		96.2	80-120	7.10	25	
Benzene	6.05	0.500	"	7.35		82.3	80-120	1.16	40	
Toluene	31.8	0.500	"	34.8		91.4	80-120	1.58	40	
Ethylbenzene	8.34	0.500	"	8.20		102	80-120	2.18	40	
Xylenes (total)	40.5	1.00	"	39.6		102	80-120	2.50	40	
Surrogate: 4-BFB (FID)	*55.0*		"	*48.0*		*115*	*62-127*			
Surrogate: 4-BFB (PID)	*50.1*		"	*48.0*		*104*	*72-127*			
Matrix Spike (4C17006-MS1)					**Source: B4C0387-01**					
Gasoline Range Hydrocarbons	446	50.0	ug/l	500	ND	89.2	72-119			
Benzene	5.91	0.500	"	7.35	ND	80.4	70-129			
Toluene	30.9	0.500	"	34.8	ND	88.8	73-114			
Ethylbenzene	7.94	0.500	"	8.20	ND	96.8	82-120			
Xylenes (total)	38.0	1.00	"	39.6	ND	96.0	74-118			
Surrogate: 4-BFB (FID)	*52.7*		"	*48.0*		*110*	*62-127*			
Surrogate: 4-BFB (PID)	*47.4*		"	*48.0*		*98.8*	*72-127*			

North Creek Analytical - Bothell

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Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C17006: Prepared 03/17/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4C17006-MSD1)					**Source: B4C0387-01**					
Gasoline Range Hydrocarbons	450	50.0	ug/l	500	ND	90.0	72-119	0.893	25	
Benzene	6.19	0.500	"	7.35	ND	84.2	70-129	4.63	40	
Toluene	32.4	0.500	"	34.8	ND	93.1	73-114	4.74	40	
Ethylbenzene	8.33	0.500	"	8.20	ND	102	82-120	4.79	40	
Xylenes (total)	39.5	1.00	"	39.6	ND	99.7	74-118	3.87	40	
Surrogate: 4-BFB (FID)	*51.8*		"	*48.0*		*108*	*62-127*			
Surrogate: 4-BFB (PID)	*48.1*		"	*48.0*		*100*	*72-127*			

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C17040: Prepared 03/17/04 Using EPA 3510C										
Blank (4C17040-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.280*		"	*0.320*		*87.5*	*50-150*			
Surrogate: Octacosane	*0.202*		"	*0.160*		*126*	*50-150*			
LCS (4C17040-BS1)										
Diesel Range Hydrocarbons	1.51	0.250	mg/l	2.00		75.5	58-125			
Surrogate: 2-FBP	*0.318*		"	*0.320*		*99.4*	*50-150*			
LCS Dup (4C17040-BSD1)										
Diesel Range Hydrocarbons	1.71	0.250	mg/l	2.00		85.5	58-125	12.4	40	
Surrogate: 2-FBP	*0.396*		"	*0.320*		*124*	*50-150*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/18/04 16:12

Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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☒ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

B4C0478

Date 3/17/04

Page 1 of 1

Chain-of-Custody Record

Project Name Conoco Phillips - Renton Term. Project No. 706002

Project Location/Event Renton / Quaterly Samplings

Sampler's Name Mario López

Project Contact Chris Kimmel / Martin Powers

Send Results To Chris Kimmel / Martin Powers

Turnaround Time
☐ Standard
☐ Accelerated
☒ 24 hr.

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Gx	BTEX (EPA 8021B)	Observations/Comments
Influent	3/16	1445	H_2O	5	X	X	X	01
Stripper Effluent	↓	1570	↓	5	X	X	X	02
Effluent	↓	1422	↓	5	X	X	X	03

Testing Parameters

Special Shipment/Handling or Storage Requirements: Samples stored in ice

Method of Shipment:

Relinquished by	Received by	Relinquished by	Received by
Signature: Mario Lopez	Signature: Jon Hollers	Signature: Jon Hollers	Signature: Cathy Gamble
Printed Name: Mario Lopez	Printed Name: Jon Hollers	Printed Name:	Printed Name: Cathy Gamble
Company: LAI	Company: NCA	Company:	Company: NCA
Date: 3/17/04 Time: 0900	Date: 3/17/04 Time: 12:01	Date: 3/17/04 Time: 1310	Date: 3/17/04 Time: 13:10

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

30 March 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 03/17/04 13:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite
Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

CASE NARRATIVE for B4C0493

Client: Landau Associates
Project Manager: Martin Powers
Project Name: Conoco Phillips Renton
Project Number: 3485-LAI-012

1.0 DESCRIPTION OF CASE

Fourteen water and two air samples were received in a single shipment as documented on the associated chain-of-custody. The scheduled analyses for these samples included: Gasoline Hydrocarbons and BTEX by NWTPH-Gx/EPA 8021B and Diesel Range Hydrocarbons by NWTPH-Dx.

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received in the Bothell laboratory on March 17, 2004. The cooler temperature was documented at 3.6 ° Celsius upon receipt in the laboratory. All sample containers were received in good condition.

3.0 COMMENTS ON PREPARATION AND ANALYSIS

Gasoline Hydrocarbons and BTEX by NWTPH-Gx/EPA 8021

No anomalies or discrepancies were associated with the preparation and analysis of the samples. The RPD (relative percent difference) was out of control limit for gasoline in the Quality Control Samples, LCS and LCS Dup, in batch 4C19003. The percent recoveries for the LCS and LCS Dup were within the control limits. Also, the Matrix Spike and Matrix Spike Duplicate samples analyzed for QC for that batch were within recovery limits and within RPD recovery limits. The RPD out of limits does not represent an out of control situation for the batch.

Diesel Range Hydrocarbons by NWTPH-Dx

Sample HA-17 had low surrogate recovery for 2-FBP. The sample was re-analyzed with the same results occurring. There was no additional sample volume remaining for a re-extraction. The results for HA-17 may be biased low. All quality control measures were within acceptable ranges.

Jeanne Garthwaite
Project Manager
North Creek Analytical

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAI-2	B4C0493-01	Water	03/16/04 10:15	03/17/04 13:10
LAI-3	B4C0493-02	Water	03/16/04 08:40	03/17/04 13:10
LAI-10	B4C0493-03	Water	03/16/04 11:25	03/17/04 13:10
LAI-11	B4C0493-04	Water	03/16/04 12:23	03/17/04 13:10
LAI-12	B4C0493-05	Water	03/16/04 13:09	03/17/04 13:10
LAI-13	B4C0493-06	Water	03/15/04 18:32	03/17/04 13:10
LAI-14	B4C0493-07	Water	03/15/04 18:00	03/17/04 13:10
LAI-15	B4C0493-08	Water	03/15/04 17:30	03/17/04 13:10
LAI-16	B4C0493-09	Water	03/16/04 15:50	03/17/04 13:10
LAI-17	B4C0493-10	Water	03/16/04 18:50	03/17/04 13:10
HA-5	B4C0493-11	Water	03/15/04 15:30	03/17/04 13:10
HA-13	B4C0493-12	Water	03/15/04 16:00	03/17/04 13:10
HA-15	B4C0493-13	Water	03/15/04 15:05	03/17/04 13:10
HA-17	B4C0493-14	Water	03/15/04 14:30	03/17/04 13:10
Effluent	B4C0493-15	Air	03/16/04 18:15	03/17/04 13:10
Influent	B4C0493-16	Air	03/16/04 18:45	03/17/04 13:10

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-2 (B4C0493-01) Water Sampled: 03/16/04 10:15 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**120000**	25000	ug/l	500	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**23600**	250	"	"	"	"	"	"	
Toluene	**27700**	250	"	"	"	"	"	"	
Ethylbenzene	**2370**	250	"	"	"	"	"	"	
Xylenes (total)	**11300**	500	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*88.3 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*92.5 %*	*72-127*			"	"	"	"	
LAI-3 (B4C0493-02) Water Sampled: 03/16/04 08:40 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**4670**	2500	ug/l	50	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**2030**	25.0	"	"	"	"	"	"	
Toluene	**94.9**	25.0	"	"	"	"	"	"	
Ethylbenzene	**113**	25.0	"	"	"	"	"	"	
Xylenes (total)	**225**	50.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*85.6 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*90.4 %*	*72-127*			"	"	"	"	
LAI-10 (B4C0493-03) Water Sampled: 03/16/04 11:25 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*80.2 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*87.7 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Environmental Laboratory Network

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-11 (B4C0493-04) Water Sampled: 03/16/04 12:23 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	0.634	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*71.5 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*87.3 %*	*72-127*			"	"	"	"	
LAI-12 (B4C0493-05) Water Sampled: 03/16/04 13:09 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*80.0 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*90.8 %*	*72-127*			"	"	"	"	
LAI-13 (B4C0493-06) Water Sampled: 03/15/04 18:32 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*74.6 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*89.0 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-14 (B4C0493-07) Water Sampled: 03/15/04 18:00 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C18007	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*82.3 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*92.1 %*	*72-127*			"	"	"	"	
LAI-15 (B4C0493-08) Water Sampled: 03/15/04 17:30 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**154**	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*83.8 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.8 %*	*72-127*			"	"	"	"	
LAI-16 (B4C0493-09) Water Sampled: 03/16/04 15:50 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**2.70**	0.500	"	"	"	"	"	"	
Toluene	**0.796**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*84.8 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.2 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Environmental Laboratory Network

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-17 (B4C0493-10) Water Sampled: 03/16/04 18:50 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**4.76**	0.500	"	"	"	"	"	"	
Toluene	**0.630**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*79.8 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.2 %*	*72-127*			"	"	"	"	
HA-5 (B4C0493-11) Water Sampled: 03/15/04 15:30 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**708**	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**21.2**	0.500	"	"	"	"	"	"	
Toluene	**1.38**	0.500	"	"	"	"	"	"	
Ethylbenzene	**41.5**	0.500	"	"	"	"	"	"	
Xylenes (total)	**6.55**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*101 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*95.4 %*	*72-127*			"	"	"	"	
HA-13 (B4C0493-12) Water Sampled: 03/15/04 16:00 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*85.6 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.4 %*	*72-127*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Environmental Laboratory Network

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA-15 (B4C0493-13) Water Sampled: 03/15/04 15:05 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**336**	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	**5.85**	0.500	"	"	"	"	"	"	
Toluene	**0.765**	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	**1.34**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*75.4 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*80.0 %*	*72-127*			"	"	"	"	
HA-17 (B4C0493-14) Water Sampled: 03/15/04 14:30 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4C19003	03/19/04	03/19/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*76.5 %*	*62-127*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.2 %*	*72-127*			"	"	"	"	

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-2 (B4C0493-01) Water Sampled: 03/16/04 10:15 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**1.95**	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*114 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*104 %*	*50-150*			"	"	"	"	
LAI-3 (B4C0493-02) Water Sampled: 03/16/04 08:40 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**0.272**	0.250	mg/l	1	4C19008	03/19/04	03/23/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*79.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*102 %*	*50-150*			"	"	"	"	
LAI-10 (B4C0493-03) Water Sampled: 03/16/04 11:25 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*75.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*93.5 %*	*50-150*			"	"	"	"	
LAI-11 (B4C0493-04) Water Sampled: 03/16/04 12:23 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*82.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*94.7 %*	*50-150*			"	"	"	"	
LAI-12 (B4C0493-05) Water Sampled: 03/16/04 13:09 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*80.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*103 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-13 (B4C0493-06) Water Sampled: 03/15/04 18:32 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*88.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*103 %*	*50-150*			"	"	"	"	
LAI-14 (B4C0493-07) Water Sampled: 03/15/04 18:00 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*78.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*101 %*	*50-150*			"	"	"	"	
LAI-15 (B4C0493-08) Water Sampled: 03/15/04 17:30 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*90.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*108 %*	*50-150*			"	"	"	"	
LAI-16 (B4C0493-09) Water Sampled: 03/16/04 15:50 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*73.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*98.8 %*	*50-150*			"	"	"	"	
LAI-17 (B4C0493-10) Water Sampled: 03/16/04 18:50 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*83.4 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*100 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA-5 (B4C0493-11) Water Sampled: 03/15/04 15:30 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**2.38**	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*122 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*106 %*	*50-150*			"	"	"	"	
HA-13 (B4C0493-12) Water Sampled: 03/15/04 16:00 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*104 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*110 %*	*50-150*			"	"	"	"	
HA-15 (B4C0493-13) Water Sampled: 03/15/04 15:05 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	**1.22**	0.250	mg/l	1	4C19008	03/19/04	03/22/04	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*91.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*98.8 %*	*50-150*			"	"	"	"	
HA-17 (B4C0493-14) Water Sampled: 03/15/04 14:30 Received: 03/17/04 13:10									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4C19008	03/19/04	03/23/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*48.2 %*	*50-150*			"	"	"	"	*X*
Surrogate: Octacosane	*52.9 %*	*50-150*			"	"	"	"	

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Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (B4C0493-15) Air Sampled: 03/16/04 18:15 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	ND	10.0	mg/m³ Air	1	4C19002	03/19/04	03/19/04	NWTPH Modified	
Benzene	**0.156**	0.100	"	"	"	"	"	"	
Toluene	**0.134**	0.100	"	"	"	"	"	"	
Ethylbenzene	ND	0.100	"	"	"	"	"	"	
Xylenes (total)	ND	0.200	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*89.1 %*	*65-132*			"	"	"	"	
Surrogate: 4-BFB (PID)	*114 %*	*75-136*			"	"	"	"	
Gasoline Range Hydrocarbons (v/v)	ND	2.36	ppmv	"	"	"	"	"	
Benzene (v/v)	**0.0480**	0.0308	"	"	"	"	"	"	
Toluene (v/v)	**0.0350**	0.0261	"	"	"	"	"	"	
Ethylbenzene (v/v)	ND	0.0227	"	"	"	"	"	"	
Xylenes, total (v/v)	ND	0.0454	"	"	"	"	"	"	
Influent (B4C0493-16) Air Sampled: 03/16/04 18:45 Received: 03/17/04 13:10									
Gasoline Range Hydrocarbons	**252**	50.0	mg/m³ Air	5	4C19002	03/19/04	03/19/04	NWTPH Modified	
Benzene	**7.81**	0.500	"	"	"	"	"	"	
Toluene	**15.5**	0.500	"	"	"	"	"	"	
Ethylbenzene	**1.96**	0.500	"	"	"	"	"	"	
Xylenes (total)	**15.6**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*93.5 %*	*65-132*			"	"	"	"	
Surrogate: 4-BFB (PID)	*102 %*	*75-136*			"	"	"	"	
Gasoline Range Hydrocarbons (v/v)	**59.4**	11.8	ppmv	5	"	"	"	"	
Benzene (v/v)	**2.41**	0.154	"	"	"	"	"	"	
Toluene (v/v)	**4.04**	0.130	"	"	"	"	"	"	
Ethylbenzene (v/v)	**0.445**	0.114	"	"	"	"	"	"	
Xylenes, total (v/v)	**3.54**	0.227	"	"	"	"	"	"	

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Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C18007: Prepared 03/19/04 Using EPA 5030B (P/T)										
Blank (4C18007-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*37.1*		"	*48.0*		*77.3*	*62-127*			
Surrogate: 4-BFB (PID)	*42.0*		"	*48.0*		*87.5*	*72-127*			
LCS (4C18007-BS1)										
Gasoline Range Hydrocarbons	454	50.0	ug/l	500		90.8	80-120			
Benzene	5.97	0.500	"	7.35		81.2	80-120			
Toluene	30.5	0.500	"	34.8		87.6	80-120			
Ethylbenzene	7.86	0.500	"	8.20		95.9	80-120			
Xylenes (total)	38.5	1.00	"	39.6		97.2	80-120			
Surrogate: 4-BFB (FID)	*47.7*		"	*48.0*		*99.4*	*62-127*			
Surrogate: 4-BFB (PID)	*44.7*		"	*48.0*		*93.1*	*72-127*			
LCS Dup (4C18007-BSD1)										
Gasoline Range Hydrocarbons	457	50.0	ug/l	500		91.4	80-120	0.659	25	
Benzene	6.13	0.500	"	7.35		83.4	80-120	2.64	40	
Toluene	31.4	0.500	"	34.8		90.2	80-120	2.91	40	
Ethylbenzene	8.06	0.500	"	8.20		98.3	80-120	2.51	40	
Xylenes (total)	39.5	1.00	"	39.6		99.7	80-120	2.56	40	
Surrogate: 4-BFB (FID)	*47.9*		"	*48.0*		*99.8*	*62-127*			
Surrogate: 4-BFB (PID)	*44.3*		"	*48.0*		*92.3*	*72-127*			
Matrix Spike (4C18007-MS1)					**Source: B4C0491-01**					
Gasoline Range Hydrocarbons	488	50.0	ug/l	500	ND	97.6	72-119			
Benzene	6.33	0.500	"	7.35	ND	86.1	70-129			
Toluene	32.1	0.500	"	34.8	0.143	91.8	73-114			
Ethylbenzene	8.12	0.500	"	8.20	ND	99.0	82-120			
Xylenes (total)	39.8	1.00	"	39.6	ND	101	74-118			
Surrogate: 4-BFB (FID)	*49.0*		"	*48.0*		*102*	*62-127*			
Surrogate: 4-BFB (PID)	*44.5*		"	*48.0*		*92.7*	*72-127*			

North Creek Analytical - Bothell

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Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C18007: Prepared 03/19/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4C18007-MSD1)					**Source: B4C0491-01**					
Gasoline Range Hydrocarbons	485	50.0	ug/l	500	ND	97.0	72-119	0.617	25	
Benzene	6.41	0.500	"	7.35	ND	87.2	70-129	1.26	40	
Toluene	32.4	0.500	"	34.8	0.143	92.7	73-114	0.930	40	
Ethylbenzene	8.28	0.500	"	8.20	ND	101	82-120	1.95	40	
Xylenes (total)	40.6	1.00	"	39.6	ND	103	74-118	1.99	40	
Surrogate: 4-BFB (FID)	*49.5*		"	*48.0*		*103*	*62-127*			
Surrogate: 4-BFB (PID)	*44.4*		"	*48.0*		*92.5*	*72-127*			
Batch 4C19003: Prepared 03/19/04 Using EPA 5030B (P/T)										
Blank (4C19003-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*31.6*		"	*48.0*		*65.8*	*62-127*			
Surrogate: 4-BFB (PID)	*40.6*		"	*48.0*		*84.6*	*72-127*			
LCS (4C19003-BS1)										
Gasoline Range Hydrocarbons	431	50.0	ug/l	502		85.9	80-120			
Benzene	6.42	0.500	"	7.38		87.0	80-120			
Toluene	33.3	0.500	"	34.9		95.4	80-120			
Ethylbenzene	8.66	0.500	"	8.19		106	80-120			
Xylenes (total)	40.8	1.00	"	39.7		103	80-120			
Surrogate: 4-BFB (FID)	*34.1*		"	*48.0*		*71.0*	*62-127*			
Surrogate: 4-BFB (PID)	*38.4*		"	*48.0*		*80.0*	*72-127*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19003: Prepared 03/19/04 Using EPA 5030B (P/T)										
LCS Dup (4C19003-BSD1)										
Gasoline Range Hydrocarbons	574	50.0	ug/l	502		114	80-120	28.5	25	X
Benzene	6.04	0.500	"	7.38		81.8	80-120	6.10	40	
Toluene	31.5	0.500	"	34.9		90.3	80-120	5.56	40	
Ethylbenzene	8.20	0.500	"	8.19		100	80-120	5.46	40	
Xylenes (total)	38.7	1.00	"	39.7		97.5	80-120	5.28	40	
Surrogate: 4-BFB (FID)	*44.9*		"	*48.0*		*93.5*	*62-127*			
Surrogate: 4-BFB (PID)	*38.7*		"	*48.0*		*80.6*	*72-127*			
Matrix Spike (4C19003-MS1)					**Source: B4C0493-12**					
Gasoline Range Hydrocarbons	481	50.0	ug/l	502	27.9	90.3	72-119			
Benzene	6.74	0.500	"	7.38	0.0720	90.4	70-129			
Toluene	34.8	0.500	"	34.9	ND	99.7	73-114			
Ethylbenzene	9.08	0.500	"	8.19	0.106	110	82-120			
Xylenes (total)	42.9	1.00	"	39.7	ND	108	74-118			
Surrogate: 4-BFB (FID)	*36.4*		"	*48.0*		*75.8*	*62-127*			
Surrogate: 4-BFB (PID)	*38.1*		"	*48.0*		*79.4*	*72-127*			
Matrix Spike Dup (4C19003-MSD1)					**Source: B4C0493-12**					
Gasoline Range Hydrocarbons	486	50.0	ug/l	502	27.9	91.3	72-119	1.03	25	
Benzene	6.75	0.500	"	7.38	0.0720	90.5	70-129	0.148	40	
Toluene	34.9	0.500	"	34.9	ND	100	73-114	0.287	40	
Ethylbenzene	9.08	0.500	"	8.19	0.106	110	82-120	0.00	40	
Xylenes (total)	42.9	1.00	"	39.7	ND	108	74-118	0.00	40	
Surrogate: 4-BFB (FID)	*36.2*		"	*48.0*		*75.4*	*62-127*			
Surrogate: 4-BFB (PID)	*38.0*		"	*48.0*		*79.2*	*72-127*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Environmental Laboratory Network

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425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19008: Prepared 03/19/04 Using EPA 3520C										
Blank (4C19008-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.304*		"	*0.320*		*95.0*	*50-150*			
Surrogate: Octacosane	*0.164*		"	*0.160*		*102*	*50-150*			
LCS (4C19008-BS1)										
Diesel Range Hydrocarbons	1.61	0.250	mg/l	2.00		80.5	58-125			
Surrogate: 2-FBP	*0.315*		"	*0.320*		*98.4*	*50-150*			
LCS Dup (4C19008-BSD1)										
Diesel Range Hydrocarbons	1.68	0.250	mg/l	2.00		84.0	58-125	4.26	40	
Surrogate: 2-FBP	*0.304*		"	*0.320*		*95.0*	*50-150*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19002: Prepared 03/19/04 Using EPA 5030B (P/T)										
Blank (4C19002-BLK1)										
Gasoline Range Hydrocarbons	ND	10.0	mg/m³ Air							
Benzene	ND	0.100	"							
Toluene	ND	0.100	"							
Ethylbenzene	ND	0.100	"							
Xylenes (total)	ND	0.200	"							
Surrogate: 4-BFB (FID)	*9.08*		"	*9.60*		*94.6*	*65-132*			
Surrogate: 4-BFB (PID)	*10.6*		"	*9.60*		*110*	*75-136*			
Gasoline Range Hydrocarbons (v/v)	ND	2.36	ppmv							
Benzene (v/v)	ND	0.0308	"							
Toluene (v/v)	ND	0.0261	"							
Ethylbenzene (v/v)	ND	0.0227	"							
Xylenes, total (v/v)	ND	0.0454	"							
LCS (4C19002-BS1)										
Gasoline Range Hydrocarbons	59.9	10.0	mg/m³ Air	100		59.9	50-150			
Surrogate: 4-BFB (FID)	*8.98*		"	*9.60*		*93.5*	*65-132*			
LCS (4C19002-BS2)										
Benzene	1.67	0.100	mg/m³ Air	2.00		83.5	50-150			
Toluene	1.54	0.100	"	2.00		77.0	50-150			
Ethylbenzene	1.49	0.100	"	1.96		76.0	50-150			
Xylenes (total)	4.64	0.200	"	6.00		77.3	50-150			
Surrogate: 4-BFB (PID)	*10.7*		"	*9.60*		*111*	*75-136*			
LCS Dup (4C19002-BSD1)										
Gasoline Range Hydrocarbons	50.5	10.0	mg/m³ Air	100		50.5	50-150	17.0	50	
Surrogate: 4-BFB (FID)	*8.18*		"	*9.60*		*85.2*	*65-132*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4C19002: Prepared 03/19/04 Using EPA 5030B (P/T)										
LCS Dup (4C19002-BSD2)										
Benzene	1.88	0.100	mg/m³ Air	2.00		94.0	50-150	11.8	50	
Toluene	1.75	0.100	"	2.00		87.5	50-150	12.8	50	
Ethylbenzene	1.69	0.100	"	1.96		86.2	50-150	12.6	50	
Xylenes (total)	5.25	0.200	"	6.00		87.5	50-150	12.3	50	
Surrogate: 4-BFB (PID)	*10.6*		"	*9.60*		*110*	*75-136*			
Duplicate (4C19002-DUP1)					**Source: B4C0493-15**					
Gasoline Range Hydrocarbons	6.30	10.0	mg/m³ Air		7.03			11.0	30	
Surrogate: 4-BFB (FID)	*8.88*		"	*9.60*		*92.5*	*65-132*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	03/30/04 16:25

Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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B4C0493

Date 3/17/04
Page 1 of 1

Landau Associates

Chain-of-Custody Record

Project Name Conoco Phillips-Renton Term. Project No. 706002
Project Location/Event Renton / Quaterly Sampling
Sampler's Name Mario López
Project Contact Chris Kimmel / Martin Powers
Send Results To Chris Kimmel / Martin Powers

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Gx	BTEX (EPA 8021B) TO-14 (BTEX + TPH-G)	Observations/Comments
-01 LAI-2	3/16	1015	H_2O	5	X	X	X	
-02 LAI-3		0840		5	X	X	X	
-03 LAI-10		1125		5	X	X	X	
-04 LAI-11		1223		5	X	X	X	
-05 LAI-12		1309		5	X	X	X	
-06 LAI-13	3/15	1832		5	X	X	X	
-07 LAI-14		1800		4	X	X	X	
-08 LAI-15		1730		4	X	X	X	
-09 LAI-16	3/16	1550		4	X	X	X	
-10 LAI-17	3/16	1850		4	X	X	X	
-11 HA-5	3/15	1530		4	X	X	X	
-12 HA-13		1600		4	X	X	X	
13 HA-15		1505		4	X	X	X	
14 HA-17		1430		4	X	X	X	
15 Effluent	3/16	1815	Air	2			X	
16 Influent	3/16	1845	Air	2			X	

Special Shipment/Handling or Storage Requirements: Water samples stored in ice / Air samples in brown box

Method of Shipment: ☒

Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Mario Lopez	Jon Hollers		Cathy Gamble
Printed Name	Printed Name	Printed Name	Printed Name
LAI	NCA		NCA
Company	Company	Company	Company
Date 3/17/04 Time 0900	Date 3/17/04 Time 1208	Date 3/17/04 Time 1310	Date 3/17/04 Time 13:10

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210
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B4C0493

Date 3/17/04
Page 1 of 1

Landau Associates

Chain-of-Custody Record

nca™ www.ncalabs.com

Project Name Conoco Phillips-Renton Terr. Project No. 706002
Project Location/Event Renton / Quaterly Sampling
Sampler's Name Mario López
Project Contact Chris Kimmel / Martin Powers
Send Results To Chris Kimmel / Martin Powers

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

	Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Dx	NWTPH-Gx	BTEX (EPA 8021B)	TO-14 (BTEX + TPH-G)	Observations/Comments
01	LAI-2	3/16	1015	H_2O	5	X	X	X		
02	LAI-3		0840		5	X	X	X		
03	LAI-10		1125		5	X	X	X		
04	LAI-11		1223		5	X	X	X		
05	LAI-12		1309		5	X	X	X		
06	LAI-13	3/15	1832		4	X	X	X		
07	LAI-14		1800		4	X	X	X		
08	LAI-15		1730		4	X	X	X		
09	LAI-16	3/16	1550		4	X	X	X		
10	LAI-17	3/16	1850		4	X	X	X		
11	HA-5	3/15	1530		4	X	X	X		
12	HA-13		1600		4	X	X	X		
13	HA-15		1505		4	X	X	X		
14	HA-17		1430		4	X	X	X		
15	Effluent	3/16	1815	Air	2				X	
16	Influent	3/16	1845	Air	2				X	

Revised Chain of Custody

Special Shipment/Handling or Storage Requirements: Water Samples stored in ice / Air samples in brown box

Method of Shipment:

Relinquished by	Received by	Relinquished by	Received by
Signature: Mario Lopez	Signature: Jon Hollers	Signature:	Signature: Cathy Gamble
Printed Name: Mario Lopez	Printed Name: Jon Hollers	Printed Name:	Printed Name: Cathy Gamble
Company: LAI	Company: NCA	Company:	Company: NCA
Date: 3/17/04 Time: 0900	Date: 3/17/04 Time: 1208	Date: 3/17/04 Time: 1310	Date: 3/17/04 Time: 13:10

17 — Trip Blank — H_2O.

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
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503.906.9200 fax 503.906.9210
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907.563.9200 fax 907.563.9210

09 July 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 06/23/04 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

Bottles with HCl
The lab checks pH <2

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAI-2	B4F0732-01	Water	06/22/04 14:05	06/23/04 17:20
LAI-3	B4F0732-02	Water	06/22/04 15:00	06/23/04 17:20
LAI-10	B4F0732-03	Water	06/22/04 13:25	06/23/04 17:20
LAI-11	B4F0732-04	Water	06/22/04 13:05	06/23/04 17:20
LAI-12	B4F0732-05	Water	06/22/04 12:45	06/23/04 17:20
LAI-13	B4F0732-06	Water	06/22/04 10:55	06/23/04 17:20
LAI-14	B4F0732-07	Water	06/22/04 11:40	06/23/04 17:20
LAI-15	B4F0732-08	Water	06/22/04 12:10	06/23/04 17:20
LAI-16	B4F0732-09	Water	06/22/04 15:25	06/23/04 17:20
LAI-22	B4F0732-10	Water	06/22/04 08:00	06/23/04 17:20
HA-5	B4F0732-11	Water	06/22/04 16:20	06/23/04 17:20
HA-13	B4F0732-12	Water	06/22/04 17:00	06/23/04 17:20

Trip Blank did not get run

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-2 (B4F0732-01) Water Sampled: 06/22/04 14:05 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	**17600**	5000	ug/l	100	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	**4390**	50.0	"	"	"	"	"	"	
Toluene	**53.3**	50.0	"	"	"	"	"	"	
Ethylbenzene	**889**	50.0	"	"	"	"	"	"	
Xylenes (total)	**1190**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.9 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.4 %*	*68-140*			"	"	"	"	
LAI-3 (B4F0732-02) Water Sampled: 06/22/04 15:00 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	**2880**	500	ug/l	10	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	**1580**	10.0	"	20	"	"	07/02/04	"	
Toluene	ND	5.00	"	10	"	"	07/01/04	"	
Ethylbenzene	**50.7**	5.00	"	"	"	"	"	"	
Xylenes (total)	**69.4**	10.0	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*89.8 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*81.9 %*	*68-140*			"	"	"	"	
LAI-10 (B4F0732-03) Water Sampled: 06/22/04 13:25 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*94.8 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*83.8 %*	*68-140*			"	"	"	"	

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Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-11 (B4F0732-04) Water Sampled: 06/22/04 13:05 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.1 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.9 %*	*68-140*			"	"	"	"	
LAI-12 (B4F0732-05) Water Sampled: 06/22/04 12:45 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*92.5 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*83.1 %*	*68-140*			"	"	"	"	
LAI-13 (B4F0732-06) Water Sampled: 06/22/04 10:55 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*89.0 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*82.7 %*	*68-140*			"	"	"	"	

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-14 (B4F0732-07) Water Sampled: 06/22/04 11:40 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*94.0 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.2 %*	*68-140*			"	"	"	"	
LAI-15 (B4F0732-08) Water Sampled: 06/22/04 12:10 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	**135**	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*97.3 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*86.2 %*	*68-140*			"	"	"	"	
LAI-16 (B4F0732-09) Water Sampled: 06/22/04 15:25 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	**8.52**	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*98.8 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.6 %*	*68-140*			"	"	"	"	

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Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-22 (B4F0732-10) Water Sampled: 06/22/04 08:00 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	**20400**	5000	ug/l	100	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	**4960**	50.0	"	"	"	"	"	"	
Toluene	**51.4**	50.0	"	"	"	"	"	"	
Ethylbenzene	**1020**	50.0	"	"	"	"	"	"	
Xylenes (total)	**1340**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*97.9 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.0 %*	*68-140*			"	"	"	"	
HA-5 (B4F0732-11) Water Sampled: 06/22/04 16:20 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	**178**	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	**2.85**	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	**0.559**	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*100 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.6 %*	*68-140*			"	"	"	"	
HA-13 (B4F0732-12) Water Sampled: 06/22/04 17:00 Received: 06/23/04 17:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G01007	07/01/04	07/01/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*93.5 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*81.9 %*	*68-140*			"	"	"	"	

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Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-2 (B4F0732-01) Water Sampled: 06/22/04 14:05 Received: 06/23/04 17:20									
iesel Range Hydrocarbons	**0.283**	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
urrogate: 2-FBP	*93.6 %*	*50-150*			"	"	"	"	
urrogate: Octacosane	*89.0 %*	*50-150*			"	"	"	"	
LAI-3 (B4F0732-02) Water Sampled: 06/22/04 15:00 Received: 06/23/04 17:20									
iesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
ube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*87.1 %*	*50-150*			"	"	"	"	
urrogate: Octacosane	*94.0 %*	*50-150*			"	"	"	"	
LAI-10 (B4F0732-03) Water Sampled: 06/22/04 13:25 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
ube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*73.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*84.8 %*	*50-150*			"	"	"	"	
AI-11 (B4F0732-04) Water Sampled: 06/22/04 13:05 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
urrogate: 2-FBP	*70.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*92.8 %*	*50-150*			"	"	"	"	
AI-12 (B4F0732-05) Water Sampled: 06/22/04 12:45 Received: 06/23/04 17:20									
iesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
urrogate: 2-FBP	*87.4 %*	*50-150*			"	"	"	"	
urrogate: Octacosane	*97.4 %*	*50-150*			"	"	"	"	

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Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LAI-13 (B4F0732-06) Water Sampled: 06/22/04 10:55 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*72.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*92.8 %*	*50-150*			"	"	"	"	
LAI-14 (B4F0732-07) Water Sampled: 06/22/04 11:40 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*66.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*90.4 %*	*50-150*			"	"	"	"	
LAI-15 (B4F0732-08) Water Sampled: 06/22/04 12:10 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*65.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*84.4 %*	*50-150*			"	"	"	"	
LAI-16 (B4F0732-09) Water Sampled: 06/22/04 15:25 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.625	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	1.25	"	"	"	"	"	"	
Surrogate: 2-FBP	*68.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*93.0 %*	*50-150*			"	"	"	"	
LAI-22 (B4F0732-10) Water Sampled: 06/22/04 08:00 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*63.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*77.8 %*	*50-150*			"	"	"	"	

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Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HA-5 (B4F0732-11) Water Sampled: 06/22/04 16:20 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*93.4 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*93.0 %*	*50-150*			"	"	"	"	
HA-13 (B4F0732-12) Water Sampled: 06/22/04 17:00 Received: 06/23/04 17:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G05003	07/05/04	07/07/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*61.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*84.2 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G01007: Prepared 07/01/04 Using EPA 5030B (P/T)										
Blank (4G01007-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*42.8*		"	*48.0*		*89.2*	*58-144*			
Surrogate: 4-BFB (PID)	*39.5*		"	*48.0*		*82.3*	*68-140*			
LCS (4G01007-BS1)										
Gasoline Range Hydrocarbons	540	50.0	ug/l	502		108	80-120			
Benzene	7.15	0.500	"	6.21		115	80-120			
Toluene	35.6	0.500	"	34.9		102	80-120			
Ethylbenzene	8.70	0.500	"	8.38		104	80-120			
Xylenes (total)	43.5	1.00	"	40.6		107	80-120			
Surrogate: 4-BFB (FID)	*49.4*		"	*48.0*		*103*	*58-144*			
Surrogate: 4-BFB (PID)	*39.7*		"	*48.0*		*82.7*	*68-140*			
LCS Dup (4G01007-BSD1)										
Gasoline Range Hydrocarbons	525	50.0	ug/l	502		105	80-120	2.82	25	
Benzene	6.93	0.500	"	6.21		112	80-120	3.13	25	
Toluene	34.5	0.500	"	34.9		98.9	80-120	3.14	25	
Ethylbenzene	8.45	0.500	"	8.38		101	80-120	2.92	25	
Xylenes (total)	42.1	1.00	"	40.6		104	80-120	3.27	25	
Surrogate: 4-BFB (FID)	*49.3*		"	*48.0*		*103*	*58-144*			
Surrogate: 4-BFB (PID)	*39.5*		"	*48.0*		*82.3*	*68-140*			
Matrix Spike (4G01007-MS1)					**Source: B4F0732-03**					
Gasoline Range Hydrocarbons	512	50.0	ug/l	502	12.7	99.5	58-129			
Benzene	6.88	0.500	"	6.21	0.160	108	46-130			
Toluene	34.0	0.500	"	34.9	0.128	97.1	60-124			
Ethylbenzene	8.42	0.500	"	8.38	ND	100	56-141			
Xylenes (total)	41.5	1.00	"	40.6	ND	102	66-132			
Surrogate: 4-BFB (FID)	*48.5*		"	*48.0*		*101*	*58-144*			
Surrogate: 4-BFB (PID)	*39.2*		"	*48.0*		*81.7*	*68-140*			

North Creek Analytical - Bothell

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Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G01007: Prepared 07/01/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4G01007-MSD1)					**Source: B4F0732-03**					
Gasoline Range Hydrocarbons	468	50.0	ug/l	502	12.7	90.7	58-129	8.98	25	
Benzene	6.58	0.500	"	6.21	0.160	103	46-130	4.46	40	
Toluene	32.4	0.500	"	34.9	0.128	92.5	60-124	4.82	40	
Ethylbenzene	7.84	0.500	"	8.38	ND	93.6	56-141	7.13	40	
Xylenes (total)	39.2	1.00	"	40.6	ND	96.6	66-132	5.70	40	
Surrogate: 4-BFB (FID)	*49.1*		"	*48.0*		*102*	*58-144*			
Surrogate: 4-BFB (PID)	*39.9*		"	*48.0*		*83.1*	*68-140*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G05003: Prepared 07/05/04 Using EPA 3520C										
Blank (4G05003-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.152*		"	*0.270*		*56.3*	*50-150*			
Surrogate: Octacosane	*0.155*		"	*0.195*		*79.5*	*50-150*			
LCS (4G05003-BS1)										
Diesel Range Hydrocarbons	1.46	0.250	mg/l	2.00		73.0	45-105			
Surrogate: 2-FBP	*0.196*		"	*0.270*		*72.6*	*50-150*			
LCS Dup (4G05003-BSD1)										
Diesel Range Hydrocarbons	1.48	0.250	mg/l	2.00		74.0	45-105	1.36	50	
Surrogate: 2-FBP	*0.207*		"	*0.270*		*76.7*	*50-150*			

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

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425.420.9200 fax 425.420.9210
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907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 3485-LAI-012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/09/04 13:45

Notes and Definitions

D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

B4F0732

Date 6-23-04

Page 1 of 1

Landau Associates

Chain-of-Custody Record

Project Name ConocoPhillips-Renton Project No. 706002

Project Location/Event Renton Terminal Quarterly GW Sampling

Sampler's Name Mario Lopez, Brian Tracy

Project Contact Chris Kimmel

Send Results To Chris Kimmel

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	Testing Parameters: BTEX	NWTPH-Gx	NWTPH-Dx										Observations/Comments
LAI - 2	6-22-04	1405	H_2O	4	X	X	X									01	NWTPH-Dx run acid
LAI - 3	6-22-04	1500			X	X	X									02	wash, silica gel cleanup
LAI - 10	6-22-04	1325			X	X	X									03	
LAI - 11	6-22-04	1305			X	X	X									04	
LAI - 12	6-22-04	1245			X	X	X									05	
LAI - 13	6-22-04	1055			X	X	X									06	
LAI - 14	6-22-04	1140			X	X	X									07	
LAI - 15	6-22-04	1210			X	X	X									08	
LAI - 16	6-22-04	1525			X	X	X									09	
LAI - 22	6-22-04	0800			X	X	X									10	
HA - 5	6-22-04	1620			X	X	X									11	
HA - 13	6-22-04	1700			X	X	X									12	

Special Shipment/Handling or Storage Requirements: Store on Ice

Method of Shipment: Lab Courier

Relinquished by
Signature: [signature]
Printed Name: Brian Tracy
Company: Landau Associates
Date: 6/23/04 Time: 1520

Received by
Signature: Tom Blankinship
Printed Name: Blankinship
Company: NCA
Date: 6/23/04 Time: 1635

Relinquished by
Signature: Tom Blankinship
Printed Name: Blankinship
Company: NCA
Date: 6/23/04 Time: 1720

Received by
Signature: [signature] TONY
Printed Name: PRANY TONY
Company: NCA
Date: 6/24/04 Time: 1720

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Landau Associates

Revised Chain of Custody 6470732

Date 6-23-04

Page 1 of 1

Chain-of-Custody Record

Project Name ConocoPhillips-Renton Project No. 706002

Project Location/Event Renton Terminal Quarterly GW Sampling

Sampler's Name Mario Lopez, Brian Tracy

Project Contact Chris Kimmel

Send Results To Chris Kimmel

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	BTEX	NWTPH-Gx	NWTPH-Dx									Observations/Comments
LAI-2	6-22-04	1405	H_2O	4	X	X	X								01	NWTPH-Dx run acid wash, silica gel cleanup
LAI-3	6-22-04	1500			X	X	X								02	
LAI-10	6-22-04	1325			X	X	X								03	
LAI-11	6-22-04	1305			X	X	X								04	
LAI-12	6-22-04	1245			X	X	X								05	
LAI-13	6-22-04	1055			X	X	X								06	
LAI-14	6-22-04	1140			X	X	X								07	
LAI-15	6-22-04	1210			X	X	X								08	
LAI-16	6-22-04	1525			X	X	X								09	
LAI-22	6-22-04	0900			X	X	X								10	
HA-5	6-22-04	1620			X	X	X								11	
HA-13	6-22-04	1700			X	X	X								12	
CW 6/24/04 Trip blank	6-22-04	1200	W	2												

Special Shipment/Handling or Storage Requirements: Store on Ice

Method of Shipment: Lab Courier

Relinquished by	Received by	Relinquished by	Received by
Signature: Brian Tracy	Signature: Tom Blankinship	Signature: Tom Blankinship	Signature: Tonya Prany
Printed Name: Brian Tracy	Printed Name: Blankinship	Printed Name: Blankinship	Printed Name: Prany Tonya
Company: Landau Associates	Company: NCA	Company: NCA	Company: NCA
Date: 6/23/04 Time: 1520	Date: 6/23/04 Time: 1635	Date: 6/23/04 Time: 1720	Date: 6/24/04 Time: 1720

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509.924.9200 fax 509.924.9290
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907.563.9200 fax 907.563.9210

20 July 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 07/02/04 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Effluent	B4G0069-01	Water	07/02/04 08:45	07/02/04 17:45
Air Stripper Effluent	B4G0069-02	Water	07/02/04 09:00	07/02/04 17:45
Influent	B4G0069-03	Water	07/02/04 09:15	07/02/04 17:45
Influent	B4G0069-04	Air	07/02/04 09:30	07/02/04 17:45

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (B4G0069-01) Water Sampled: 07/02/04 08:45 Received: 07/02/04 17:45									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G09015	07/09/04	07/09/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*90.4 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*90.6 %*	*68-140*			"	"	"	"	
Air Stripper Effluent (B4G0069-02) Water Sampled: 07/02/04 09:00 Received: 07/02/04 17:45									
Gasoline Range Hydrocarbons	**104**	50.0	ug/l	1	4G09015	07/09/04	07/09/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	**0.513**	0.500	"	"	"	"	"	"	
Xylenes (total)	**1.57**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*99.2 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*88.5 %*	*68-140*			"	"	"	"	
Influent (B4G0069-03) Water Sampled: 07/02/04 09:15 Received: 07/02/04 17:45									
Gasoline Range Hydrocarbons	**967**	50.0	ug/l	1	4G09015	07/09/04	07/09/04	NWTPH-Gx/8021B	
Benzene	**3.12**	0.500	"	"	"	"	"	"	
Toluene	**11.0**	0.500	"	"	"	"	"	"	
Ethylbenzene	**4.00**	0.500	"	"	"	"	"	"	
Xylenes (total)	**104**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*106 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*84.6 %*	*68-140*			"	"	"	"	

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (B4G0069-01) Water Sampled: 07/02/04 08:45 Received: 07/02/04 17:45									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4G07012	07/07/04	07/09/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*76.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*86.3 %*	*50-150*			"	"	"	"	
Air Stripper Effluent (B4G0069-02) Water Sampled: 07/02/04 09:00 Received: 07/02/04 17:45									
Diesel Range Hydrocarbons	**0.324**	0.250	mg/l	1	4G07012	07/07/04	07/11/04	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*101 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*84.9 %*	*50-150*			"	"	"	"	
Influent (B4G0069-03) Water Sampled: 07/02/04 09:15 Received: 07/02/04 17:45									
Diesel Range Hydrocarbons	**1.37**	0.250	mg/l	1	4G07012	07/07/04	07/11/04	NWTPH-Dx	D-06
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	*110 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*94.7 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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503.906.9200 fax 503.906.9210
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Influent (B4G0069-04) Air Sampled: 07/02/04 09:30 Received: 07/02/04 17:45									
Gasoline Range Hydrocarbons	**927**	50.0	mg/m³ Air	5	4G04004	07/04/04	07/04/04	NWTPH Modified	
Benzene	**23.5**	0.500	"	"	"	"	"	"	
Toluene	**68.5**	0.500	"	"	"	"	"	"	
Ethylbenzene	**5.61**	0.500	"	"	"	"	"	"	
Xylenes (total)	**57.6**	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*104 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*98.7 %*	*75-133*			"	"	"	"	
Gasoline Range Hydrocarbons (v/v)	**218**	11.8	ppmv	5	"	"	"	"	
Benzene (v/v)	**7.26**	0.154	"	"	"	"	"	"	
Toluene (v/v)	**17.9**	0.130	"	"	"	"	"	"	
Ethylbenzene (v/v)	**1.27**	0.114	"	"	"	"	"	"	
Xylenes, total (v/v)	**13.1**	0.227	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Conventional Chemistry Parameters by APHA/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (B4G0069-01) Water Sampled: 07/02/04 08:45 Received: 07/02/04 17:45									
Oil & Grease (HEM)	ND	5.00	mg/l	1	4G08017	07/09/04	07/11/04	EPA 1664	
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	"	"	"	"	"	"	
Air Stripper Effluent (B4G0069-02) Water Sampled: 07/02/04 09:00 Received: 07/02/04 17:45									
Oil & Grease (HEM)	ND	5.00	mg/l	1	4G08017	07/09/04	07/11/04	EPA 1664	
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	"	"	"	"	"	"	
Influent (B4G0069-03) Water Sampled: 07/02/04 09:15 Received: 07/02/04 17:45									
Oil & Grease (HEM)	**20.2**	5.00	mg/l	1	4G08017	07/09/04	07/11/04	EPA 1664	
Total Petroleum Hydrocarbons (SGT-HEM)	**10.5**	5.00	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G09015: Prepared 07/09/04 Using EPA 5030B (P/T)										
Blank (4G09015-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*45.6*		"	*48.0*		*95.0*	*58-144*			
Surrogate: 4-BFB (PID)	*42.4*		"	*48.0*		*88.3*	*68-140*			
LCS (4G09015-BS1)										
Gasoline Range Hydrocarbons	599	50.0	ug/l	502		119	80-120			
Benzene	5.67	0.500	"	6.21		91.3	80-120			
Toluene	30.8	0.500	"	34.9		88.3	80-120			
Ethylbenzene	7.51	0.500	"	8.38		89.6	80-120			
Xylenes (total)	36.4	1.00	"	40.6		89.7	80-120			
Surrogate: 4-BFB (FID)	*47.7*		"	*48.0*		*99.4*	*58-144*			
Surrogate: 4-BFB (PID)	*36.3*		"	*48.0*		*75.6*	*68-140*			
LCS Dup (4G09015-BSD1)										
Gasoline Range Hydrocarbons	574	50.0	ug/l	502		114	80-120	4.26	25	
Benzene	5.61	0.500	"	6.21		90.3	80-120	1.06	25	
Toluene	30.8	0.500	"	34.9		88.3	80-120	0.00	25	
Ethylbenzene	7.44	0.500	"	8.38		88.8	80-120	0.936	25	
Xylenes (total)	36.1	1.00	"	40.6		88.9	80-120	0.828	25	
Surrogate: 4-BFB (FID)	*44.3*		"	*48.0*		*92.3*	*58-144*			
Surrogate: 4-BFB (PID)	*36.3*		"	*48.0*		*75.6*	*68-140*			
Matrix Spike (4G09015-MS1)					**Source: B4F0876-02**					
Gasoline Range Hydrocarbons	688	50.0	ug/l	502	56.9	126	58-129			
Benzene	6.04	0.500	"	6.21	ND	97.3	46-130			
Toluene	32.2	0.500	"	34.9	0.280	91.5	60-124			
Ethylbenzene	7.96	0.500	"	8.38	ND	95.0	56-141			
Xylenes (total)	38.3	1.00	"	40.6	0.712	92.6	66-132			
Surrogate: 4-BFB (FID)	*48.1*		"	*48.0*		*100*	*58-144*			
Surrogate: 4-BFB (PID)	*37.1*		"	*48.0*		*77.3*	*68-140*			

North Creek Analytical - Bothell

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Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G09015: Prepared 07/09/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4G09015-MSD1)					**Source: B4F0876-02**					
Gasoline Range Hydrocarbons	633	50.0	ug/l	502	56.9	115	58-129	8.33	25	
Benzene	5.98	0.500	"	6.21	ND	96.3	46-130	0.998	40	
Toluene	33.0	0.500	"	34.9	0.280	93.8	60-124	2.45	40	
Ethylbenzene	8.09	0.500	"	8.38	ND	96.5	56-141	1.62	40	
Xylenes (total)	38.9	1.00	"	40.6	0.712	94.1	66-132	1.55	40	
Surrogate: 4-BFB (FID)	*44.9*		"	*48.0*		*93.5*	*58-144*			
Surrogate: 4-BFB (PID)	*37.3*		"	*48.0*		*77.7*	*68-140*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G07012: Prepared 07/07/04 Using EPA 3520C										
Blank (4G07012-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.200*		"	*0.270*		*74.1*	*50-150*			
Surrogate: Octacosane	*0.170*		"	*0.195*		*87.2*	*50-150*			
LCS (4G07012-BS1)										
Diesel Range Hydrocarbons	1.54	0.250	mg/l	2.00		77.0	45-105			
Surrogate: 2-FBP	*0.220*		"	*0.270*		*81.5*	*50-150*			
LCS Dup (4G07012-BSD1)										
Diesel Range Hydrocarbons	1.34	0.250	mg/l	2.00		67.0	45-105	13.9	50	
Surrogate: 2-FBP	*0.173*		"	*0.270*		*64.1*	*50-150*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G04004: Prepared 07/04/04 Using EPA 5030B (P/T)										
Blank (4G04004-BLK1)										
Gasoline Range Hydrocarbons	ND	10.0	mg/m³ Air							
Benzene	ND	0.100	"							
Toluene	ND	0.100	"							
Ethylbenzene	ND	0.100	"							
Xylenes (total)	ND	0.200	"							
Surrogate: 4-BFB (FID)	*8.38*		"	*9.60*		*87.3*	*50-150*			
Surrogate: 4-BFB (PID)	*9.84*		"	*9.60*		*102*	*75-133*			
Gasoline Range Hydrocarbons (v/v)	ND	2.36	ppmv							
Benzene (v/v)	ND	0.0308	"							
Toluene (v/v)	ND	0.0261	"							
Ethylbenzene (v/v)	ND	0.0227	"							
Xylenes, total (v/v)	ND	0.0454	"							
LCS (4G04004-BS1)										
Gasoline Range Hydrocarbons	82.0	10.0	mg/m³ Air	100		82.0	50-150			
Surrogate: 4-BFB (FID)	*10.3*		"	*9.60*		*107*	*50-150*			
LCS (4G04004-BS2)										
Benzene	2.05	0.100	mg/m³ Air	2.00		102	50-150			
Toluene	1.89	0.100	"	2.00		94.5	50-150			
Ethylbenzene	1.74	0.100	"	1.96		88.8	50-150			
Xylenes (total)	5.49	0.200	"	6.00		91.5	50-150			
Surrogate: 4-BFB (PID)	*10.4*		"	*9.60*		*108*	*75-133*			
LCS Dup (4G04004-BSD1)										
Gasoline Range Hydrocarbons	65.7	10.0	mg/m³ Air	100		65.7	50-150	22.1	50	
Surrogate: 4-BFB (FID)	*9.51*		"	*9.60*		*99.1*	*50-150*			

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Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Gasoline Hydrocarbons (Benzene to Napthalene) and BTEX in Air by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G04004: Prepared 07/04/04 Using EPA 5030B (P/T)										
LCS Dup (4G04004-BSD2)										
Benzene	2.10	0.100	mg/m³ Air	2.00		105	50-150	2.41	50	
Toluene	1.86	0.100	"	2.00		93.0	50-150	1.60	50	
Ethylbenzene	1.76	0.100	"	1.96		89.8	50-150	1.14	50	
Xylenes (total)	5.53	0.200	"	6.00		92.2	50-150	0.726	50	
Surrogate: 4-BFB (PID)	*10.3*		"	*9.60*		*107*	*75-133*			
Duplicate (4G04004-DUP1)					**Source: B4G0078-01**					
Gasoline Range Hydrocarbons	1310	500	mg/m³ Air		1200			8.76	30	
Surrogate: 4-BFB (FID)	*9.72*		"	*9.60*		*101*	*50-150*			

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G08017: Prepared 07/09/04 Using Gravimetric (hexane)										
Blank (4G08017-BLK1)										
Oil & Grease (HEM)	ND	5.00	mg/l							
Total Petroleum Hydrocarbons (SGT-HEM)	ND	5.00	"							
LCS (4G08017-BS1)										
Oil & Grease (HEM)	40.2	5.00	mg/l	40.8		98.5	78-107			
Total Petroleum Hydrocarbons (SGT-HEM)	17.9	5.00	"	20.4		87.7	65-132			
LCS Dup (4G08017-BSD1)										
Oil & Grease (HEM)	39.7	5.00	mg/l	40.8		97.3	78-107	1.25	10	
Total Petroleum Hydrocarbons (SGT-HEM)	17.7	5.00	"	20.4		86.8	65-132	1.12	20	

North Creek Analytical - Bothell

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	07/20/04 09:48

Notes and Definitions

D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

B4G0069

Date 7-2-04

Page 1 of 1

Chain-of-Custody Record

Project Name Conoco Phillips - Renton Project No. 706002

Project Location/Event Renton Quarterly Sampling

Sampler's Name Brian Tracy

Project Contact Chris Kimmel

Send Results To Chris Kimmel

Testing Parameters

Turnaround Time
☒ Standard
☐ Accelerated
☐ _____

Sample I.D.	Date	Time	Matrix	No. of Containers	BETX + TPH-G (8021-8)	TPH-Dx (NWTPH-Dx)	Oil + Grease (HEM)								Observations/Comments
Effluent	7-2-04	0845	Water	5	x	x	x							-01	TPH-Dx, run acid wash
Air Stripper Effluent	7-2-04	0900	Water	5	x	x	x							-02	+ silica gel cleanup prep
Influent	7-2-04	0915	Water	5	x	x	x							-03	
Influent	7-2-04	0930	Air	2	x									-04	

Special Shipment/Handling or Storage Requirements: Stored on Ice

Method of Shipment: Courier

Relinquished by	Received by	Relinquished by	Received by
Signature: [signature]	Signature: [signature] TONY	Signature:	Signature:
Printed Name: Brian Tracy	Printed Name: PRANY TONY	Printed Name:	Printed Name:
Company: Landau Associates	Company: NCA	Company:	Company:
Date: 7-2-04 Time: 1101	Date: 7/2/04 Time: 1745	Date: Time:	Date: Time:

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

5.0° w/ ice

Rev 4/01

TECHNICAL MEMORANDUM

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

TO: Richard Walker and Richard Logan, Department of Ecology

FROM: Martin Powers, P.E.

DATE: July 15, 2004

RE: INVESTIGATION OF STORMWATER DETENTION POND
CONOCOPHILLIPS RENTON TERMINAL
2423 LIND AVENUE SW, RENTON, WA

INTRODUCTION

On June 1, 2004, Martin Powers of Landau Associates received a telephone call from Tim Johnson of ConocoPhillips in which Mr. Johnson relayed preliminary site investigation information verbally reported by Washington State Department of Ecology (Ecology) personnel for a stormwater detention pond located at the ConocoPhillips bulk petroleum distribution terminal (terminal) located in Renton, Washington. Mr. Johnson indicated that Richard Walker of Ecology conveyed to Mr. Johnson that Ecology personnel based out of the Natural Resources Damage Assessment group had conducted some investigatory activities in the stormwater detention pond, which potentially indicated that free phase gasoline product was observed floating on the surface water in the pond and also present in soil observed by Ecology personnel. On June 2, 2004, in response to Mr. Johnson's telephone call, Mr. Powers contacted Richard Logan (supervisor of the Ecology Natural Resources Damage Assessment group) and Dale Davis who was one of the two personnel that had investigated the stormwater detention pond on behalf of Ecology. Based on the conversations between Mr. Powers, Mr. Logan, and Mr. Davis, it was agreed that Mr. Powers would meet Mr. Davis at the terminal stormwater detention pond to discuss the observations made by Ecology personnel and collect samples from areas identified by Ecology personnel as potentially exhibiting free phase gasoline product.

SUMMARY OF FIELD INVESTIGATION

Mr. Powers and Mr. Davis met at the terminal stormwater detention pond area on June 3, 2004. The pond was virtually dry with no surface water present on June 3, 2004, except for a small puddle near the northern end of the east side of a concrete dike in the pond. Mr. Davis indicated that surface water conditions were the same during his investigation work during the previous week and that Ecology personnel actually did not observe any floating free product on surface water in the detention pond. Mr. Davis showed Mr. Powers the locations of two areas where Ecology personnel had used a shovel to dig 1 to 3 feet into the soil located near the toe of the northern bank of the stormwater detention pond. Mr.

Powers used a hand auger to collect samples from borings located immediately adjacent to the locations previously dug by Ecology personnel for the purpose of "screening" the soil to determine the concentration of volatile organic compounds (VOCs) present as measured with a photoionization detector (PID). The locations were designated as B-1 and B-2 (see attached Figure 1). The hand auger soil borings were extended to 2 ft below grade at location B-1 and 2.5 ft below grade at location B-2. Soil samples were collected at 0.5 ft intervals in each of the hand auger borings, placed in re-sealable plastic bags, allowed to equilibrate for approximately 10 minutes, and monitored for VOC content using a PID probe inserted into the bags. In addition, Mr. Davis dug another shallow sample location (D-1) to a depth of approximately 1 ft below grade near the northern end of the eastern side of the concrete dike and Mr. Powers collected a composite soil sample from the sidewall of this excavation at a depth of approximately 0.0 to 0.5 ft below grade for VOC screening using a PID. The PID readings recorded were documented in the attached field notes (Appendix A).

Field screening results indicated that the highest VOC concentrations observed in the soil samples were at B-1 from 0.5 to 1.0 ft below grade [250 parts per million (ppm)]; B-2 from 1.0 to 1.5 ft below grade (549 ppm); and D-1 from 0.0 to 0.5 ft below grade (250 ppm). Based on the PID results recorded, four duplicate soil samples were collected at B-1 at a depth of 0.5 to 1.0 ft below grade; B-2 at depths from 1.0 to 1.5 ft below grade and 2.0 to 2.5 ft below grade; and D-1 from 0.0 to 0.5 ft below grade. The samples were collected from B-1 and B-2 using a decontaminated hand auger and the sample was collected from D-1 using a nitrile-gloved hand. The soil samples were placed in clean, 4-ounce, soil jars provided by the laboratory [North Creek Analytical, Inc. (NCA) in Bothell, Washington] and were submitted to NCA for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX) using EPA Method 8021B, gasoline range total petroleum hydrocarbons (TPH-G) using Method NWTPH-Gx, and diesel and lube oil range total petroleum hydrocarbons (TPH-Dx) using Method NWTPH-Dx. Soil analytical results were compared to the Washington State Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels for unrestricted land use. Based on a review of the analytical data (Table 1), one of the soil samples (B-1 collected at 0.5 to 1.0 ft below grade) exceeded the MTCA Method A cleanup level for TPH-G [30 milligrams per kilogram (mg/kg)] with a reported concentration of 46.8 mg/kg. All four soil samples exceeded the MTCA Method A cleanup level for benzene (0.03 mg/kg), with concentrations ranging from 0.169 to 2.91 mg/kg. None of the remaining analytes were reported to exceed the MTCA Method A cleanup levels. The concentrations reported for TPH-G and benzene are not indicative of free phase gasoline product being present in the soil. A copy of the laboratory analytical report is provided in Appendix B.

In addition to the soil samples, a water sample was collected from the standing water present in the hole dug at location D-1. The water sample was placed in 40 milliliter (mL) sample containers

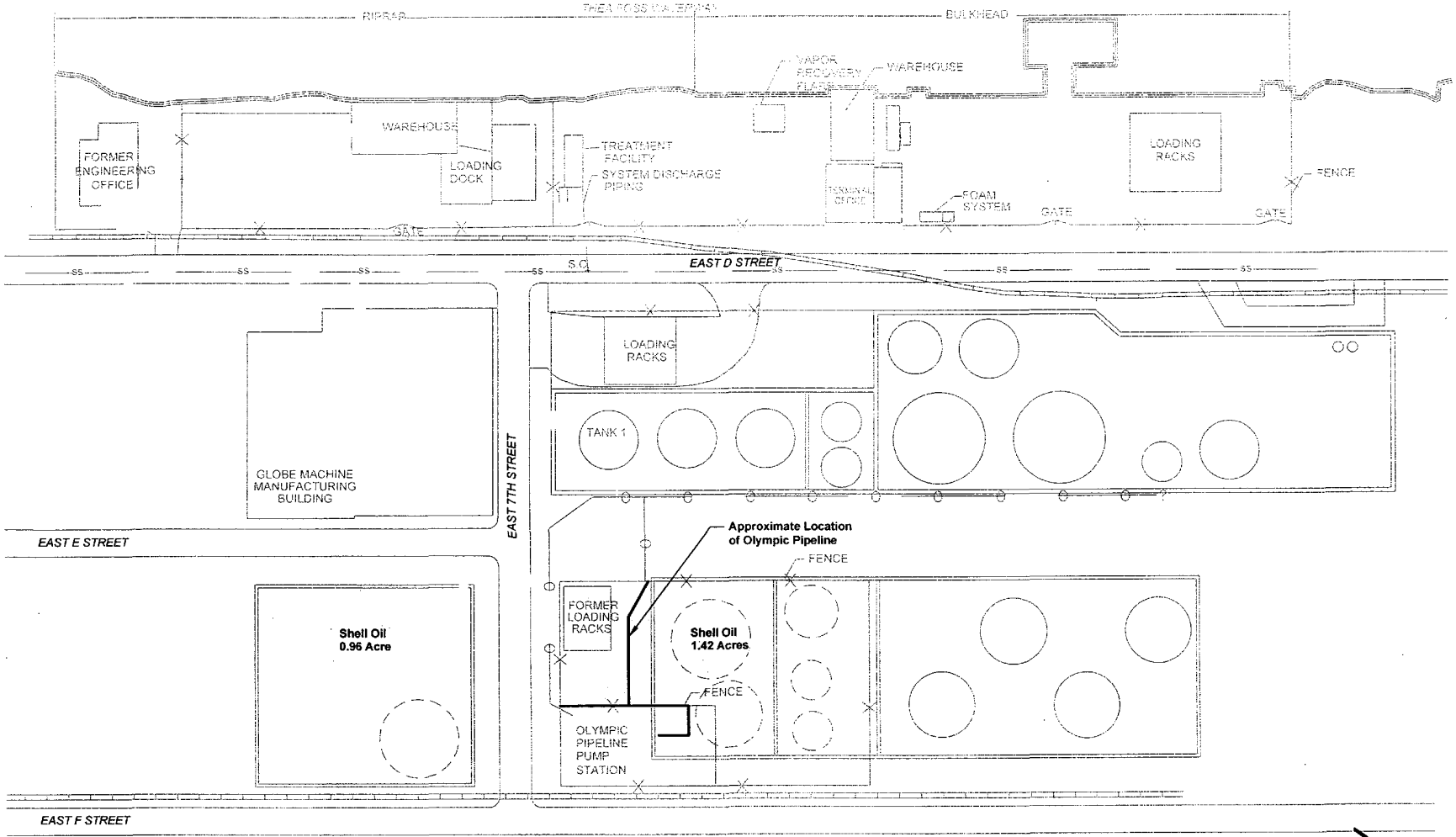
preserved with hydrochloric acid and provided by NCA. The water samples were submitted to NCA for analysis of BTEX using EPA Method 8021B and TPH-G using Method NWTPH-Gx. The water analytical results were compared to the MTCA Method A groundwater cleanup levels (Table 1). Based on a review of the analytical data, the water sample contained TPH-G and BTEX concentrations in excess of the cleanup levels, however the concentrations reported do not indicate the presence of free phase gasoline product. A copy of the laboratory analytical report is provided in Appendix B.

CONCLUSION

Based on the results compiled for the soil and groundwater samples collected on June 3, 2004, it does not appear that free phase gasoline product is impacting the soil or groundwater within the terminal stormwater detention pond. We recommend the continued operation of the soil vapor and groundwater remediation system to address the petroleum release from Tank No. 2, and the subsequent monitoring of groundwater as documented in the semi-annual progress reports submitted to Ecology for the terminal.

If you have any questions regarding the content of this memorandum, please contact Martin Powers of Landau Associates at (425) 329-0246.

Cc: Marty Cramer, ConocoPhillips



Legend

—O— Underground Olympic Pipeline Fuel Line

—ss— Underground Sanitary Sewer Line

Former Above Ground Storage Tanks

S.C. x Sewer Connection

—X— Fence

0 100 200

Scale in Feet

N

Adapted from: Maul Foster & Alongi, Inc. April 02

D Street Petroleum Site Tacoma, Washington	**Shell Oil Properties**	Figure 1

LANDAU ASSOCIATES

Tosco D Street Petroleum Site | T:\706001\020\Memo\Fig1.dwg (A) *Figure 1* 7/14/2004

TABLE 1
ANALYTICAL DATA
STORMWATER POND
CONOCO PHILLIPS RENTON

Location:	B-1	B-2	B-2	D-1	
Depth (ft)	0.5-1.0	1.0-1.5	2.0-2.5	0-0.5	
Lab ID:	B4F0168-01	B4F0168-02	B4F0168-03	B4F0168-04	MTCA
Date Collected:	6/3/2004	6/3/2004	6/3/2004	6/3/2004	Method A
Matrix:	Soil	Soil	Soil	Soil	Level
NWTPH-Gx (mg/kg)					
Gasoline	46.8	8.45	27.3	7.83	30
BETX (mg/kg)					
Method 8021B					
Benzene	2.91	0.169	1.45	0.752	0.03
Toluene	3.01	0.483	0.376	0.379	7
Ethylbenzene	1.07	0.0500 U	0.229	0.200	6
Xylenes (total)	9.30	1.78	0.781	0.771	9
NWTPH-Dx (mg/kg)					
Diesel Range Hydrocarbons	16.4	10.0 U	20.2 U	10.0 U	2,000
Lube Oil Range Hydrocarbons	45.8	25.0 U	50.5 U	25.0 U	2,000
PID Reading, ppm	250	549	59.5	250	

Location:	D-1	
Lab ID:	B4F0168-05	MTCA
Date Collected:	6/3/2004	Method A
Matrix:	Water	Level
NWTPH-Gx (µg/L)		
Gasoline	36200	800
BETX (µg/L)		
Method 8021B		
Benzene	7860	5
Toluene	6920	1000
Ethylbenzene	792	700
Xylenes (total)	3260	1000

U = Indicates the compound was undetected at the reported concentration.

APPENDIX A

Field Notes

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

Sample Point	Location	Depth	Soil Type	PID Readings*
B-1	18ft E of Dike @	0-0.5	Organic Peat/Debris	N/A
	base of N. Bank	0.5-1.0	Med. Grain Sand	250 ppm
	of Pond	1.0-1.5	Sand Grading to Clay	N/A
		1.5-2.0	Clay and Peat	112 ppm
B-2	29 ft E. of Dike	0-0.5	Peat/Organic Debris	N/A
	@ base of N. Bank	0.5-1.0	med. Grain Sand	51 ppm
	of Pond	1.0-1.5	med Grain Sand w/ Some Clay	549 ppm
		1.5-2.0	Clay	N/A
		2.0-2.5	Clay w/Peat	59.5 ppm

*PID readings were collected from soil headspace in re-sealable plastic bags.

Dale Davis dug a hole approximately 1 ft East of the concrete dike and near the north end of the dike and collected a soil sample for PID screening. The soil type was sand and the PID reading was 250 ppm. The sample was collected from 0.0 - 0.5 ft below grade and this location was identified as D-1.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. 706002.012

Location Stormwater Pond Client ConocoPhillips Date 6-3-04

Weather Conditions Sunny; Clear; Low 70s Prepared By M. Powers

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

09:55 - Arrived on site & signed in. I told Gary Anderson whom I was meeting and the nature of today's activities - No Permit Issued

10:00 - Met Dale Davis with Dept. of Ecology at stormwater pond. Dale & I walked into the pond area and Dale explained and identified sampling locations dug by Dale and David Mora of Ecology last week. The pond was dry with the exception of a very small amount of water near the northern end of the east side of the concrete dike.

10:15 - 10:40 - I used a hand auger to collect soil samples adjacent to the sample points dug last week by Ecology. I collected these samples for physical description and to screen samples with a PID to determine which samples were to be analyzed by a laboratory. My findings were as follows:

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

11:00 - 11:15 - I drove to active portion of terminal and filled 2 buckets with water for decontamination of hand auger - 1 bucket was filled w/ water & alconox & the other with water only

11:20 Returned to stormwater pond and began sampling. See Sample Collection Forms

12:05 - 12:15 Cleaned up, took photos (see attached)

12:20 - 12:30 Returned to terminal and signed out. Decon water was deposited into remediation system sparge tank.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

10:40-11:00 - I discussed the PID results with Dale Davis and told him that I intended to collect soil samples from B-1 @ 0.5-1.0 ft bgs; B-2 @ 1.0-1.5 ft bgs; B-2 @ 2.0-2.5 ft bgs using a decontaminated hand auger at locations immediately adjacent to locations B-1 and B-2 which were previously screened with a PID. I also told him that I would collect a grab sample from D-1 @ 0.0-0.5 ft BGS and a water sample from the standing water present in D-1. Andrew Holbrook with ConocoPhillips (Terminal Manager) arrived and I discussed the plan for sampling with him. Dale requested that I have the soil samples analyzed for diesel and gasoline range petroleum hydrocarbons.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project Name ConocoPhillips Renton
Project No. 706002.012 Event

Sample No. B-1 (0.5-1.0')
Date Collected 6-3-04 Time 11:40

Soil/Sediment Sample Collection Form

Weather Sunny; 70s Collector(s) MTP

SAMPLE LOCATION/COMPOSITE DATA

Sample Type: ☒ Soil ☐ Sediment ☐ Other
Sample Location: 18 ft east of Concrete Dike near toe of north bank of pond

Sample Composited: ☐ Horizontally Locations:
☒ Vertically Depth Ranges: 0.5-1.0 ft bgs
☐ Not Composited ☐ Other:

Elevation and Reference:

SAMPLE COLLECTION DATA

Sample Collected From: ☐ Hand-Dug Hole ☐ Test Pit ☒ Boring ☐ Catch Basin/Manhole ☐ Other
Sample Collected With: ☐ Bowl ☐ Spoon ☐ Split Barrel ☐ Shovel ☒ Auger ☐ Other
Made of: ☒ Stainless Steel ☐ Steel ☐ Plastic ☐ Other
Decon Procedure: (By Numerical Order) ☒ Alconox Wash ☒ Tap Rinse ☐ DI Water Rinse ☐ Other ☐ Other
☐ Other

SAMPLE DESCRIPTION (color, grain size, density, moisture, etc.): medium grain sand with hydrocarbon odor; Gray and Moist

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
4oz	2	☒ Glass ☐ Plastic ☐ Other	NWTPH-Dx; NWTPH-Gx; BTEX
		☐ Glass ☐ Plastic ☐ Other	
		☐ Glass ☐ Plastic ☐ Other	

Co-Located/Duplicate Sample No(s). N/A

Photo No. Roll No.

Comments:

☐ Continued on Back

Signature Date 6-4-04

Soil/SedSmplCollForm (M) 10/97

LANDAU ASSOCIATES
ENVIRONMENTAL | GEOTECHNICAL | NATURAL RESOURCES

Project Name ConocoPhillips Renton
Project No. 706002.012 Event
Sample No. R-2 (1.0-1.5')
Date Collected 6-3-04 Time 11:25

Soil/Sediment Sample Collection Form

Weather Sunny; 70s Collector(s) MTP

SAMPLE LOCATION/COMPOSITE DATA

Sample Type: ☒ Soil ☐ Sediment ☐ Other
Sample Location: 29 ft east of Concrete Duke near toe of north bank of pond

Sample Composited: ☐ Horizontally Locations:
☒ Vertically Depth Ranges: ~~0.5~~ 1.0-1.5 ft bgs
☐ Not Composited ☐ Other:

Elevation and Reference:

SAMPLE COLLECTION DATA

Sample Collected From: ☐ Hand-Dug Hole ☐ Test Pit ☒ Boring ☐ Catch Basin/Manhole ☐ Other
Sample Collected With: ☐ Bowl ☐ Spoon ☐ Split Barrel ☐ Shovel ☒ Auger ☐ Other
Made of: ☒ Stainless Steel ☐ Steel ☐ Plastic ☐ Other
Decon Procedure: (By Numerical Order) ☒ Alconox Wash ☒ Tap Rinse ☐ DI Water Rinse ☐ Other ☐ Other
☐ Other

SAMPLE DESCRIPTION (color, grain size, density, moisture, etc.): Medium grain grey sand with some brown clay; Moist; Hydrocarbon odor

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
4oz	2	☒ Glass ☐ Plastic ☐ Other	NWTPH-Dx; NWTPH-Gx; BTEX
		☐ Glass ☐ Plastic ☐ Other	
		☐ Glass ☐ Plastic ☐ Other	

Co-Located/Duplicate Sample No(s). N/A

Photo No. Roll No.

Comments:

☐ Continued on Back

Signature Date 6-4-04

Soil/SedSmplCollForm (M) 10/97

LANDAU ASSOCIATES, INC.
Edmonds, WA (425) 778-0907
Fax (425) 778-6409

Project Name ConocoPhillips Renton
Project No. 706003.012 Event

Sample No. B-2 (2.0-2.5)
Date Collected 6-3-04 Time 11:30

Soil/Sediment Sample Collection Form

Weather Sunny; 70s Collector(s) MTP

SAMPLE LOCATION/COMPOSITE DATA

Sample Type: ☒ Soil ☐ Sediment ☐ Other
Sample Location: Same as B-2 (1.0-1.5)

Sample Composited: ☐ Horizontally ☒ Vertically ☐ Not Composited
Locations:
Depth Ranges: 2.0-2.5 ft bgs
☐ Other:

Elevation and Reference:

SAMPLE COLLECTION DATA

Sample Collected From: ☐ Hand-Dug Hole ☐ Test Pit ☒ Boring ☐ Catch Basin/Manhole ☐ Other
Sample Collected With: ☐ Bowl ☐ Spoon ☐ Split Barrel ☐ Shovel ☒ Auger ☐ Other
Made of: ☒ Stainless Steel ☐ Steel ☐ Plastic ☐ Other
Decon Procedure: *(By Numerical Order)* ☒ Alconox Wash ☒ Tap Rinse ☐ DI Water Rinse ☐ Other ☐ Other ☐ Other

SAMPLE DESCRIPTION (color, grain size, density, moisture, etc.): Brown clay with peat & organic debris (wood, leaves, etc.); very moist

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
4oz	2	☒ Glass ☐ Plastic ☐ Other	NWTPH-Dx; NWTPH-Gx; BTEX
		☐ Glass ☐ Plastic ☐ Other	
		☐ Glass ☐ Plastic ☐ Other	

Co-Located/Duplicate Sample No(s). N/A

Photo No. Roll No.

Comments:

☐ Continued on Back

Signature Martin Powers Date 6-4-04

LANDAU ASSOCIATES, INC.
Edmonds, WA (425) 778-0907
Fax (425) 778-6409

Project Name ConocoPhillips Renton
Project No. 206002.012 Event

Sample No. D-1
Date Collected 6-3-04 Time 11:45

Soil/Sediment Sample Collection Form

Weather Sunny; 70s Collector(s) MTP

SAMPLE LOCATION/COMPOSITE DATA

Sample Type: ☒ Soil ☐ Sediment ☐ Other

Sample Location: 1 ft east of concrete dike near toe of north bank of pond

Sample Composited: ☐ Horizontally Locations:
☒ Vertically Depth Ranges: 0.0 - 0.5 ft bgs
☐ Not Composited ☐ Other:

Elevation and Reference:

SAMPLE COLLECTION DATA

Sample Collected From: ☒ Hand-Dug Hole ☐ Test Pit ☐ Boring ☐ Catch Basin/Manhole ☐ Other

Sample Collected With: ☐ Bowl ☐ Spoon ☐ Split Barrel ☐ Shovel ☐ Auger ☒ Other Gloved hand

Made of: ☐ Stainless Steel ☐ Steel ☐ Plastic ☒ Other Nitrile

Decon Procedure: (By Numerical Order) ☐ Alconox Wash ☐ Tap Rinse ☐ DI Water Rinse ☐ Other ☐ Other
☐ Other

SAMPLE DESCRIPTION (color, grain size, density, moisture, etc.): Gray; moist; med. grain sand; Hydrocarbon odor present

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
4oz	2	☒ Glass ☐ Plastic ☐ Other	NWTPH-Dx; NWTPH-Gx; BTEX
		☐ Glass ☐ Plastic ☐ Other	
		☐ Glass ☐ Plastic ☐ Other	

Co-Located/Duplicate Sample No(s). N/A

Photo No. Roll No.

Comments:

☐ Continued on Back

Signature Date 6-4-04

LANDAU ASSOCIATES, INC.
Edmonds, WA (425) 778-0907
Fax (425) 778-6409

PROJECT NAME ConocoPhillips Renton
PROJECT NO. 706002.012 EVENT

Groundwater/Surface Water Sample Collection Form

SAMPLE NO. D-1
DATE COLLECTED 6-4-04 TIME 11:55
Weather Sunny; 70s Collector(s) MTP

WATER LEVEL/WELL/PURGE DATA

Sample Type: ☐ Groundwater ☒ Surface Water ☐ Other
Sample Location: D-1
Depth to Water (ft): 6 inches Time: Measured from: ☐ ~~Top of Protective Casing~~ Ground surface at Das Sample Point ☐ Top of Well Casing
Well Casing Type: ☐ PVC ☐ Stainless Steel ☐ Fiberglass Casing Diameter:
Well Condition: Secure (☐ Yes / ☐ No) Damaged (☐ Yes / ☐ No) Describe

Begin Purge: Date/Time: Casing Volume (gal):
End Purge: Date/Time: Purge Volume (gal):
Total Depth of Well (ft. below top of well casing):
Purge Volume Calculation:

VOLUME OF SCHEDULE 40 PVC PIPE
Casing Volume (Gal) = $\pi r^2 h \cdot 7.48$
Where: $\pi = 3.1416$, r = radius in ft, h = ft of water column

Diameter (inch)	O.D. (inch)	I.D. (inch)	Volume (gal/linear ft)	Wt. Water (lbs/lineal ft)
2	2.375	2.067	0.17	1.45
4	4.500	4.026	0.66	5.51

Purge Water Disposal to: ☐ 55-gal Drum ☐ Storage Tank ☐ Ground ☐ Other Gallons Purged:

Time	Vol. Purged (gal)	pH	Temperature (°F/°C)	Conductivity	Comments/Observations

SAMPLE COLLECTION DATA

Sample Collected With: ☐ Bailer ☐ Pump/Pump Type ☒ Clean Glass Jar Dedicated (☐ Yes / ☐ No)
Made of: ☐ Stainless Steel ☐ PVC ☐ Teflon ☐ Polyethylene ☒ Other Glass
Decon Procedure: *(By Numerical Order)* ☐ Alconox Wash ☒ Tap Rinse ☐ DI Water ☐ Other ☐ Other ☐ Other
Sample Description (color, turbidity, odor, sheen, etc.): Turbid; Gray; No Odor; No Sheen

Replicate	pH	Temperature (°F/°C)	Conductivity (µS)	Other
1				
2				
3				
4				

pH Meter: Cond. Meter: Cond. Range: ATC: ☐ On ☐ Off
Meter Calibration Check: Ph7 Buffer Reads at °C after Sample Collection.

SIZE	QUANTITY	TYPE	FIELD FILTERED	LABORATORY ANALYSIS
		☐ Glass ☐ Plastic	☐ Yes / ☐ No	
		☐ Glass ☐ Plastic	☐ Yes / ☐ No	
		☐ Glass ☐ Plastic	☐ Yes / ☐ No	
		☐ Glass ☐ Plastic	☐ Yes / ☐ No	

Duplicate Sample No(s). N/A
Comments:

☐ *Continued on Back*

Signature Date

APPENDIX B

Laboratory Analytical Report

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

14 June 2004

Martin Powers
Landau Associates - Edmonds
Sound View Plaza, 130 2nd Ave S
Edmonds, WA/USA 98020-9129

RE: Conoco Phillips - Renton

Enclosed are the results of analyses for samples received by the laboratory on 06/04/04 17:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1 (0.5-1.0')	B4F0168-01	Soil	06/03/04 11:40	06/04/04 17:35
B-2 (1.0-1.5')	B4F0168-02	Soil	06/03/04 11:25	06/04/04 17:35
B-2 (2.0-2.5')	B4F0168-03	Soil	06/03/04 11:30	06/04/04 17:35
D-1 (0-0.5')	B4F0168-04	Soil	06/03/04 11:45	06/04/04 17:35
D-1	B4F0168-05	Water	06/03/04 11:55	06/04/04 17:35

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (0.5-1.0') (B4F0168-01) Soil Sampled: 06/03/04 11:40 Received: 06/04/04 17:35									
Gasoline Range Hydrocarbons	**46.8**	5.00	mg/kg dry	1	4F08007	06/08/04	06/10/04	NWTPH-Gx/8021B	
Benzene	**2.91**	0.0300	"	"	"	"	"	"	
Toluene	**3.01**	0.0500	"	"	"	"	"	"	
Ethylbenzene	**1.07**	0.0500	"	"	"	"	"	"	
Xylenes (total)	**9.30**	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*65.2 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*66.2 %*	*53-142*			"	"	"	"	
B-2 (1.0-1.5') (B4F0168-02) Soil Sampled: 06/03/04 11:25 Received: 06/04/04 17:35									
Gasoline Range Hydrocarbons	**8.45**	5.00	mg/kg dry	1	4F08007	06/08/04	06/10/04	NWTPH-Gx/8021B	
Benzene	**0.169**	0.0300	"	"	"	"	"	"	
Toluene	**0.483**	0.0500	"	"	"	"	"	"	
Ethylbenzene	ND	0.0500	"	"	"	"	"	"	
Xylenes (total)	**1.78**	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*86.2 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*88.3 %*	*53-142*			"	"	"	"	
B-2 (2.0-2.5') (B4F0168-03) Soil Sampled: 06/03/04 11:30 Received: 06/04/04 17:35									
Gasoline Range Hydrocarbons	**27.3**	10.1	mg/kg dry	1	4F08007	06/08/04	06/10/04	NWTPH-Gx/8021B	
Benzene	**1.45**	0.0606	"	"	"	"	"	"	
Toluene	**0.376**	0.101	"	"	"	"	"	"	
Ethylbenzene	**0.229**	0.101	"	"	"	"	"	"	
Xylenes (total)	**0.781**	0.202	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*82.8 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*85.0 %*	*53-142*			"	"	"	"	

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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
D-1 (0-0.5') (B4F0168-04) Soil Sampled: 06/03/04 11:45 Received: 06/04/04 17:35									
Gasoline Range Hydrocarbons	**7.83**	5.00	mg/kg dry	1	4F08007	06/08/04	06/10/04	NWTPH-Gx/8021B	
Benzene	**0.752**	0.0300	"	"	"	"	"	"	
Toluene	**0.379**	0.0500	"	"	"	"	"	"	
Ethylbenzene	**0.200**	0.0500	"	"	"	"	"	"	
Xylenes (total)	**0.771**	0.100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*89.1 %*	*50-150*			"	"	"	"	
Surrogate: 4-BFB (PID)	*89.9 %*	*53-142*			"	"	"	"	
D-1 (B4F0168-05) Water Sampled: 06/03/04 11:55 Received: 06/04/04 17:35									
Gasoline Range Hydrocarbons	**36200**	5000	ug/l	100	4F09007	06/09/04	06/09/04	NWTPH-Gx/8021B	
Benzene	**7860**	50.0	"	"	"	"	"	"	
Toluene	**6920**	50.0	"	"	"	"	"	"	
Ethylbenzene	**792**	50.0	"	"	"	"	"	"	
Xylenes (total)	**3260**	100	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	*96.9 %*	*58-144*			"	"	"	"	
Surrogate: 4-BFB (PID)	*105 %*	*68-140*			"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (0.5-1.0') (B4F0168-01) Soil Sampled: 06/03/04 11:40 Received: 06/04/04 17:35									
Diesel Range Hydrocarbons	**16.4**	10.0	mg/kg dry	1	4F10036	06/10/04	06/10/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	**45.8**	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*78.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*88.5 %*	*50-150*			"	"	"	"	
B-2 (1.0-1.5') (B4F0168-02) Soil Sampled: 06/03/04 11:25 Received: 06/04/04 17:35									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	4F10036	06/10/04	06/10/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*78.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*104 %*	*50-150*			"	"	"	"	
B-2 (2.0-2.5') (B4F0168-03) Soil Sampled: 06/03/04 11:30 Received: 06/04/04 17:35									
Diesel Range Hydrocarbons	ND	20.2	mg/kg dry	1	4F10036	06/10/04	06/10/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	50.5	"	"	"	"	"	"	
Surrogate: 2-FBP	*77.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*95.4 %*	*50-150*			"	"	"	"	
D-1 (0-0.5') (B4F0168-04) Soil Sampled: 06/03/04 11:45 Received: 06/04/04 17:35									
Diesel Range Hydrocarbons	ND	10.0	mg/kg dry	1	4F10036	06/10/04	06/10/04	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	25.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*85.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*110 %*	*50-150*			"	"	"	"	

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Physical Parameters by APHA/ASTM/EPA Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1 (0.5-1.0') (B4F0168-01) Soil	**Sampled: 06/03/04 11:40**	**Received: 06/04/04 17:35**							
Dry Weight	**59.0**	1.00	%	1	4F10031	06/10/04	06/11/04	BSOPSPL003R08	
B-2 (1.0-1.5') (B4F0168-02) Soil	**Sampled: 06/03/04 11:25**	**Received: 06/04/04 17:35**							
Dry Weight	**83.9**	1.00	%	1	4F10031	06/10/04	06/11/04	BSOPSPL003R08	
B-2 (2.0-2.5') (B4F0168-03) Soil	**Sampled: 06/03/04 11:30**	**Received: 06/04/04 17:35**							
Dry Weight	**49.5**	1.00	%	1	4F10031	06/10/04	06/11/04	BSOPSPL003R08	
D-1 (0-0.5') (B4F0168-04) Soil	**Sampled: 06/03/04 11:45**	**Received: 06/04/04 17:35**							
Dry Weight	**80.5**	1.00	%	1	4F10031	06/10/04	06/11/04	BSOPSPL003R08	

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4F08007: Prepared 06/08/04 Using EPA 5030B (MeOH)										
Blank (4F08007-BLK1)										
Gasoline Range Hydrocarbons	ND	5.00	mg/kg							
Benzene	ND	0.0300	"							
Toluene	ND	0.0500	"							
Ethylbenzene	ND	0.0500	"							
Xylenes (total)	ND	0.100	"							
Surrogate: 4-BFB (FID)	*4.56*		"	*4.00*		*114*	*50-150*			
Surrogate: 4-BFB (PID)	*4.33*		"	*4.00*		*108*	*53-142*			
LCS (4F08007-BS1)										
Gasoline Range Hydrocarbons	25.7	5.00	mg/kg	27.5		93.5	75-125			
Benzene	0.380	0.0300	"	0.340		112	75-125			
Toluene	1.91	0.0500	"	1.92		99.5	75-125			
Ethylbenzene	0.470	0.0500	"	0.460		102	75-125			
Xylenes (total)	2.29	0.100	"	2.22		103	75-125			
Surrogate: 4-BFB (FID)	*4.27*		"	*4.00*		*107*	*50-150*			
Surrogate: 4-BFB (PID)	*4.08*		"	*4.00*		*102*	*53-142*			
LCS Dup (4F08007-BSD1)										
Gasoline Range Hydrocarbons	26.3	5.00	mg/kg	27.5		95.6	75-125	2.31	25	
Benzene	0.383	0.0300	"	0.340		113	75-125	0.786	25	
Toluene	1.92	0.0500	"	1.92		100	75-125	0.522	25	
Ethylbenzene	0.474	0.0500	"	0.460		103	75-125	0.847	25	
Xylenes (total)	2.31	0.100	"	2.22		104	75-125	0.870	25	
Surrogate: 4-BFB (FID)	*4.69*		"	*4.00*		*117*	*50-150*			
Surrogate: 4-BFB (PID)	*4.29*		"	*4.00*		*107*	*53-142*			
Matrix Spike (4F08007-MS1)					**Source: B4F0143-01**					
Gasoline Range Hydrocarbons	24.0	5.00	mg/kg dry	28.6	1.36	79.2	42-125			
Benzene	0.335	0.0300	"	0.353	ND	94.9	45-125			
Toluene	1.77	0.0500	"	1.99	0.0195	88.0	55-125			
Ethylbenzene	0.446	0.0500	"	0.478	0.00556	92.1	53-132			
Xylenes (total)	2.18	0.100	"	2.31	0.0172	93.6	59-125			
Surrogate: 4-BFB (FID)	*4.22*		"	*4.15*		*102*	*50-150*			
Surrogate: 4-BFB (PID)	*4.15*		"	*4.15*		*100*	*53-142*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4F08007: Prepared 06/08/04 Using EPA 5030B (MeOH)										
Matrix Spike Dup (4F08007-MSD1)					**Source: B4F0143-01**					
Gasoline Range Hydrocarbons	24.1	5.00	mg/kg dry	28.6	1.36	79.5	42-125	0.416	40	
Benzene	0.361	0.0300	"	0.353	ND	102	45-125	7.47	40	
Toluene	1.87	0.0500	"	1.99	0.0195	93.0	55-125	5.49	40	
Ethylbenzene	0.471	0.0500	"	0.478	0.00556	97.4	53-132	5.45	40	
Xylenes (total)	2.30	0.100	"	2.31	0.0172	98.8	59-125	5.36	40	
Surrogate: 4-BFB (FID)	*3.93*		"	*4.15*		*94.7*	*50-150*			
Surrogate: 4-BFB (PID)	*4.07*		"	*4.15*		*98.1*	*53-142*			
Batch 4F09007: Prepared 06/09/04 Using EPA 5030B (P/T)										
Blank (4F09007-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	*47.8*		"	*48.0*		*99.6*	*58-144*			
Surrogate: 4-BFB (PID)	*48.8*		"	*48.0*		*102*	*68-140*			
LCS (4F09007-BS1)										
Gasoline Range Hydrocarbons	506	50.0	ug/l	500		101	80-120			
Benzene	7.00	0.500	"	6.20		113	80-120			
Toluene	32.4	0.500	"	34.8		93.1	80-120			
Ethylbenzene	8.59	0.500	"	8.35		103	80-120			
Xylenes (total)	40.3	1.00	"	40.5		99.5	80-120			
Surrogate: 4-BFB (FID)	*52.8*		"	*48.0*		*110*	*58-144*			
Surrogate: 4-BFB (PID)	*48.4*		"	*48.0*		*101*	*68-140*			

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4F09007: Prepared 06/09/04 Using EPA 5030B (P/T)										
LCS Dup (4F09007-BSD1)										
Gasoline Range Hydrocarbons	516	50.0	ug/l	500		103	80-120	1.96	25	
Benzene	7.12	0.500	"	6.20		115	80-120	1.70	25	
Toluene	33.1	0.500	"	34.8		95.1	80-120	2.14	25	
Ethylbenzene	8.79	0.500	"	8.35		105	80-120	2.30	25	
Xylenes (total)	41.1	1.00	"	40.5		101	80-120	1.97	25	
Surrogate: 4-BFB (FID)	*52.5*		"	*48.0*		*109*	*58-144*			
Surrogate: 4-BFB (PID)	*48.9*		"	*48.0*		*102*	*68-140*			

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4F10036: Prepared 06/10/04 Using EPA 3550B										
Blank (4F10036-BLK1)										
Diesel Range Hydrocarbons	ND	10.0	mg/kg							
Lube Oil Range Hydrocarbons	ND	25.0	"							
Surrogate: 2-FBP	*8.15*		"	*10.7*		*76.2*	*50-150*			
Surrogate: Octacosane	*4.69*		"	*5.33*		*88.0*	*50-150*			
LCS (4F10036-BS1)										
Diesel Range Hydrocarbons	59.9	10.0	mg/kg	66.7		89.8	71-120			
Surrogate: 2-FBP	*9.83*		"	*10.7*		*91.9*	*50-150*			
LCS Dup (4F10036-BSD1)										
Diesel Range Hydrocarbons	57.6	10.0	mg/kg	66.7		86.4	71-120	3.91	40	
Surrogate: 2-FBP	*9.47*		"	*10.7*		*88.5*	*50-150*			
Duplicate (4F10036-DUP1)					**Source: B4F0260-07**					
Diesel Range Hydrocarbons	25.8	10.0	mg/kg wet		34.4			28.6	40	
Lube Oil Range Hydrocarbons	68.9	25.0	"		92.9			29.7	40	
Surrogate: 2-FBP	*6.51*		"	*10.8*		*60.3*	*50-150*			
Surrogate: Octacosane	*4.96*		"	*5.39*		*92.0*	*50-150*			

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Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4F10031: Prepared 06/10/04 Using Dry Weight										
Blank (4F10031-BLK1)										
Dry Weight	100	1.00	%							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Landau Associates - Edmonds	Project: Conoco Phillips - Renton	
Sound View Plaza, 130 2nd Ave S	Project Number: 706002.012	**Reported:**
Edmonds, WA/USA 98020-9129	Project Manager: Martin Powers	06/14/04 10:43

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

North Creek Analytical - Bothell

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

Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

B4F0168

Date 6-4-04

Page 1 of 1

☐ Seattle (Edmonds) (425) 778-0907
☐ Tacoma (253) 926-2493
☐ Spokane (509) 327-9737
☐ Portland (Lake Oswego) (503) 443-6010
☐ _____

Landau Associates

Chain-of-Custody Record

Project Name ConocoPhillips Renton Project No. 706002.012

Project Location/Event Stormwater Pond

Sampler's Name M. Powers

Project Contact M. Powers

Send Results To M. Powers

Testing Parameters

Turnaround Time
[redacted]
☒ Accelerated
☐ 5 day

Sample I.D.	Date	Time	Matrix	No. of Containers	NWTPH-Gx/BTEX	NWTPH-Dx	Observations/Comments
B-1 (0.5-1.0')	6-3-04	11:40	S	2	X	X	01
B-2 (1.0-1.5')	6-3-04	11:25	S	2	X	X	02
B-2 (2.0-2.5')	6-3-04	11:30	S	2	X	X	03
D-1 ([redacted]-0.5')	6-3-04	11:45	S	2	X	X	04
D-1	6-3-04	11:55	W	2	X		05
							5.4° W/O

Special Shipment/Handling or Storage Requirements ConocoPhillips WO 3485-LAI-011

Method of Shipment

Relinquished by	Received by	Relinquished by	Received by
Signature: Martin Powers	Signature: Tom Blankinship	Signature: Tom Blankinship	Signature: [redacted] TONY
Printed Name: Martin Powers	Printed Name: Blankinship	Printed Name:	Printed Name: PRAMY TONY
Company: Landau Associates	Company: NCA	Company:	Company: NCA
Date: 6-4-04 Time: 17:00	Date: 6/4/04 Time: 1700	Date: 6/4/04 Time: 1735	Date: 6/4/04 Time: 1735

WHITE COPY - Project File YELLOW COPY - Laboratory PINK COPY - Client Representative

Rev 4/01

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. 706002.012

Location Stormwater Pond Client ConocoPhillips Date 6-3-04

Weather Conditions Sunny; Clear; Low 70s Prepared By M. Powers

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

09:55 - Arrived on site & signed in. I told Gary Anderson whom I was meeting and the nature of today's activities - No Permit Issued

10:00 - Met Dale Davis with Dept. of Ecology at stormwater pond. Dale & I walked into the pond area and Dale explained and identified sampling locations flagged by Dale and David Mora of Ecology last week. The pond was dry with the exception of a very small amount of water near the northern end of the east side of the concrete dike.

10:15-10:40 - I used a hand auger to collect soil samples adjacent to the sample points flagged last week by Ecology. I collected these samples for physical description and to screen samples with a PID to determine which samples were to be analyzed by a laboratory. My findings were as follows:

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

Sample Point	Location	Depth	Soil Type	PID Reading*
B-1	18ft E of Dike @	0-0.5	Organic Peat/Debris	N/A
	base of N. Bank	0.5-1.0	Med. Grain Sand	250 ppm
	of Pond	1.0-1.5	Sand Grading to Clay	N/A
		1.5-2.0	Clay and Peat	112 ppm
B-2	29 ft E. of Dike	0-0.5	Peat/Organic Debris	N/A
	@ base of N. Bank	0.5-1.0	Med. Grain Sand	51 ppm
	of Pond	1.0-1.5	Med Grain Sand w/ Some Clay	549 ppm
		1.5-2.0	Clay	N/A
		2.0-2.5	Clay w/ Peat	59.5 ppm

*PID readings were collected from soil headspace in re-sealable plastic bags.

Dale Davis dug a hole approximately 1 ft East of the concrete dike and near the north end of the dike and collected a soil sample for PID screening. The soil type was sand and the PID reading was 250 ppm. The sample was collected from 0.0 - 0.5 ft below grade and this location was identified as D-1.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
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Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

10:40-11:00 - I discussed the PID results with Dale Davis and told him that I intended to collect soil samples from B-1 @ 0.5-1.0 ft bgs; B-2 @ 1.0-1.5 ft bgs; B-2 @ 2.0-2.5 ft bgs using a decontaminated hand auger at locations immediately adjacent to locations B-1 and B-2 which were previously screened with a PID. I also told him that I would collect a grab sample from D-1 @ 0.0-0.5 ft BGS and a [redacted] sample from the standing water present in D-1. Andrew Holbrook with ConocoPhillips (Terminal Manager) arrived and I discussed the plan for sampling with him. Dale requested that I have the soil samples analyzed for diesel and gasoline range petroleum hydrocarbons.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Landau Associates, Inc.
Edmonds, WA (425) 778-0907
Fax: (425) 778-6409

Field Report

Project ConocoPhillips Renton Terminal Job No. _____

Location _____ Client _____ Date 6-3-04

Weather Conditions _____ Prepared By _____

Description of work done, locations, equipment used, quantity estimate *(Indicate location and elevation, and mark locations on plans, use separate paragraph for each subject work item, show if approved as meeting specifications or not.)*

11:00 - 11:15 - I drove to active portion of terminal and filled 2 buckets with water for decontamination of hand auger - 1 bucket was filled w/ water & alconox & the other with water only

11:20 Returned to stormwater pond and began sampling. See Sample Collection Forms

12:05 - 12:15 Cleaned up, took photos (see attached)

12:20 - 12:30 Returned to terminal and signed out. Decon water was deposited into remediation system sparge tank.

Visitors _____

Unsatisfactory Conditions & Recommended Correction _____

Attachments _____

Distribution _____ Signed _____

Semiannual Status Report
ConocoPhillips Renton Terminal
Renton, Washington

February 23, 2004

Prepared for

ConocoPhillips Co.

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907

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INTRODUCTION

This status report provides a summary of remediation activities conducted from July through December 2003 at the ConocoPhillips (formerly Tosco Corporation) bulk petroleum distribution terminal in Renton, Washington (the site). Remediation activities conducted at the site and documented in this report are related to a 14,800-gallon petroleum product release, which occurred in November 2002. The petroleum release was reported to the Washington State Department of Ecology (Ecology) on November 14, 2002. A Release Notification Report (Landau Associates 2003a) was submitted to Ecology in February 2003. Remedial actions conducted from November 2002 through June 2003 were summarized in a Status Report (Landau Associates 2003b) previously submitted to Ecology.

BACKGROUND

The site is an active bulk petroleum distribution terminal located at 2423 Lind Avenue SW in Renton, Washington (Figure 1). The site is surrounded by industrial properties, public streets, and undeveloped areas. There are currently seven large aboveground storage tanks located in the tank farm at the site (Figure 2), which store premium and regular unleaded gasoline, kerosene, diesel fuel, and ethanol. Each tank is surrounded by concrete block walls which are approximately 3 ft high, and the entire tank area is surrounded by an earthen containment berm which provides secondary surface spill containment. Surface drainage in the tank area is controlled by a series of gate valves in the concrete containment walls, which direct flow to a sump in the western portion of the tank area. A large portion of the surface drainage water infiltrates through the earthen material surrounding the tanks and recharges the shallow groundwater table.

HISTORICAL RELEASE

A historical release at the site was discovered in 1986 when petroleum-contaminated soil was encountered in the vicinity of the tanker truck loading area. The responsible party for the release was determined to be Mobil Oil Company (currently ExxonMobil). A subsurface investigation was conducted, which revealed that contaminated groundwater and soil were present throughout the tanker truck loading area and extended south into the tank farm area. Liquid phase hydrocarbons (LPH) floating on the groundwater table were measured up to 3.55 ft thick as recently as May 2003. In response to a consent order by Ecology (Order No. DE 87-N301), an LPH recovery system was constructed and began operation in November 1987. Previous consultants documented that 57,000 gallons of LPH were removed by the product recovery system between December 1987 and November 1993. Based on an interview with the current environmental consultant (Kleinfelder, Inc.) working on behalf of ExxonMobil,

the remediation system in operation at the site consists of two recovery wells, an oil/water separator, a product holding tank, a batch tank, and an air stripper. This current configuration has been in operation since March 2003 and reportedly has resulted in the recovery and discharge of approximately 537,677 gallons of groundwater and the recovery of approximately 50 gallons of LPH (Personal Communication – Charlie Swift). As of December 30, 2003, a maximum thickness of 1.3 ft of LPH were reportedly floating on the groundwater table in the immediate vicinity of the loading rack.

NOVEMBER 2002 RELEASE

The petroleum release in November 2002 consisted of 14,800 gallons of super-unleaded gasoline from the bulk storage tank designated as Tank 2 (Figure 2). Upon discovery of the gasoline release from Tank 2, site personnel began transferring the remaining gasoline from Tank 2 into some of the other large bulk tanks in the tank farm and into tanker trucks. On November 14, 2002, Landau Associates began coordinating efforts to assess the extent of impact and conduct interim action LPH recovery efforts. The initial assessment and LPH recovery activities conducted prior to January 21, 2003 were documented in the Release Notification Report (Landau Associates 2003a).

Initial assessment efforts included the installation of 24 postholes around the perimeter of Tank 2 and the monitoring of existing wells (HA-6, HA-7, HA-8, HA-12, HA-13, HA-14) to determine if LPH was present. Only one posthole (located northwest of Tank 2) reported any measurable LPH. No LPH were observed in postholes located to the south, southeast, and southwest of Tank 2. On November 15 and 16, 2002, Landau Associates oversaw the installation of a horizontal total fluids recovery well (HRW-1), seven vertical total fluids recovery wells (RW-1, RW-2, RW-3, RW-4, RW-5, RW-6, and RW-7), and four horizontal vapor recovery lines (VR-1, VR-2, VR-3, and VR-4) as shown on Figure 2. Monitoring data indicated that all vertical recovery wells contained measurable LPH by November 20, 2002.

On November 23 and 24, 2002, Landau Associates installed six groundwater monitoring wells (HA-15, HA-16, HA-17, HA-18, HA-19 and HA-20) inside the tank farm and near Tank 2 using hand auger techniques. Approximately 3.5 ft of LPH were observed in HA-20 on November 27, 2002. To delineate the LPH near HA-20, Landau Associates installed three 4-inch diameter total fluids recovery/monitoring wells (LAI-1 through LAI-3) along the outside of the tank farm on January 3, 2003 using hollow-stem auger drilling methods, as shown on Figure 2.

On January 17, 2003, LPH were discovered floating on the water surface of a stormwater retention pond located to the southeast of Tank 2. ConocoPhillips personnel contacted the Renton Fire Department and Ecology upon observing the LPH on the surface water on January 17, 2003. The Renton Fire Department, with assistance from ConocoPhillips, Emerald Petroleum Services, Inc. (Emerald), and

Landau Associates, conducted the initial response. A diaphragm pump was installed in a small ditch located west of the pond, to limit the flow of water and LPH to the retention pond. In addition, a network of Venturi style blowers were installed near the southern bank of the retention pond to abate vapor concentrations.

Between January 20 and 30, 2003, Landau Associates oversaw the installation of five monitoring wells (LAI-12 through LAI-16), six vertical total fluids recovery wells (LAI-4 through LAI-9) located inside the tank farm area and south-southeast of Tank 2 and two vertical total fluids recovery wells (LAI-10 and LAI-11) located outside the tank area and south-southwest of Tank 2.

REMEDIAL COMPONENTS

Remediation of the November 2002 gasoline release was initiated on November 17, 2002. Since the initiation of remedial efforts, a combination of methods—groundwater/LPH pumping using diaphragm pumps, surface water/LPH pumping using diaphragm pumps, LPH removal using hand bailing methods, groundwater/LPH pumping using downhole pneumatic pumps and soil vapor extraction/LPH volatilization using a dual phase vacuum extraction (DPVE) system—have been utilized in the vicinity of Tank 2. The current configuration of the remediation system being utilized at the site is provided in Figure 3.

DUAL PHASE VACUUM EXTRACTION SYSTEM

A DPVE component was installed and activated on February 12, 2003. The DPVE utilizes a positive displacement blower to apply a vacuum to seven vertical recovery wells (LAI-4, LAI-5, LAI-7, LAI-8, LAI-9, RW-2, RW-3 and RW-7). The amount of vacuum applied at each well was periodically adjusted to maximize system efficiency. Discharged airflow from the water treatment air stripper and the DPVE recovered vapors from the wells are routed to a thermal oxidizer for treatment prior to atmospheric discharge in accordance with the modified Notice of Construction (NoC) No. 8819 issued by the Puget Sound Clean Air Agency (PSCAA). Fresh air dilution valves were installed at five recovery wells (LAI-4, LAI-7, RW-2, RW-3 and RW-7) to keep the mixture of fresh air and recovered vapors at an optimal concentration for the thermal/catalytic oxidizer.

The oxidizer unit was modified from thermal mode to catalytic mode on November 18, 2003. Petroleum hydrocarbon concentrations of the extracted vapor were becoming low enough so that a catalytic oxydizer would operate with greater efficiency at a lower combustion temperature and require less supplemental fuel (propane).

The DPVE system was in operation for approximately 3,400 hours between June and December 2003. Landau Associates' field personnel conduct operation and maintenance checks on the system once a week, or more often if needed. In addition, H2Oil Recovery System (manufacturer of the remediation system) has performed monthly maintenance from June through December 2003. Operational logs completed by maintenance personnel are provided in Appendix A.

GROUNDWATER TREATMENT SYSTEM

Dedicated down-hole pneumatic pumps at LAI-4, LAI-5, LAI-7, LAI-8, LAI-9 and RW-2 have been utilized for groundwater and LPH recovery since March 24, 2003. To optimize LPH recovery, the pneumatic pump at RW-2 was relocated to LAI-6 on July 24, 2003. The groundwater system consists of an oil/water separator, a product holding tank, batch tank, air-sparge tank, and an air stripper. The system design schematic is presented on Figure 3. On July 9, 2003, the disposal of treated groundwater was rerouted from the onsite storage in a Baker Tank (final disposal at Ferndale Refinery) to discharge through the sanitary sewer under King County Wastewater Discharge Authorization No. 4057-01.

A horizontal interceptor trench was installed near the southern property boundary directly south of Tank 2 on November 11, 2003. The interceptor trench is located near the property line and runs almost parallel to SW 27th Street (Figure 2). The interceptor trench is oriented east - west spanning 100 ft in length and varies from approximately 8 to 10 ft in depth. Recovery points HW-1E and HW-1W are situated at the east and west end points of the trench, respectively. An as-built diagram of the groundwater horizontal interceptor trench is presented on Figure 4.

Landau Associates installed three additional pneumatic groundwater pumps on December 3, 2003 at HW-1E, HW-1W and LAI-6. The pump that was at LAI-6 previous to the new pump installation was relocated to RW-2. The new pumps were installed to increase the area of groundwater table depression. In effect, the new pumps will assist the prevention offsite contaminant migration as well as TPH recovery.

Seasonal increases in groundwater table are problematic for free product recovery. During seasonal high groundwater table conditions (approximately November through April), the pumps recover primarily water and very little, if any, LPH. To avoid the potential accumulation of groundwater in the LPH storage tank, the oil water separation unit has been temporarily bypassed as of December 12, 2003.

On December 24, 2003, the system was shutdown due to accumulating ice related to the unusual cold air temperatures. Sections of frozen PVC pipes used to transfer groundwater and LPH from the well head to the treatment system were replaced. Prior to re-startup of the system, an evaluation of any damaged equipment and/or part will be conducted.

ADDITIONAL REMEDIAL ACTIVITIES

Landau Associates installed a surface water containment dike in the southwest corner of the storm water retention pond (Figure 2) on November 22, 2003. The dike was installed as a contingency measure to limit the potential for LPH to impact a significant area of the surface water in the pond. In the winter of 2002-2003, LPH was observed in the pond and was determined to be entering the pond near the southwestern corner. The dike is constructed of pre-cast concrete with a flow-through valve that will normally remain closed during the "wet" season (approximately November through April). The as-built diagram of the surface water containment barrier is provided on Figure 5.

MONITORING DATA

GROUNDWATER AND PRODUCT ELEVATION MONITORING

Depths of groundwater and free product, if present, have been measured monthly between June and December 2003 in five hand auger wells, five monitoring wells, and eighteen recovery wells. The wells were selected to allow for evaluation of groundwater elevation and LPH thickness in the vicinity of Tank 2. Depths to groundwater and LPH were measured from the northern portion of the PVC well casing using a decontaminated, intrinsically safe oil/water interface probe with readings recorded to the nearest 0.01 ft. Decontamination procedures consisted of removing any free product (if present) from the probe using a paper towel, washing the probe with a tap water and alconox soap mixture, and rinsing the probe with distilled water.

The measured depths to groundwater, LPH thickness, and the calculated groundwater elevations are presented in Table 1. Depths to groundwater were converted to groundwater elevations based on previous vertical control surveys conducted at the site. A general decrease in groundwater potentiometric levels was observed from March 2003 to September 2003 due to the effect of groundwater pumping and lack of precipitation. Groundwater potentiometric levels have generally increased from September 2003 to December 2003 as a result of precipitation. The stormwater retention pond was virtually dry from mid-May to late September 2003. As a result of the November 2002 release from Tank 2, measurable amounts of free product have been consistently detected in wells HA-20, LAI-4 through LAI-9, and RW-1 through RW-7, with a maximum thickness of 1.06 ft in LAI-4 measured in December 2003.

Measurements collected monthly for ExxonMobil by Kleinfelder also indicate measurable amounts of LPH at B-3, B-4, B-6, HA-2, HA-8 and W-3 with a maximum thickness of 1.30 ft in B-3 in December 2003. Only the LPH observed in HA-8 is likely related to the November 2002 release from Tank 2. Indications of LPH (i.e., sheen) have been reported at B-1, B-5, HA-2, and W-2. ExxonMobil groundwater elevation and LPH data is presented in Appendix B.

Potentiometric maps have been developed from the depth to groundwater and LPH thickness data collected during the monthly sampling events. Potentiometric contours for June 2003, July 2003, August 2003, September 2003, October 2003, November 2003 and December 2003 are presented in Figures 6 through 12, respectively. The July 16, 2003 potentiometric map (Figure 6) also includes ExxonMobil data which was collected on July 17, 2003. The groundwater potentiometric data compiled for June through December 2003 appear to indicate a natural radial pattern of groundwater flow outward from the ConocoPhillips tank farm; however, local alterations to the natural groundwater flow direction appear to be related to the active remediation activities at the site (Figures 6 through 12). Areas of groundwater depression are apparent around active groundwater pumping locations and mounds are apparent around DPVE recovery wells.

ANALYTICAL DATA COLLECTION AND EVALUATION

GROUNDWATER ANALYTICAL MONITORING

Quarterly groundwater sampling events were conducted during August and November 2003 for analysis of gasoline range total petroleum hydrocarbons (TPH-G), benzene, toluene, ethylbenzene, and xylenes (BTEX). ExxonMobil conducted an annual sampling event in May 2003 to coincide with the ConocoPhillips second quarter 2003 sampling event. No groundwater samples were collected on behalf of ExxonMobil during the period from June to December 2003. The August and November 2003 analytical results for TPH-G and benzene are presented along with ExxonMobil annual results (May 2003) on Figures 13 through 16. Groundwater analytical results are summarized in Table 2 and laboratory reports are provided in Appendix C.

During quarterly sampling events, monitoring wells located outside the retaining wall were purged using a non-dedicated centrifugal pump and sampled using non-dedicated peristaltic pumps with dedicated polyethylene tubing. Samples from monitoring wells located inside the retaining walls of the tank farm were collected using disposable bailers. Authorization to use the centrifugal pump for groundwater purging was granted by the ConocoPhillips Renton Terminal management prior to use, per the requirements of the Health and Safety Plan. Wells were purged prior to sample collection by removing three well volumes of groundwater and noting the stabilization of field parameters. Field parameters consisted of pH, conductivity, and temperature. If the well was purged dry prior to the collection of three well volumes, then the well was considered adequately purged. Sample collection was conducted by slowly filling the laboratory-supplied containers in such a manner as to reduce aeration of the water. Sample containers for analyses that are sensitive to volatilization were completely filled so that no headspace remained. Samples were placed in coolers and packed in ice to keep samples at about 4°C.

Groundwater samples were analyzed by North Creek Analytical, Inc. (NCA) for TPH-G using Method NWTPH-G, diesel and lube oil-range petroleum hydrocarbons (TPH-Dx) using Method NWTPH-D, and BTEX using Method 8021B. Landau Associates reviewed all analytical results through a focused data validation process. The purpose of the validation was to verify if selected quality control parameters were within the limits specified by the analytical methods. The data validation was performed in accordance with applicable portions of the EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review and Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 1994a,b). Some data was flagged as estimated based on the results of the data validation and labeled with an estimated flag "J" for detected compounds and "UJ" for non-detected compounds; however, all data was determined to be acceptable for monitoring purposes.

SYSTEM VAPOR SAMPLING

Samples of recovered (influent) and discharged (effluent) vapors have been collected approximately monthly since the DPVE system startup. Samples for this reporting period were collected system on July 11, 2003; August 7, 2003; October 15, 2003; November 21, 2003; and December 18, 2003. Samples were collected from the influent and effluent sampling ports of the thermal (catalytic) oxidizer using 1-liter Tedlar™ bags. Samples were screened for VOCs using a portable photoionization detector (PID) meter. Samples were placed in a cooler, without ice, for shipment to the laboratory. System vapor samples were submitted to NCA under chain-of-custody documentation. Vapor samples were analyzed for BTEX and TPH-G using EPA Method 8021B. Influent and effluent analytical results are summarized in Table 3. The laboratory reports are provided in Appendix C.

GROUNDWATER TREATMENT SYSTEM SAMPLING

Groundwater treatment system samples were collected in July, September, October, and December 2003. Samples were collected to follow the wastewater permit requirement of semiannual sampling, characterize water for disposal purposes, and to assist with mass removal calculations. Samples at dedicated sample ports were collected prior to and after the recovered water was passed through the air stripper by slowly filling the laboratory supplied containers in such a manner as to reduce aeration of the water. Sample containers for analyses that are sensitive to volatilization were completely filled so that no headspace remained. Samples were placed in coolers and packed in ice to keep samples at about 4°C. Treatment samples were analyzed by NCA for TPH-G (Method NWTPH-G), TPH-Dx (Method NWTPH-D), and BTEX (EPA Method 8021B). Treatment system sample results are provided in Table 4. The laboratory reports for the treatment system sample are provided in Appendix C.

GASOLINE VOLUME REMOVAL

As reported in the August 8, 2003 Status Report (Landau 2003b), approximately 6,791 gallons of gasoline were recovered from the vicinity of Tank 2 prior to July 2003. The volume of gasoline removed by remedial efforts to date can be estimated by summarizing the following:

- Volume of gasoline recovered prior to July 2003
- Volume of LPH collected in the product storage tank and disposed at the ConocoPhillips Ferndale Refinery and the Emerald Airport Way Disposal Center
- Volume of dissolved phase gasoline removed based on the total volume of water recovered and the average TPH-G concentration of the recovered water influent samples
- Volume of vapor phase gasoline removed based on the vapor recovery flow rate and concentration exhibited by the DPVE system influent samples.

LPH REMOVAL

Between July 1, 2003 and December 31, 2003 approximately 1,998 gallons of LPH was separated from pumped groundwater through the oil/water separator. The stored product was removed and disposed by Emerald at the ConocoPhillips Ferndale Refinery and the Emerald Airport Way Disposal Center. Bills of lading are provided by Emerald and are included in Appendix D.

DISSOLVED PHASE GASOLINE REMOVAL

Between July 1, 2003 and December 31, 2003 a total of 60,305 gallons of pumped groundwater has been treated onsite and discharged to the sanitary sewer under King County Wastewater Discharge Authorization No. 4057-01.

Analytical results from the influent sampling port of the groundwater treatment system indicate an average TPH concentration of 209 mg/L throughout the period from July to December 2003. Based on a total volume of approximately 60,305 gallons of water disposed, it is estimated that approximately 16 gallons of gasoline have been removed by the groundwater recovery operations between July 1 and December 31, 2003.

VAPOR PHASE GASOLINE REMOVAL

Weekly monitoring of the DPVE system indicates that the system has operated approximately 3,400 hours between July and December 2003 and a total of 5,406 hours (225 days) hours since the commencement of the system (February 12, 2003). Periodic influent vapor sampling of the DPVE system

(Table 5) indicate that the DPVE system has removed approximately 14,129 lbs (2,208 gallons) between June 21, and December 31, 2003.

TOTAL VOLUME OF GASOLINE REMOVED

Based on the above information, approximately 11,013 gallons of gasoline has been recovered since the initial release on November 13, 2002. The total estimated volume of gasoline recovered is comprised of the following:

RECOVERY METHOD	GALLONS OF RECOVERED GASOLINE
Recovery Efforts Prior to July 2003: (as reported in previous status reports)	6,791
LPH Recovery (July – December 2003)	1,998
Dissolved Phase Recovery (July – December 2003)	16
Vapor Phase Recovery (June 21 through December 31, 2003	2,208
Estimated Total Gasoline Recovered	11,013

CONCLUSIONS

The effectiveness of the remedial efforts being conducted can be evaluated on the following criteria:

- Control of the LPH to reduce migration to the stormwater retention pond and decrease the thickness in the vicinity of Tank 2.
- Control of the dissolved-phase TPH-G and benzene plumes to limit offsite impacts and co-mingling with the plume generated by the historical (Mobil Oil Company) gasoline release near the loading racks.
- Discharge treated vapors and water in compliance with appropriate permits applicable to the remedial activities.

The three performance criteria identified are evaluated as follows:

LPH CONTROL

Based on the interpretations of the extent of LPH presented in Figures 13 through 16, it appears that the areal extent of LPH has remained relatively consistent since monitoring began in November 2002. Aside from detections of LPH at HA-8, none of the ExxonMobil monitoring wells in the vicinity of Tank 2 exhibited measurable LPH during the period from July to December 2003. In general, as documented in Table 1, the overall thickness of LPH floating on the water table appears to be decreasing. LPH has not been observed in the stormwater retention pond since March 2003, likely due to the effects of the groundwater and LPH pumping activities and the seasonal lack of precipitation during the dry months. Water was not present in the stormwater retention pond from July until late November 2003. The concrete dike installed in the retention pond in November 2003 is intended to limit the potential to impact a significant area of the surface water in the pond.

DISSOLVED-PHASE PLUME CONTROL

Based on the data interpreted in Figures 6 through 12, it appears that natural groundwater flow follows a radial pattern from the vicinity of Tank 2. The radial flow of groundwater creates the potential for the dissolved phase TPH-G and benzene plumes to co-mingle with the southern extent of the plume related to the historical Mobil Oil Company gasoline release, and it also creates the potential for the dissolved phase plume emanating from Tank 2 to migrate offsite to the south under SW 27th Street. The dissolved phase TPH-G (Figures 13 and 15) and benzene (Figures 14 and 16) concentration data from the August and November 2003 sampling events indicates that the dissolved-phase plume has not co-mingled with the Mobil Oil Company release plume, and has not migrated offsite to the southeast of Tank 2. Analytical data from May 2003 indicated possible migration offsite (low level concentrations of TPH and benzene detected in LAI-16); however, the November 2003 analytical results indicate no detectable concentrations of TPH-G or benzene in LAI-16 (the well was dry in August 2003 and could not be sampled). The horizontal interceptor trench installed approximately parallel to SW 27th Street and south of the terminal fence line is intended to reduce the potential of offsite migration of the dissolved phase plume.

PERMIT COMPLIANCE

Two operational permits exist for the remediation system at the Renton Terminal. A PSCAA permit for Notice of Construction (NoC) 8819 was issued on May 8, 2002 with a subsequent modification issued on July 8, 2003. The NoC limits the total vapor discharge flow rate to 800 cfm and TPH concentration in the vapor effluent to less than 30 ppmv. The conditions of the permit have been monitored between July and December 2003 with no exceedances of the permit, as indicated by information presented in Tables 3 and 5.

A wastewater discharge authorization (No. 4057-01) was issued on June 2, 2003 by King County Wastewater Treatment Division. The permit limits the daily water discharge from the remediation system to 8,000 gallons per day and requires that the discharged water meet concentration limits of 130 micrograms per liter (µg/L) for benzene, 1,500 µg/L for toluene, and 1,400 µg/L for ethylbenzene. Semi-annual samples of the discharged water are required by the discharge authorization. Discharge (effluent) samples were collected on July 7, September 11, October 14, and December 18, 2003 (Table 4). The analytical results for the December 18, 2003 sampling event indicate that the benzene concentration of the effluent sample (284 µg/L) was greater than the permit limit (130 µg/L). The system has been shut down since December 24 because of freezing water pipes. Prior to re-startup of the system, an evaluation of the system will be completed to attempt to determine conditions that may have caused the exceedance.

In addition, a granular activated carbon (GAC) filtration vessel will be installed to treat water discharged from the air stripper prior to entering the sanitary sewer.

RECOMMENDATIONS

Based on the conclusions provided above, the following recommendations are made for the site:

- Continued quarterly sampling of groundwater monitoring wells and analysis for TPH-G and benzene. The next groundwater sampling event is scheduled for March 2004 to accommodate the sampling schedule of ExxonMobil's consultant and to gather a more complete data set.

- Continued monthly gauging of groundwater and LPH. We will also attempt to coordinate these gauging events with ExxonMobil's consultant.

- Continued operation of the DPVE and groundwater recovery and treatment systems. The goals of the remedial system remain to remove LPH and limit migration of LPH and the dissolved-phase plume.

We recommend the preparation of a semi-annual progress report for the period from January 2004 through June 2004 and submittal of the report to Ecology by August 2004.

USE OF THIS REPORT

This remediation status report has been prepared for the exclusive use of ConocoPhillips Company for specific application to the ConocoPhillips Renton Terminal. No other party is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

This document has been prepared under the supervision and direction of the following key staff.

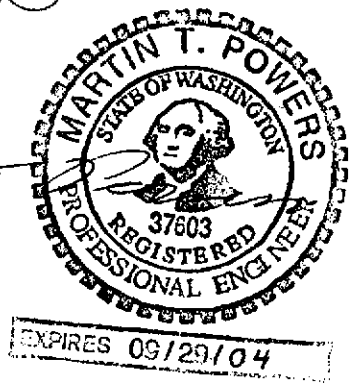
LANDAU ASSOCIATES, INC.

Rhonda Moon

For Christine B. Kimmel, L.G.
Project Geologist

Martin T. Powers

Martin T. Powers, P.E.
Project Manager



CBK/MTP/skh

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EPA. 1994b. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.*

Landau Associates. 2003a. *Release Notification Report, ConocoPhillips Renton Terminal, Renton, Washington.* February 11.

Landau Associates. 2003b. Status Report, *ConocoPhillips Renton Terminal, Renton, Washington.* August 8.

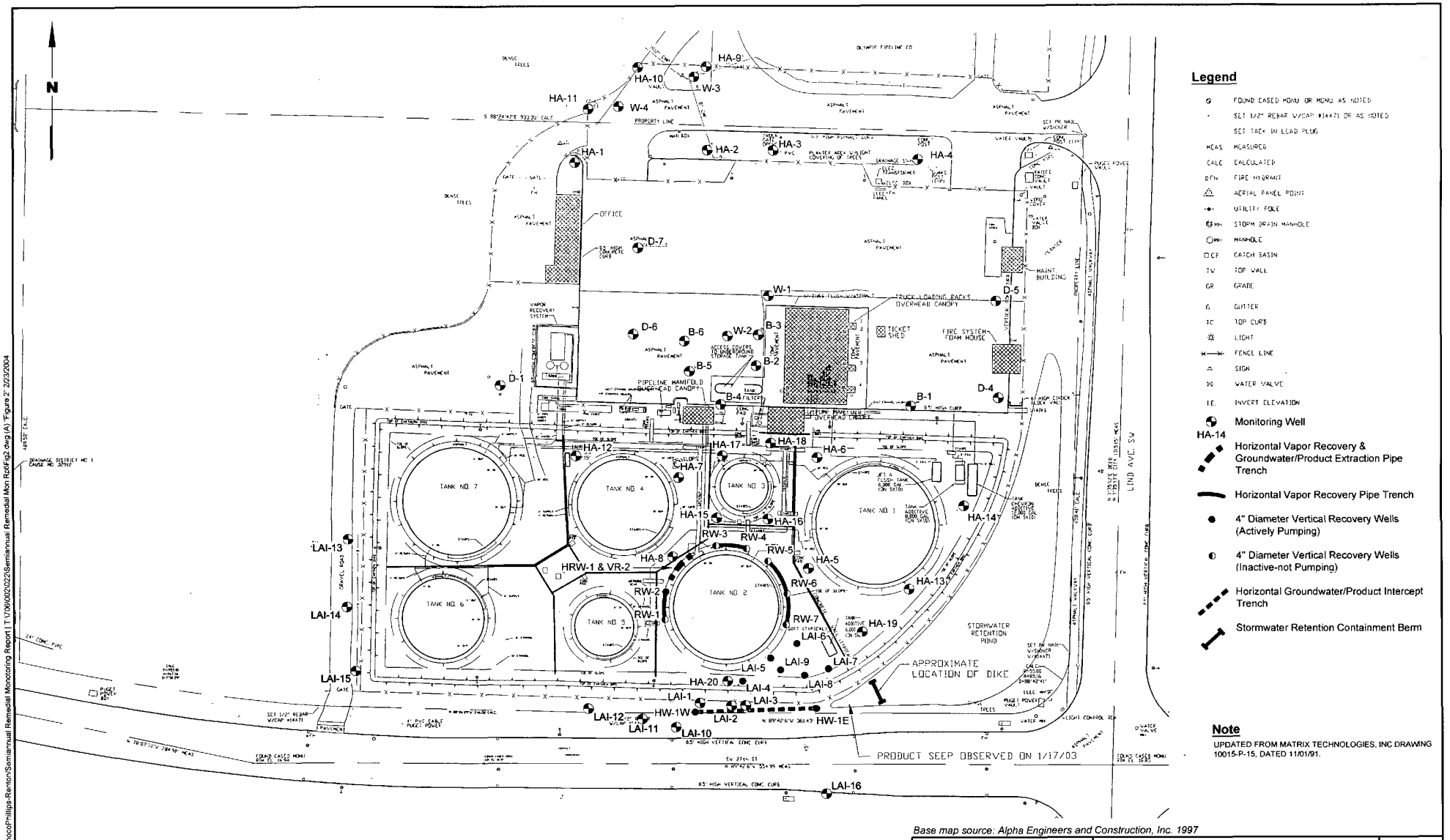
Semiannual Status Report
ConocoPhillips Renton Terminal
Renton, Washington

February 23, 2004

Prepared for

ConocoPhillips Co.

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907



Base map source: Alpha Engineers and Construction, Inc. 1997

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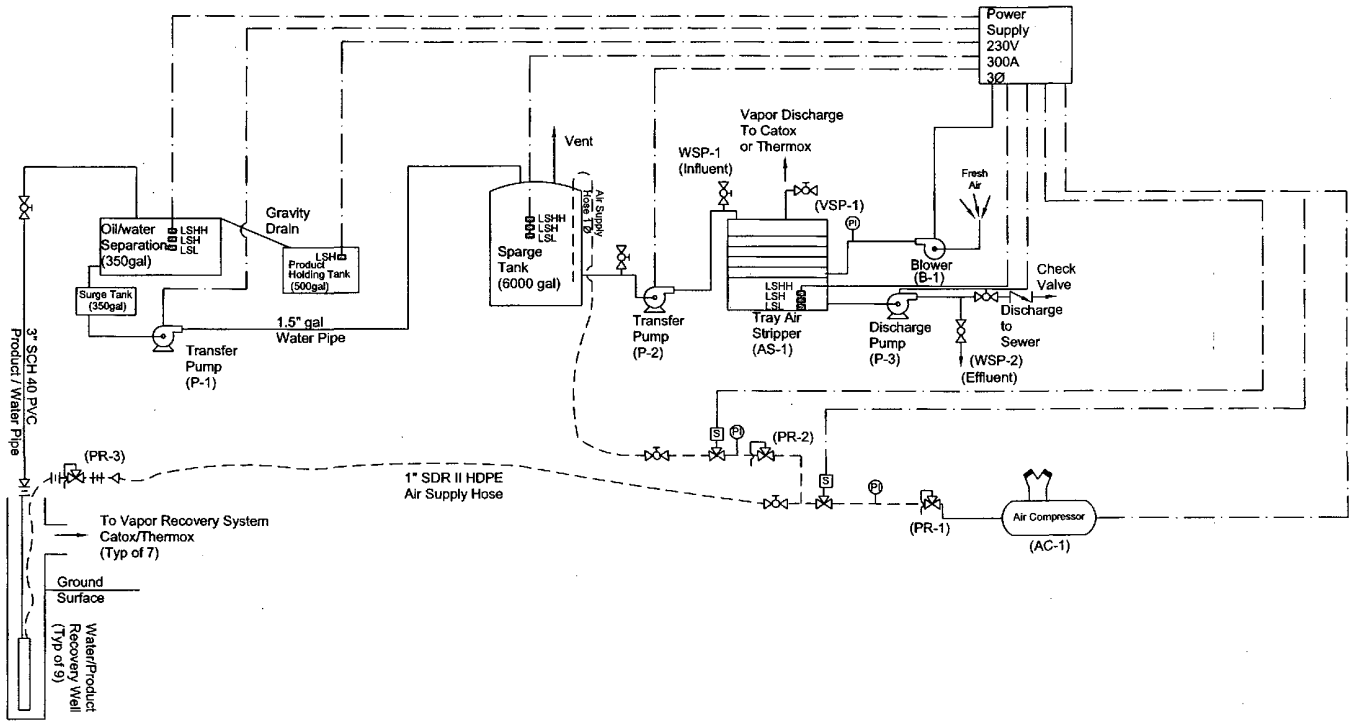
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Site Map**	Figure 2

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\76\0002\2022\Semiannual Remedial Mon Rpt\Fig2.dwg (A) 'Figure 2' 2/23/2004



Not to Scale

ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Groundwater Treatment System Process and Instrumentation Diagram**	Figure 3

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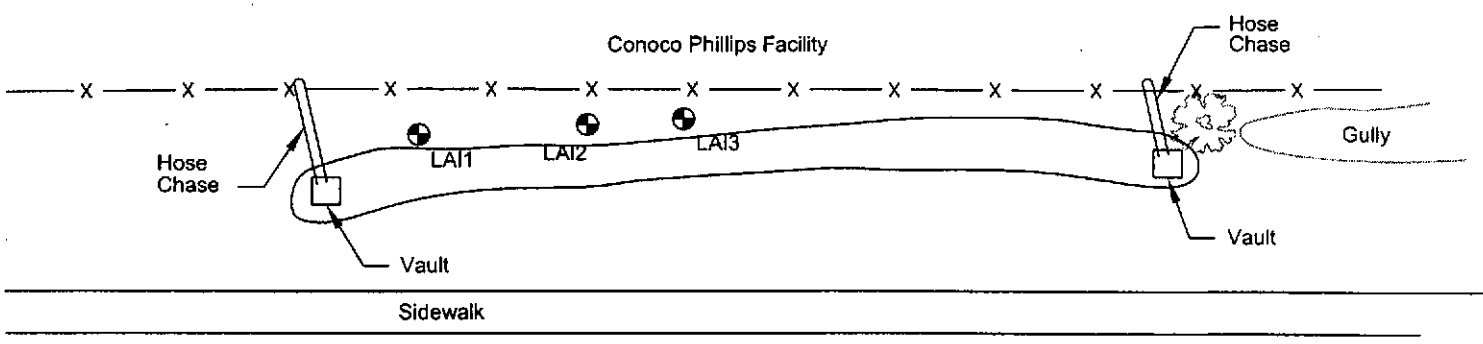
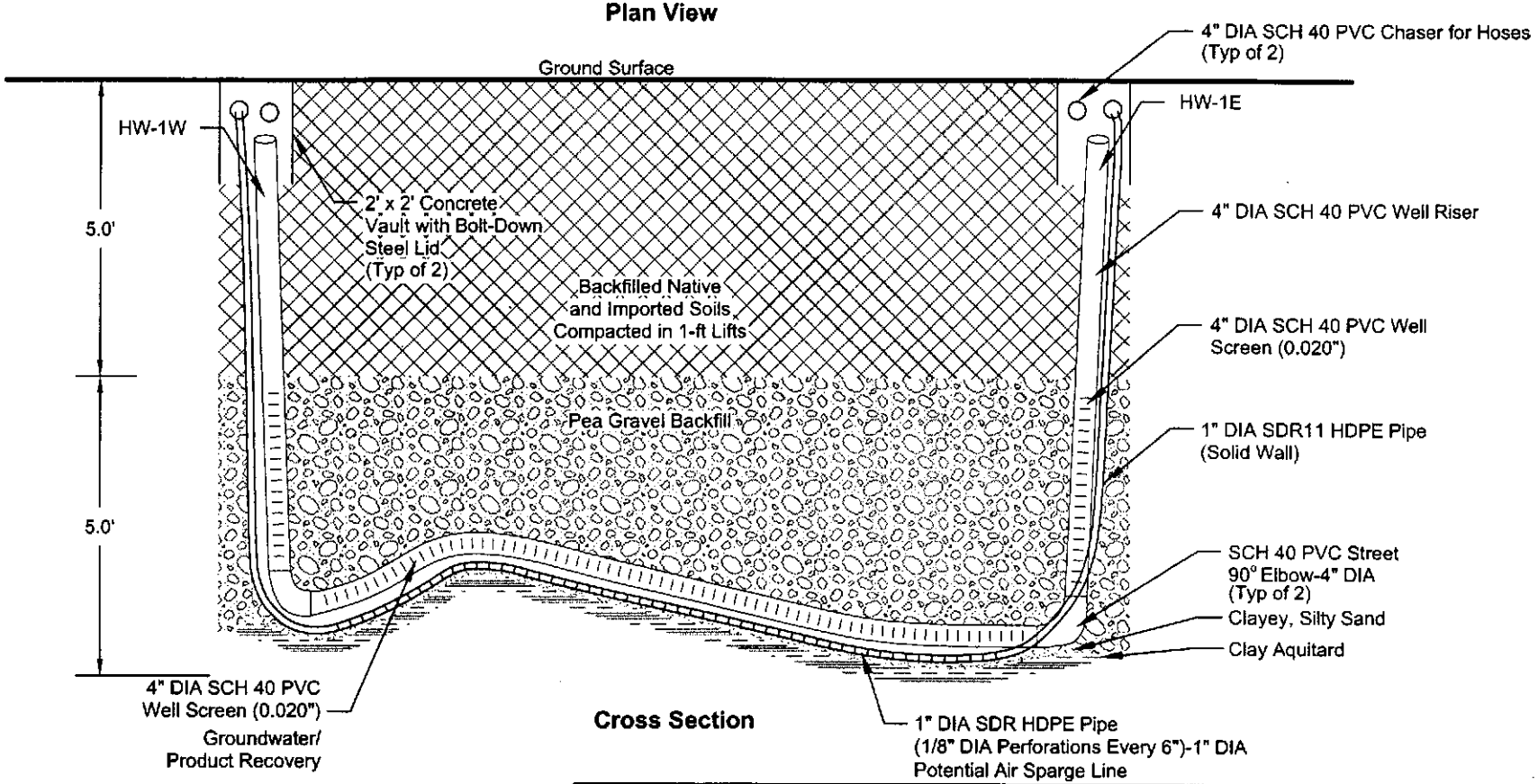


Plan View



Cross Section

0 20 40

Approximate Scale in Feet
Vertical Exaggeration = 8x

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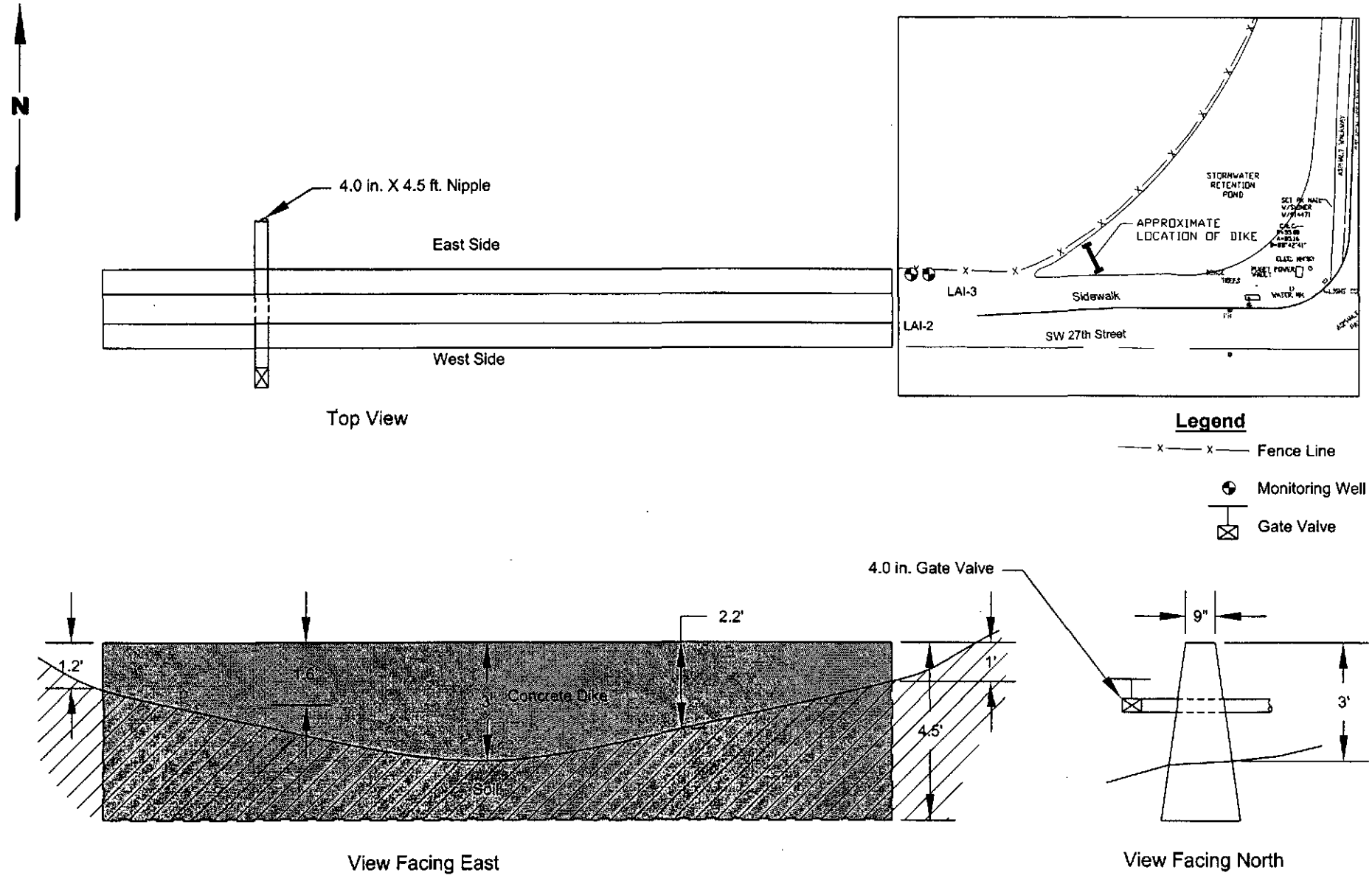
ConocoPhillips
2423 Lind Ave SW
Renton, Washington

Horizontal Interceptor Trench

Figure 4



0 5 10
Scale in Feet

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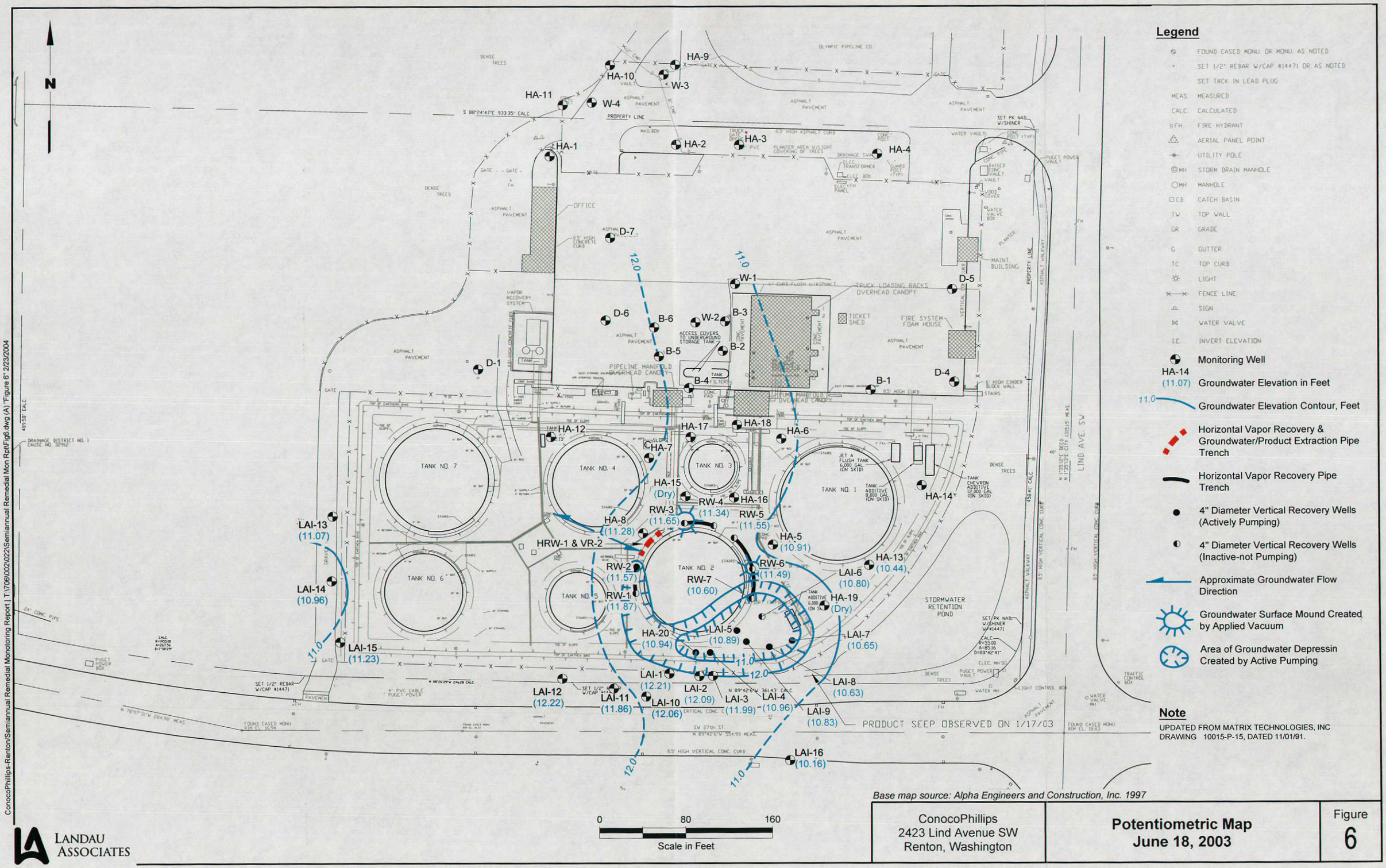
ConocoPhillips
2423 Lind Avenue SW
Renton, Washington

Stormwater Retention Pond Dike

Figure 5



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- SET TACK IN LEAD PLUG
- MEAS. MEASURED
- CALC. CALCULATED
- RFH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping

Note

UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

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ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map June 18, 2003**	Figure 6

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\706\002\022\Semiannual Remedial Mon Rpt\Fig6.dwg (A) "Figure 6" 2/23/2004

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- RFH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
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- MH MANHOLE
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- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping

Note

UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

PRODUCT SEEP OBSERVED ON 1/17/03

Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160

Scale in Feet

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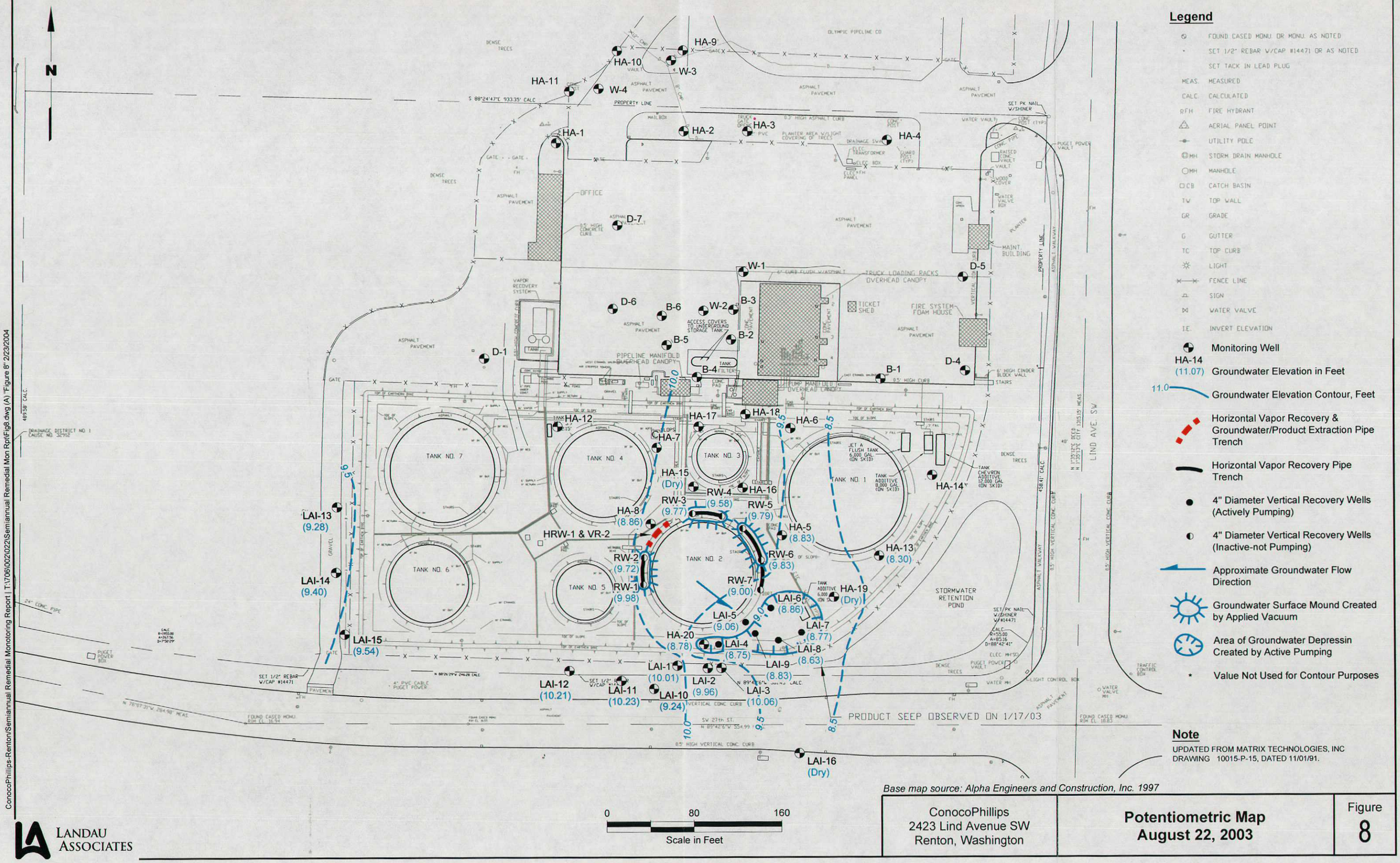
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map July 16, 2003**	Figure 7



Note

UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

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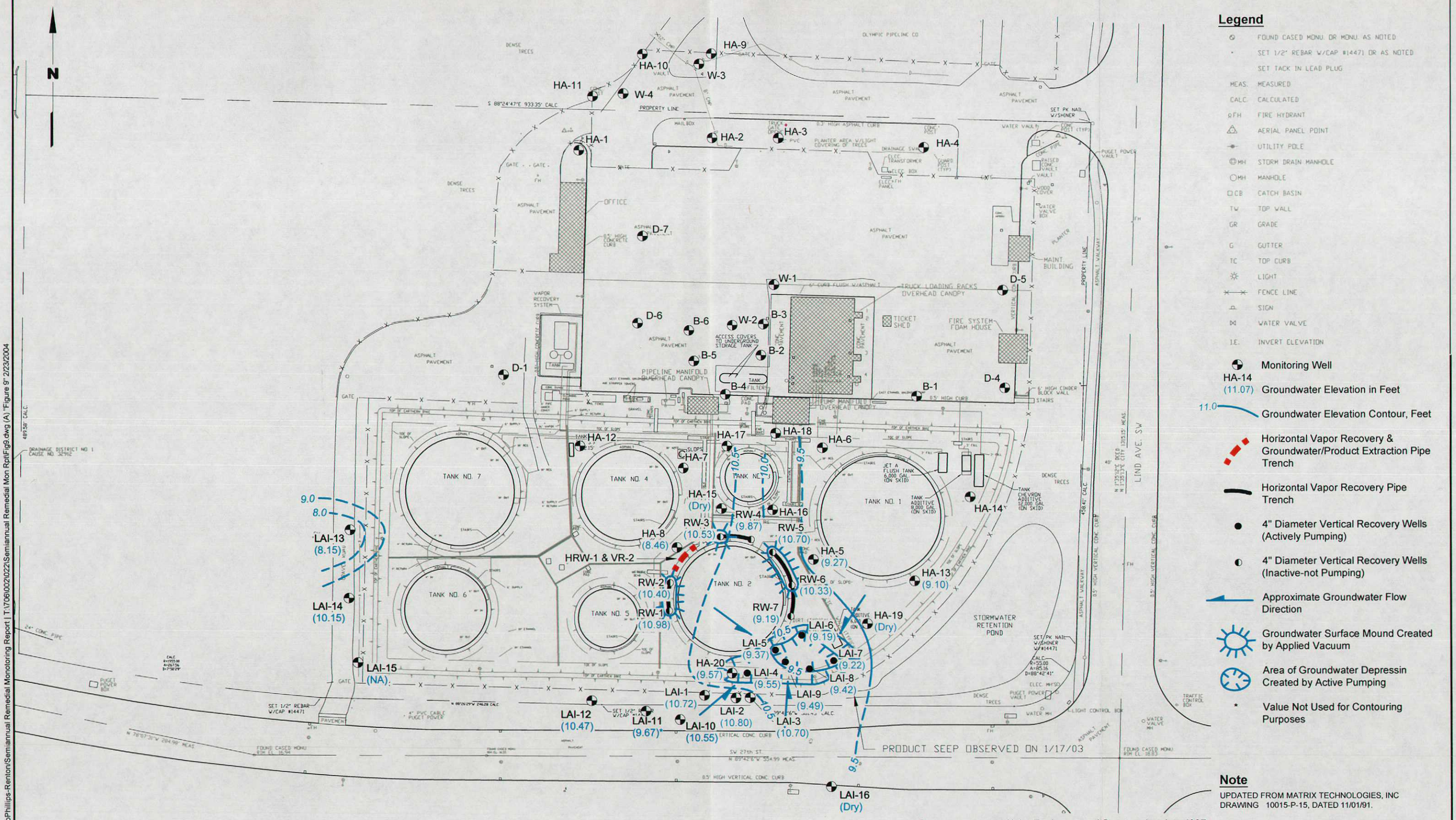
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map August 22, 2003**	Figure 8

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\706\0\2022\Semiannual Remedial Mon Rpt\Fig8.dwg (A) "Figure 8" 2/23/2004



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- AERIAL PANEL POINT
- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WV WATER VALVE
- I.E. INVERT ELEVATION

- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- * Value Not Used for Contouring Purposes

Note

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Base map source: Alpha Engineers and Construction, Inc. 1997

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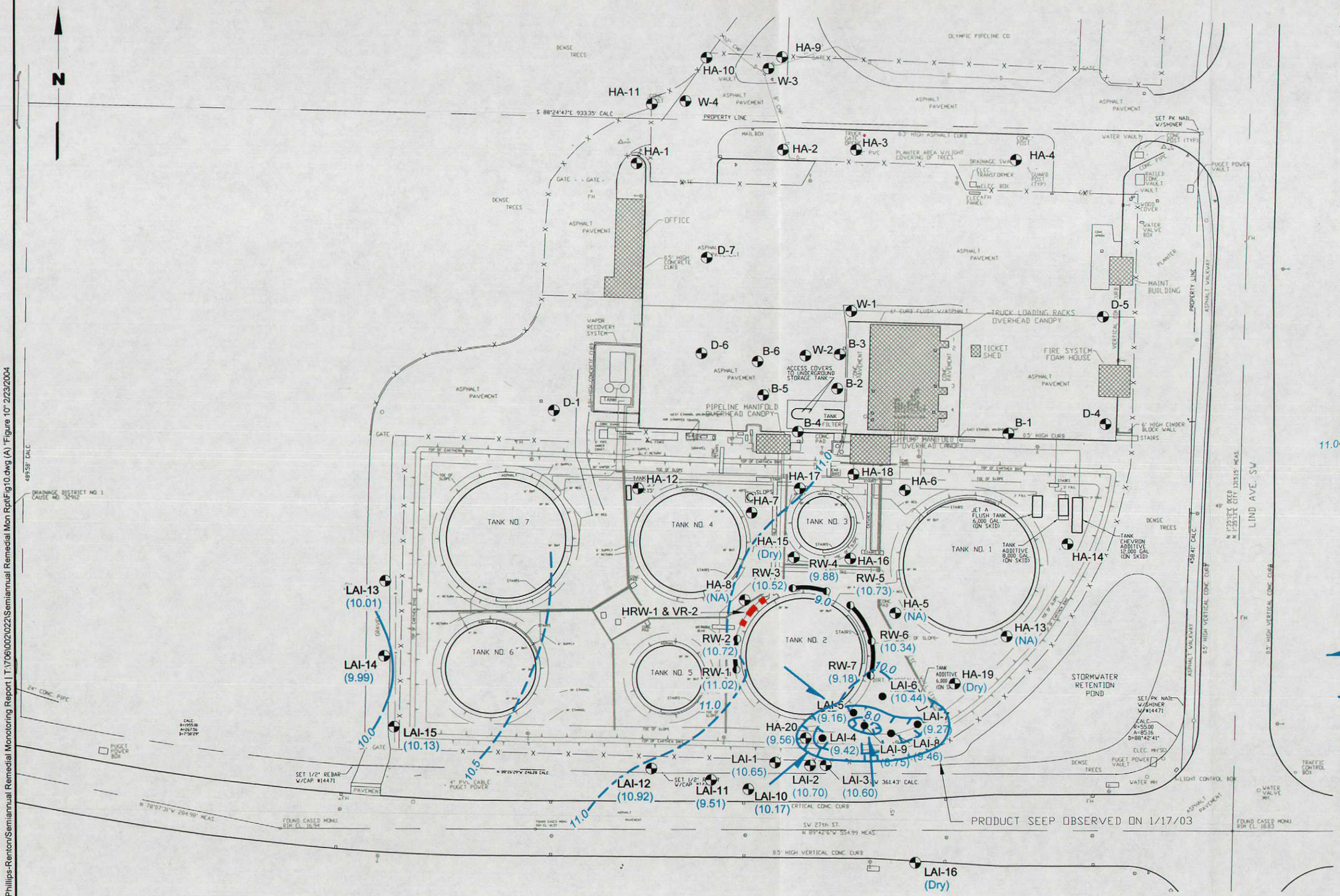
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map September 19, 2003**	Figure 9

ConocoPhillips-Renton/Semiannual Remedial Monitoring Report | T:\7060020\2022\Semiannual Remedial Mon Rpt\Fig9.dwg (A) 'Figure 9' 2/23/2004



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- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping

Note

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Base map source: Alpha Engineers and Construction, Inc. 1997

0 80 160
Scale in Feet

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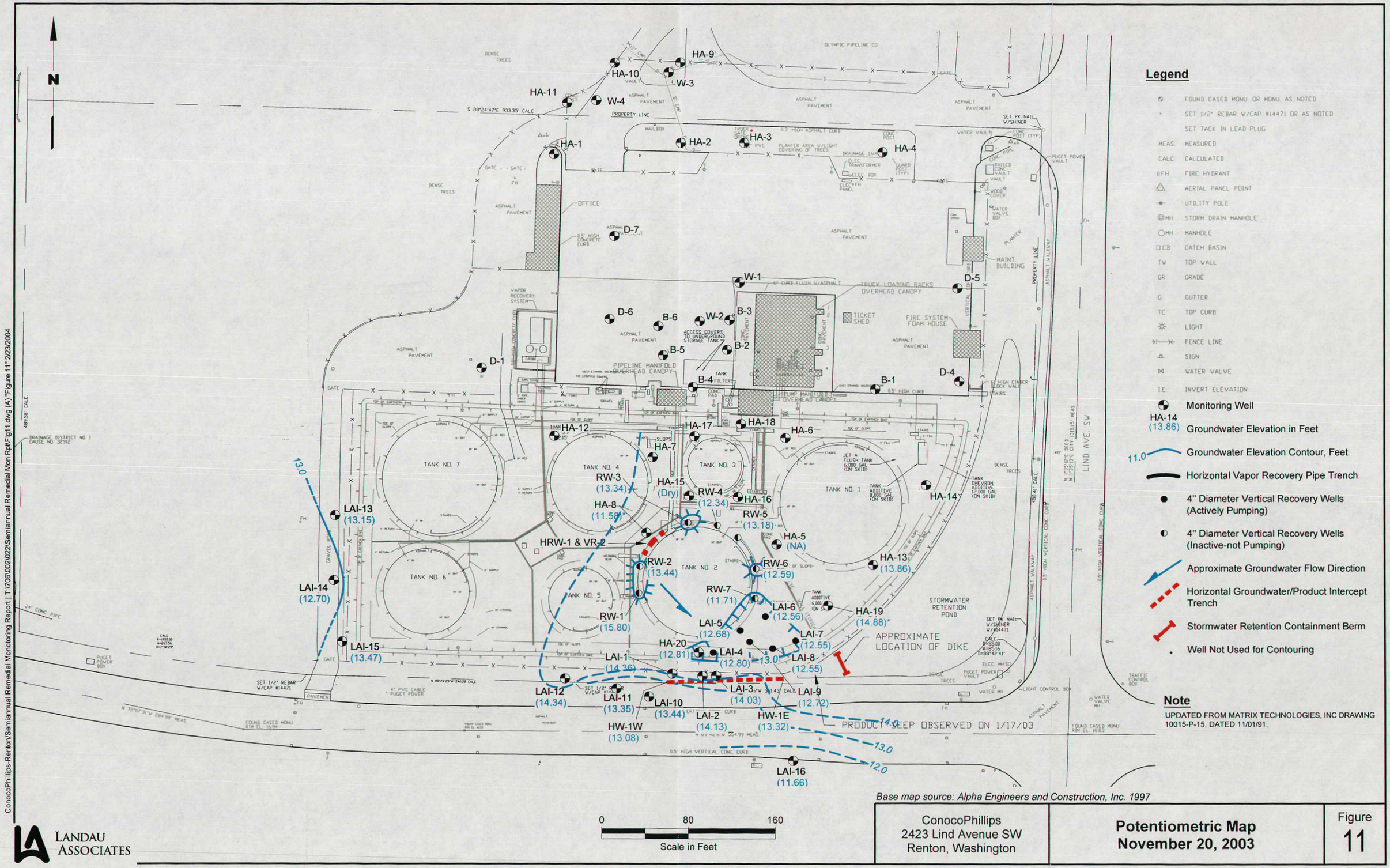
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map October 14, 2003**	Figure 10



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- RFH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (13.86) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm
- * Well Not Used for Contouring

Note

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Base map source: Alpha Engineers and Construction, Inc. 1997

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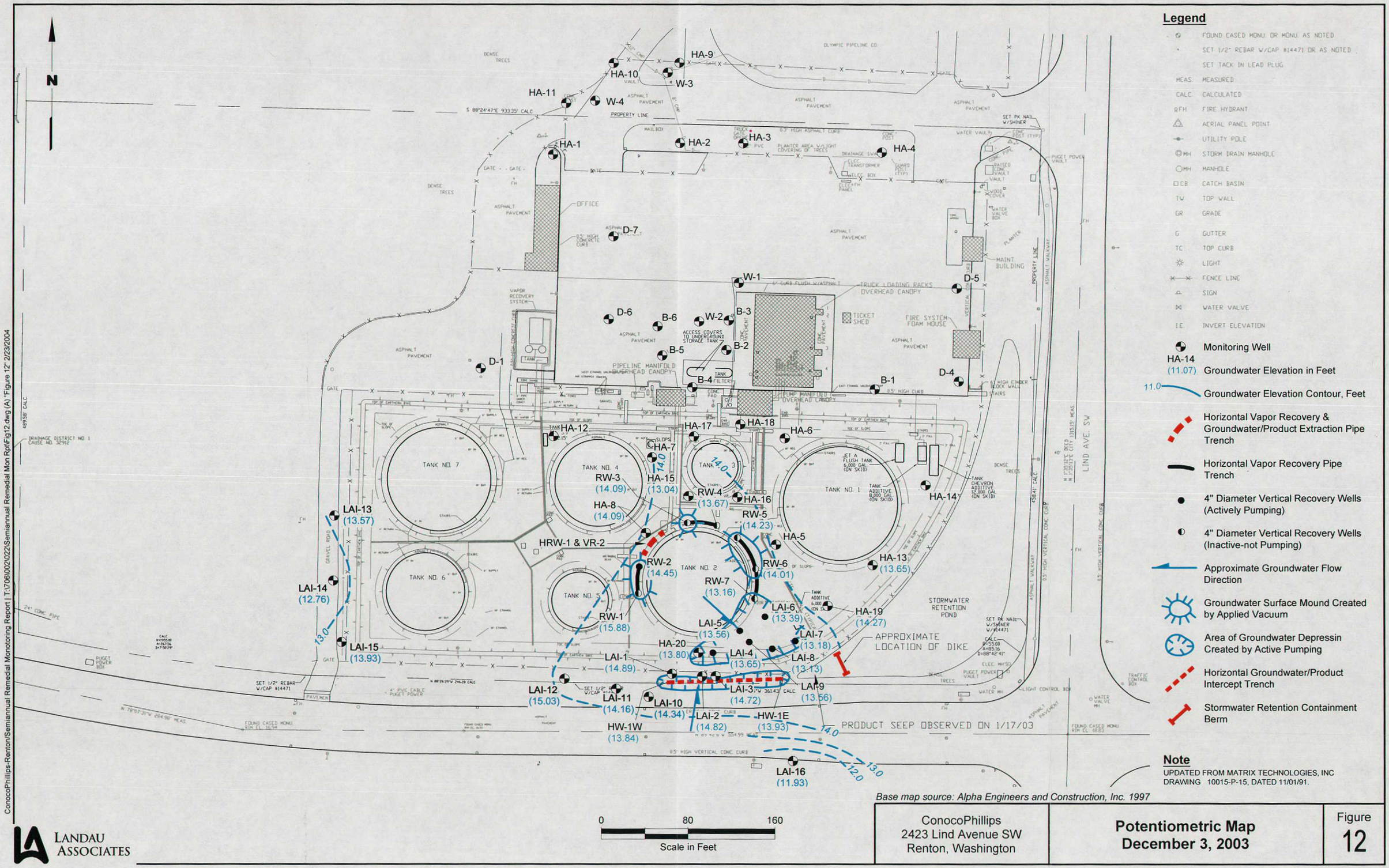
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map November 20, 2003**	Figure 11

ConocoPhillips-Renton\Semiannual Remedial Monotoring Report | T:\706\002\022\Semiannual Remedial Mon Rpt\Fig11.dwg (A) "Figure 11" 2/23/2004



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- CALC. CALCULATED
- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (11.07) Groundwater Elevation in Feet
- 11.0 Groundwater Elevation Contour, Feet
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells (Actively Pumping)
- 4" Diameter Vertical Recovery Wells (Inactive-not Pumping)
- Approximate Groundwater Flow Direction
- Groundwater Surface Mound Created by Applied Vacuum
- Area of Groundwater Depressin Created by Active Pumping
- Horizontal Groundwater/Product Intercept Trench
- Stormwater Retention Containment Berm

Note

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Base map source: Alpha Engineers and Construction, Inc. 1997

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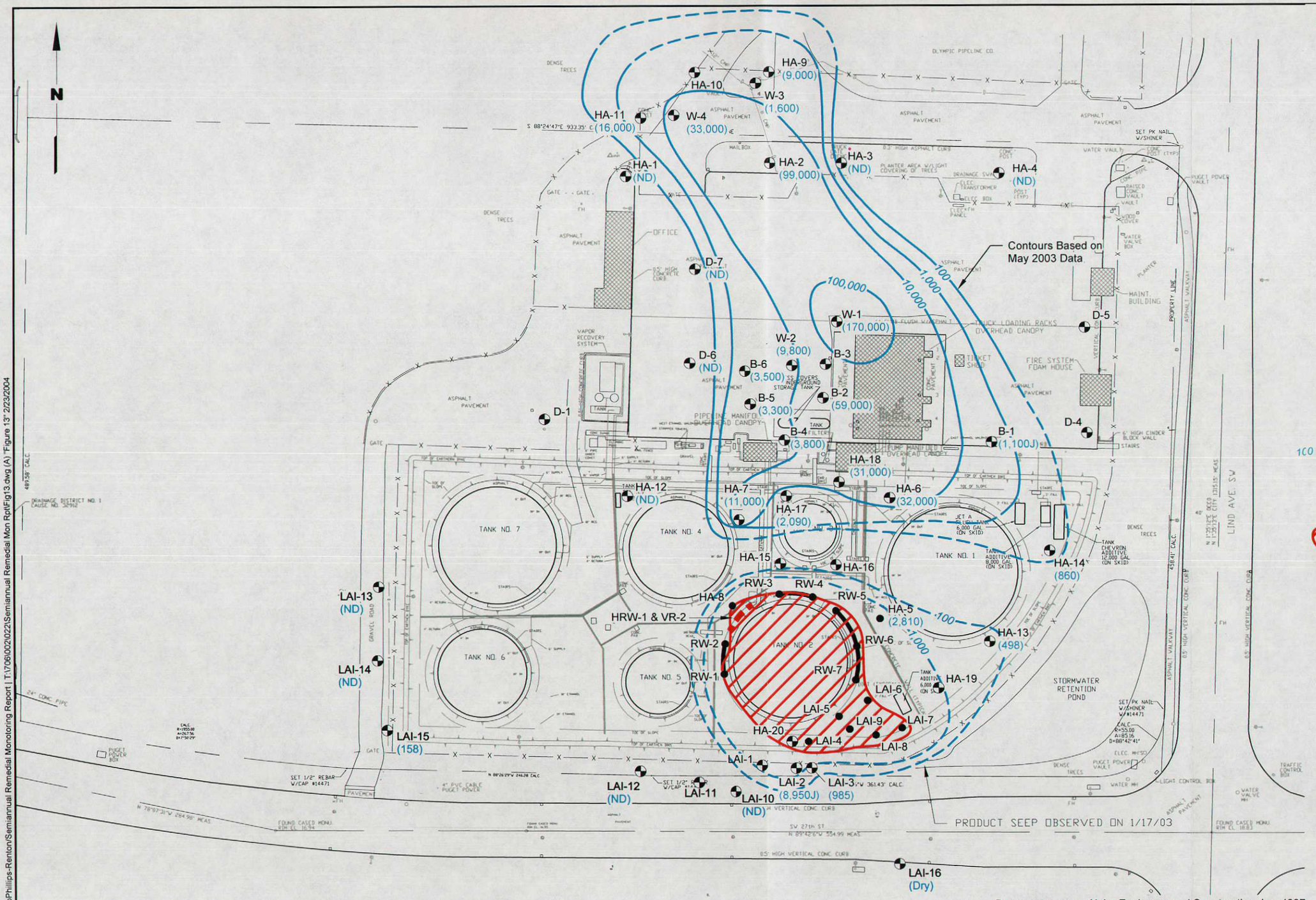
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Potentiometric Map December 3, 2003**	Figure 12

ConocoPhillips-Renton\Semiannual Remedial Monotoring Report | T:\7061002\022\Semiannual Remedial Mon Rpt\Fig12.dwg (A) "Figure 12" 2/23/2004



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- UTILITY POLE
- SDMH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION
- Monitoring Well
- HA-14 (985) TPH-Gasoline Concentration (µg/L)
- 100 Isoconcentration Contour for TPH-Gasoline; µg/L
- ND Analytical Results Below Reporting Limit
- Estimated Extent of Free Product Related to November 2002 Release
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells

Note

UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

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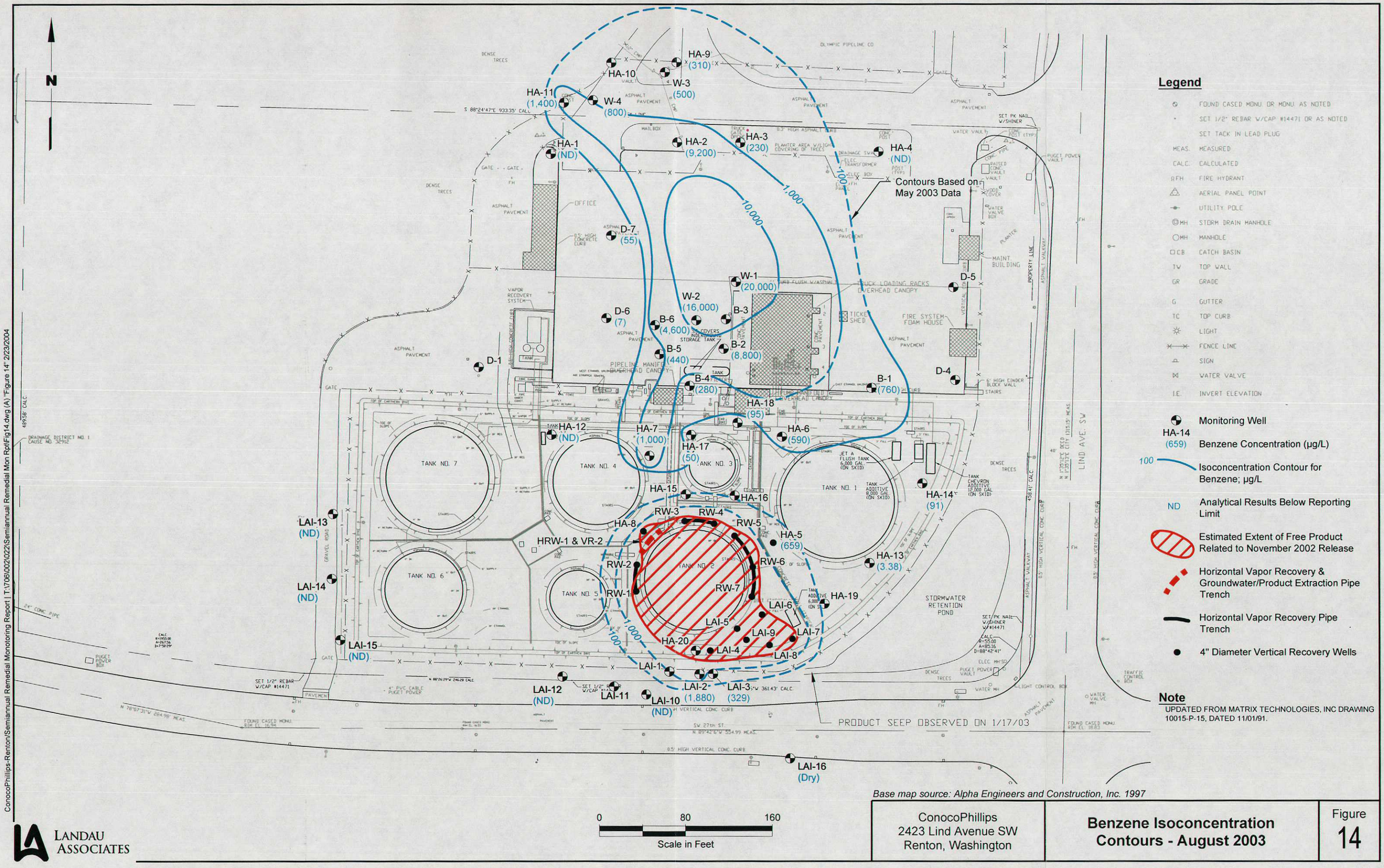
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**TPH-Gasoline Isoconcentration Contours - August 2003**	Figure 13

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\7061\002\022\[Semiannual Remedial Mon Rpt\Fig13.dwg (A) "Figure 13" 2/23/2004



Base map source: Alpha Engineers and Construction, Inc. 1997

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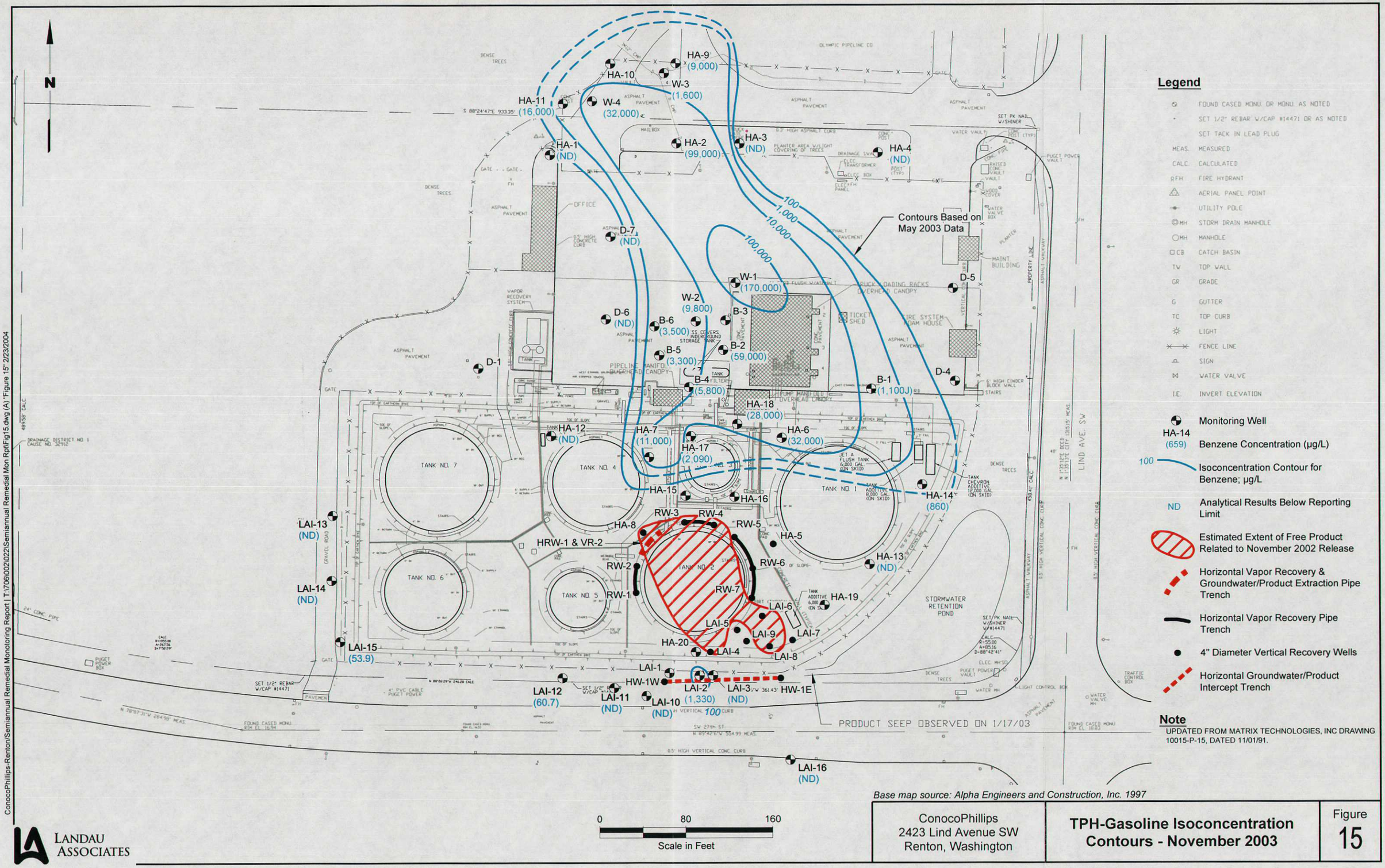
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Benzene Isoconcentration Contours - August 2003**	Figure 14

ConocoPhillips-Renton\Semiannual Remedial Monotoring Report | T:\706\002\022\Semiannual Remedial Mon Rpt\Fig14.dwg (A) "Figure 14" 2/23/2004



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- FH FIRE HYDRANT
- AERIAL PANEL POINT
- UTILITY POLE
- MH STORM DRAIN MANHOLE
- MH MANHOLE
- CB CATCH BASIN
- TW TOP WALL
- GR GRADE
- G GUTTER
- TC TOP CURB
- LIGHT
- FENCE LINE
- SIGN
- WATER VALVE
- I.E. INVERT ELEVATION

- Monitoring Well
- HA-14 (659) Benzene Concentration (µg/L)
- 100 Isoconcentration Contour for Benzene; µg/L
- ND Analytical Results Below Reporting Limit
- Estimated Extent of Free Product Related to November 2002 Release
- Horizontal Vapor Recovery & Groundwater/Product Extraction Pipe Trench
- Horizontal Vapor Recovery Pipe Trench
- 4" Diameter Vertical Recovery Wells
- Horizontal Groundwater/Product Intercept Trench

Note

UPDATED FROM MATRIX TECHNOLOGIES, INC DRAWING 10015-P-15, DATED 11/01/91.

Base map source: Alpha Engineers and Construction, Inc. 1997

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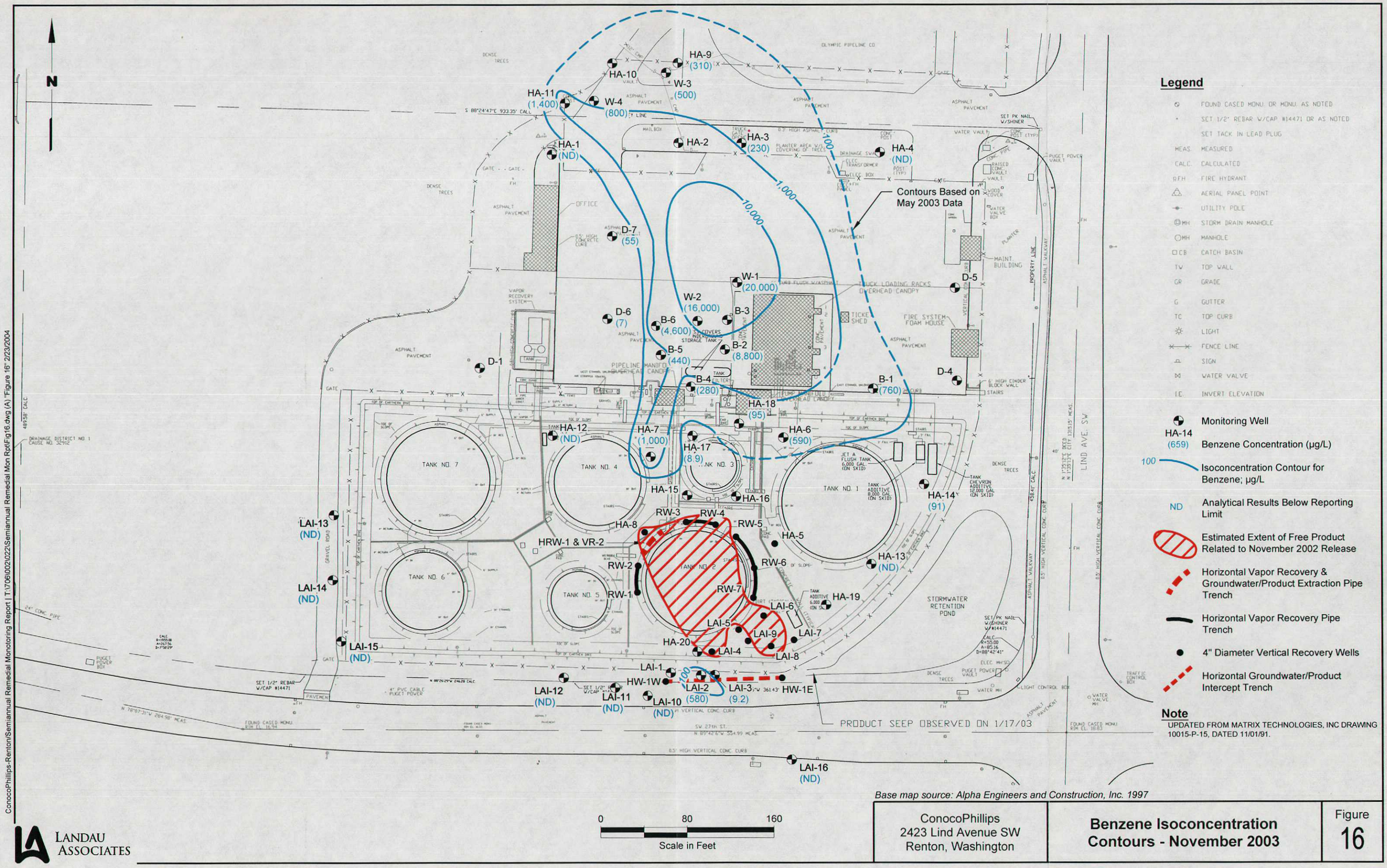
ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**TPH-Gasoline Isoconcentration Contours - November 2003**	Figure 15

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\7060\002\022\Semiannual Remedial Mon Rpt\Fig15.dwg (A) "Figure 15" 2/23/2004



Base map source: Alpha Engineers and Construction, Inc. 1997

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ConocoPhillips 2423 Lind Avenue SW Renton, Washington	**Benzene Isoconcentration Contours - November 2003**	Figure 16

ConocoPhillips-Renton\Semiannual Remedial Monitoring Report | T:\7061002\2022\Semiannual Remedial Mon Rpt\Fig16.dwg (A) "Figure 16" 2/23/2004

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-1	11/24/2002	19.50	N/A	N/A	N/A	5.71	13.79	13.79	
HA-3	11/24/2002	21.03	N/A	N/A	N/A	9.42	11.61	11.61	
HA-4	11/24/2002	20.24	N/A	N/A	N/A	8.78	11.46	11.46	
HA-5	11/24/2002	18.07	N/A	N/A	N/A	6.80	11.27	11.27	
HA-5	1/17/2003	18.07	4.37	13.70	0.00	4.37	13.70	13.70	
HA-5	1/20/2003	18.07	N/A	N/A	N/A	4.58	13.49	13.49	
HA-5	1/31/2003	18.07	N/A	N/A	N/A	4.49	13.58	13.58	
HA-5	2/7/2003	18.07	N/A	N/A	N/A	4.46	13.61	13.61	
HA-5	2/12/2003	18.07	N/A	N/A	N/A	4.93	13.14	13.14	
HA-5	2/18/2003	18.07	N/A	N/A	N/A	5.30	12.77	12.77	
HA-5	2/21/2003	18.07	N/A	N/A	N/A	5.14	12.93	12.93	
HA-5	2/24/2003	18.07	N/A	N/A	N/A	5.23	12.84	12.84	
HA-5	3/4/2003	18.07	N/A	N/A	N/A	5.55	12.52	12.52	
HA-5	3/12/2003	18.07	N/A	N/A	N/A	5.24	12.83	12.83	
HA-5	3/14/2003	18.07	5.25	12.82	0.01	5.26	12.81	12.82	
HA-5	3/26/2003	18.07	N/A	N/A	N/A	4.41	13.66	13.66	
HA-5	3/28/2003	18.07	N/A	N/A	N/A	4.98	13.09	13.09	
HA-5	4/2/2003	18.07	N/A	N/A	N/A	5.00	13.07	13.07	
HA-5	4/4/2003	18.07	N/A	N/A	N/A	5.44	12.63	12.63	
HA-5	4/8/2003	18.07	N/A	N/A	N/A	5.49	12.58	12.58	
HA-5	4/11/2003	18.07	N/A	N/A	N/A	5.53	12.54	12.54	
HA-5	4/15/2003	18.07	N/A	N/A	N/A	5.06	13.01	13.01	
HA-5	4/17/2003	18.07	N/A	N/A	N/A	5.70	12.37	12.37	
HA-5	4/22/2003	18.07	N/A	N/A	N/A	5.54	12.53	12.53	
HA-5	4/25/2003	18.07	N/A	N/A	N/A	5.92	12.15	12.15	
HA-5	5/2/2003	18.07	N/A	N/A	N/A	5.98	12.09	12.09	
HA-5	5/6/2003	18.07	N/A	N/A	N/A	6.02	12.05	12.05	
HA-5	5/9/2003	18.07	N/A	N/A	N/A	6.34	11.73	11.73	
HA-5	5/23/2003	18.07	N/A	N/A	N/A	6.95	11.12	11.12	
HA-5	5/28/2003	18.07	N/A	N/A	N/A	6.85	11.22	11.22	
HA-5	6/13/2003	18.07	N/A	N/A	N/A	7.22	10.85	10.85	
HA-5	6/18/2003	18.07	N/A	N/A	N/A	7.16	10.91	10.91	
HA-5	6/27/2003	18.07	N/A	N/A	N/A	7.14	10.93	10.93	
HA-5	7/7/2003	18.07	N/A	N/A	N/A	7.47	10.60	10.60	
HA-5	7/16/2003	18.07	N/A	N/A	N/A	7.57	10.50	10.50	
HA-5	7/31/2003	18.07	7.82	10.25	0.01	7.83	10.24	10.25	
HA-5	8/5/2003	18.07	N/A	N/A	N/A	7.90	10.17	10.17	
HA-5	8/11/2003	18.07	N/A	N/A	N/A	9.01	9.06	9.06	
HA-5	8/22/2003	18.07	9.24	8.83	0.01	9.25	8.82	8.83	
HA-5	8/26/2003	18.07	N/A	N/A	N/A	8.19	9.88	9.88	
HA-5	9/2/2003	18.07	N/A	N/A	N/A	8.48	9.59	9.59	
HA-5	9/9/2003	18.07	N/A	N/A	N/A	8.93	9.14	9.14	
HA-5	9/19/2003	18.07	8.80	9.27	0.01	8.81	9.26	9.27	
HA-5	10/14/2003	18.07	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-5	11/20/2003	18.07	N/A	N/A	N/A	N/A	N/A	N/A	Submerged well cap
HA-5	12/3/2003	18.07	N/A	N/A	N/A	4.44	N/A	N/A	Bailer in well
HA-6	11/24/2002	18.16	N/A	N/A	N/A	7.12	11.04	11.04	
HA-7	11/24/2002	18.44	N/A	N/A	N/A	7.25	11.19	11.19	
HA-8	11/24/2002	18.88	N/A	N/A	N/A	7.40	11.48	11.48	
HA-8	1/31/2003	18.88	N/A	N/A	N/A	4.04	14.84	14.84	
HA-8	2/7/2003	18.88	N/A	N/A	N/A	4.16	14.72	14.72	
HA-8	2/12/2003	18.88	N/A	N/A	N/A	4.71	14.17	14.17	
HA-8	2/18/2003	18.88	N/A	N/A	N/A	4.99	13.89	13.89	
HA-8	2/21/2003	18.88	N/A	N/A	N/A	5.16	13.72	13.72	
HA-8	2/24/2003	18.88	N/A	N/A	N/A	5.21	13.67	13.67	
HA-8	3/4/2003	18.88	N/A	N/A	N/A	5.89	12.99	12.99	
HA-8	3/12/2003	18.88	N/A	N/A	N/A	5.36	13.52	13.52	
HA-8	3/14/2003	18.88	5.21	13.67	0.01	5.22	13.66	13.67	
HA-8	3/26/2003	18.88	N/A	N/A	N/A	4.74	14.14	14.14	
HA-8	3/28/2003	18.88	N/A	N/A	N/A	5.21	13.67	13.67	
HA-8	4/2/2003	18.88	N/A	N/A	N/A	5.25	13.63	13.63	
HA-8	4/4/2003	18.88	N/A	N/A	N/A	5.57	13.31	13.31	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-8	4/8/2003	18.88	N/A	N/A	N/A	5.57	13.31	13.31	
HA-8	4/11/2003	18.88	N/A	N/A	N/A	5.77	13.11	13.11	
HA-8	4/15/2003	18.88	N/A	N/A	N/A	5.41	13.47	13.47	
HA-8	4/17/2003	18.88	N/A	N/A	N/A	5.91	12.97	12.97	
HA-8	4/22/2003	18.88	N/A	N/A	N/A	6.07	12.81	12.81	
HA-8	4/25/2003	18.88	N/A	N/A	N/A	6.37	12.51	12.51	
HA-8	5/2/2003	18.88	N/A	N/A	N/A	6.44	12.44	12.44	
HA-8	5/6/2003	18.88	N/A	N/A	N/A	6.62	12.26	12.26	
HA-8	5/9/2003	18.88	N/A	N/A	N/A	6.92	11.96	11.96	
HA-8	5/23/2003	18.88	N/A	N/A	N/A	7.38	11.50	11.50	
HA-8	5/28/2003	18.88	N/A	N/A	N/A	7.34	11.54	11.54	
HA-8	6/13/2003	18.88	N/A	N/A	N/A	7.66	11.22	11.22	
HA-8	6/18/2003	18.88	N/A	N/A	N/A	7.60	11.28	11.28	
HA-8	6/27/2003	18.88	N/A	N/A	N/A	7.65	11.23	11.23	
HA-8	7/7/2003	18.88	N/A	N/A	N/A	8.51	10.37	10.37	
HA-8	7/16/2003	18.88	N/A	N/A	N/A	8.24	10.64	10.64	
HA-8	7/31/2003	18.88	N/A	N/A	N/A	8.61	10.27	10.27	
HA-8	8/5/2003	18.88	N/A	N/A	N/A	9.62	9.26	9.26	
HA-8	8/11/2003	18.88	N/A	N/A	N/A	9.70	9.18	9.18	
HA-8	8/22/2003	18.88	10.02	8.86	0.01	10.03	8.85	8.86	
HA-8	8/26/2003	18.88	N/A	N/A	N/A	8.99	9.89	9.89	
HA-8	9/2/2003	18.88	N/A	N/A	N/A	9.02	9.86	9.86	
HA-8	9/9/2003	18.88	9.51	9.37	0.01	9.52	9.36	9.37	
HA-8	9/19/2003	18.88	10.40	8.48	0.10	10.50	8.38	8.46	
HA-8	10/14/2003	18.88	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-8	11/20/2003	18.88	7.22	11.66	0.32	7.54	11.34	11.58	
HA-8	12/3/2003	18.88	4.65	14.23	0.57	5.22	13.66	14.09	
HA-9	11/24/2002	19.40	N/A	N/A	N/A	8.20	11.20	11.20	
HA-10	11/24/2002	19.33	N/A	N/A	N/A	8.49	10.84	10.84	
HA-11	11/24/2002	18.51	N/A	N/A	N/A	8.33	10.18	10.18	
HA-12	11/24/2002	19.91	N/A	N/A	N/A	7.43	12.48	12.48	
HA-13	11/24/2002	19.56	N/A	N/A	N/A	8.60	10.96	10.96	
HA-13	1/17/2003	19.56	N/A	N/A	N/A	6.30	13.26	13.26	
HA-13	1/31/2003	19.56	N/A	N/A	N/A	4.49	15.07	15.07	
HA-13	2/7/2003	19.56	N/A	N/A	N/A	6.27	13.29	13.29	
HA-13	2/12/2003	19.56	N/A	N/A	N/A	6.78	12.78	12.78	
HA-13	2/18/2003	19.56	N/A	N/A	N/A	7.13	12.43	12.43	
HA-13	2/21/2003	19.56	N/A	N/A	N/A	6.99	12.57	12.57	
HA-13	2/24/2003	19.56	N/A	N/A	N/A	6.98	12.58	12.58	
HA-13	3/4/2003	19.56	N/A	N/A	N/A	7.49	12.07	12.07	
HA-13	3/12/2003	19.56	N/A	N/A	N/A	6.48	13.08	13.08	
HA-13	3/14/2003	19.56	N/A	N/A	N/A	5.16	14.40	14.40	
HA-13	3/26/2003	19.56	N/A	N/A	N/A	5.65	13.91	13.91	
HA-13	3/28/2003	19.56	N/A	N/A	N/A	6.34	13.22	13.22	
HA-13	4/2/2003	19.56	N/A	N/A	N/A	6.74	12.82	12.82	
HA-13	4/4/2003	19.56	N/A	N/A	N/A	7.08	12.48	12.48	
HA-13	4/8/2003	19.56	N/A	N/A	N/A	7.17	12.39	12.39	
HA-13	4/11/2003	19.56	N/A	N/A	N/A	7.31	12.25	12.25	
HA-13	4/15/2003	19.56	N/A	N/A	N/A	6.93	12.63	12.63	
HA-13	4/17/2003	19.56	N/A	N/A	N/A	7.32	12.24	12.24	
HA-13	4/22/2003	19.56	N/A	N/A	N/A	7.52	12.04	12.04	
HA-13	4/25/2003	19.56	N/A	N/A	N/A	7.81	11.75	11.75	
HA-13	5/2/2003	19.56	N/A	N/A	N/A	8.04	11.52	11.52	
HA-13	5/6/2003	19.56	N/A	N/A	N/A	8.13	11.43	11.43	
HA-13	5/9/2003	19.56	N/A	N/A	N/A	8.36	11.20	11.20	
HA-13	5/23/2003	19.56	N/A	N/A	N/A	8.93	10.63	10.63	
HA-13	5/28/2003	19.56	N/A	N/A	N/A	8.98	10.58	10.58	
HA-13	6/13/2003	19.56	N/A	N/A	N/A	6.08	13.48	13.48	
HA-13	6/18/2003	19.56	N/A	N/A	N/A	9.12	10.44	10.44	
HA-13	6/27/2003	19.56	N/A	N/A	N/A	9.07	10.49	10.49	
HA-13	7/7/2003	19.56	N/A	N/A	N/A	9.55	10.01	10.01	
HA-13	7/16/2003	19.56	N/A	N/A	N/A	9.42	10.14	10.14	
HA-13	7/31/2003	19.56	N/A	N/A	N/A	9.59	9.97	9.97	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-13	8/5/2003	19.56	N/A	N/A	N/A	9.63	9.93	9.93	
HA-13	8/11/2003	19.56	N/A	N/A	N/A	10.75	8.81	8.81	
HA-13	8/22/2003	19.56	N/A	N/A	N/A	11.26	8.30	8.30	
HA-13	8/26/2003	19.56	N/A	N/A	N/A	9.87	9.69	9.69	
HA-13	9/2/2003	19.56	N/A	N/A	N/A	10.31	9.25	9.25	
HA-13	9/9/2003	19.56	N/A	N/A	N/A	10.46	9.10	9.10	
HA-13	9/19/2003	19.56	N/A	N/A	N/A	10.46	9.10	9.10	
HA-13	10/14/2003	19.56	N/A	N/A	N/A	N/A	N/A	N/A	Bailer in well
HA-13	11/20/2003	19.56	N/A	N/A	N/A	5.70	13.86	13.86	
HA-13	12/3/2003	19.56	N/A	N/A	N/A	5.91	13.65	13.65	
HA-14	11/24/2002	20.02	N/A	N/A	N/A	9.67	10.35	10.35	
HA-15	1/31/2003	19.12	N/A	N/A	N/A	5.56	13.56	13.56	
HA-15	2/7/2003	19.12	N/A	N/A	N/A	5.31	13.81	13.81	
HA-15	2/12/2003	19.12	N/A	N/A	N/A	5.64	13.48	13.48	
HA-15	2/18/2003	19.12	N/A	N/A	N/A	6.09	13.03	13.03	
HA-15	2/21/2003	19.12	N/A	N/A	N/A	7.92	11.20	11.20	
HA-15	2/24/2003	19.12	N/A	N/A	N/A	6.04	13.08	13.08	
HA-15	3/4/2003	19.12	N/A	N/A	N/A	6.62	12.50	12.50	
HA-15	3/12/2003	19.12	N/A	N/A	N/A	6.02	13.10	13.10	
HA-15	3/26/2003	19.12	N/A	N/A	N/A	5.46	13.66	13.66	
HA-15	3/28/2003	19.12	N/A	N/A	N/A	5.96	13.16	13.16	
HA-15	4/2/2003	19.12	N/A	N/A	N/A	5.91	13.21	13.21	
HA-15	4/4/2003	19.12	N/A	N/A	N/A	6.22	12.90	12.90	
HA-15	4/8/2003	19.12	N/A	N/A	N/A	6.42	12.70	12.70	
HA-15	4/11/2003	19.12	N/A	N/A	N/A	6.63	12.49	12.49	
HA-15	4/15/2003	19.12	N/A	N/A	N/A	6.28	12.84	12.84	
HA-15	4/17/2003	19.12	N/A	N/A	N/A	6.49	12.63	12.63	
HA-15	4/22/2003	19.12	N/A	N/A	N/A	6.66	12.46	12.46	
HA-15	4/25/2003	19.12	N/A	N/A	N/A	7.07	12.05	12.05	
HA-15	5/2/2003	19.12	N/A	N/A	N/A	7.06	12.06	12.06	
HA-15	5/6/2003	19.12	N/A	N/A	N/A	7.32	11.80	11.80	
HA-15	5/9/2003	19.12	N/A	N/A	N/A	7.52	11.60	11.60	
HA-15	5/23/2003	19.12	N/A	N/A	N/A	7.83	11.29	11.29	
HA-15	5/28/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/13/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/18/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	6/27/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/7/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/16/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	7/31/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/5/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/11/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/22/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	8/26/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/2/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/9/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	9/19/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	10/14/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	11/20/2003	19.12	N/A	N/A	N/A	Dry	Dry	Dry	
HA-15	12/3/2003	19.12	N/A	N/A	N/A	6.08	13.04	13.04	
HA-16	12/5/2002	19.01	7.60	11.41	0.05	7.65	11.36	11.40	
HA-16	12/11/2002	19.01	7.40	11.61	0.68	8.08	10.93	11.44	
HA-16	12/13/2002	19.01	7.33	11.68	0.96	8.29	10.72	11.44	
HA-16	12/17/2002	19.01	6.67	12.34	1.54	8.21	10.80	11.96	
HA-16	1/2/2003	19.01	5.60	13.41	0.22	5.82	13.19	13.36	
HA-16	1/6/2003	19.01	5.08	13.93	0.02	5.1	13.91	13.93	
HA-16	1/7/2003	19.01	5.05	13.96	0.02	5.07	13.94	13.96	
HA-16	1/8/2003	19.01	4.95	14.06	0.03	4.98	14.03	14.05	
HA-16	1/9/2003	19.01	4.92	14.09	0.02	4.94	14.07	14.09	
HA-16	1/10/2003	19.01	4.94	14.07	0.02	4.96	14.05	14.07	
HA-16	1/14/2003	19.01	3.09	15.92	2.03	5.12	13.89	15.41	
HA-16	1/15/2003	19.01	5.00	14.01	0.05	5.05	13.96	14.00	
HA-16	1/16/2003	19.01	4.92	14.09	0.04	4.96	14.05	14.08	
HA-16	1/17/2003	19.01	4.95	14.06	0.02	4.97	14.04	14.06	
HA-16	1/20/2003	19.01	4.98	14.03	0.04	5.02	13.99	14.02	

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CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-16	5/28/2003	19.01	7.35	11.66	0.77	8.12	10.89	11.47	
HA-17	8/11/2003		N/A	N/A	N/A	Dry	Dry	Dry	
HA-18	8/11/2003		N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	--	19.62	--	--	--	--	--	--	
HA-19	4/2/2003	19.62	N/A	N/A	N/A	4.61	15.01	15.01	
HA-19	4/4/2003	19.62	7.10	N/A	N/A	7.13	12.49	12.49	
HA-19	4/8/2003	19.62	6.61	13.01	0.00	6.62	13.01	13.01	
HA-19	4/11/2003	19.62	5.69	13.93	0.00	5.69	13.93	13.93	
HA-19	4/15/2003	19.62	N/A	N/A	N/A	4.26	15.36	15.36	
HA-19	4/17/2003	19.62	N/A	N/A	N/A	5.62	14.00	14.00	
HA-19	4/22/2003	19.62	7.21	12.41	0.01	7.22	12.40	12.41	
HA-19	4/25/2003	19.62	7.23	12.39	0.00	7.23	12.39	12.39	
HA-19	5/2/2003	19.62	N/A	N/A	N/A	7.87	11.75	11.75	
HA-19	5/6/2003	19.62	N/A	N/A	N/A	7.80	11.82	11.82	
HA-19	5/9/2003	19.62	N/A	N/A	N/A	8.00	11.62	11.62	
HA-19	5/23/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	5/28/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/13/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/18/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	6/27/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/7/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/16/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	7/31/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/5/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/11/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/22/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	8/26/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/2/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/9/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	9/19/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	10/14/2003	19.62	N/A	N/A	N/A	Dry	Dry	Dry	
HA-19	11/20/2003	19.62	N/A	N/A	N/A	4.74	14.88	14.88	
HA-19	12/3/2003	19.62	N/A	N/A	N/A	5.35	14.27	14.27	
HA-20	11/24/2002	18.17	N/A	N/A	N/A	7.49	10.68	10.68	
HA-20	11/27/2002	17.46	6.46	11.00	3.51	9.97	7.49	10.12	
HA-20	12/5/2002	17.46	6.25	11.21	3.57	9.82	7.64	10.32	
HA-20	12/11/2002	17.46	6.25	11.21	3.48	9.73	7.73	10.34	
HA-20	12/13/2002	17.46	6.12	11.34	3.55	9.67	7.79	10.45	
HA-20	12/17/2002	17.46	5.29	12.17	4.20	9.49	7.97	11.12	
HA-20	1/3/2003	17.46	3.26	14.20	4.39	7.65	9.81	13.10	
HA-20	1/6/2003	17.46	3.83	13.63	3.10	6.93	10.53	12.86	
HA-20	1/7/2003	17.46	4.45	13.01	1.16	5.61	11.85	12.72	
HA-20	1/8/2003	17.46	4.22	13.24	1.57	5.79	11.67	12.85	
HA-20	1/9/2003	17.46	3.97	13.49	3.11	7.08	10.38	12.71	
HA-20	1/10/2003	17.46	4.04	13.42	3.24	7.28	10.18	12.61	
HA-20	1/13/2003	17.46	4.75	12.71	0.92	5.67	11.79	12.48	
HA-20	1/14/2003	17.46	4.15	13.31	3.47	7.62	9.84	12.44	
HA-20	1/15/2003	17.46	4.05	13.41	3.10	7.15	10.31	12.64	
HA-20	1/16/2003	17.46	4.15	13.31	2.90	7.05	10.41	12.59	
HA-20	1/17/2003	17.46	4.18	13.28	2.82	7.00	10.46	12.58	
HA-20	1/20/2003	17.46	4.15	13.31	3.09	7.24	10.22	12.54	
HA-20	1/22/2003	17.46	3.30	14.16	6.50	9.80	7.66	12.54	
HA-20	1/23/2003	17.46	4.80	12.66	3.78	8.58	8.88	11.72	
HA-20	1/24/2003	17.46	4.55	12.91	3.66	8.21	9.25	12.00	
HA-20	1/27/2003	17.46	3.68	13.78	2.96	6.64	10.82	13.04	
HA-20	1/28/2003	17.46	3.82	13.64	3.68	7.50	9.96	12.72	
HA-20	1/29/2003	17.46	4.05	13.41	4.44	8.49	8.97	12.30	
HA-20	1/30/2003	17.46	4.26	13.20	4.06	8.32	9.14	12.19	
HA-20	2/3/2003	17.46	4.33	13.13	3.17	7.50	9.96	12.34	
HA-20	2/6/2003	20.01	4.59	15.42	1.80	6.39	13.62	14.97	
HA-20	2/11/2003	20.01	6.18	13.83	2.39	8.57	11.44	13.23	
HA-20	2/18/2003	20.01	7.40	12.61	0.88	8.28	11.73	12.39	
HA-20	2/21/2003	20.01	7.34	12.67	0.73	8.07	11.94	12.49	
HA-20	2/26/2003	20.01	6.09	13.92	0.11	6.20	13.81	13.89	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
HA-20	3/4/2003	20.01	7.47	12.54	1.87	9.34	10.67	12.07	
HA-20	3/12/2003	20.01	7.05	12.96	2.63	9.68	10.33	12.30	
HA-20	3/14/2003	20.01	7.14	12.87	2.27	9.41	10.60	12.30	
HA-20	3/26/2003	20.01	5.64	14.37	3.93	9.57	10.44	13.39	
HA-20	3/28/2003	20.01	6.91	13.10	2.50	9.41	10.60	12.48	
HA-20	4/2/2003	20.01	6.47	13.54	2.65	9.12	10.89	12.88	
HA-20	4/4/2003	20.01	7.01	13.00	2.13	9.14	10.87	12.47	
HA-20	4/8/2003	20.01	7.16	12.85	1.49	8.65	11.36	12.48	
HA-20	4/11/2003	20.01	7.21	12.80	1.66	8.87	11.14	12.39	
HA-20	4/15/2003	20.01	6.91	13.10	0.40	7.31	12.70	13.00	
HA-20	4/17/2003	20.01	7.71	12.30	1.00	8.71	11.30	12.05	
HA-20	4/22/2003	20.01	7.28	12.73	1.39	8.67	11.34	12.38	
HA-20	4/25/2003	20.01	7.72	12.29	1.24	8.96	11.05	11.98	
HA-20	5/2/2003	20.01	7.46	12.55	2.41	9.87	10.14	11.95	
HA-20	5/6/2003	20.01	7.38	12.63	2.49	9.87	10.14	12.01	
HA-20	5/9/2003	20.01	8.05	11.96	1.95	10.00	10.01	11.47	
HA-20	5/23/2003	20.01	8.69	11.32	1.76	10.45	9.56	10.88	
HA-20	5/28/2003	20.01	8.50	11.51	1.49	9.99	10.02	11.14	
HA-20	6/13/2003	20.01	8.75	11.26	1.46	10.21	9.80	10.90	
HA-20	6/18/2003	20.01	8.68	11.33	1.57	10.25	9.76	10.94	
HA-20	6/27/2003	20.01	8.70	11.31	1.64	10.34	9.67	10.90	
HA-20	7/7/2003	20.01	9.64	10.37	0.73	10.37	9.64	10.19	
HA-20	7/16/2003	20.01	9.11	10.90	1.43	10.54	9.47	10.54	
HA-20	7/31/2003	20.01	9.40	10.61	1.48	10.88	9.13	10.24	
HA-20	8/5/2003	20.01	9.50	10.51	1.25	10.75	9.26	10.20	
HA-20	8/11/2003	20.01	10.65	9.36	1.37	12.02	7.99	9.02	
HA-20	8/22/2003	20.01	10.91	9.10	1.29	12.20	7.81	8.78	
HA-20	8/26/2003	20.01	N/A	N/A	N/A	9.81	10.20	10.20	
HA-20	9/2/2003	20.01	9.94	10.07	1.33	11.27	8.74	9.74	
HA-20	9/9/2003	20.01	10.40	9.61	0.36	10.76	9.25	9.52	
HA-20	9/19/2003	20.01	10.38	9.63	0.24	10.62	9.39	9.57	
HA-20	10/14/2003	20.01	10.26	9.75	0.75	11.01	9.00	9.56	
HA-20	11/20/2003	20.01	N/A	N/A	N/A	7.20	12.81	12.81	
HA-20	12/3/2003	20.01	N/A	N/A	N/A	6.21	13.80	13.80	
LAI-1	1/17/2003	18.99	N/A	N/A	N/A	4.17	14.82	14.82	
LAI-1	1/20/2003	18.99	N/A	N/A	N/A	4.18	14.81	14.81	
LAI-1	1/31/2003	18.99	N/A	N/A	N/A	4.28	14.71	14.71	
LAI-1	2/7/2003	18.99	4.06	14.93	0.48	4.54	14.45	14.81	
LAI-1	2/12/2003	18.99	4.38	14.61	1.08	5.46	13.53	14.34	
LAI-1	2/18/2003	18.99	N/A	N/A	N/A	5.40	13.59	13.59	
LAI-1	2/21/2003	18.99	N/A	N/A	N/A	5.52	13.47	13.47	
LAI-1	2/24/2003	18.99	N/A	N/A	N/A	5.96	13.03	13.03	
LAI-1	3/3/2003	18.99	N/A	N/A	N/A	5.76	13.23	13.23	
LAI-1	3/12/2003	18.99	N/A	N/A	N/A	5.48	13.51	13.51	
LAI-1	3/14/2003	18.99	N/A	N/A	N/A	5.09	13.90	13.90	
LAI-1	3/26/2003	18.99	N/A	N/A	N/A	4.76	14.23	14.23	
LAI-1	3/28/2003	18.99	N/A	N/A	N/A	4.86	14.13	14.13	
LAI-1	4/2/2003	18.99	5.21	13.78	0.01	5.22	13.77	13.78	
LAI-1	4/4/2003	18.99	5.19	13.80	0.01	5.20	13.79	13.80	
LAI-1	4/8/2003	18.99	5.67	13.32	0.01	5.68	13.31	13.32	
LAI-1	4/11/2003	18.99	5.07	13.92	0.01	5.08	13.91	13.92	
LAI-1	4/15/2003	18.99	4.62	14.37	0.01	4.63	14.36	14.37	
LAI-1	4/17/2003	18.99	6.14	12.85	0.01	6.15	12.84	12.85	
LAI-1	4/22/2003	18.99	N/A	N/A	N/A	5.21	13.78	13.78	
LAI-1	4/25/2003	18.99	N/A	N/A	N/A	5.43	13.56	13.56	
LAI-1	5/2/2003	18.99	N/A	N/A	N/A	5.53	13.46	13.46	
LAI-1	5/6/2003	18.99	N/A	N/A	N/A	5.66	13.33	13.33	
LAI-1	5/9/2003	18.99	N/A	N/A	N/A	6.15	12.84	12.84	
LAI-1	5/16/2003	18.99	N/A	N/A	N/A	6.40	12.59	12.59	
LAI-1	5/23/2003	18.99	6.50	12.49	0.01	6.51	12.48	12.49	
LAI-1	5/28/2003	18.99	6.45	12.54	0.01	6.46	12.53	12.54	
LAI-1	6/13/2003	18.99	6.79	12.20	0.01	6.80	12.19	12.20	
LAI-1	6/18/2003	18.99	N/A	N/A	N/A	6.78	12.21	12.21	
LAI-1	6/27/2003	18.99	N/A	N/A	N/A	6.81	12.18	12.18	
LAI-1	7/7/2003	18.99	N/A	N/A	N/A	7.41	11.58	11.58	
LAI-1	7/16/2003	18.99	N/A	N/A	N/A	6.43	12.56	12.56	
LAI-1	7/31/2003	18.99	N/A	N/A	N/A	7.49	11.50	11.50	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-1	8/5/2003	18.99	N/A	N/A	N/A	7.61	11.38	11.38	
LAI-1	8/11/2003	18.99	N/A	N/A	N/A	8.80	10.19	10.19	
LAI-1	8/22/2003	18.99	N/A	N/A	N/A	8.98	10.01	10.01	
LAI-1	8/26/2003	18.99	N/A	N/A	N/A	7.91	11.08	11.08	
LAI-1	9/2/2003	18.99	N/A	N/A	N/A	8.07	10.92	10.92	
LAI-1	9/9/2003	18.99	8.39	10.60	0.01	8.40	10.59	10.60	
LAI-1	9/19/2003	18.99	N/A	N/A	N/A	8.27	10.72	10.72	
LAI-1	10/14/2003	18.99	N/A	N/A	N/A	8.34	10.65	10.65	
LAI-1	11/20/2003	18.99	N/A	N/A	N/A	4.63	14.36	14.36	
LAI-1	12/3/2003	18.99	N/A	N/A	N/A	4.10	14.89	14.89	
LAI-2	1/17/2003	18.95	N/A	N/A	N/A	4.14	14.81	14.81	
LAI-2	1/20/2003	18.95	N/A	N/A	N/A	4.25	14.70	14.70	
LAI-2	1/31/2003	18.95	N/A	N/A	N/A	4.55	14.40	14.40	
LAI-2	2/7/2003	18.95	N/A	N/A	N/A	4.41	14.54	14.54	
LAI-2	2/12/2003	18.95	N/A	N/A	N/A	4.71	14.24	14.24	
LAI-2	2/18/2003	18.95	N/A	N/A	N/A	5.44	13.51	13.51	
LAI-2	2/21/2003	18.95	N/A	N/A	N/A	5.61	13.34	13.34	
LAI-2	2/24/2003	18.95	N/A	N/A	N/A	5.89	13.06	13.06	
LAI-2	3/3/2003	18.95	N/A	N/A	N/A	5.17	13.78	13.78	
LAI-2	3/12/2003	18.95	N/A	N/A	N/A	5.37	13.58	13.58	
LAI-2	3/14/2003	18.95	N/A	N/A	N/A	5.24	13.71	13.71	
LAI-2	3/26/2003	18.95	N/A	N/A	N/A	4.61	14.34	14.34	
LAI-2	3/28/2003	18.95	N/A	N/A	N/A	4.72	14.23	14.23	
LAI-2	4/2/2003	18.95	N/A	N/A	N/A	5.51	13.44	13.44	
LAI-2	4/4/2003	18.95	N/A	N/A	N/A	5.48	13.47	13.47	
LAI-2	4/8/2003	18.95	N/A	N/A	N/A	5.55	13.40	13.40	
LAI-2	4/11/2003	18.95	N/A	N/A	N/A	5.19	13.76	13.76	
LAI-2	4/15/2003	18.95	N/A	N/A	N/A	4.80	14.15	14.15	
LAI-2	4/17/2003	18.95	N/A	N/A	N/A	5.96	12.99	12.99	
LAI-2	4/22/2003	18.95	N/A	N/A	N/A	5.33	13.62	13.62	
LAI-2	4/25/2003	18.95	N/A	N/A	N/A	5.49	13.46	13.46	
LAI-2	5/2/2003	18.95	N/A	N/A	N/A	5.78	13.17	13.17	
LAI-2	5/6/2003	18.95	N/A	N/A	N/A	5.42	13.53	13.53	
LAI-2	5/9/2003	18.95	N/A	N/A	N/A	6.30	12.65	12.65	
LAI-2	5/16/2003	18.95	N/A	N/A	N/A	6.54	12.41	12.41	
LAI-2	5/23/2003	18.95	N/A	N/A	N/A	6.63	12.32	12.32	
LAI-2	5/28/2003	18.95	N/A	N/A	N/A	6.51	12.44	12.44	
LAI-2	6/13/2003	18.95	N/A	N/A	N/A	6.91	12.04	12.04	
LAI-2	6/18/2003	18.95	N/A	N/A	N/A	6.86	12.09	12.09	
LAI-2	6/27/2003	18.95	N/A	N/A	N/A	6.87	12.08	12.08	
LAI-2	7/7/2003	18.95	N/A	N/A	N/A	7.40	11.55	11.55	
LAI-2	7/16/2003	18.95	N/A	N/A	N/A	6.52	12.43	12.43	
LAI-2	7/31/2003	18.95	N/A	N/A	N/A	7.48	11.47	11.47	
LAI-2	8/5/2003	18.95	N/A	N/A	N/A	7.56	11.39	11.39	
LAI-2	8/11/2003	18.95	N/A	N/A	N/A	8.81	10.14	10.14	
LAI-2	8/22/2003	18.95	N/A	N/A	N/A	8.99	9.96	9.96	
LAI-2	8/26/2003	18.95	N/A	N/A	N/A	7.86	11.09	11.09	
LAI-2	9/2/2003	18.95	8.03	10.92	0.01	8.04	10.91	10.92	
LAI-2	9/9/2003	18.95	N/A	N/A	N/A	8.46	10.49	10.49	
LAI-2	9/19/2003	18.95	N/A	N/A	N/A	8.15	10.80	10.80	
LAI-2	10/14/2003	18.95	N/A	N/A	N/A	8.25	10.70	10.70	
LAI-2	11/20/2003	18.95	N/A	N/A	N/A	4.82	14.13	14.13	
LAI-2	12/3/2003	18.95	N/A	N/A	N/A	4.13	14.82	14.82	
LAI-3	1/17/2003	18.80	N/A	N/A	N/A	4.37	14.43	14.43	
LAI-3	1/20/2003	18.80	N/A	N/A	N/A	4.28	14.52	14.52	
LAI-3	1/31/2003	18.80	N/A	N/A	N/A	4.94	13.86	13.86	
LAI-3	2/7/2003	18.80	N/A	N/A	N/A	4.41	14.39	14.39	
LAI-3	2/12/2003	18.80	N/A	N/A	N/A	4.70	14.10	14.10	
LAI-3	2/18/2003	18.80	N/A	N/A	N/A	5.21	13.59	13.59	
LAI-3	2/21/2003	18.80	N/A	N/A	N/A	5.58	13.22	13.22	
LAI-3	2/24/2003	18.80	N/A	N/A	N/A	5.66	13.14	13.14	
LAI-3	3/3/2003	18.80	N/A	N/A	N/A	5.13	13.67	13.67	
LAI-3	3/12/2003	18.80	N/A	N/A	N/A	5.32	13.48	13.48	
LAI-3	3/14/2003	18.80	N/A	N/A	N/A	5.16	13.64	13.64	
LAI-3	3/26/2003	18.80	N/A	N/A	N/A	4.65	14.15	14.15	
LAI-3	3/28/2003	18.80	N/A	N/A	N/A	4.75	14.05	14.05	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-3	4/2/2003	18.80	N/A	N/A	N/A	5.57	13.23	13.23	
LAI-3	4/4/2003	18.80	N/A	N/A	N/A	5.53	13.27	13.27	
LAI-3	4/8/2003	18.80	N/A	N/A	N/A	5.69	13.11	13.11	
LAI-3	4/11/2003	18.80	N/A	N/A	N/A	5.15	13.65	13.65	
LAI-3	4/15/2003	18.80	N/A	N/A	N/A	4.75	14.05	14.05	
LAI-3	4/17/2003	18.80	N/A	N/A	N/A	6.08	12.72	12.72	
LAI-3	4/22/2003	18.80	N/A	N/A	N/A	5.27	13.53	13.53	
LAI-3	4/25/2003	18.80	N/A	N/A	N/A	5.45	13.35	13.35	
LAI-3	5/2/2003	18.80	N/A	N/A	N/A	5.76	13.04	13.04	
LAI-3	5/6/2003	18.80	N/A	N/A	N/A	5.61	13.19	13.19	
LAI-3	5/9/2003	18.80	N/A	N/A	N/A	6.30	12.50	12.50	
LAI-3	5/16/2003	18.80	N/A	N/A	N/A	6.53	12.27	12.27	
LAI-3	5/23/2003	18.80	N/A	N/A	N/A	6.57	12.23	12.23	
LAI-3	5/28/2003	18.80	N/A	N/A	N/A	6.44	12.36	12.36	
LAI-3	6/13/2003	18.80	N/A	N/A	N/A	6.85	11.95	11.95	
LAI-3	6/18/2003	18.80	N/A	N/A	N/A	6.81	11.99	11.99	
LAI-3	6/27/2003	18.80	N/A	N/A	N/A	6.83	11.97	11.97	
LAI-3	7/7/2003	18.80	N/A	N/A	N/A	7.32	11.48	11.48	
LAI-3	7/16/2003	18.80	N/A	N/A	N/A	6.47	12.33	12.33	
LAI-3	7/31/2003	18.80	N/A	N/A	N/A	7.37	11.43	11.43	
LAI-3	8/5/2003	18.80	N/A	N/A	N/A	7.49	11.31	11.31	
LAI-3	8/11/2003	18.80	N/A	N/A	N/A	7.68	11.12	11.12	
LAI-3	8/22/2003	18.80	N/A	N/A	N/A	8.74	10.06	10.06	
LAI-3	8/26/2003	18.80	N/A	N/A	N/A	7.74	11.06	11.06	
LAI-3	9/2/2003	18.80	N/A	N/A	N/A	8.03	10.77	10.77	
LAI-3	9/9/2003	18.80	N/A	N/A	N/A	8.45	10.35	10.35	
LAI-3	9/19/2003	18.80	N/A	N/A	N/A	8.10	10.70	10.70	
LAI-3	10/14/2003	18.80	N/A	N/A	N/A	8.20	10.60	10.60	
LAI-3	11/20/2003	18.80	N/A	N/A	N/A	4.77	14.03	14.03	
LAI-3	12/3/2003	18.80	N/A	N/A	N/A	4.08	14.72	14.72	
LAI-4	1/22/2003	19.58	6.87	12.71	0.43	7.30	12.28	12.60	
LAI-4	1/23/2003	19.58	7.48	12.10	0.20	7.68	11.90	12.05	
LAI-4	1/24/2003	19.58	6.72	12.86	0.67	7.39	12.19	12.69	
LAI-4	1/27/2003	19.58	4.47	15.11	4.67	9.14	10.44	13.94	
LAI-4	1/28/2003	19.58	4.97	14.61	4.43	9.40	10.18	13.50	
LAI-4	1/29/2003	19.58	7.40	12.18	0.05	7.45	12.13	12.17	
LAI-4	1/30/2003	19.58	7.88	11.70	0.06	7.94	11.64	11.69	
LAI-4	2/3/2003	19.58	6.25	13.33	2.16	8.41	11.17	12.79	
LAI-4	2/6/2003	21.03	6.28	14.75	1.04	7.32	13.71	14.49	
LAI-4	2/11/2003	21.03	7.54	13.49	1.44	8.98	12.05	13.13	
LAI-4	2/18/2003	21.03	9.28	11.75	0.17	9.45	11.58	11.71	
LAI-4	2/21/2003	21.03	9.11	11.92	0.09	9.20	11.83	11.90	
LAI-4	2/26/2003	21.03	8.37	12.66	1.35	9.72	11.31	12.32	
LAI-4	3/3/2003	21.03	8.57	12.46	0.86	9.43	11.60	12.25	
LAI-4	3/12/2003	21.03	8.80	12.23	0.14	8.94	12.09	12.20	
LAI-4	3/14/2003	21.03	8.68	12.35	0.14	8.82	12.21	12.32	
LAI-4	3/26/2003	21.03	N/A	N/A	N/A	9.06	11.97	11.97	
LAI-4	3/28/2003	21.03	N/A	N/A	N/A	9.28	11.75	11.75	
LAI-4	4/2/2003	21.03	8.21	12.82	0.08	8.29	12.74	12.80	
LAI-4	4/4/2003	21.03	8.58	12.45	0.04	8.62	12.41	12.44	
LAI-4	4/8/2003	21.03	8.51	12.52	0.13	8.64	12.39	12.49	
LAI-4	4/11/2003	21.03	8.78	12.25	0.14	8.92	12.11	12.22	
LAI-4	4/15/2003	21.03	7.86	13.17	0.95	8.81	12.22	12.93	
LAI-4	4/17/2003	21.03	9.19	11.84	0.02	9.21	11.82	11.84	
LAI-4	4/22/2003	21.03	6.61	14.42	0.19	6.80	14.23	14.37	
LAI-4	4/25/2003	21.03	8.96	12.07	0.25	9.21	11.82	12.01	
LAI-4	5/2/2003	21.03	9.06	11.97	0.10	9.16	11.87	11.95	
LAI-4	5/6/2003	21.03	8.56	12.47	1.85	10.41	10.62	12.01	
LAI-4	5/9/2003	21.03	10.96	10.07	0.02	10.98	10.05	10.07	
LAI-4	5/23/2003	21.03	10.17	10.86	0.02	10.19	10.84	10.86	
LAI-4	5/28/2003	21.03	9.81	11.22	0.03	9.84	11.19	11.21	
LAI-4	6/13/2003	21.03	10.09	10.94	0.03	10.12	10.91	10.93	
LAI-4	6/18/2003	21.03	10.05	10.98	0.08	10.13	10.90	10.96	
LAI-4	6/27/2003	21.03	9.92	11.11	0.82	10.74	10.29	10.91	
LAI-4	7/7/2003	21.03	10.27	10.76	1.44	11.71	9.32	10.40	
LAI-4	7/16/2003	21.03	9.92	11.11	2.10	12.02	9.01	10.59	
LAI-4	7/31/2003	21.03	10.58	10.45	1.12	11.70	9.33	10.17	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-4	8/5/2003	21.03	10.32	10.71	1.97	12.29	8.74	10.22	
LAI-4	8/11/2003	21.03	11.70	9.33	1.09	12.79	8.24	9.06	
LAI-4	8/22/2003	21.03	11.96	9.07	1.28	13.24	7.79	8.75	
LAI-4	8/26/2003	21.03	11.09	9.94	1.15	12.24	8.79	9.65	
LAI-4	9/2/2003	21.03	11.04	9.99	1.32	12.36	8.67	9.66	
LAI-4	9/9/2003	21.03	11.10	9.93	2.16	13.26	7.77	9.39	
LAI-4	9/19/2003	21.03	11.14	9.89	1.35	12.49	8.54	9.55	
LAI-4	10/14/2003	21.03	11.21	9.82	1.59	12.80	8.23	9.42	
LAI-4	11/20/2003	21.03	8.21	12.82	0.09	8.30	12.73	12.80	
LAI-4	12/3/2003	21.03	7.12	13.91	1.06	8.18	12.85	13.65	
LAI-5	1/22/2003	19.92	6.55	13.37	4.18	10.73	9.19	12.33	
LAI-5	1/23/2003	19.92	6.54	13.38	4.02	10.56	9.36	12.38	
LAI-5	1/24/2003	19.92	6.40	13.52	3.92	10.32	9.60	12.54	
LAI-5	1/27/2003	19.92	5.51	14.41	3.66	9.17	10.75	13.50	
LAI-5	1/28/2003	19.92	6.85	13.07	0.55	7.40	12.52	12.93	
LAI-5	1/29/2003	19.92	6.20	13.72	4.20	10.40	9.52	12.67	
LAI-5	1/30/2003	19.92	6.31	13.61	4.04	10.35	9.57	12.60	
LAI-5	2/3/2003	19.92	6.36	13.56	3.29	9.65	10.27	12.74	
LAI-5	2/6/2003	21.40	7.18	14.22	3.57	10.75	10.65	13.33	
LAI-5	2/11/2003	21.40	7.53	13.87	3.64	11.17	10.23	12.96	
LAI-5	2/18/2003	21.40	6.50	14.90	4.75	11.25	10.15	13.71	
LAI-5	2/21/2003	21.40	8.21	13.19	3.30	11.51	9.89	12.37	
LAI-5	2/26/2003	21.40	7.78	13.62	3.23	11.01	10.39	12.81	
LAI-5	3/4/2003	21.40	7.78	13.62	3.23	11.01	10.39	12.81	
LAI-5	3/12/2003	21.40	8.32	13.08	3.36	11.68	9.72	12.24	
LAI-5	3/14/2003	21.40	8.36	13.04	3.08	11.44	9.96	12.27	
LAI-5	3/26/2003	21.40	N/A	N/A	N/A	10.01	11.39	11.39	
LAI-5	3/28/2003	21.40	N/A	N/A	N/A	9.96	11.44	11.44	
LAI-5	4/2/2003	21.40	8.52	12.88	0.83	9.35	12.05	12.67	
LAI-5	4/4/2003	21.40	8.90	12.50	0.68	9.58	11.82	12.33	
LAI-5	4/8/2003	21.40	8.96	12.44	0.55	9.51	11.89	12.30	
LAI-5	4/11/2003	21.40	8.72	12.68	1.62	10.34	11.06	12.28	
LAI-5	4/15/2003	21.40	8.01	13.39	2.43	10.44	10.96	12.78	
LAI-5	4/17/2003	21.40	9.60	11.80	0.16	9.76	11.64	11.76	
LAI-5	4/22/2003	21.40	9.04	12.36	0.39	9.43	11.97	12.26	
LAI-5	4/25/2003	21.40	9.05	12.35	2.10	11.15	10.25	11.83	
LAI-5	5/2/2003	21.40	9.48	11.92	0.24	9.72	11.68	11.86	
LAI-5	5/6/2003	21.40	8.94	12.46	2.24	11.18	10.22	11.90	
LAI-5	5/9/2003	21.40	10.28	11.12	0.07	10.35	11.05	11.10	
LAI-5	5/23/2003	21.40	10.65	10.75	0.02	10.67	10.73	10.75	
LAI-5	5/28/2003	21.40	10.36	11.04	0.09	10.45	10.95	11.02	
LAI-5	6/13/2003	21.40	10.58	10.82	0.05	10.63	10.77	10.81	
LAI-5	6/18/2003	21.40	10.51	10.89	0.01	10.52	10.88	10.89	
LAI-5	6/27/2003	21.40	10.08	11.32	1.63	11.71	9.69	10.91	
LAI-5	7/7/2003	21.40	10.52	10.88	1.85	12.37	9.03	10.42	
LAI-5	7/16/2003	21.40	10.30	11.10	2.15	12.45	8.95	10.56	
LAI-5	7/31/2003	21.40	10.77	10.63	1.67	12.44	8.96	10.21	
LAI-5	8/5/2003	21.40	11.30	10.10	2.35	13.65	7.75	9.51	
LAI-5	8/11/2003	21.40	N/A	N/A	N/A	12.22	9.18	9.18	
LAI-5	8/22/2003	21.40	N/A	N/A	N/A	12.34	9.06	9.06	
LAI-5	8/26/2003	21.40	12.39	9.01	1.29	13.68	7.72	8.69	
LAI-5	9/2/2003	21.40	11.57	9.83	0.03	11.60	9.80	9.82	
LAI-5	9/9/2003	21.40	11.14	10.26	2.49	13.63	7.77	9.64	
LAI-5	9/19/2003	21.40	11.89	9.51	0.57	12.46	8.94	9.37	
LAI-5	10/14/2003	21.40	12.13	9.27	0.45	12.58	8.82	9.16	
LAI-5	11/20/2003	21.40	NA	NA	NA	8.72	12.68	12.68	
LAI-5	12/3/2003	21.40	7.76	13.64	0.33	8.09	13.31	13.56	
LAI-6	1/22/2003	19.78	6.67	13.11	3.78	10.45	9.33	12.17	
LAI-6	1/23/2003	19.78	6.45	13.33	3.85	10.30	9.48	12.37	
LAI-6	1/24/2003	19.78	6.32	13.46	4.00	10.32	9.46	12.46	
LAI-6	1/27/2003	19.78	5.68	14.10	3.37	9.05	10.73	13.26	
LAI-6	1/28/2003	19.78	6.91	12.87	0.93	7.84	11.94	12.64	
LAI-6	1/29/2003	19.78	6.51	13.27	2.53	9.04	10.74	12.64	
LAI-6	1/30/2003	19.78	6.36	13.42	3.60	9.96	9.82	12.52	
LAI-6	2/3/2003	19.78	6.27	13.51	3.69	9.96	9.82	12.59	
LAI-6	2/6/2003	19.78	5.79	13.99	3.79	9.58	10.20	13.04	

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GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-6	2/11/2003	19.78	6.03	13.75	3.61	9.64	10.14	12.85	
LAI-6	2/18/2003	19.78	7.98	11.80	0.42	8.40	11.38	11.70	
LAI-6	2/21/2003	19.78	7.57	12.21	0.54	8.11	11.67	12.08	
LAI-6	2/26/2003	19.78	7.15	12.63	0.47	7.62	12.16	12.51	
LAI-6	3/3/2003	19.78	8.01	11.77	0.45	8.46	11.32	11.66	
LAI-6	3/12/2003	19.78	7.46	12.32	0.23	7.69	12.09	12.26	
LAI-6	3/14/2003	19.78	7.72	12.06	0.19	7.91	11.87	12.01	
LAI-6	3/26/2003	19.78	6.37	13.41	1.45	7.82	11.96	13.05	
LAI-6	3/28/2003	19.78	7.10	12.68	1.65	8.75	11.03	12.27	
LAI-6	4/2/2003	19.78	6.65	13.13	2.15	8.80	10.98	12.59	
LAI-6	4/4/2003	19.78	7.06	12.72	1.74	8.80	10.98	12.29	
LAI-6	4/8/2003	19.78	7.13	12.65	1.70	8.83	10.95	12.23	
LAI-6	4/11/2003	19.78	7.22	12.56	0.88	8.10	11.68	12.34	
LAI-6	4/15/2003	19.78	6.56	13.22	1.82	8.38	11.40	12.77	
LAI-6	4/17/2003	19.78	7.61	12.17	1.74	9.35	10.43	11.74	
LAI-6	4/22/2003	19.78	7.16	12.62	1.65	8.81	10.97	12.21	
LAI-6	4/25/2003	19.78	7.70	12.08	0.83	8.53	11.25	11.87	
LAI-6	5/2/2003	19.78	7.61	12.17	1.65	9.26	10.52	11.76	
LAI-6	5/6/2003	19.78	8.45	11.33	0.99	9.44	10.34	11.08	
LAI-6	5/9/2003	19.78	8.00	11.78	1.95	9.95	9.83	11.29	
LAI-6	5/23/2003	19.78	8.41	11.37	2.00	10.41	9.37	10.87	
LAI-6	5/28/2003	19.78	8.23	11.55	1.78	10.01	9.77	11.11	
LAI-6	6/13/2003	19.78	8.50	11.28	2.11	10.61	9.17	10.75	
LAI-6	6/18/2003	19.78	8.46	11.32	2.10	10.56	9.22	10.80	
LAI-6	6/27/2003	19.78	9.91	9.87	0.77	10.68	9.10	9.68	
LAI-6	7/7/2003	19.78	8.98	10.80	2.08	11.06	8.72	10.28	
LAI-6	7/16/2003	19.78	8.75	11.03	2.20	10.95	8.83	10.48	
LAI-6	7/31/2003	19.78	9.14	10.64	2.06	11.20	8.58	10.13	
LAI-6	8/5/2003	19.78	9.15	10.63	2.01	11.16	8.62	10.13	
LAI-6	8/11/2003	19.78	10.24	9.54	1.97	12.21	7.57	9.05	
LAI-6	8/22/2003	19.78	10.45	9.33	1.90	12.35	7.43	8.86	
LAI-6	8/26/2003	19.78	9.78	10.00	0.02	9.80	9.98	10.00	
LAI-6	9/2/2003	19.78	10.13	9.65	0.90	11.03	8.75	9.43	
LAI-6	9/9/2003	19.78	10.48	9.30	0.79	11.27	8.51	9.10	
LAI-6	9/19/2003	19.78	10.44	9.34	0.61	11.05	8.73	9.19	
LAI-6	10/14/2003	19.78	9.11	10.67	0.91	10.02	9.76	10.44	
LAI-6	11/20/2003	19.78	7.22	12.56	0.01	7.23	12.55	12.56	
LAI-6	12/3/2003	19.78	6.30	13.48	0.35	6.65	13.13	13.39	
LAI-7	1/22/2003	19.76	8.10	11.66	1.10	9.20	10.56	11.39	
LAI-7	1/23/2003	19.76	7.58	12.18	1.07	8.65	11.11	11.91	
LAI-7	1/24/2003	19.76	6.99	12.77	2.36	9.35	10.41	12.18	
LAI-7	1/27/2003	19.76	5.18	14.58	5.30	10.48	9.28	13.26	
LAI-7	1/28/2003	19.76	7.08	12.68	0.90	7.98	11.78	12.46	
LAI-7	1/29/2003	19.76	7.41	12.35	0.44	7.85	11.91	12.24	
LAI-7	1/30/2003	19.76	8.11	11.65	0.26	8.37	11.39	11.59	
LAI-7	2/3/2003	19.76	8.90	10.86	0.06	8.96	10.80	10.85	
LAI-7	2/6/2003	21.22	7.82	13.40	1.56	9.38	11.84	13.01	
LAI-7	2/11/2003	21.22	8.23	12.99	1.56	9.79	11.43	12.60	
LAI-7	2/18/2003	21.22	9.45	11.77	0.20	9.65	11.57	11.72	
LAI-7	2/21/2003	21.22	8.57	12.65	2.34	10.91	10.31	12.07	
LAI-7	2/26/2003	21.22	8.53	12.69	3.18	11.71	9.51	11.90	
LAI-7	3/3/2003	21.22	9.53	11.69	0.18	9.71	11.51	11.65	
LAI-7	3/12/2003	21.22	8.99	12.23	0.19	9.18	12.04	12.18	
LAI-7	3/14/2003	21.22	9.18	12.04	0.18	9.36	11.86	12.00	
LAI-7	3/26/2003	21.22	N/A	N/A	N/A	9.97	11.25	11.25	
LAI-7	3/28/2003	21.22	N/A	N/A	N/A	9.95	11.27	11.27	
LAI-7	4/2/2003	21.22	8.79	12.43	0.08	8.87	12.35	12.41	
LAI-7	4/4/2003	21.22	9.04	12.18	0.08	9.12	12.10	12.16	
LAI-7	4/8/2003	21.22	8.53	12.69	0.10	8.63	12.59	12.67	
LAI-7	4/11/2003	21.22	9.06	12.16	0.17	9.23	11.99	12.12	
LAI-7	4/15/2003	21.22	8.41	12.81	0.94	9.35	11.87	12.58	
LAI-7	4/17/2003	21.22	9.55	11.67	0.17	9.72	11.50	11.63	
LAI-7	4/22/2003	21.22	9.03	12.19	0.34	9.37	11.85	12.11	
LAI-7	4/25/2003	21.22	9.00	12.22	0.31	9.31	11.91	12.14	
LAI-7	5/2/2003	21.22	9.60	11.62	0.05	9.65	11.57	11.61	
LAI-7	5/6/2003	21.22	9.17	12.05	1.19	10.36	10.86	11.75	
LAI-7	5/9/2003	21.22	10.04	11.18	0.06	10.10	11.12	11.17	

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CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-7	5/23/2003	21.22	10.60	10.62	0.02	10.62	10.60	10.62	
LAI-7	5/28/2003	21.22	10.21	11.01	0.01	10.22	11.00	11.01	
LAI-7	6/13/2003	21.22	9.90	11.32	0.55	10.45	10.77	11.18	
LAI-7	6/18/2003	21.22	10.57	10.65	0.02	10.59	10.63	10.65	
LAI-7	6/27/2003	21.22	10.42	10.80	0.63	11.05	10.17	10.64	
LAI-7	7/7/2003	21.22	10.85	10.37	0.52	11.37	9.85	10.24	
LAI-7	7/16/2003	21.22	10.43	10.79	1.65	12.08	9.14	10.38	
LAI-7	7/31/2003	21.22	11.06	10.16	0.31	11.37	9.85	10.08	
LAI-7	8/5/2003	21.22	10.66	10.56	0.90	11.56	9.66	10.34	
LAI-7	8/11/2003	21.22	12.45	8.77	0.01	12.46	8.76	8.77	
LAI-7	8/22/2003	21.22	12.40	8.82	0.20	12.60	8.62	8.77	
LAI-7	8/26/2003	21.22	11.32	9.90	1.43	12.75	8.47	9.54	
LAI-7	9/2/2003	21.22	11.61	9.61	0.20	11.81	9.41	9.56	
LAI-7	9/9/2003	21.22	11.66	9.56	1.64	13.30	7.92	9.15	
LAI-7	9/19/2003	21.22	11.66	9.56	1.35	13.01	8.21	9.22	
LAI-7	10/14/2003	21.22	11.59	9.63	1.46	13.05	8.17	9.27	
LAI-7	11/20/2003	21.22	NA	NA	NA	8.67	12.55	12.55	
LAI-7	12/3/2003	21.22	7.98	13.24	0.23	8.21	13.01	13.18	
LAI-8	1/22/2003	20.02	8.10	11.92	0.91	9.01	11.01	11.69	
LAI-8	1/23/2003	20.02	7.72	12.30	0.88	8.60	11.42	12.08	
LAI-8	1/24/2003	20.02	7.50	12.52	1.55	9.05	10.97	12.13	
LAI-8	1/27/2003	20.02	5.34	14.68	5.08	10.42	9.60	13.41	
LAI-8	1/28/2003	20.02	6.90	13.12	1.75	8.65	11.37	12.68	
LAI-8	1/29/2003	20.02	7.99	12.03	0.31	8.30	11.72	11.95	
LAI-8	1/30/2003	20.02	7.90	12.12	0.69	8.59	11.43	11.95	
LAI-8	2/3/2003	20.02	8.47	11.55	0.01	8.48	11.54	11.55	
LAI-8	2/6/2003	21.44	6.46	14.98	2.95	9.41	12.03	14.24	
LAI-8	2/11/2003	21.44	8.45	12.99	1.22	9.67	11.77	12.69	
LAI-8	2/18/2003	21.44	6.85	14.59	5.75	12.60	8.84	13.15	
LAI-8	2/21/2003	21.44	8.49	12.95	3.16	11.65	9.79	12.16	
LAI-8	2/26/2003	21.44	7.92	13.52	4.02	11.94	9.50	12.52	
LAI-8	3/4/2003	21.44	7.46	13.98	5.02	12.48	8.96	12.73	
LAI-8	3/12/2003	21.44	8.67	12.77	3.03	11.70	9.74	12.01	
LAI-8	3/14/2003	21.44	8.88	12.56	2.53	11.41	10.03	11.93	
LAI-8	3/26/2003	21.44	8.63	12.81	0.88	9.51	11.93	12.59	
LAI-8	3/28/2003	21.44	N/A	N/A	N/A	9.48	11.96	11.96	
LAI-8	4/2/2003	21.44	8.97	12.47	0.14	9.11	12.33	12.44	
LAI-8	4/4/2003	21.44	9.32	12.12	0.04	9.36	12.08	12.11	
LAI-8	4/8/2003	21.44	9.25	12.19	0.03	9.28	12.16	12.18	
LAI-8	4/11/2003	21.44	9.21	12.23	0.46	9.67	11.77	12.12	
LAI-8	4/15/2003	21.44	8.57	12.87	1.13	9.70	11.74	12.59	
LAI-8	4/17/2003	21.44	9.82	11.62	0.08	9.90	11.54	11.60	
LAI-8	4/22/2003	21.44	9.28	12.16	0.29	9.51	11.93	12.10	
LAI-8	4/25/2003	21.44	9.61	11.83	0.25	9.86	11.58	11.77	
LAI-8	5/2/2003	21.44	9.71	11.73	0.40	10.11	11.33	11.63	
LAI-8	5/6/2003	21.44	9.36	12.08	1.40	10.76	10.68	11.73	
LAI-8	5/9/2003	21.44	N/A	N/A	N/A	10.23	11.21	11.21	
LAI-8	5/23/2003	21.44	10.80	10.64	0.01	10.81	10.63	10.64	
LAI-8	5/28/2003	21.44	10.51	10.93	0.03	10.54	10.90	10.92	
LAI-8	6/13/2003	21.44	10.20	11.24	1.56	11.76	9.68	10.85	
LAI-8	6/18/2003	21.44	10.35	11.09	1.85	12.20	9.24	10.63	
LAI-8	6/27/2003	21.44	10.62	10.82	0.49	11.11	10.33	10.70	
LAI-8	7/7/2003	21.44	10.67	10.77	2.18	12.85	8.59	10.23	
LAI-8	7/16/2003	21.44	10.45	10.99	1.37	11.82	9.62	10.65	
LAI-8	7/31/2003	21.44	10.96	10.48	1.79	12.75	8.69	10.03	
LAI-8	8/5/2003	21.44	10.82	10.62	2.23	13.05	8.39	10.06	
LAI-8	8/11/2003	21.44	12.12	9.32	1.57	13.69	7.75	8.93	
LAI-8	8/22/2003	21.44	12.40	9.04	1.66	14.06	7.38	8.63	
LAI-8	8/26/2003	21.44	11.44	10.00	1.44	12.88	8.56	9.64	
LAI-8	9/2/2003	21.44	11.45	9.99	1.78	13.23	8.21	9.55	
LAI-8	9/9/2003	21.44	11.54	9.90	1.68	13.22	8.22	9.48	
LAI-8	9/19/2003	21.44	11.61	9.83	1.64	13.25	8.19	9.42	
LAI-8	10/14/2003	21.44	11.58	9.86	1.60	13.18	8.26	9.46	
LAI-8	11/20/2003	21.44	8.87	12.57	0.07	8.94	12.50	12.55	
LAI-8	12/3/2003	21.44	8.01	13.43	0.41	8.42	13.02	13.33	
LAI-9	1/22/2003	19.32	N/A	N/A	N/A	7.90	11.42	11.42	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-9	1/23/2003	19.32	N/A	N/A	N/A	8.38	10.94	10.94	
LAI-9	1/24/2003	19.32	7.10	12.22	0.04	7.14	12.18	12.21	
LAI-9	1/27/2003	19.32	5.32	14.00	1.54	6.86	12.46	13.62	
LAI-9	1/28/2003	19.32	5.90	13.42	1.50	7.40	11.92	13.05	
LAI-9	1/29/2003	19.32	N/A	N/A	N/A	8.44	10.88	10.88	
LAI-9	1/30/2003	19.32	N/A	N/A	N/A	8.40	10.92	10.92	
LAI-9	2/3/2003	19.32	6.57	12.75	0.70	7.27	12.05	12.58	
LAI-9	2/6/2003	20.77	7.53	13.24	0.15	7.68	13.09	13.20	
LAI-9	2/11/2003	20.77	7.93	12.84	0.11	8.04	12.73	12.81	
LAI-9	2/18/2003	20.77	5.50	15.27	2.50	8.00	12.77	14.65	
LAI-9	2/21/2003	20.77	7.63	13.14	3.68	11.31	9.46	12.22	
LAI-9	2/26/2003	20.77	6.94	13.83	3.54	10.48	10.29	12.95	
LAI-9	3/4/2003	20.77	6.98	13.79	3.94	10.92	9.85	12.81	
LAI-9	3/12/2003	20.77	7.82	12.95	3.39	11.21	9.56	12.10	
LAI-9	3/14/2003	20.77	8.09	12.68	2.21	10.30	10.47	12.13	
LAI-9	3/26/2003	20.77	N/A	N/A	N/A	8.95	11.82	11.82	
LAI-9	3/28/2003	20.77	N/A	N/A	N/A	9.04	11.73	11.73	
LAI-9	4/2/2003	20.77	8.08	12.69	0.32	8.40	12.37	12.61	
LAI-9	4/4/2003	20.77	8.34	12.43	0.48	8.82	11.95	12.31	
LAI-9	4/8/2003	20.77	8.10	12.67	0.49	8.59	12.18	12.55	
LAI-9	4/11/2003	20.77	8.36	12.41	0.49	8.85	11.92	12.29	
LAI-9	4/15/2003	20.77	7.81	12.96	0.21	8.02	12.75	12.91	
LAI-9	4/17/2003	20.77	9.11	11.66	0.13	9.24	11.53	11.63	
LAI-9	4/22/2003	20.77	8.41	12.36	0.35	8.76	12.01	12.27	
LAI-9	4/25/2003	20.77	8.32	12.45	0.80	9.12	11.65	12.25	
LAI-9	5/2/2003	20.77	8.99	11.78	0.01	9.00	11.77	11.78	
LAI-9	5/6/2003	20.77	8.66	12.11	0.85	9.51	11.26	11.90	
LAI-9	5/9/2003	20.77	9.75	11.02	0.02	9.77	11.00	11.02	
LAI-9	5/23/2003	20.77	N/A	N/A	N/A	10.10	10.67	10.67	
LAI-9	5/28/2003	20.77	10.50	10.27	0.01	10.51	10.26	10.27	
LAI-9	6/13/2003	20.77	9.91	10.86	0.37	10.28	10.49	10.77	
LAI-9	6/18/2003	20.77	9.81	10.96	0.51	10.32	10.45	10.83	
LAI-9	6/27/2003	20.77	9.91	10.86	0.33	10.24	10.53	10.78	
LAI-9	7/7/2003	20.77	10.21	10.56	0.83	11.04	9.73	10.35	
LAI-9	7/16/2003	20.77	10.03	10.74	0.84	10.87	9.90	10.53	
LAI-9	7/31/2003	20.77	10.44	10.33	0.95	11.39	9.38	10.09	
LAI-9	8/5/2003	20.77	10.25	10.52	1.19	11.44	9.33	10.22	
LAI-9	8/11/2003	20.77	11.89	8.88	0.12	12.01	8.76	8.85	
LAI-9	8/22/2003	20.77	11.92	8.85	0.08	12.00	8.77	8.83	
LAI-9	8/26/2003	20.77	11.03	9.74	0.64	11.67	9.10	9.58	
LAI-9	9/2/2003	20.77	10.96	9.81	1.03	11.99	8.78	9.55	
LAI-9	9/9/2003	20.77	11.12	9.65	0.51	11.63	9.14	9.52	
LAI-9	9/19/2003	20.77	10.89	9.88	1.58	12.47	8.30	9.49	
LAI-9	10/14/2003	20.77	11.75	9.02	1.07	12.82	7.95	8.75	
LAI-9	11/20/2003	20.77	NA	NA	NA	8.05	12.72	12.72	
LAI-9	12/3/2003	20.77	7.21	13.56	0.01	7.22	13.55	13.56	
LAI-10	1/31/2003	17.92	N/A	N/A	N/A	4.34	13.58	13.58	
LAI-10	2/12/2003	17.92	N/A	N/A	N/A	3.93	13.99	13.99	
LAI-10	2/18/2003	17.92	N/A	N/A	N/A	4.51	13.41	13.41	
LAI-10	2/21/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	2/24/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	3/3/2003	17.92	N/A	N/A	N/A	4.38	13.54	13.54	
LAI-10	3/12/2003	17.92	N/A	N/A	N/A	4.31	13.61	13.61	
LAI-10	3/14/2003	17.92	N/A	N/A	N/A	4.08	13.84	13.84	
LAI-10	3/26/2003	17.92	N/A	N/A	N/A	4.78	13.14	13.14	
LAI-10	3/28/2003	17.92	N/A	N/A	N/A	4.82	13.10	13.10	
LAI-10	4/2/2003	17.92	N/A	N/A	N/A	4.25	13.67	13.67	
LAI-10	4/4/2003	17.92	N/A	N/A	N/A	4.21	13.71	13.71	
LAI-10	4/8/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	4/11/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	4/15/2003	17.92	N/A	N/A	N/A	4.09	13.83	13.83	
LAI-10	4/17/2003	17.92	N/A	N/A	N/A	4.50	13.42	13.42	
LAI-10	4/22/2003	17.92	N/A	N/A	N/A	4.45	13.47	13.47	
LAI-10	4/25/2003	17.92	N/A	N/A	N/A	4.58	13.34	13.34	
LAI-10	5/2/2003	17.92	N/A	N/A	N/A	4.23	13.69	13.69	
LAI-10	5/6/2003	17.92	N/A	N/A	N/A	4.86	13.06	13.06	
LAI-10	5/9/2003	17.92	N/A	N/A	N/A	5.10	12.82	12.82	

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CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-10	5/16/2003	17.92	N/A	N/A	N/A	5.38	12.54	12.54	
LAI-10	5/23/2003	17.92	N/A	N/A	N/A	6.50	11.42	11.42	
LAI-10	5/28/2003	17.92	N/A	N/A	N/A	5.55	12.37	12.37	
LAI-10	6/13/2003	17.92	N/A	N/A	N/A	6.17	11.75	11.75	
LAI-10	6/18/2003	17.92	N/A	N/A	N/A	5.86	12.06	12.06	
LAI-10	6/27/2003	17.92	N/A	N/A	N/A	5.89	12.03	12.03	
LAI-10	7/7/2003	17.92	N/A	N/A	N/A	6.51	11.41	11.41	
LAI-10	7/16/2003	17.92	N/A	N/A	N/A	5.53	12.39	12.39	
LAI-10	7/31/2003	17.92	N/A	N/A	N/A	6.61	11.31	11.31	
LAI-10	8/5/2003	17.92	N/A	N/A	N/A	6.68	11.24	11.24	
LAI-10	8/11/2003	17.92	N/A	N/A	N/A	7.15	10.77	10.77	
LAI-10	8/22/2003	17.92	N/A	N/A	N/A	8.68	9.24	9.24	
LAI-10	8/26/2003	17.92	N/A	N/A	N/A	7.03	10.89	10.89	
LAI-10	9/2/2003	17.92	N/A	N/A	N/A	7.15	10.77	10.77	
LAI-10	9/9/2003	17.92	7.33	10.59	0.01	7.34	10.58	10.59	
LAI-10	9/19/2003	17.92	N/A	N/A	N/A	7.37	10.55	10.55	
LAI-10	10/14/2003	17.92	N/A	N/A	N/A	7.75	10.17	10.17	
LAI-10	11/20/2003	17.92	N/A	N/A	N/A	4.48	13.44	13.44	
LAI-10	12/3/2003	17.92	N/A	N/A	N/A	3.58	14.34	14.34	
LAI-11	1/31/2003	18.66	N/A	N/A	N/A	4.55	14.11	14.11	
LAI-11	2/12/2003	18.66	N/A	N/A	N/A	4.92	13.74	13.74	
LAI-11	2/18/2003	18.66	N/A	N/A	N/A	5.41	13.25	13.25	
LAI-11	2/21/2003	18.66	N/A	N/A	N/A	5.51	13.15	13.15	
LAI-11	2/24/2003	18.66	N/A	N/A	N/A	5.48	13.18	13.18	
LAI-11	3/3/2003	18.66	N/A	N/A	N/A	5.38	13.28	13.28	
LAI-11	3/12/2003	18.66	N/A	N/A	N/A	5.32	13.34	13.34	
LAI-11	3/14/2003	18.66	N/A	N/A	N/A	5.19	13.47	13.47	
LAI-11	3/26/2003	18.66	N/A	N/A	N/A	4.81	13.85	13.85	
LAI-11	3/28/2003	18.66	N/A	N/A	N/A	4.89	13.77	13.77	
LAI-11	4/2/2003	18.66	N/A	N/A	N/A	5.28	13.38	13.38	
LAI-11	4/4/2003	18.66	N/A	N/A	N/A	5.33	13.33	13.33	
LAI-11	4/8/2003	18.66	N/A	N/A	N/A	5.41	13.25	13.25	
LAI-11	4/11/2003	18.66	N/A	N/A	N/A	5.42	13.24	13.24	
LAI-11	4/15/2003	18.66	N/A	N/A	N/A	5.08	13.58	13.58	
LAI-11	4/17/2003	18.66	N/A	N/A	N/A	5.46	13.20	13.20	
LAI-11	4/22/2003	18.66	N/A	N/A	N/A	5.47	13.19	13.19	
LAI-11	4/25/2003	18.66	N/A	N/A	N/A	5.67	12.99	12.99	
LAI-11	5/2/2003	18.66	N/A	N/A	N/A	5.12	13.54	13.54	
LAI-11	5/6/2003	18.66	N/A	N/A	N/A	5.81	12.85	12.85	
LAI-11	5/9/2003	18.66	N/A	N/A	N/A	6.00	12.66	12.66	
LAI-11	5/16/2003	18.66	N/A	N/A	N/A	6.30	12.36	12.36	
LAI-11	5/23/2003	18.66	N/A	N/A	N/A	6.58	12.08	12.08	
LAI-11	5/28/2003	18.66	N/A	N/A	N/A	6.44	12.22	12.22	
LAI-11	6/13/2003	18.66	N/A	N/A	N/A	6.70	11.96	11.96	
LAI-11	6/18/2003	18.66	N/A	N/A	N/A	6.80	11.86	11.86	
LAI-11	6/27/2003	18.66	N/A	N/A	N/A	6.81	11.85	11.85	
LAI-11	7/7/2003	18.66	N/A	N/A	N/A	7.51	11.15	11.15	
LAI-11	7/16/2003	18.66	N/A	N/A	N/A	6.42	12.24	12.24	
LAI-11	7/31/2003	18.66	N/A	N/A	N/A	8.91	9.75	9.75	
LAI-11	8/5/2003	18.66	N/A	N/A	N/A	8.51	10.15	10.15	
LAI-11	8/11/2003	18.66	N/A	N/A	N/A	8.79	9.87	9.87	
LAI-11	8/22/2003	18.66	N/A	N/A	N/A	8.43	10.23	10.23	
LAI-11	8/26/2003	18.66	N/A	N/A	N/A	8.92	9.74	9.74	
LAI-11	9/2/2003	18.66	N/A	N/A	N/A	8.95	9.71	9.71	
LAI-11	9/9/2003	18.66	N/A	N/A	N/A	9.24	9.42	9.42	
LAI-11	9/19/2003	18.66	N/A	N/A	N/A	8.99	9.67	9.67	
LAI-11	10/14/2003	18.66	N/A	N/A	N/A	9.15	9.51	9.51	
LAI-11	11/20/2003	18.66	N/A	N/A	N/A	5.31	13.35	13.35	
LAI-11	12/3/2003	18.66	N/A	N/A	N/A	4.50	14.16	14.16	
LAI-12	1/31/2003	18.40	N/A	N/A	N/A	3.28	15.12	15.12	
LAI-12	2/12/2003	18.40	N/A	N/A	N/A	3.98	14.42	14.42	
LAI-12	2/18/2003	18.40	N/A	N/A	N/A	4.50	13.90	13.90	
LAI-12	2/21/2003	18.40	N/A	N/A	N/A	4.60	13.80	13.80	
LAI-12	2/24/2003	18.40	N/A	N/A	N/A	4.58	13.82	13.82	
LAI-12	3/3/2003	18.40	N/A	N/A	N/A	4.61	13.79	13.79	
LAI-12	3/12/2003	18.40	N/A	N/A	N/A	4.38	14.02	14.02	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-12	3/14/2003	18.40	N/A	N/A	N/A	4.17	14.23	14.23	
LAI-12	3/26/2003	18.40	N/A	N/A	N/A	4.04	14.36	14.36	
LAI-12	3/28/2003	18.40	N/A	N/A	N/A	4.10	14.30	14.30	
LAI-12	4/2/2003	18.40	N/A	N/A	N/A	4.34	14.06	14.06	
LAI-12	4/4/2003	18.40	N/A	N/A	N/A	4.45	13.95	13.95	
LAI-12	4/8/2003	18.40	N/A	N/A	N/A	4.58	13.82	13.82	
LAI-12	4/11/2003	18.40	N/A	N/A	N/A	4.65	13.75	13.75	
LAI-12	4/15/2003	18.40	N/A	N/A	N/A	4.25	14.15	14.15	
LAI-12	4/17/2003	18.40	N/A	N/A	N/A	4.69	13.71	13.71	
LAI-12	4/22/2003	18.40	N/A	N/A	N/A	4.69	13.71	13.71	
LAI-12	4/25/2003	18.40	N/A	N/A	N/A	4.81	13.59	13.59	
LAI-12	5/2/2003	18.40	N/A	N/A	N/A	4.98	13.42	13.42	
LAI-12	5/6/2003	18.40	N/A	N/A	N/A	5.22	13.18	13.18	
LAI-12	5/9/2003	18.40	N/A	N/A	N/A	5.46	12.94	12.94	
LAI-12	5/16/2003	18.40	N/A	N/A	N/A	5.74	12.66	12.66	
LAI-12	5/23/2003	18.40	N/A	N/A	N/A	5.27	13.13	13.13	
LAI-12	5/28/2003	18.40	N/A	N/A	N/A	5.88	12.52	12.52	
LAI-12	6/13/2003	18.40	N/A	N/A	N/A	5.45	12.95	12.95	
LAI-12	6/18/2003	18.40	N/A	N/A	N/A	6.18	12.22	12.22	
LAI-12	6/27/2003	18.40	N/A	N/A	N/A	6.22	12.18	12.18	
LAI-12	7/7/2003	18.40	N/A	N/A	N/A	6.95	11.45	11.45	
LAI-12	7/16/2003	18.40	N/A	N/A	N/A	5.84	12.56	12.56	
LAI-12	7/31/2003	18.40	N/A	N/A	N/A	6.97	11.43	11.43	
LAI-12	8/5/2003	18.40	N/A	N/A	N/A	7.05	11.35	11.35	
LAI-12	8/11/2003	18.40	N/A	N/A	N/A	6.80	11.60	11.60	
LAI-12	8/22/2003	18.40	N/A	N/A	N/A	8.19	10.21	10.21	
LAI-12	8/26/2003	18.40	N/A	N/A	N/A	7.33	11.07	11.07	
LAI-12	9/2/2003	18.40	N/A	N/A	N/A	7.45	10.95	10.95	
LAI-12	9/9/2003	18.40	N/A	N/A	N/A	7.64	10.76	10.76	
LAI-12	9/19/2003	18.40	N/A	N/A	N/A	7.93	10.47	10.47	
LAI-12	10/14/2003	18.40	N/A	N/A	N/A	7.48	10.92	10.92	
LAI-12	11/20/2003	18.40	N/A	N/A	N/A	4.06	14.34	14.34	
LAI-12	12/3/2003	18.40	N/A	N/A	N/A	3.37	15.03	15.03	
LAI-13	1/31/2003	19.09	N/A	N/A	N/A	5.25	13.84	13.84	
LAI-13	2/12/2003	19.09	N/A	N/A	N/A	6.28	12.81	12.81	
LAI-13	2/18/2003	19.09	N/A	N/A	N/A	6.15	12.94	12.94	
LAI-13	2/21/2003	19.09	N/A	N/A	N/A	6.29	12.80	12.80	
LAI-13	2/24/2003	19.09	N/A	N/A	N/A	6.65	12.44	12.44	
LAI-13	3/3/2003	19.09	N/A	N/A	N/A	6.88	12.21	12.21	
LAI-13	3/12/2003	19.09	N/A	N/A	N/A	6.87	12.22	12.22	
LAI-13	3/14/2003	19.09	N/A	N/A	N/A	6.62	12.47	12.47	
LAI-13	3/26/2003	19.09	6.16	12.93	0.00	6.16	12.93	12.93	
LAI-13	3/28/2003	19.09	N/A	N/A	N/A	6.21	12.88	12.88	
LAI-13	4/2/2003	19.09	N/A	N/A	N/A	6.25	12.84	12.84	
LAI-13	4/4/2003	19.09	N/A	N/A	N/A	6.25	12.84	12.84	
LAI-13	4/8/2003	19.09	N/A	N/A	N/A	6.69	12.40	12.40	
LAI-13	4/11/2003	19.09	N/A	N/A	N/A	6.69	12.40	12.40	
LAI-13	4/15/2003	19.09	N/A	N/A	N/A	6.61	12.48	12.48	
LAI-13	4/17/2003	19.09	N/A	N/A	N/A	6.66	12.43	12.43	
LAI-13	4/22/2003	19.09	N/A	N/A	N/A	6.87	12.22	12.22	
LAI-13	4/25/2003	19.09	N/A	N/A	N/A	6.92	12.17	12.17	
LAI-13	5/2/2003	19.09	N/A	N/A	N/A	6.71	12.38	12.38	
LAI-13	5/6/2003	19.09	N/A	N/A	N/A	7.25	11.84	11.84	
LAI-13	5/9/2003	19.09	N/A	N/A	N/A	7.36	11.73	11.73	
LAI-13	5/16/2003	19.09	N/A	N/A	N/A	7.63	11.46	11.46	
LAI-13	5/23/2003	19.09	N/A	N/A	N/A	7.78	11.31	11.31	
LAI-13	5/28/2003	19.09	N/A	N/A	N/A	7.80	11.29	11.29	
LAI-13	6/13/2003	19.09	N/A	N/A	N/A	8.01	11.08	11.08	
LAI-13	6/18/2003	19.09	N/A	N/A	N/A	8.02	11.07	11.07	
LAI-13	6/27/2003	19.09	N/A	N/A	N/A	8.06	11.03	11.03	
LAI-13	7/7/2003	19.09	N/A	N/A	N/A	8.45	10.64	10.64	
LAI-13	7/16/2003	19.09	N/A	N/A	N/A	7.71	11.38	11.38	
LAI-13	7/31/2003	19.09	N/A	N/A	N/A	8.51	10.58	10.58	
LAI-13	8/5/2003	19.09	N/A	N/A	N/A	8.54	10.55	10.55	
LAI-13	8/11/2003	19.09	N/A	N/A	N/A	8.62	10.47	10.47	
LAI-13	8/22/2003	19.09	N/A	N/A	N/A	9.81	9.28	9.28	
LAI-13	8/26/2003	19.09	N/A	N/A	N/A	8.81	10.28	10.28	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-13	9/2/2003	19.09	N/A	N/A	N/A	8.88	10.21	10.21	
LAI-13	9/9/2003	19.09	N/A	N/A	N/A	8.91	10.18	10.18	
LAI-13	9/19/2003	19.09	N/A	N/A	N/A	10.94	8.15	8.15	
LAI-13	10/14/2003	19.09	N/A	N/A	N/A	9.08	10.01	10.01	
LAI-13	11/20/2003	19.09	N/A	N/A	N/A	5.94	13.15	13.15	
LAI-13	12/3/2003	19.09	N/A	N/A	N/A	5.52	13.57	13.57	
LAI-14	1/31/2003	19.29	N/A	N/A	N/A	6.12	13.17	13.17	
LAI-14	2/12/2003	19.29	N/A	N/A	N/A	7.11	12.18	12.18	
LAI-14	2/18/2003	19.29	N/A	N/A	N/A	7.17	12.12	12.12	
LAI-14	2/21/2003	19.29	N/A	N/A	N/A	7.25	12.04	12.04	
LAI-14	2/24/2003	19.29	N/A	N/A	N/A	7.25	12.04	12.04	
LAI-14	3/3/2003	19.29	N/A	N/A	N/A	7.50	11.79	11.79	
LAI-14	3/12/2003	19.29	N/A	N/A	N/A	7.40	11.89	11.89	
LAI-14	3/14/2003	19.29	N/A	N/A	N/A	7.23	12.06	12.06	
LAI-14	3/26/2003	19.29	N/A	N/A	N/A	7.04	12.25	12.25	
LAI-14	3/28/2003	19.29	N/A	N/A	N/A	7.07	12.22	12.22	
LAI-14	4/2/2003	19.29	N/A	N/A	N/A	7.00	12.29	12.29	
LAI-14	4/4/2003	19.29	N/A	N/A	N/A	7.24	12.05	12.05	
LAI-14	4/8/2003	19.29	N/A	N/A	N/A	7.41	11.88	11.88	
LAI-14	4/11/2003	19.29	N/A	N/A	N/A	7.36	11.93	11.93	
LAI-14	4/15/2003	19.29	N/A	N/A	N/A	7.34	11.95	11.95	
LAI-14	4/17/2003	19.29	N/A	N/A	N/A	7.39	11.90	11.90	
LAI-14	4/22/2003	19.29	N/A	N/A	N/A	7.53	11.76	11.76	
LAI-14	4/25/2003	19.29	N/A	N/A	N/A	7.62	11.67	11.67	
LAI-14	5/2/2003	19.29	N/A	N/A	N/A	7.20	12.09	12.09	
LAI-14	5/6/2003	19.29	N/A	N/A	N/A	7.82	11.47	11.47	
LAI-14	5/9/2003	19.29	N/A	N/A	N/A	7.86	11.43	11.43	
LAI-14	5/16/2003	19.29	N/A	N/A	N/A	8.00	11.29	11.29	
LAI-14	5/23/2003	19.29	N/A	N/A	N/A	8.03	11.26	11.26	
LAI-14	5/28/2003	19.29	N/A	N/A	N/A	8.14	11.15	11.15	
LAI-14	6/13/2003	19.29	N/A	N/A	N/A	8.30	10.99	10.99	
LAI-14	6/18/2003	19.29	N/A	N/A	N/A	8.33	10.96	10.96	
LAI-14	6/27/2003	19.29	N/A	N/A	N/A	8.35	10.94	10.94	
LAI-14	7/7/2003	19.29	N/A	N/A	N/A	8.65	10.64	10.64	
LAI-14	7/16/2003	19.29	N/A	N/A	N/A	7.83	11.46	11.46	
LAI-14	7/31/2003	19.29	N/A	N/A	N/A	8.41	10.88	10.88	
LAI-14	8/5/2003	19.29	N/A	N/A	N/A	8.73	10.56	10.56	
LAI-14	8/11/2003	19.29	N/A	N/A	N/A	8.80	10.49	10.49	
LAI-14	8/22/2003	19.29	N/A	N/A	N/A	9.89	9.40	9.40	
LAI-14	8/26/2003	19.29	N/A	N/A	N/A	9.04	10.25	10.25	
LAI-14	9/2/2003	19.29	N/A	N/A	N/A	9.07	10.22	10.22	
LAI-14	9/9/2003	19.29	N/A	N/A	N/A	9.14	10.15	10.15	
LAI-14	9/19/2003	19.29	N/A	N/A	N/A	9.14	10.15	10.15	
LAI-14	10/14/2003	19.29	N/A	N/A	N/A	9.30	9.99	9.99	
LAI-14	11/20/2003	19.29	N/A	N/A	N/A	6.59	12.70	12.70	
LAI-14	12/3/2003	19.29	N/A	N/A	N/A	6.53	12.76	12.76	
LAI-15	1/31/2003	17.58	N/A	N/A	N/A	6.13	11.45	11.45	
LAI-15	2/12/2003	17.58	N/A	N/A	N/A	4.23	13.35	13.35	
LAI-15	2/18/2003	17.58	N/A	N/A	N/A	4.51	13.07	13.07	
LAI-15	2/21/2003	17.58	N/A	N/A	N/A	4.72	12.86	12.86	
LAI-15	2/24/2003	17.58	N/A	N/A	N/A	4.74	12.84	12.84	
LAI-15	3/3/2003	17.58	N/A	N/A	N/A	4.96	12.62	12.62	
LAI-15	3/12/2003	17.58	N/A	N/A	N/A	4.81	12.77	12.77	
LAI-15	3/14/2003	17.58	N/A	N/A	N/A	4.14	13.44	13.44	
LAI-15	3/26/2003	17.58	N/A	N/A	N/A	3.82	13.76	13.76	
LAI-15	3/28/2003	17.58	N/A	N/A	N/A	3.85	13.73	13.73	
LAI-15	4/2/2003	17.58	N/A	N/A	N/A	4.40	13.18	13.18	
LAI-15	4/4/2003	17.58	N/A	N/A	N/A	4.49	13.09	13.09	
LAI-15	4/8/2003	17.58	N/A	N/A	N/A	4.71	12.87	12.87	
LAI-15	4/11/2003	17.58	N/A	N/A	N/A	4.80	12.78	12.78	
LAI-15	4/15/2003	17.58	N/A	N/A	N/A	4.75	12.83	12.83	
LAI-15	4/17/2003	17.58	N/A	N/A	N/A	4.77	12.81	12.81	
LAI-15	4/22/2003	17.58	N/A	N/A	N/A	4.99	12.59	12.59	
LAI-15	4/25/2003	17.58	N/A	N/A	N/A	5.09	12.49	12.49	
LAI-15	5/2/2003	17.58	N/A	N/A	N/A	5.13	12.45	12.45	
LAI-15	5/6/2003	17.58	N/A	N/A	N/A	5.55	12.03	12.03	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
LAI-15	5/9/2003	17.58	N/A	N/A	N/A	5.68	11.90	11.90	
LAI-15	5/16/2003	17.58	N/A	N/A	N/A	4.90	12.68	12.68	
LAI-15	5/23/2003	17.58	N/A	N/A	N/A	6.12	11.46	11.46	
LAI-15	5/28/2003	17.58	N/A	N/A	N/A	6.13	11.45	11.45	
LAI-15	6/13/2003	17.58	N/A	N/A	N/A	6.33	11.25	11.25	
LAI-15	6/18/2003	17.58	N/A	N/A	N/A	6.35	11.23	11.23	
LAI-15	6/27/2003	17.58	N/A	N/A	N/A	6.39	11.19	11.19	
LAI-15	7/7/2003	17.58	N/A	N/A	N/A	6.75	10.83	10.83	
LAI-15	7/16/2003	17.58	N/A	N/A	N/A	6.03	11.55	11.55	
LAI-15	7/31/2003	17.58	N/A	N/A	N/A	6.83	10.75	10.75	
LAI-15	8/5/2003	17.58	N/A	N/A	N/A	6.85	10.73	10.73	
LAI-15	8/11/2003	17.58	N/A	N/A	N/A	6.93	10.65	10.65	
LAI-15	8/22/2003	17.58	N/A	N/A	N/A	8.04	9.54	9.54	
LAI-15	8/26/2003	17.58	N/A	N/A	N/A	7.11	10.47	10.47	
LAI-15	9/2/2003	17.58	N/A	N/A	N/A	7.21	10.37	10.37	
LAI-15	9/9/2003	17.58	N/A	N/A	N/A	7.23	10.35	10.35	
LAI-15	9/19/2003	17.58	N/A	N/A	N/A	N/A	N/A	N/A	
LAI-15	10/14/2003	17.58	N/A	N/A	N/A	7.45	10.13	10.13	
LAI-15	11/20/2003	17.58	N/A	N/A	N/A	4.11	13.47	13.47	
LAI-15	12/3/2003	17.58	N/A	N/A	N/A	3.65	13.93	13.93	
LAI-16	1/31/2003	18.61	N/A	N/A	N/A	6.28	12.33	12.33	
LAI-16	2/12/2003	18.61	N/A	N/A	N/A	6.65	11.96	11.96	
LAI-16	2/18/2003	18.61	N/A	N/A	N/A	6.70	11.91	11.91	
LAI-16	2/21/2003	18.61	N/A	N/A	N/A	6.73	11.88	11.88	
LAI-16	2/24/2003	18.61	N/A	N/A	N/A	6.74	11.87	11.87	
LAI-16	3/3/2003	18.61	N/A	N/A	N/A	6.86	11.75	11.75	
LAI-16	3/12/2003	18.61	N/A	N/A	N/A	6.52	12.09	12.09	
LAI-16	3/14/2003	18.61	N/A	N/A	N/A	6.39	12.22	12.22	
LAI-16	3/26/2003	18.61	N/A	N/A	N/A	6.48	12.13	12.13	
LAI-16	3/28/2003	18.61	N/A	N/A	N/A	7.46	11.15	11.15	
LAI-16	4/2/2003	18.61	N/A	N/A	N/A	6.63	11.98	11.98	
LAI-16	4/4/2003	18.61	N/A	N/A	N/A	6.71	11.90	11.90	
LAI-16	4/8/2003	18.61	N/A	N/A	N/A	6.90	11.71	11.71	
LAI-16	4/11/2003	18.61	N/A	N/A	N/A	6.75	11.86	11.86	
LAI-16	4/15/2003	18.61	N/A	N/A	N/A	6.68	11.93	11.93	
LAI-16	4/17/2003	18.61	N/A	N/A	N/A	6.73	11.88	11.88	
LAI-16	4/22/2003	18.61	N/A	N/A	N/A	6.87	11.74	11.74	
LAI-16	4/25/2003	18.61	N/A	N/A	N/A	6.99	11.62	11.62	
LAI-16	5/2/2003	18.61	N/A	N/A	N/A	6.78	11.83	11.83	
LAI-16	5/6/2003	18.61	N/A	N/A	N/A	7.26	11.35	11.35	
LAI-16	5/9/2003	18.61	N/A	N/A	N/A	7.35	11.26	11.26	
LAI-16	5/16/2003	18.61	N/A	N/A	N/A	7.60	11.01	11.01	
LAI-16	5/23/2003	18.61	N/A	N/A	N/A	8.08	10.53	10.53	
LAI-16	5/28/2003	18.61	N/A	N/A	N/A	7.87	10.74	10.74	
LAI-16	6/13/2003	18.61	N/A	N/A	N/A	8.31	10.30	10.30	
LAI-16	6/18/2003	18.61	N/A	N/A	N/A	8.45	10.16	10.16	
LAI-16	6/27/2003	18.61	N/A	N/A	N/A	8.08	10.53	10.53	
LAI-16	7/7/2003	18.61	N/A	N/A	N/A	N/A	N/A	N/A	Faulty meter
LAI-16	7/16/2003	18.61	N/A	N/A	N/A	8.00	10.61	10.61	
LAI-16	7/31/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/5/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/11/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/22/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	8/26/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/2/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/9/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	9/19/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	10/14/2003	18.61	N/A	N/A	N/A	Dry	Dry	Dry	
LAI-16	11/20/2003	18.61	N/A	N/A	N/A	6.95	11.66	11.66	
LAI-16	12/3/2003	18.61	N/A	N/A	N/A	6.68	11.93	11.93	
R-1	11/24/2002	16.94	N/A	N/A	N/A	5.90	11.04	11.04	
R-2	11/24/2002	17.52	N/A	N/A	N/A	6.69	10.83	10.83	
RW-1	11/20/2002	21.68	8.25	13.43	0.95	9.2	12.48	13.19	
RW-1	11/21/2002	21.68	8.25	13.43	1.15	9.4	12.28	13.14	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-1	11/22/2002	21.68	8.22	13.46	1.20	9.42	12.26	13.16	
RW-1	11/24/2002	21.68	8.35	13.33	1.06	9.41	12.27	13.07	
RW-1	1/2/2003	21.68	5.61	16.07	0.21	5.82	15.86	16.02	
RW-1	1/3/2003	21.68	5.51	16.17	0.21	5.72	15.96	16.12	
RW-1	1/6/2003	21.68	5.35	16.33	0.29	5.64	16.04	16.26	
RW-1	1/7/2003	21.68	5.68	16.00	0.28	5.96	15.72	15.93	
RW-1	1/8/2003	21.68	5.95	15.73	0.28	6.23	15.45	15.66	
RW-1	1/9/2003	21.68	6.03	15.65	0.29	6.32	15.36	15.58	
RW-1	1/10/2003	21.68	6.20	15.48	0.30	6.5	15.18	15.41	
RW-1	1/13/2003	21.68	6.00	15.68	0.32	6.32	15.36	15.60	
RW-1	1/14/2003	21.68	5.72	15.96	0.73	6.45	15.23	15.78	
RW-1	1/15/2003	21.68	5.99	15.69	0.19	6.18	15.50	15.64	
RW-1	1/16/2003	21.68	6.10	15.58	0.30	6.4	15.28	15.51	
RW-1	1/17/2003	21.68	6.15	15.53	0.30	6.45	15.23	15.46	
RW-1	1/20/2003	21.68	6.34	15.34	0.35	6.69	14.99	15.25	
RW-1	1/22/2003	21.68	5.60	16.08	0.29	5.89	15.79	16.01	
RW-1	1/23/2003	21.68	5.80	15.88	0.35	6.15	15.53	15.79	
RW-1	1/24/2003	21.68	5.37	16.31	0.38	5.75	15.93	16.22	
RW-1	1/27/2003	21.68	4.68	17.00	0.47	5.15	16.53	16.88	
RW-1	1/28/2003	21.68	4.66	17.02	0.45	5.11	16.57	16.91	
RW-1	1/29/2003	21.68	4.67	17.01	0.46	5.13	16.55	16.90	
RW-1	1/30/2003	21.68	4.90	16.78	0.44	5.34	16.34	16.67	
RW-1	2/3/2003	21.68	5.65	16.03	0.41	6.06	15.62	15.93	
RW-1	2/6/2003	21.32	6.76	14.56	0.40	7.16	14.16	14.46	
RW-1	2/11/2003	21.32	7.35	13.97	0.42	7.77	13.55	13.87	
RW-1	2/18/2003	21.32	N/A	N/A	N/A	6.55	14.77	14.77	
RW-1	2/21/2003	21.32	7.90	13.42	0.93	8.83	12.49	13.19	
RW-1	2/26/2003	21.32	7.70	13.62	0.81	8.51	12.81	13.42	
RW-1	3/4/2003	21.32	7.11	14.21	0.63	7.74	13.58	14.05	
RW-1	3/12/2003	21.32	7.30	14.02	0.46	7.76	13.56	13.91	
RW-1	3/14/2003	21.32	6.85	14.47	N/A	7.31	14.01	14.01	
RW-1	3/26/2003	21.32	6.39	14.93	0.13	6.52	14.80	14.90	
RW-1	3/28/2003	21.32	7.41	13.91	0.15	7.56	13.76	13.87	
RW-1	4/2/2003	21.32	7.45	13.87	0.10	7.55	13.77	13.85	
RW-1	4/4/2003	21.32	7.70	13.62	0.05	7.75	13.57	13.61	
RW-1	4/8/2003	21.32	7.25	14.07	0.02	7.27	14.05	14.07	
RW-1	4/11/2003	21.32	7.15	14.17	0.03	7.18	14.14	14.16	
RW-1	4/15/2003	21.32	6.57	14.75	0.02	6.59	14.73	14.75	
RW-1	4/17/2003	21.32	7.52	13.80	0.02	7.54	13.78	13.80	
RW-1	4/22/2003	21.32	7.53	13.79	0.02	7.55	13.77	13.79	
RW-1	4/25/2003	21.32	7.42	13.90	0.01	7.43	13.89	13.90	
RW-1	5/2/2003	21.32	8.84	12.48	0.01	8.85	12.47	12.48	
RW-1	5/6/2003	21.32	N/A	N/A	N/A	9.02	12.30	12.30	
RW-1	5/9/2003	21.32	N/A	N/A	N/A	9.21	12.11	12.11	
RW-1	5/23/2003	21.32	N/A	N/A	N/A	9.26	12.06	12.06	
RW-1	5/28/2003	21.32	9.35	11.97	0.01	9.36	11.96	11.97	
RW-1	6/13/2003	21.32	9.52	11.80	0.49	10.01	11.31	11.68	
RW-1	6/18/2003	21.32	9.22	12.10	0.91	10.13	11.19	11.87	
RW-1	6/27/2003	21.32	N/A	N/A	N/A	9.81	11.51	11.51	
RW-1	7/7/2003	21.32	10.26	11.06	0.03	10.29	11.03	11.05	
RW-1	7/16/2003	21.32	10.09	11.23	0.26	10.35	10.97	11.17	
RW-1	7/31/2003	21.32	10.34	10.98	0.01	10.35	10.97	10.98	
RW-1	8/5/2003	21.32	10.32	11.00	0.08	10.40	10.92	10.98	
RW-1	8/11/2003	21.32	11.34	9.98	0.01	11.35	9.97	9.98	
RW-1	8/22/2003	21.32	11.34	9.98	0.01	11.35	9.97	9.98	
RW-1	8/26/2003	21.32	N/A	N/A	N/A	10.36	10.96	10.96	
RW-1	9/2/2003	21.32	N/A	N/A	N/A	10.36	10.96	10.96	
RW-1	9/9/2003	21.32	10.33	10.99	0.05	10.38	10.94	10.98	
RW-1	9/19/2003	21.32	10.33	10.99	0.03	10.36	10.96	10.98	
RW-1	10/14/2003	21.32	N/A	N/A	N/A	10.30	11.02	11.02	
RW-1	11/20/2003	21.32	N/A	N/A	N/A	5.52	15.80	15.80	
RW-1	12/3/2003	21.32	N/A	N/A	N/A	5.44	15.88	15.88	
RW-2	11/20/2002	21.49	8.05	13.44	1.35	9.4	12.09	13.10	
RW-2	11/21/2002	21.49	8.00	13.49	1.40	9.4	12.09	13.14	
RW-2	11/22/2002	21.49	8.00	13.49	1.41	9.41	12.08	13.14	
RW-2	11/24/2002	21.49	8.21	13.28	1.49	9.70	11.79	12.91	
RW-2	1/2/2003	21.49	6.11	15.38	2.27	8.38	13.11	14.81	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-2	1/6/2003	21.49	5.40	16.09	2.78	8.18	13.31	15.40	
RW-2	1/7/2003	21.49	6.41	15.08	0.54	6.95	14.54	14.95	
RW-2	1/8/2003	21.49	7.67	13.82	0.01	7.68	13.81	13.82	
RW-2	1/9/2003	21.49	8.72	12.77	0.01	8.73	12.76	12.77	
RW-2	1/10/2003	21.49	6.38	15.11	0.54	6.92	14.57	14.98	
RW-2	1/13/2003	21.49	8.42	13.07	0.10	8.52	12.97	13.05	
RW-2	1/14/2003	21.49	6.17	15.32	1.32	7.49	14.00	14.99	
RW-2	1/15/2003	21.49	5.95	15.54	0.85	6.80	14.69	15.33	
RW-2	1/16/2003	21.49	6.51	14.98	1.00	7.51	13.98	14.73	
RW-2	1/17/2003	21.49	6.40	15.09	1.12	7.52	13.97	14.81	
RW-2	1/20/2003	21.49	6.35	15.14	1.59	7.94	13.55	14.74	
RW-2	1/22/2003	21.49	5.86	15.63	2.74	8.60	12.89	14.95	
RW-2	1/23/2003	21.49	5.92	15.57	3.23	9.15	12.34	14.76	
RW-2	1/24/2003	21.49	5.37	16.12	0.62	5.99	15.50	15.97	
RW-2	1/27/2003	21.49	4.69	16.80	0.53	5.22	16.27	16.67	
RW-2	1/28/2003	21.49	4.83	16.66	3.71	8.54	12.95	15.73	
RW-2	1/29/2003	21.49	4.82	16.67	3.66	8.48	13.01	15.76	
RW-2	1/30/2003	21.49	4.95	16.54	0.94	5.89	15.60	16.31	
RW-2	2/3/2003	21.49	5.29	16.20	3.82	9.11	12.38	15.25	
RW-2	2/6/2003	21.10	6.16	14.94	3.48	9.64	11.46	14.07	
RW-2	2/11/2003	21.10	6.61	14.49	3.17	9.78	11.32	13.70	
RW-2	2/18/2003	21.10	7.46	13.64	2.72	10.18	10.92	12.96	
RW-2	2/21/2003	21.10	7.40	13.70	2.76	10.16	10.94	13.01	
RW-2	2/26/2003	21.10	7.66	13.44	0.69	8.35	12.75	13.27	
RW-2	3/4/2003	21.10	7.15	13.95	1.42	8.57	12.53	13.60	
RW-2	3/12/2003	21.10	7.60	13.50	0.02	7.62	13.48	13.50	
RW-2	3/14/2003	21.10	7.38	13.72	1.61	8.99	12.11	13.32	
RW-2	3/26/2003	21.10	6.85	14.25	0.70	7.55	13.55	14.08	
RW-2	3/28/2003	21.10	7.48	13.62	0.87	8.35	12.75	13.40	
RW-2	4/2/2003	21.10	7.55	13.55	0.86	8.41	12.69	13.34	
RW-2	4/4/2003	21.10	7.95	13.15	0.56	8.51	12.59	13.01	
RW-2	4/8/2003	21.10	8.02	13.08	0.03	8.05	13.05	13.07	
RW-2	4/11/2003	21.10	8.22	12.88	0.01	8.23	12.87	12.88	
RW-2	4/15/2003	21.10	NA	N/A	N/A	7.68	13.42	13.42	
RW-2	4/17/2003	21.10	8.34	12.76	0.06	8.40	12.70	12.75	
RW-2	4/22/2003	21.10	8.36	12.74	0.16	8.52	12.58	12.70	
RW-2	4/25/2003	21.10	8.30	12.80	0.11	8.41	12.69	12.77	
RW-2	5/2/2003	21.10	8.75	12.35	0.31	9.06	12.04	12.27	
RW-2	5/6/2003	21.10	8.82	12.28	0.61	9.43	11.67	12.13	
RW-2	5/9/2003	21.10	9.16	11.94	0.62	9.78	11.32	11.79	
RW-2	5/23/2003	21.10	9.15	11.95	1.42	10.57	10.53	11.60	
RW-2	5/28/2003	21.10	8.95	12.15	1.49	10.44	10.66	11.78	
RW-2	6/13/2003	21.10	9.24	11.86	1.35	10.59	10.51	11.52	
RW-2	6/18/2003	21.10	9.20	11.90	1.31	10.51	10.59	11.57	
RW-2	6/27/2003	21.10	9.23	11.87	1.26	10.49	10.61	11.56	
RW-2	7/7/2003	21.10	10.01	11.09	0.42	10.43	10.67	10.99	
RW-2	7/16/2003	21.10	9.83	11.27	0.71	10.54	10.56	11.09	Had to pull pump to measure
RW-2	7/31/2003	21.10	10.31	10.79	0.15	10.46	10.64	10.75	
RW-2	8/5/2003	21.10	10.28	10.82	0.22	10.50	10.60	10.77	
RW-2	8/11/2003	21.10	NA	N/A	N/A	11.38	9.72	9.72	
RW-2	8/22/2003	21.10	NA	N/A	N/A	11.38	9.72	9.72	
RW-2	8/26/2003	21.10	NA	N/A	N/A	11.26	9.84	9.84	
RW-2	9/2/2003	21.10	NA	N/A	N/A	10.40	10.70	10.70	
RW-2	9/9/2003	21.10	10.34	10.76	0.06	10.40	10.70	10.75	
RW-2	9/19/2003	21.10	NA	N/A	N/A	10.70	10.40	10.40	
RW-2	10/14/2003	21.10	NA	N/A	N/A	10.38	10.72	10.72	
RW-2	11/20/2003	21.10	NA	N/A	N/A	7.66	13.44	13.44	
RW-2	12/3/2003	21.10	NA	N/A	N/A	6.65	14.45	14.45	
RW-3	11/20/2002	20.00	8.45	11.55	0.80	9.25	10.75	11.35	
RW-3	11/21/2002	20.00	8.27	11.73	1.20	9.47	10.53	11.43	
RW-3	11/22/2002	20.00	8.18	11.82	1.28	9.46	10.54	11.50	
RW-3	11/24/2002	20.00	7.94	12.06	1.68	9.62	10.38	11.64	
RW-3	1/2/2003	20.00	6.52	13.48	0.04	6.56	13.44	13.47	
RW-3	1/3/2003	20.00	6.38	13.62	0.23	6.61	13.39	13.56	
RW-3	1/6/2003	20.00	5.92	14.08	0.03	5.95	14.05	14.07	
RW-3	1/7/2003	20.00	5.81	14.19	0.04	5.85	14.15	14.18	
RW-3	1/8/2003	20.00	5.74	14.26	0.05	5.79	14.21	14.25	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-3	1/9/2003	20.00	5.78	14.22	0.05	5.83	14.17	14.21	
RW-3	1/10/2003	20.00	5.88	14.12	0.05	5.93	14.07	14.11	
RW-3	1/13/2003	20.00	6.02	13.98	0.08	6.10	13.90	13.96	
RW-3	1/14/2003	20.00	5.97	14.03	0.09	6.06	13.94	14.01	
RW-3	1/15/2003	20.00	5.87	14.13	0.12	5.99	14.01	14.10	
RW-3	1/16/2003	20.00	5.89	14.11	0.09	5.98	14.02	14.09	
RW-3	1/17/2003	20.00	5.85	14.15	0.07	5.92	14.08	14.13	
RW-3	1/20/2003	20.00	5.98	14.02	0.13	6.11	13.89	13.99	
RW-3	1/22/2003	20.00	5.91	14.09	0.09	6.00	14.00	14.07	
RW-3	1/23/2003	20.00	6.20	13.80	0.49	6.69	13.31	13.68	
RW-3	1/24/2003	20.00	6.02	13.98	0.24	6.26	13.74	13.92	
RW-3	1/27/2003	20.00	5.57	14.43	0.08	5.65	14.35	14.41	
RW-3	1/28/2003	20.00	5.55	14.45	0.07	5.62	14.38	14.43	
RW-3	1/29/2003	20.00	5.44	14.56	0.06	5.50	14.50	14.55	
RW-3	1/30/2003	20.00	5.56	14.44	0.06	5.62	14.38	14.43	
RW-3	2/3/2003	20.00	5.75	14.25	0.10	5.85	14.15	14.23	
RW-3	2/6/2003	20.82	6.44	14.38	0.12	6.56	14.26	14.35	
RW-3	2/11/2003	20.82	6.81	14.01	0.32	7.13	13.69	13.93	
RW-3	2/18/2003	20.82	7.29	13.53	0.88	8.17	12.65	13.31	
RW-3	2/21/2003	20.82	7.19	13.63	0.75	7.94	12.88	13.44	
RW-3	2/26/2003	20.82	6.73	14.09	0.31	7.04	13.78	14.01	
RW-3	3/4/2003	20.82	6.83	13.99	0.34	7.17	13.65	13.91	
RW-3	3/12/2003	20.82	7.38	13.44	0.06	7.44	13.38	13.43	
RW-3	3/14/2003	20.82	7.21	13.61	0.07	7.28	13.54	13.59	
RW-3	3/26/2003	20.82	6.52	14.30	0.01	6.53	14.29	14.30	
RW-3	3/28/2003	20.82	N/A	N/A	N/A	7.09	13.73	13.73	
RW-3	4/2/2003	20.82	N/A	N/A	N/A	7.05	13.77	13.77	
RW-3	4/4/2003	20.82	N/A	N/A	N/A	7.26	13.56	13.56	
RW-3	4/8/2003	20.82	N/A	N/A	N/A	6.90	13.92	13.92	
RW-3	4/11/2003	20.82	N/A	N/A	N/A	7.51	13.31	13.31	
RW-3	4/15/2003	20.82	N/A	N/A	N/A	6.67	14.15	14.15	
RW-3	4/17/2003	20.82	N/A	N/A	N/A	7.61	13.21	13.21	
RW-3	4/22/2003	20.82	N/A	N/A	N/A	7.61	13.21	13.21	
RW-3	4/25/2003	20.82	N/A	N/A	N/A	7.22	13.60	13.60	
RW-3	5/2/2003	20.82	8.21	12.61	0.25	8.46	12.36	12.55	
RW-3	5/6/2003	20.82	8.51	12.31	0.24	8.75	12.07	12.25	
RW-3	5/9/2003	20.82	8.71	12.11	0.12	8.83	11.99	12.08	
RW-3	5/23/2003	20.82	9.74	11.08	0.03	9.77	11.05	11.07	
RW-3	5/28/2003	20.82	8.75	12.07	0.01	8.76	12.06	12.07	
RW-3	6/13/2003	20.82	9.19	11.63	0.02	9.21	11.61	11.63	
RW-3	6/18/2003	20.82	9.16	11.66	0.06	9.22	11.60	11.65	
RW-3	6/27/2003	20.82	N/A	N/A	N/A	9.50	11.32	11.32	
RW-3	7/7/2003	20.82	10.05	10.77	0.06	10.11	10.71	10.76	
RW-3	7/16/2003	20.82	10.02	10.80	0.01	10.03	10.79	10.80	
RW-3	7/31/2003	20.82	10.18	10.64	0.11	10.29	10.53	10.61	
RW-3	8/5/2003	20.82	N/A	N/A	N/A	Dry	Dry	Dry	
RW-3	8/11/2003	20.82	11.00	9.82	0.30	11.30	9.52	9.75	
RW-3	8/22/2003	20.82	10.98	9.84	0.29	11.27	9.55	9.77	
RW-3	8/26/2003	20.82	N/A	N/A	N/A	11.14	9.68	9.68	
RW-3	9/2/2003	20.82	N/A	N/A	N/A	10.28	10.54	10.54	
RW-3	9/9/2003	20.82	N/A	N/A	N/A	10.29	10.53	10.53	
RW-3	9/19/2003	20.82	N/A	N/A	N/A	10.29	10.53	10.53	
RW-3	10/14/2003	20.82	N/A	N/A	N/A	10.30	10.52	10.52	
RW-3	11/20/2003	20.82	7.16	13.66	1.29	8.45	12.37	13.34	
RW-3	12/3/2003	20.82	6.72	14.10	0.05	6.77	14.05	14.09	
RW-4	11/20/2002	19.92	7.50	12.42	2.64	10.14	9.78	11.76	
RW-4	11/21/2002	19.92	7.50	12.42	2.64	10.14	9.78	11.76	
RW-4	11/22/2002	19.92	8.37	11.55	0.77	9.14	10.78	11.36	
RW-4	11/24/2002	19.92	7.57	12.35	2.52	10.09	9.83	11.72	
RW-4	1/3/2003	19.92	6.31	13.61	0.50	6.81	13.11	13.49	
RW-4	1/6/2003	19.92	6.02	13.90	0.04	6.06	13.86	13.89	
RW-4	1/7/2003	19.92	5.74	14.18	0.18	5.92	14.00	14.14	
RW-4	1/8/2003	19.92	5.67	14.25	0.14	5.81	14.11	14.22	
RW-4	1/9/2003	19.92	5.67	14.25	0.19	5.86	14.06	14.20	
RW-4	1/10/2003	19.92	5.76	14.16	0.25	6.01	13.91	14.10	
RW-4	1/13/2003	19.92	5.80	14.12	0.35	6.15	13.77	14.03	
RW-4	1/14/2003	19.92	5.85	14.07	0.29	6.14	13.78	14.00	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-4	1/15/2003	19.92	5.05	14.87	1.80	6.85	13.07	14.42	
RW-4	1/16/2003	19.92	5.78	14.14	0.27	6.05	13.87	14.07	
RW-4	1/17/2003	19.92	5.72	14.20	0.27	5.99	13.93	14.13	
RW-4	1/20/2003	19.92	5.84	14.08	0.30	6.14	13.78	14.01	
RW-4	1/22/2003	19.92	5.82	14.10	0.34	6.16	13.76	14.02	
RW-4	1/23/2003	19.92	6.12	13.80	0.58	6.70	13.22	13.66	
RW-4	1/24/2003	19.92	5.97	13.95	0.38	6.35	13.57	13.86	
RW-4	1/27/2003	19.92	5.51	14.41	0.13	5.64	14.28	14.38	
RW-4	1/28/2003	19.92	5.50	14.42	0.10	5.60	14.32	14.40	
RW-4	1/29/2003	19.92	5.36	14.56	0.07	5.43	14.49	14.54	
RW-4	1/30/2003	19.92	5.45	14.47	0.13	5.58	14.34	14.44	
RW-4	2/3/2003	19.92	5.66	14.26	0.21	5.87	14.05	14.21	
RW-4	2/6/2003	20.68	6.35	14.33	0.28	6.63	14.05	14.26	
RW-4	2/11/2003	20.68	6.75	13.93	0.39	7.14	13.54	13.83	
RW-4	2/18/2003	20.68	7.22	13.46	1.07	8.29	12.39	13.19	
RW-4	2/21/2003	20.68	7.10	13.58	0.97	8.07	12.61	13.34	
RW-4	2/26/2003	20.68	6.74	13.94	0.84	7.58	13.10	13.73	
RW-4	3/4/2003	20.68	7.08	13.60	0.14	7.22	13.46	13.57	
RW-4	3/12/2003	20.68	7.34	13.34	0.41	7.75	12.93	13.24	
RW-4	3/14/2003	20.68	7.20	13.48	0.64	7.84	12.84	13.32	
RW-4	3/26/2003	20.68	6.61	14.07	0.40	7.01	13.67	13.97	
RW-4	3/28/2003	20.68	7.15	13.53	0.47	7.62	13.06	13.41	
RW-4	4/2/2003	20.68	7.21	13.47	0.24	7.45	13.23	13.41	
RW-4	4/4/2003	20.68	7.52	13.16	0.15	7.67	13.01	13.12	
RW-4	4/8/2003	20.68	N/A	N/A	N/A	7.26	13.42	13.42	
RW-4	4/11/2003	20.68	7.72	12.96	0.03	7.75	12.93	12.95	
RW-4	4/15/2003	20.68	7.14	13.54	0.06	7.20	13.48	13.53	
RW-4	4/17/2003	20.68	7.82	12.86	0.08	7.90	12.78	12.84	
RW-4	4/22/2003	20.68	7.87	12.81	0.08	7.95	12.73	12.79	
RW-4	4/25/2003	20.68	7.91	12.77	0.11	8.02	12.66	12.74	
RW-4	5/2/2003	20.68	8.32	12.36	0.13	8.45	12.23	12.33	
RW-4	5/6/2003	20.68	8.50	12.18	0.31	8.81	11.87	12.10	
RW-4	5/9/2003	20.68	8.72	11.96	0.36	9.08	11.60	11.87	
RW-4	5/23/2003	20.68	8.92	11.76	1.11	10.03	10.65	11.48	
RW-4	5/28/2003	20.68	8.80	11.88	0.02	8.82	11.86	11.88	
RW-4	6/13/2003	20.68	8.90	11.78	1.72	10.62	10.06	11.35	
RW-4	6/18/2003	20.68	8.85	11.83	1.96	10.81	9.87	11.34	
RW-4	6/27/2003	20.68	9.40	11.28	1.42	10.82	9.86	10.93	
RW-4	7/7/2003	20.68	9.54	11.14	1.27	10.81	9.87	10.82	
RW-4	7/16/2003	20.68	9.41	11.27	1.40	10.81	9.87	10.92	
RW-4	7/31/2003	20.68	9.95	10.73	0.85	10.80	9.88	10.52	
RW-4	8/5/2003	20.68	9.82	10.86	0.98	10.80	9.88	10.62	
RW-4	8/11/2003	20.68	10.84	9.84	0.94	11.78	8.90	9.61	
RW-4	8/22/2003	20.68	10.87	9.81	0.92	11.79	8.89	9.58	
RW-4	8/26/2003	20.68	10.36	10.32	0.44	10.80	9.88	10.21	
RW-4	9/2/2003	20.68	10.22	10.46	0.58	10.80	9.88	10.32	
RW-4	9/9/2003	20.68	N/A	N/A	N/A	10.80	9.88	9.88	
RW-4	9/19/2003	20.68	N/A	N/A	N/A	10.81	9.87	9.87	
RW-4	10/14/2003	20.68	N/A	N/A	N/A	10.80	9.88	9.88	
RW-4	11/20/2003	20.68	7.96	12.72	1.54	9.50	11.18	12.34	
RW-4	12/3/2003	20.68	6.75	13.93	1.03	7.78	12.90	13.67	
RW-5	11/20/2002	20.64	8.65	11.99	0.02	8.67	11.97	11.99	
RW-5	11/21/2002	20.64	8.30	12.34	0.10	8.4	12.24	12.32	
RW-5	11/22/2002	20.64	8.46	12.18	0.06	8.52	12.12	12.17	
RW-5	11/24/2002	20.64	8.63	12.01	0.28	8.91	11.73	11.94	
RW-5	1/2/2003	20.64	6.87	13.77	0.04	6.91	13.73	13.76	
RW-5	1/3/2003	20.64	6.77	13.87	0.03	6.8	13.84	13.86	
RW-5	1/6/2003	20.64	6.46	14.18	0.04	6.5	14.14	14.17	
RW-5	1/7/2003	20.64	6.36	14.28	0.06	6.42	14.22	14.27	
RW-5	1/8/2003	20.64	6.13	14.51	0.03	6.16	14.48	14.50	
RW-5	1/9/2003	20.64	6.25	14.39	0.03	6.28	14.36	14.38	
RW-5	1/10/2003	20.64	6.43	14.21	0.04	6.47	14.17	14.20	
RW-5	1/13/2003	20.64	6.48	14.16	0.03	6.51	14.13	14.15	
RW-5	1/14/2003	20.64	6.44	14.20	0.05	6.49	14.15	14.19	
RW-5	1/15/2003	20.64	6.37	14.27	0.04	6.41	14.23	14.26	
RW-5	1/16/2003	20.64	6.40	14.24	0.02	6.42	14.22	14.24	
RW-5	1/17/2003	20.64	6.37	14.27	0.04	6.41	14.23	14.26	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-5	1/20/2003	20.64	6.57	14.07	0.05	6.62	14.02	14.06	
RW-5	1/22/2003	20.64	6.60	14.04	0.08	6.68	13.96	14.02	
RW-5	1/23/2003	20.64	6.83	13.81	0.07	6.90	13.74	13.79	
RW-5	1/24/2003	20.64	6.69	13.95	0.03	6.72	13.92	13.94	
RW-5	1/27/2003	20.64	5.97	14.67	0.06	6.03	14.61	14.66	
RW-5	1/28/2003	20.64	5.95	14.69	0.09	6.04	14.60	14.67	
RW-5	1/29/2003	20.64	5.82	14.82	0.12	5.94	14.70	14.79	
RW-5	1/30/2003	20.64	5.90	14.74	0.10	6.00	14.64	14.72	
RW-5	2/3/2003	20.64	6.34	14.30	0.07	6.41	14.23	14.28	
RW-5	2/6/2003	21.38	7.12	14.26	0.06	7.18	14.20	14.25	
RW-5	2/11/2003	21.38	7.63	13.75	0.07	7.70	13.68	13.73	
RW-5	2/18/2003	21.38	8.11	13.27	0.14	8.25	13.13	13.24	
RW-5	2/21/2003	21.38	7.99	13.39	0.03	8.02	13.36	13.38	
RW-5	2/26/2003	21.38	7.74	13.64	0.01	7.75	13.63	13.64	
RW-5	3/4/2003	21.38	N/A	N/A	N/A	7.59	13.79	13.79	
RW-5	3/12/2003	21.38	8.04	13.34	0.01	8.05	13.33	13.34	
RW-5	3/14/2003	21.38	7.84	13.54	0.01	7.85	13.53	13.54	
RW-5	3/26/2003	21.38	N/A	N/A	N/A	7.19	14.19	14.19	
RW-5	3/28/2003	21.38	N/A	N/A	N/A	7.71	13.67	13.67	
RW-5	4/2/2003	21.38	N/A	N/A	N/A	7.85	13.53	13.53	
RW-5	4/4/2003	21.38	N/A	N/A	N/A	8.16	13.22	13.22	
RW-5	4/8/2003	21.38	7.71	13.67	0.00	7.72	13.67	13.67	
RW-5	4/11/2003	21.38	N/A	N/A	N/A	7.78	13.60	13.60	
RW-5	4/15/2003	21.38	7.44	13.94	0.01	7.45	13.93	13.94	
RW-5	4/17/2003	21.38	N/A	N/A	N/A	7.91	13.47	13.47	
RW-5	4/22/2003	21.38	N/A	N/A	N/A	7.75	13.63	13.63	
RW-5	4/25/2003	21.38	N/A	N/A	N/A	7.84	13.54	13.54	
RW-5	5/2/2003	21.38	N/A	N/A	N/A	8.78	12.60	12.60	
RW-5	5/6/2003	21.38	9.05	12.33	0.01	9.06	12.32	12.33	
RW-5	5/9/2003	21.38	9.06	12.32	0.05	9.11	12.27	12.31	
RW-5	5/23/2003	21.38	9.08	12.30	0.01	9.09	12.29	12.30	
RW-5	5/28/2003	21.38	9.27	12.11	0.01	9.28	12.10	12.11	
RW-5	6/13/2003	21.38	9.85	11.53	0.06	9.91	11.47	11.52	
RW-5	6/18/2003	21.38	9.81	11.57	0.08	9.89	11.49	11.55	
RW-5	6/27/2003	21.38	9.26	12.12	0.22	9.48	11.90	12.07	
RW-5	7/7/2003	21.38	10.51	10.87	0.19	10.70	10.68	10.82	
RW-5	7/16/2003	21.38	10.29	11.09	0.16	10.45	10.93	11.05	
RW-5	7/31/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	8/5/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	8/11/2003	21.38	N/A	N/A	N/A	11.68	9.70	9.70	
RW-5	8/22/2003	21.38	11.57	9.81	0.08	11.65	9.73	9.79	
RW-5	8/26/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	9/2/2003	21.38	N/A	N/A	N/A	10.67	10.71	10.71	
RW-5	9/9/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	9/19/2003	21.38	N/A	N/A	N/A	10.68	10.70	10.70	
RW-5	10/14/2003	21.38	N/A	N/A	N/A	10.65	10.73	10.73	
RW-5	11/20/2003	21.38	N/A	N/A	N/A	8.20	13.18	13.18	
RW-5	12/3/2003	21.38	N/A	N/A	N/A	7.15	14.23	14.23	
RW-6	11/20/2002	20.34	8.05	12.29	2.05	10.1	10.24	11.78	
RW-6	11/21/2002	20.34	8.40	11.94	0.15	8.55	11.79	11.90	
RW-6	11/22/2002	20.34	8.45	11.89	0.24	8.69	11.65	11.83	
RW-6	11/24/2002	20.34	8.65	11.69	0.33	8.98	11.36	11.61	
RW-6	1/2/2003	20.34	6.70	13.64	0.87	7.57	12.77	13.42	
RW-6	1/7/2003	20.34	6.50	13.84	0.26	6.76	13.58	13.78	
RW-6	1/8/2003	20.34	6.09	14.25	0.51	6.6	13.74	14.12	
RW-6	1/9/2003	20.34	6.28	14.06	0.38	6.66	13.68	13.97	
RW-6	1/10/2003	20.34	6.42	13.92	0.23	6.65	13.69	13.86	
RW-6	1/13/2003	20.34	8.16	12.18	0.07	8.23	12.11	12.16	
RW-6	1/14/2003	20.34	6.73	13.61	0.20	6.93	13.41	13.56	
RW-6	1/15/2003	20.34	6.30	14.04	0.60	6.90	13.44	13.89	
RW-6	1/16/2003	20.34	6.28	14.06	0.65	6.93	13.41	13.90	
RW-6	1/17/2003	20.34	6.29	14.05	0.00	6.29	14.05	14.05	
RW-6	1/20/2003	20.34	6.31	14.03	0.63	6.94	13.40	13.87	
RW-6	1/22/2003	20.34	6.41	13.93	0.75	7.16	13.18	13.74	
RW-6	1/23/2003	20.34	6.60	13.74	0.80	7.40	12.94	13.54	
RW-6	1/24/2003	20.34	6.45	13.89	0.76	7.21	13.13	13.70	
RW-6	1/27/2003	20.34	5.82	14.52	0.62	6.44	13.90	14.37	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-6	1/28/2003	20.34	5.90	14.44	0.39	6.29	14.05	14.34	
RW-6	1/29/2003	20.34	5.81	14.53	0.35	6.16	14.18	14.44	
RW-6	1/30/2003	20.34	5.92	14.42	0.28	6.20	14.14	14.35	
RW-6	2/3/2003	20.34	6.25	14.09	0.19	6.44	13.90	14.04	
RW-6	2/6/2003	21.09	6.96	14.13	0.18	7.14	13.95	14.09	
RW-6	2/11/2003	21.09	7.44	13.65	0.31	7.75	13.34	13.57	
RW-6	2/18/2003	21.09	7.90	13.19	0.51	8.41	12.68	13.06	
RW-6	2/21/2003	21.09	7.86	13.23	0.47	8.33	12.76	13.11	
RW-6	2/26/2003	21.09	7.76	13.33	0.01	7.77	13.32	13.33	
RW-6	3/4/2003	21.09	N/A	N/A	N/A	7.46	13.63	13.63	
RW-6	3/12/2003	21.09	8.01	13.08	0.01	8.02	13.07	13.08	
RW-6	3/14/2003	21.09	N/A	N/A	N/A	7.81	13.28	13.28	
RW-6	3/26/2003	21.09	N/A	N/A	N/A	7.02	14.07	14.07	
RW-6	3/28/2003	21.09	N/A	N/A	N/A	7.62	13.47	13.47	
RW-6	4/2/2003	21.09	N/A	N/A	N/A	7.74	13.35	13.35	
RW-6	4/4/2003	21.09	N/A	N/A	N/A	8.07	13.02	13.02	
RW-6	4/8/2003	21.09	N/A	N/A	N/A	7.69	13.40	13.40	
RW-6	4/11/2003	21.09	7.61	13.48	0.01	7.62	13.47	13.48	
RW-6	4/15/2003	21.09	N/A	N/A	N/A	7.29	13.80	13.80	
RW-6	4/17/2003	21.09	7.78	13.31	0.01	7.79	13.30	13.31	
RW-6	4/22/2003	21.09	N/A	N/A	N/A	7.81	13.28	13.28	
RW-6	4/25/2003	21.09	N/A	N/A	N/A	7.75	13.34	13.34	
RW-6	5/2/2003	21.09	N/A	N/A	N/A	8.66	12.43	12.43	
RW-6	5/6/2003	21.09	8.84	12.25	0.28	9.12	11.97	12.18	
RW-6	5/9/2003	21.09	8.82	12.27	0.43	9.25	11.84	12.16	
RW-6	5/23/2003	21.09	8.85	12.24	0.86	9.71	11.38	12.03	
RW-6	5/28/2003	21.09	8.93	12.16	1.08	10.01	11.08	11.89	
RW-6	6/13/2003	21.09	9.28	11.81	0.81	10.09	11.00	11.61	
RW-6	6/18/2003	21.09	9.22	11.87	1.53	10.75	10.34	11.49	
RW-6	6/27/2003	21.09	9.60	11.49	1.22	10.82	10.27	11.19	
RW-6	7/7/2003	21.09	9.90	11.19	0.91	10.81	10.28	10.96	
RW-6	7/16/2003	21.09	9.68	11.41	1.08	10.76	10.33	11.14	
RW-6	7/31/2003	21.09	10.34	10.75	0.42	10.76	10.33	10.65	
RW-6	8/5/2003	21.09	10.30	10.79	0.45	10.75	10.34	10.68	
RW-6	8/11/2003	21.09	11.35	9.74	0.39	11.74	9.35	9.64	
RW-6	8/22/2003	21.09	11.10	9.99	0.64	11.74	9.35	9.83	
RW-6	8/26/2003	21.09	10.71	10.38	0.05	10.76	10.33	10.37	
RW-6	9/2/2003	21.09	10.61	10.48	0.14	10.75	10.34	10.45	
RW-6	9/9/2003	21.09	N/A	N/A	N/A	10.76	10.33	10.33	
RW-6	9/19/2003	21.09	N/A	N/A	N/A	10.76	10.33	10.33	
RW-6	10/14/2003	21.09	N/A	N/A	N/A	10.75	10.34	10.34	
RW-6	11/20/2003	21.09	N/A	N/A	N/A	8.50	12.59	12.59	
RW-6	12/3/2003	21.09	N/A	N/A	N/A	7.08	14.01	14.01	
RW-7	11/20/2002	19.95	7.65	12.30	2.46	10.11	9.84	11.69	
RW-7	11/21/2002	19.95	7.60	12.35	2.51	10.11	9.84	11.72	
RW-7	11/22/2002	19.95	8.03	11.92	1.75	9.78	10.17	11.48	
RW-7	11/24/2002	19.95	8.23	11.72	1.26	9.49	10.46	11.41	
RW-7	1/2/2003	19.95	6.44	13.51	0.40	6.84	13.11	13.41	
RW-7	1/3/2003	19.95	6.28	13.67	0.40	6.68	13.27	13.57	
RW-7	1/6/2003	19.95	5.93	14.02	0.12	6.05	13.90	13.99	
RW-7	1/7/2003	19.95	5.84	14.11	0.20	6.04	13.91	14.06	
RW-7	1/8/2003	19.95	5.66	14.29	0.20	5.86	14.09	14.24	
RW-7	1/9/2003	19.95	5.72	14.23	0.33	6.05	13.90	14.15	
RW-7	1/10/2003	19.95	5.90	14.05	0.25	6.15	13.80	13.99	
RW-7	1/13/2003	19.95	5.98	13.97	0.37	6.35	13.60	13.88	
RW-7	1/14/2003	19.95	5.97	13.98	0.27	6.24	13.71	13.91	
RW-7	1/15/2003	19.95	5.95	14.00	0.30	6.25	13.70	13.93	
RW-7	1/16/2003	19.95	5.84	14.11	0.41	6.25	13.70	14.01	
RW-7	1/17/2003	19.95	5.85	14.10	0.35	6.20	13.75	14.01	
RW-7	1/20/2003	19.95	6.02	13.93	0.53	6.55	13.40	13.80	
RW-7	1/22/2003	19.95	6.11	13.84	0.80	6.91	13.04	13.64	
RW-7	1/23/2003	19.95	6.25	13.70	1.05	7.30	12.65	13.44	
RW-7	1/24/2003	19.95	6.16	13.79	1.03	7.19	12.76	13.53	
RW-7	1/27/2003	19.95	5.60	14.35	0.58	6.18	13.77	14.21	
RW-7	1/28/2003	19.95	5.65	14.30	0.63	6.28	13.67	14.14	
RW-7	1/29/2003	19.95	5.55	14.40	0.65	6.20	13.75	14.24	
RW-7	1/30/2003	19.95	5.65	14.30	0.67	6.32	13.63	14.13	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
RW-7	2/3/2003	19.95	5.91	14.04	0.76	6.67	13.28	13.85	
RW-7	2/6/2003	20.72	6.55	14.17	0.79	7.34	13.38	13.97	
RW-7	2/11/2003	20.72	6.99	13.73	1.08	8.07	12.65	13.46	
RW-7	2/21/2003	20.72	7.42	13.30	0.99	8.41	12.31	13.05	
RW-7	2/26/2003	20.72	7.24	13.48	0.04	7.28	13.44	13.47	
RW-7	3/4/2003	20.72	N/A	N/A	N/A	6.96	13.76	13.76	
RW-7	3/12/2003	19.95	Trace	N/A	N/A	7.71	12.24	12.24	
RW-7	3/14/2003	19.95	N/A	N/A	N/A	7.51	12.44	12.44	
RW-7	3/26/2003	19.95	N/A	N/A	N/A	6.68	13.27	13.27	
RW-7	3/28/2003	19.95	N/A	N/A	N/A	7.25	12.70	12.70	
RW-7	4/2/2003	19.95	N/A	N/A	N/A	7.42	12.53	12.53	
RW-7	4/4/2003	19.95	N/A	N/A	N/A	7.64	12.31	12.31	
RW-7	4/8/2003	19.95	N/A	N/A	N/A	7.22	12.73	12.73	
RW-7	4/11/2003	19.95	N/A	N/A	N/A	7.16	12.79	12.79	
RW-7	4/15/2003	19.95	N/A	N/A	N/A	6.81	13.14	13.14	
RW-7	4/17/2003	19.95	N/A	N/A	N/A	7.38	12.57	12.57	
RW-7	4/22/2003	19.95	N/A	N/A	N/A	7.34	12.61	12.61	
RW-7	4/25/2003	19.95	N/A	N/A	N/A	7.21	12.74	12.74	
RW-7	5/2/2003	19.95	8.30	11.65	0.03	8.33	11.62	11.64	
RW-7	5/6/2003	19.95	8.52	11.43	0.08	8.6	11.35	11.41	
RW-7	5/9/2003	19.95	8.54	11.41	0.03	8.57	11.38	11.40	
RW-7	5/23/2003	19.95	8.55	11.40	1.03	9.58	10.37	11.14	
RW-7	5/28/2003	19.95	8.57	11.38	1.55	10.12	9.83	10.99	
RW-7	6/13/2003	19.95	8.92	11.03	1.64	10.56	9.39	10.62	
RW-7	6/18/2003	19.95	8.88	11.07	1.87	10.75	9.20	10.60	
RW-7	6/27/2003	19.95	9.26	10.69	1.55	10.81	9.14	10.30	
RW-7	7/7/2003	19.95	9.54	10.41	1.21	10.75	9.20	10.11	
RW-7	7/16/2003	19.95	9.42	10.53	1.30	10.72	9.23	10.21	
RW-7	7/31/2003	19.95	9.98	9.97	0.76	10.74	9.21	9.78	
RW-7	8/5/2003	19.95	10.88	9.07	0.74	11.62	8.33	8.89	
RW-7	8/11/2003	19.95	11.00	8.95	0.69	11.69	8.26	8.78	
RW-7	8/22/2003	19.95	10.70	9.25	1.01	11.71	8.24	9.00	
RW-7	8/26/2003	19.95	11.28	8.67	0.37	11.65	8.30	8.58	
RW-7	9/2/2003	19.95	10.36	9.59	0.36	10.72	9.23	9.50	
RW-7	9/9/2003	19.95	10.75	9.20	0.01	10.76	9.19	9.20	
RW-7	9/19/2003	19.95	N/A	N/A	N/A	10.76	9.19	9.19	
RW-7	10/14/2003	19.95	N/A	N/A	N/A	10.77	9.18	9.18	
RW-7	11/20/2003	19.95	N/A	N/A	N/A	8.24	11.71	11.71	
RW-7	12/3/2003	19.95	N/A	N/A	N/A	6.79	13.16	13.16	
HW-1East	11/20/2003	17.93	N/A	N/A	N/A	4.61	13.32	13.32	
	12/3/2003	17.93	N/A	N/A	N/A	4.00	13.93	13.93	
HW-1West	11/20/2003	17.40	N/A	N/A	N/A	4.32	13.08	13.08	
	12/3/2003	17.40	N/A	N/A	N/A	3.56	13.84	13.84	
W-1	11/24/2002	18.86	N/A	N/A	N/A	7.95	10.91	10.91	
W-2	11/24/2002	18.28	N/A	N/A	N/A	7.39	10.89	10.89	
W-3	11/24/2002	17.10	N/A	N/A	N/A	6.05	11.05	11.05	
W-4	11/24/2002	18.03	7.44	10.59	0.01	7.45	10.58	10.59	
B-1	11/24/2002	18.62	N/A	N/A	N/A	7.85	10.77	10.77	
B-2	11/24/2002	18.60	N/A	N/A	N/A	7.86	10.74	10.74	
B-3	11/24/2002	18.73	8.18	10.55	2.63	10.81	7.92	9.89	
B-4	11/24/2002	18.09	N/A	N/A	N/A	7.22	10.87	10.87	
B-5	11/24/2002	17.97	N/A	N/A	N/A	6.93	11.04	11.04	
B-6	11/24/2002	17.94	N/A	N/A	N/A	7.53	10.41	10.41	
D-1	11/24/2002	18.03	N/A	N/A	N/A	6.27	11.76	11.76	

TABLE 1
GROUNDWATER ELEVATION DATA
CONOCOPHILLIPS RENTON TERMINAL

Well	Date	Top of Casing Elevation	Depth to Free Product	Elevation of Free Product	Product Thickness	Depth to Groundwater	Groundwater Elevation	Potentiometric Elevation	Comments
D-2	11/24/2002	19.14	---	---	---	---	---	---	
D-4	11/24/2002	17.82	---	---	---	---	---	---	
D-5	11/24/2002	18.12	N/A	N/A	N/A	Dry	Dry		
D-6	11/24/2002	17.74	N/A	N/A	N/A	6.55	11.19	11.19	
D-7	11/24/2002	17.69	N/A	N/A	N/A	6.93	10.76	10.76	

N/A Not Applicable. No free product detected.

TABLE 2
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
B2	B2K0572-16	11/25/2002	9850	1780	1280	9220	60500	13.2	0.500 U
B3	B2K0572-15	11/25/2002	NA	NA	NA	NA	NA	NA	NA
B4	B2K0572-09	11/25/2002	519	295	2180	10500	41700	5.46	0.500 U
B5	B2K0572-10	11/25/2002	126	4.31	37.4	67.4	2270	1.06	0.500 U
B6	B2K0619-05	11/26/2002	5230	5410	525	5460	43000	5.31 J	2.51 J
Dup of B6 (B17)	B2K0619-06	11/26/2002	4850	5010	464	5430	43500	7.04 J	3.63 J
D1	B2K0619-04	11/26/2002	0.500 U	1.12	0.500 U	2.16	185	0.434	1.01
D6	B2K0619-11	11/26/2002	121	10.7	1.20	5.59	385	0.250 U	0.500 U
D7	B2K0619-07	11/26/2002	2.82	0.614	0.500 U	1.12	50.0 U	0.435	1.26
HA1	B2K0619-08	11/26/2002	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
HA5	B2K0471-01	11/19/2002	3.39	5.63	0.581	5.87	223	NA	NA
HA5	B2K0572-08	11/25/2002	2.94	1.67	0.500 U	4.22	236	0.250 U	0.500 U
Dup of HA5 (HA5-021122)	B2K0572-17	11/25/2002	2.78	1.51	0.500 U	3.81	243	0.250 U	0.500 U
HA5	B3A0300-06	1/14/2003	3380	2870	43.6	151	14300	NA	NA
HA5	B3B0527-01	2/24/2003	8620	17200	685	3260	65000	0.476	0.500 U
HA5	B3C0615-05	3/25/2003	6550	14700	657	2900	54700	0.388	0.500 U
HA5	B3D0437-08	4/18/2003	7550	16800	857	3960	66600	0.250 U	0.500 U
HA5	B3H0266-09	8/11/2003	659	232	26.7	187	2810	0.512	0.500 U
HA6	B2K0572-07	11/25/2002	637	181	1320	5620	25600	1.43	0.500 U
HA7	B2K0471-02	11/19/2002	587	31.3	259	324	5510	NA	NA
HA7	B2K0572-05	11/25/2002	811	41.1	402	580	7840	2.67	0.500 U
HA7	B3A0300-03	1/14/2003	421	56.2	261	2350	13700	NA	NA
HA8	B2K0471-03	11/19/2002	2.07	4.11	1.76	7.42	135	NA	NA
HA8	B2K0572-04	11/24/2002	5.78	16.9	12.6	57.8	579	0.250 U	0.500 U
HA8	B3A0300-04	1/14/2003	4.02	16.5	16.3	207	633	NA	NA
HA8	B3B0527-02	2/24/2003	14.6	74.5	232	1570	5720	0.767	0.500 U
HA8	B3C0615-06	3/25/2003	6.17	22.0	73.0	445	1950	0.544	0.500 U
HA8	B3D0437-10	4/18/2003	12.1	35.9	160	708	3040	0.250 U	0.500 U
Dup of HA8	B3D0437-06	4/18/2003	11.9	41.1	164	762	3650	0.257	0.500 U
HA9	B2K0619-10	11/26/2002	249	3.55	349	187	6110 J	NA	NA
HA12	B2K0572-06	11/25/2002	0.957	3.85	1.52	10.8	93.7	0.250 U	0.500 U

TABLE 2
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
HA13	B2K0572-12/B2K0619-02	11/25/2002	0.569	1.80	0.667	5.74	50.0 U	0.250 U	0.500 U
HA13	B3B0527-03	2/24/2003	0.500 U	0.500 U	0.500 U	1.08	50.0 U	0.250 U	0.500 U
HA13	B3C0615-07	3/25/2003	0.500 U	0.580	0.500 U	1.00 U	98.4	0.250 U	0.500 U
HA13	B3D0437-07	4/18/2003	0.500 U	0.500 U	0.500	1.00 U	50.0 U	0.250 U	0.500 U
HA13	B3I0408-03	9/11/2003	3.38	28.9	7.87	60.6	498	NA	NA
HA13	B3K0600-11	11/21/2003	0.500 U	0.877	0.500 U	1.15	50 U	0.250 U	0.500 U
HA14	B2K0572-13/B2K0619-03	11/25/2002	141	15.7	169	48.1	939	0.250 U	0.500 U
HA14	B3D0437-13	4/18/2003	133	8.87	228	23.7	1190	0.250 U	0.500 U
HA15	B3A0300-05	1/14/2003	3.34	0.672	0.500 U	2.51	344	NA	NA
HA15	B3B0527-04	2/24/2003	12.9	5.57	9.80	69.6	1250	0.481	0.500 U
HA15	B3C0615-08	3/25/2003	7.47	1.55	1.12	3.99	910	0.486	0.500 U
HA15	B3D0437-09	4/18/2003	7.21	1.88	0.716	6.47	658	0.250 U	0.500 U
HA17	B3A0300-02	1/14/2003	10.2	1.25 U	1.55	2.61	548	NA	NA
HA17	B3E0729-10	5/29/2003	50.0	129	80.1	322	2090	0.250 UJ	0.500 UJ
HA17	b3k0600-02	11/20/2003	8.9	0.500 U	0.500 U	1.00 U	585	0.620	0.500 U
HA18	B3A0300-01	1/14/2003	40.3	75.9	810	2220	11400	NA	NA
HA18	B3E0729-11	5/29/2003	95.0	157	2440	7840	31000	7.51	0.500 U
HA18	B3K0600-01	11/20/2003	284.0	178	1950	6400	28000	6.87	0.500 U
LAI-1	B3A0300-07	1/15/2003	728	935	22.8	120	4120	NA	NA
LAI-1	B3B0527-05	2/26/2003	2150	3680	116	979	15100	1.02	0.500 U
LAI-1	B3C0577-01	3/24/2003	7970	15000	739	4250	47500	1.49	0.500 U
LAI-2	B3A0300-08	1/15/2003	2.78	2.20 J	1.10 J	9.33 J	72.6 J	NA	NA
Dup of LAI-2 (LAI-12)	B3A0300-10	1/15/2003	3.39	3.36 J	1.68 J	15.1 J	103 J	NA	NA
LAI-2	B3E0729-12	5/29/2003	2940	6100	235	1680	18100	0.250 U	0.500 U
Dup of LAI-2 (LAI-20)	B3E0729-09	5/29/2003	2840	6320	235	1680	18800	0.299 J	0.500 U
LAI-2	B3H0266-06	8/11/2003	1880	2150 J	135	907	8950 J	0.516	0.562 U
Dup of LAI-2 (LAI-21)	B3H0266-01	8/11/2003	1750	1340 J	104	678	6620 J	0.550	0.500 U
LAI-2	B3K0600-09	11/20/2003	580	1.98	35.3	235	1330	0.304	0.500 U
LAI-3	B3A0300-09	1/15/2003	0.500 U	3.19	1.36	8.45	66.6	NA	NA
LAI-3	B3B0527-06	2/26/2003	70.1	159	6.42	32.6	558	0.250 U	0.500 U
LAI-3	B3C0615-01	3/25/2003	61.6	176	8.43	39.5	573	0.250 U	0.500 U
LAI-3	B3D0437-05	4/17/2003	7.56	24.5	4.00	29.4	154	0.250 U	0.500 U
LAI-3	B3E0729-13	5/29/2003	151	40.7	0.951	4.6	301	0.250 U	0.500 U
LAI-3	B3H0266-07	8/11/2003	329	18.4	2.470	7.27	985	0.250 U	0.500 U
LAI-3	B3K0600-10	11/20/2003	9.2	0.500 U	0.500 U	1.00 U	50 U	0.250 U	0.500 U
LAI-10	B3B0527-07	2/26/2003	0.500 U	0.991	0.500 U	1.37	50.0 U	0.250 U	0.500 U

TABLE 2
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
Dup of LAI-10 (LAI-17)	B3B0527-12	2/26/2003	0.500 U	0.757	0.500 U	1.18	50.0 U	0.250 U	0.500 U
LAI-10	B3C0577-02	3/24/2003	1.35	2.67	0.500 U	1.36	50.0 U	0.250 UJ	0.500 U
LAI-10	B3D0437-02	4/17/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-10	B3E0729-08	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-10	B3H0266-08	8/11/2003	0.500 U	1.75	0.757	4.54	50.0 U	0.250 U	0.500 U
LAI-10	B3K0600-06	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	1.95	0.500 U
LAI-11	B3B0527-08	2/26/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.401	0.500 U
LAI-11	B3C0577-03	3/24/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.429	0.500 U
LAI-11	B3D0437-03	4/17/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B3E0729-02	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-11	B3K0600-07	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-12	B3E0729-03	5/28/2003	0.500 U	0.500 U	0.500 U	1.81	50.0 U	0.250 U	0.500 U
LAI-12	B3H0266-02	8/11/2003	0.500 U	0.500 U	0.500 U	2.21	50.0 U	0.354	0.500 U
LAI-12	B3K0600-08	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	60.7	0.250 U	0.500 U
LAI-13	B3E0729-06	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B3H0266-05	8/11/2003	0.500 U	0.647	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-13	B3K0600-03	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3B0527-09	2/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0	0.269	0.500 U
LAI-14	B3C0615-02	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	66.3	0.250 U	0.500 U
LAI-14	B3D0437-11	4/18/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3E0729-05	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-14	B3H0266-04	8/11/2003	0.500 U	0.631	0.500 U	1.00 U	50.0 U	0.278	0.500 U
LAI-14	B3K0600-04	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-15	B3E0729-04	5/28/2003	0.500 U	0.500 U	0.500 U	1.00 U	104	0.250 U	0.500 U
LAI-15	B3H0266-03	8/11/2003	0.500 U	0.641	0.500 U	1.95	158	0.334	0.500 U
LAI-15	B3K0600-05	11/20/2003	0.500 U	0.500 U	0.500 U	1.00 U	53.9	0.250 U	0.500 U
LAI-16	B3B0527-10	2/25/2003	0.500 U	0.679	0.500 U	1.09	50.0 U	0.250 U	0.500 U
LAI-16	B3C0615-03	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.288	0.500 U
Dup of LAI-16 (LAI-26)	B3C0615-04	3/25/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.330	0.500 U
LAI-16	B3D0437-04	4/17/2003	3.51	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
LAI-16	B3E0729-07	5/28/2003	523	14.9	1.00 U	2.25	705 J	0.250 U	0.500 U
LAI-16	B3K0600-12	11/21/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
Dup of LAI-16 (LAI-25)	B3K0600-13	11/21/2003	0.500 U	0.500 U	0.500 U	1.00 U	50.0 U	0.250 U	0.500 U
W1	B2K0572-14	11/25/2002	17600	24800	2950	19500	155000	16.7	0.500 U
W2	B2K0572-11	11/25/2002	15300	15800	1960	11700	104000	14.7	1.91

TABLE 2
WATER ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON TERMINAL

Location	Lab ID	Date Collected	BETX (µg/L) Method 8021B				NWTPH-Gx (µg/L)	NWTPH-Dx (mg/L)	
			Benzene	Toluene	Ethylbenzene	Xylenes (total)	Gasoline	Diesel	Lube Oil
W3	B2K0619-09	11/26/2002	455	156	463	1570	14100	4.89	0.500 U
W4	B2K0619-01	11/25/2002	1830	38.2	2550	4220	39900	19.2	0.648

NA = Not analyzed.
U = Not detected above reporting limit.
J = Indicates that the analyte was positively identified; the associated numercial value is the approximate concentration of the analyte in the sample.

TABLE 3
INFLUENT AND EFFLUENT AIR ANALYTICAL RESULTS - REMEDIATION SYSTEM
CONOCOPHILLIPS RENTON TERMINAL

	Influent 203134-01 2/13/2003	Effluent 203134-02 2/13/2003	Influent 203145-01 2/24/2003	Effluent 203145-02 2/24/2003	Influent 203249-01 4/8/2003	Effluent 203249-02 4/8/2003	Influent 203284-01 4/17/2003	Effluent 203284-02 4/17/2003	Influent B3F0471-01 6/20/2003	Effluent B3F0471-02 6/20/2003	Influent B3G0287-01 7/11/2003	Effluent B3G0287-02 7/11/2003
BTEX EPA Method 8021B (mg/m^3)												
Benzene	9.162	0.002 U	62.322	NA	28.845	0.002 U	34.874	0.002 U	84	0.064	80.5	0.641
Toluene	14.379	0.002	226.045	NA	106.648	0.001 U	153.375	0.001 U	189.000	0.026 U	101.000	0.086
Ethylbenzene	0.598	0.001 U	17.387	NA	10.811	0.001 U	16.712	0.001 U	17.100	0.023 U	17.500	0.023 U
m-xylene (p-xylene)	1.869	0.003	61.785	NA	44.347	0.002 U	73.891	0.002 U	NA	NA	NA	NA
o-Xylene	0.595	0.002 U	22.02	NA	17.856	0.002 U	30.883	0.003 U	NA	NA	NA	NA
Xylenes, total	NA	NA	NA	NA	NA	NA	NA	NA	93.500	0.045 U	81.600	0.045 U
TPH as Gasoline	708.443	0.023	1859.64	NA	1124.34	0.022	1551.2	NA	1860	2.36 U	1900	2.36 U
TPH as Diesel	NA	NA	867.833	NA	524.692	0.013 U	723.893	NA	NA	NA	NA	NA
BTEX EPA Method 8021B (ppmV)												
Metyl tert butyl ether	NA	NA	NA	0.3 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	1.4	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	0.3	NA	NA	NA	NA	NA	NA	NA	NA
m & p-Xylene	NA	NA	NA	1.2	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	0.4	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	2.8 U	NA	NA	NA	NA	NA	NA	NA	NA
Tetraethyl Lead	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
Isooctane	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
Methanol	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
Cumene	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	NA	NA	NA	1.7 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 3
INFLUENT AND EFFLUENT AIR ANALYTICAL RESULTS - REMEDIATION SYSTEM
CONOCOPHILLIPS RENTON TERMINAL

	Influent B3H0121-01 8/7/2003	Effluent B3H0121-02 8/7/2003	Influent B3J0424-01 10/15/2003	Effluent B3J0424-02 10/15/2003	Influent B3L0669-03 12/18/2003	Effluent B3L0669-03 12/18/2003	Influent B3B0139-04 2/5/2004	Effluent B3B0139-05 2/5/2004
BTEX EPA Method 8021B (mg/m^3)								
Benzene	63.5	0.0308 U	43.2	0.0308 U	14.8	0.100 U	3.45	0.100 U
Toluene	111.000	0.089	91.500	0.026 U	64.4	0.100 U	6.8	0.359
Ethylbenzene	6.610	0.023 U	6.510	0.023 U	9.27	0.100 U	0.924	0.100 U
m-xylene (p-xylene)	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes, total	31.400	0.067	34.100	0.045 U	54.8	0.200 U	6.7	0.338
TPH as Gasoline	1170	2.36 U	779	2.36 U	497	10 U	45.5	10 U
TPH as Diesel	NA	NA	NA	NA	NA	NA	NA	NA
BTEX EPA Method 8021B (ppmV)								
Metyl tert butyl ether	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA
m & p-Xylene	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA
Tetraethyl Lead	NA	NA	NA	NA	NA	NA	NA	NA
Isooctane	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	NA	NA	NA	NA	NA	NA	NA	NA
Methanol	NA	NA	NA	NA	NA	NA	NA	NA
Cumene	NA	NA	NA	NA	NA	NA	NA	NA
Hexane	NA	NA	NA	NA	NA	NA	NA	NA

Analysis prior to June 2003 completed using TO-14 and TO-15 testing methods
U = Not detected above the listed reporting limit.
NA = Not analyzed.

TABLE 4
INFLUENT AND EFFLUENT GROUNDWATER TREATMENT ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON, WA

	Effluent Permit Levels	Influent B3G0160-02 7/7/2003	Effluent B3G0160-01 7/7/2003	Influent B3I0408-01 9/11/2003	Effluent B3I0408-02 9/11/2003	Influent B3L0669-01 12/18/2003	Effluent B3L0669-02 12/18/2003	Influent B4A0540-03 1/23/2004	Effluent B4A0540-01 1/23/2004	Stripper Effluent B4A0540-02 1/23/2004
BETX (µg/L)										
Method 8021B										
Benzene	130	45,200	4.87	37,500	11.6	4060	284	389	0.500 U	10.5
Toluene	1500	81,200	18.5	76,700	23.7	14500	1110	3900	0.500 U	28.4
Ethylbenzene	1400	3840	1.63	2,810	5 U	1690	135	68.6	0.500 U	3.38
Xylenes (total)		21,700	16.7	22,400	68.7	11800	1080	7140	1.00 U	119
m,p-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene		NA	NA	NA	NA	NA	NA	NA	NA	NA
NWTPH-Gx (µg/L)										
Gasoline		331,000	345	320,000	2480	73100	7550	34700	50.0 U	4010
NWTPH-Dx (mg/L)										
Diesel Range Hydrocarbons		3.47	2.42	2.74	NA	34.8	22.1	NA	NA	NA
Lube Oil Range Hydrocarbons		0.630	0.500 U	0.500 U	NA	10 U	5 U	NA	NA	NA
CONVENTIONALS										
Oil & Grease (HEM) (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Petroleum Hydrocarbons (SGT-HEM) (mg/L)		NA	NA	NA	NA	NA	NA	NA	NA	NA
pH		NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4
INFLUENT AND EFFLUENT GROUNDWATER TREATMENT ANALYTICAL RESULTS
CONOCOPHILLIPS RENTON, WA

	Effluent Permit Levels	Influent B4B0139-01 2/5/2004	Stripper Effluent B4B0139-02 2/5/2004	Effluent B4B0139-03 2/5/2004
BETX (µg/L)				
Method 8021B				
Benzene	130	3180	24.7	0.500 U
Toluene	1500	6930	39.9	0.500 U
Ethylbenzene	1400	783	9.38	0.500 U
Xylenes (total)		5350	76.9	1.00 U
m,p-Xylene		NA	NA	NA
o-Xylene		NA	NA	NA
NWTPH-Gx (µg/L)				
Gasoline		40000	2370	50 U
NWTPH-Dx (mg/L)				
Diesel Range Hydrocarbons		NA	NA	NA
Lube Oil Range Hydrocarbons		NA	NA	NA
CONVENTIONALS				
Oil & Grease (HEM) (mg/L)		NA	NA	NA
Total Petroleum Hydrocarbons (SGT-HEM) (mg/L)		NA	NA	NA
pH		NA	NA	NA

Note:
Influent is collected prior to air stripper; effluent is collected at discharge pump from air stripper.
U = Not detected above the method detection limit (MDL).

TABLE 5
ESTIMATED DPVE MASS REMOVAL SUMMARY
CONOCOPHILLIPS RENTON TERMINAL

								Removal Rate				Mass Removed			
Date	PID (ppm)	TPH-G&D (ppmv)	Benzene (ppmv)	Toluene (ppmv)	Ethyl-benzene (ppmv)	Xylenes (b) (ppmv)	Flow Rate (scfm)	TPH (lbs/day)	Benzene (lbs/day)	Panel Hour Meter (hrs)	Duration of Operation (days)	Total TPH (lbs)	Total Benzene (lbs)	Total TPH (Gallons)	Total Benzene (Gallons)
2/12/2003	330	NC	NC	NC	NC	NC	300	NC	NC	21590.5	0	0			
2/13/2003	200	708.44 (a)	9.16	14.38	0.60	2.46	300	77	1	21609.5	0.8	0	0	0	0
2/24/2003	942	2727.48	62.32	226.05	17.39	83.81	300	397	6	21875.0	11.9	4396	61	687	10
4/8/2003	NR	1649.03	28.85	106.65	10.81	62.20	290	232	2	22609.8	42.5	11506	137	1798	21
4/17/2003	801	2275.09	34.87	153.38	16.71	104.77	290	320	3	22822.6	51.3	14347	164	2242	26
6/20/2003	1479	1860.00 (a)	84.00	189.00	17.10	93.50	290	206	7	23802.0	92.1	22751	455	3555	71
7/11/2003	1099	1900.00	80.50	101.00	17.50	81.60	291	211	7	24039.5	102.0	24842	522	3882	82
8/7/2003	NR	1170.00	63.50	111.00	6.61	31.40	420	188	8	24539.9	122.9	28767	685	4495	107
10/15/2003	NR	779.00 (a)	43.20	91.50	6.51	34.10	420	125	5	25993.0	183.4	36342	1005	5678	157
11/21/2003	86	88.70 (a)	3.09	5.68	0.571	4.39	185	6	0.2	26464.2	203.1	36465	1009	5698	158
12/18/2003	23.8	117.00 (a)	4.57	16.80	2.10	12.40	270	12	0.4	27112. 0 (c)	230.1	36791	1018	5749	159
12/24/2003	NR	NR	NR	NR	NR	NR	270 (c)	12 (c)	0.4 (c)	27289.3	237.5	36880	1021	5763	160

Notes:
TPH-G & D = Gasoline and Diesel Range Total Petroleum Hydrocarbons
ppmv = parts per million by volume
NC = Not Collected
(a) Only TPH-G analyzed
(b) Combined total reported for m, p, and o-xylenes
(c) Extrapolated value
Analytical results prior to June 20, 2003 reported from TO-14/15 analysis using Suma canisters.
Analytical results from June 20, 2003 forward reported from NWTPH Modified Method analysis using tedlar bags.