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SUBSURFACE INVESTIGATION REPORT

703 & 709 S Lincoln Street

Port Angeles, Washington

Prepared For:

David Gellner and Adam Greenberg

July 24, 2021

Project ID: CapPac-26-02

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SUCCEED ENVIRONMENTAL CONSULTING, LLC

July 26, 2021

4260 Galewood Street, Suite A
Lake Oswego, OR 97035

Attention: David Gellner

Subsurface Investigation Report
Multifamily Apartments
703 & 709 S Lincoln Street
Port Angeles, Washington
SEC Project: CapPac-26-02

Succeed Environmental Consulting LLC is pleased to submit the results of the subsurface investigation conducted at 703 & 709 S Lincoln Street in Port Angeles, Washington. This assessment was completed in conformance with our proposal dated June 21, 2021. We appreciate the opportunity to be of service to you. Please contact us if you have questions regarding this report.

Sincerely,

Succeed Environmental Consulting LLC

Andrew S. Blake, R.G., L.G.
Principal Geologist

cc: Adam Greenberg, First Western Properties (via email)

ASB
Attachments
One electronic copy submitted.
Document ID: CapPac-26-02-072621-envr PortAngeles_SI

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1.0 INTRODUCTION AND BACKGROUND

This report summarizes the results of environmental subsurface investigation activities conducted at 703 & 709 S Lincoln Street in Port Angeles, Washington (project site). The approximately 0.34-acre project site includes Clallam County, Washington Property IDs. 58009 and 58008. The project site currently includes two multi-tenant residential buildings with associated parking and landscaped areas. The project site vicinity is primarily used for residential and light commercial purposes. SEC conducted a Phase I Environmental Site Assessment (ESA)[1] of the project site, which revealed the following:

- The regulatory records search identified two upgradient petroleum station sites (located at 722 and 807 S Lincoln Street), which appear to be associated with a comingled petroleum hydrocarbon groundwater plume with some free-phase petroleum product present. Based on our review of groundwater monitoring well data, the petroleum hydrocarbon plume appears to be migrating towards (and may be present beneath) the northern and western portions of the project site, and is considered to be a recognized environmental condition.
- The historical records search revealed that the project site appears to have been used primarily for residential purposes. However, the southern project site structure was used as an automotive sales, repair, and painting facility sometime between 1922 and 1949. In addition, an automotive bus garage and a gas station were developed to the south of the project site (across the existing alley) and another gas station (722 S Lincoln Street), was developed to the southwest of the project site by that time. The historical use of (1) the southern project site structure as an automotive sales, repair, and painting facility, and (2) the up-gradient adjoining properties as historical automotive service and fueling stations are considered indicative of a recognized environmental condition.
- SEC conducted a reconnaissance of the project site during this assessment. During the visit, SEC observed pipes protruding from the ground surface along the northern sides of both buildings. A partially buried metal feature was also observed protruding from the ground surface beneath the southern building in the above-described area. The above noted pipes and the metal object appear to be indicative of one or more heating oil USTs at the project site, which are considered representative of a recognized environmental condition at the site. The Phase I ESA recommended decommissioning the potential USTs, if not intended for future use.
- SEC also observed one groundwater monitoring well (labeled as MW-5) at the project site. Additional information relating to the well was not provided to SEC during the reconnaissance. SEC conducted a search of the Washington Department of Ecology's well log database and identified a well log (labeled MW-5), which appears to correspond to the well that was observed during the reconnaissance. The Phase I ESA recommended decommissioning the monitoring well, if not intended for future use.

Based on the foregoing, a subsurface investigation was recommended to evaluate soil, soil vapor, and groundwater at the project site, as discussed in this report. The project site is shown relative to surrounding physical features on Figure 1. The project site layout and surrounding properties are shown on Figure 2. Acronyms and abbreviations used herein are defined at the end of this document.

[1] *Phase I Environmental Site Assessment; 703-709 S Lincoln Street; Portland Angeles, Washington*, prepared by SEC dated June 18, 2021.

2.0 REGULATORY AGENCY FILE REVIEW

On June 15, 2021, SEC received an electronic copy of the Washington Department of Ecology (Ecology) in-house file for Cleanup Site No. 52, which is associated with the address of 704 S Lincoln Street in Port Angeles. Although the address for Cleanup Site No. 52 does not correspond with the project site address, Ecology's file includes information that pertains to the project site, which is summarized below:

- In the early 1980s, petroleum hydrocarbons (primarily gasoline) and associated VOCs benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in the daylight crawl space beneath the southern project site apartment (the 709 S Lincoln Street building). Fuel odors had been a nuisance to the apartment residents on several occasions.
- To mediate the problem, Ecology noted that (1) a ventilation system was installed to disperse fuel odors, and (2) subdrains were used to direct drainage beneath the apartment to a common sump that discharges into the Port Angeles storm sewer system (and eventually Peabody Creek).
- In 1991, a water sample was collected from the 709 S Lincoln Street sump, which revealed the presence of gasoline and BTEX in water at the project site. A 1993-1994 site assessment was later conducted at the project site by the Washington Department of Ecology, which identified petroleum hydrocarbons and associated VOCs in soil, soil vapor, and surface water samples in the basement of the southern project site structure.

Ecology identified two potential sources areas of contamination: (1) the 722 S Lincoln Street Property (former Round the Clock Deli), and (2) a former service station located north of the Arco Station on 8th Street. Ecology Cleanup Site no. 52 remains open. The information provided by Ecology is included in Appendix A,

3.0 PURPOSE AND SCOPE OF SERVICES

The subsurface investigation was conducted to evaluate subsurface conditions at the project site. The specific scope of services was conducted by an environmental professional and included the following:

- Coordinated and managed the field investigation, including utility checks, project site access authorizations, access preparations, and scheduling of subcontractors.
- Contacted the Washington One-Call Utility Notification Center to mark the location of public utilities beneath the ROWs surrounding the project site.
- Advanced nine hand augured explorations (HA-1 through HA-9) to depths up to 9.0 feet BGS at the project site.
- Collected continuous soil samples from each exploration for visual identification and field screening. Field screening consisted of visual observation and water sheen testing.
- Collected groundwater samples from selected monitoring wells located on the project site or in the adjoining public ROW.
- Collected two soil vapor samples beneath the multifamily buildings during the investigation.
- Submitted the selected soil, vapor, and groundwater samples to Pace Analytical of Mt. Juliet,

Tennessee, for chemical analysis.
- Following sampling, abandoned each exploration by repairing the ground surface, as appropriate.
- Disposed of all IDW, as appropriate.
- Prepared this report that presents our findings and provides conclusions and recommendations.

4.0 FIELD ACTIVITIES

Field activities conducted by SEC between June 30 and July 1, 2021 consisted of the advancement of nine hand augured explorations (HA-1 through HA-9), the collection of four groundwater samples (MW-5, KMW-7, KMW-15, and BBA 510), and the collection of two soil vapor samples (SV-1 and SV-2), as discussed in the following sections. The approximate exploration locations are presented on Figure 2.

4.1 SUBSURFACE BORINGS

On July 1, 2021, SEC advanced nine hand augured borings (HA-1 through HA-9) to evaluate subsurface conditions beneath the project site. The borings were advanced to depths of up to 9.0 feet BGS (or until refusal was met) using direct-push drilling equipment owned and operated by SEC. SEC personnel collected field samples for soil classification, field screening, and chemical analysis. A description of our field exploration is presented in Appendix B.

4.1.1 Subsurface Conditions

Soil beneath the project site generally consists of sand with varying silt and silt with varying clay to the depths explored. Groundwater was encountered by SEC during drilling at depths ranging between approximately 1.0 and 14.5 feet BGS. The exploration logs are presented in Appendix B.

4.1.2 Soil Sample Field Analysis

Soil samples were collected from each boring and screened in the field using visual examination and water sheen screening. Organic odors and petroleum-like sheens were observed in several of the borings advanced in the western and central portions of the project site.

Field screening results are presented on the exploration logs in Appendix B.

4.1.3 Soil Sample Selection and Laboratory Submittal

SEC selected at least one soil sample from each boring for chemical analysis. The soil samples selected for analysis were placed into labeled, laboratory-prepared containers and immediately placed in a cooler with ice and transported under chain-of-custody procedures to Pace Analytical of Mt. Juliet, Tennessee.

4.1.4 Groundwater Sample Collection and Laboratory Submittal

SEC collected groundwater samples from monitoring wells MW-5, KMW-7, KMW-15, and BBA 510 for chemical analysis. All four samples were collected in laboratory-prepared containers via peristaltic pumps and unused LDPE tubing.

The groundwater samples were placed into labeled, laboratory-prepared containers and immediately placed in a cooler with ice and transported under chain-of-custody procedures to Pace Analytical of Mt. Juliet, Tennessee.

4.1.5 Soil Vapor Sampling

SEC collected two soil vapor samples (SV-1 and SV-2) from the project site at the approximate locations shown on Figure 2. Each sample was collected as described below:

- At sample location SV-1, SEC drilled a ¼" diameter hole through the concrete floor slab. Advanced a decontaminated stainless-steel probe into the hole.
- At sample location SV-2, SEC advanced a stainless steel AMS soil gas probe to a depth of approximately 3.5' BGS.
- Each probe was connected to disposable polytetrafluoroethylene tubing to an approximate depth of 0.5-feet BGS.
- Sealed the annular space between the vapor point and the boring sidewall with hydrated bentonite to minimize ambient air migration into the sampling zone.
- Installed a leak-check system at the vapor sample location. Specifically, the leak-check system was installed as follows:
- Dedicated tubing was attached to the sample point and connected to the sampling manifold.
- Swagelok™ fittings were used to create a closed system.
- Connections and fittings were wrapped with cloths soaked with isopropyl alcohol. 2-propanol was not detected or was detected in the laboratory samples at a concentration of less than 0.01 percent, indicating the sampling train was airtight.
- Approximately 30 minutes after installing the sampling train, the sample was collected in a laboratory-supplied 6-liter summa canister equipped with a flow controller.

5.0 CHEMICAL ANALYITCAL PROGRAM

The samples submitted by SEC were received by Pace Analytical of Mt. Juliet, Tennessee, with no quality control exceptions noted. The selected samples were analyzed for one or more of the following:

- Gasoline-range organics by Method NWTPH-Gx (Soil and Groundwater)
- Diesel- and residual-range organics by Method NWTPH-Dx (Soil and Groundwater)
- VOCs by EPA Method 8260D (Soil and Groundwater)
- VOCs by EPA Method TO-15 (Soil Vapor)
- Selected RCRA-8 Metals by EPA Methods 6020B/7471B (Soil and Groundwater)
- PCBs by EPA Method 8082A (Soil)

The chemical analytical results are summarized in Tables 1 through 3 and discussed (as appropriate) in the following sections. Chemical analytical program details, laboratory reports, and chain-of-custody documentation are presented in Appendix C.

6.0 REGULATORY SCREENING LEVELS

Based on our understanding of the current and anticipated future residential use of the project site, the following screening levels were compared to the chemical analytical results from this investigation:

- MTCA Method A Cleanup Level for Soil and Groundwater (Unrestricted Use)
- MTCA Method B and C Cleanup Levels for Soil and Groundwater (Non Cancer)
- MTCA Method B and C Cleanup Levels for Soil and Groundwater (Cancer)
- CLARC Maximum Contaminant Level for Groundwater (2019)
- CLARC Draft Method B Soil Gas Screening Level (Non Cancer)
- CLARC Draft Method B Soil Gas Screening Level (Cancer)
- CLARC Draft Method C Soil Gas Screening Level (Non Cancer)
- CLARC Draft Method C Soil Gas Screening Level (Cancer)

A comparison of the chemical analytical results to applicable regulatory screening levels are presented in Tables 1 through 3 and are discussed in the following sections.

7.0 SOIL CHEMICAL ANALYTICAL RESULTS

7.1 Gasoline-Range Organics

Nine soil samples[2] were analyzed for gasoline-range organics by Method NWTPH-Gx. Gasoline-range organics were detected in soil sample HA-7(1.0-2.0) at a concentration of 209 mg/kg, which exceeds the MTCA Method A CUL of 30 mg/kg.

Gasoline-range organics were otherwise not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

7.2 Diesel- and Oil-Range Organics

Nine soil samples[2] were analyzed for diesel- and oil-range organics by Method NWTPH-Dx SGT. Diesel- and oil-range organics were not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

7.3 VOCs

Six soil samples[3] were analyzed for VOCs by EPA Method 8260D. Benzene, ethylbenzene, naphthalene, and total xylenes were detected in soil sample HA-7(1.0-2.0) at concentrations, which exceed their corresponding MTCA Method A CULs. In addition, benzene was detected in soil sample HA-2(3.0-4.0) at a concentration that exceeds the MTCA Method A CUL.

VOCs were otherwise not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

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[2] HA-1(4.0-5.0), HA-2(3.0-4.0), HA-3(8.0-9.0), HA-4(6.0-7.0), HA-5(8.0-9.0), HA-6(2.0-3.0), HA-7(1.0-2.0), HA-8(3.0-4.0), and HA-9(2.0-3.0)

[3] HA-2(3.0-4.0), HA-3(8.0-9.0), HA-6(2.0-3.0), HA-7(1.0-2.0), HA-8(3.0-4.0), and HA-9(2.0-3.0)

7.4 PCBs

Five soil samples[4] were analyzed for PCBs by EPA Method 8082A. PCBs were not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

7.5 Metals

Five soil samples[4] were analyzed for total metals by EPA Methods 6020B/7471B. These compounds were either not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than the corresponding MTCA Method A CUL. Although it should be noted that arsenic was detected in all soil samples at a concentration that slightly exceeds the MTCA Method B CUL (Cancer), the detected concentrations arsenic are below the published background concentration for the region, indicating natural background levels.

8.0 GROUNDWATER CHEMICAL ANALYTICAL RESULTS

8.1 Gasoline-Range Organics

Four groundwater samples[5] were analyzed for gasoline-range organics by Method NWTPH-Gx. Gasoline-range organics detected in groundwater samples collected from monitoring wells KMW-7 and KMW-15 at concentrations the exceed all applicable CULs. Gasoline-range organics were otherwise not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

8.2 Diesel- and Oil-Range Organics

Four groundwater samples[5] were analyzed for diesel- and oil-range organics by Method NWTPH-Dx SGT. Diesel-range organics were detected in groundwater collected from monitoring well KMW-7 at a concentration that exceeds all applicable CULs. Diesel- and oil-range organics were otherwise not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

8.3 VOCs

Four groundwater samples[5] were analyzed for VOCs by EPA Method 8260D. Benzene, ethylbenzene, naphthalene, 1,24-trimethylbenene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzne, and/or total xylenes were detected in groundwater samples collected from KMW-7 an KMW-15 at concentrations that exceed their corresponding MTCA Method A CULs. VOCs were otherwise not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

8.4 Metals

Four groundwater samples[5] were analyzed for total lead by EPA Method 6020B. Lead was not detected at concentrations greater than laboratory RDLs or was detected at a concentration less than the corresponding MTCA Method A CUL.

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[4] HA-2(3.0-4.0), HA-6(2.0-3.0), HA-7(1.0-2.0), HA-8(3.0-4.0), and HA-9(2.0-3.0)

[5] MW-5, KMW-7, KMW-15, and BBA 510

9.0 SOIL VAPOR CHEMICAL ANALYTICAL RESULTS

Vapor samples SV-1 and SV-2 were analyzed for VOCs by EPA method TO-15. VOCs were not detected at concentrations greater than laboratory RDLs or were detected at concentrations less than applicable CULs in the samples submitted for analysis.

10.0 CONCLUSIONS AND RECOMMENDATIONS

Succeed Environmental Consulting LLC (SEC) performed a subsurface investigation at 703 & 709 S Lincoln Street in Port Angeles, Washington. This assessment was completed in conformance with our proposal dated June 21, 2021. SEC conducted a series of soil borings at the project site, the collection of groundwater from monitoring wells located on or near the project site, and the collection of soil vapor beneath the project site to evaluate subsurface conditions. The results are summarized below:

- Gasoline-range organics and/or associated VOCs (benzene, ethylbenzene, naphthalene, and total xylenes) were detected in soil samples HA-7(1.0-2.0) and HA-2(3.0-4.0) at concentrations, which exceed their corresponding MTCA Method A CULs.
- Gasoline- and diesel-range organics and associated VOCs (benzene, ethylbenzene, naphthalene, 1,24-trimethylbenene, 1,2,3-trimethylbenzene, 1,3,5-trimethylbenzne, and/or total xylenes) were detected in groundwater collected from monitoring wells KMW-7 and KMW-15 at concentrations that exceed applicable CULs.
- VOCs were not detected in soil vapor samples collected at the project site at concentrations greater than applicable CULs in the samples submitted for analysis.
- Contaminants of interest were otherwise not detected at the project site at concentrations exceeding regulatory screening levels.

Based on the results of this investigation, a petroleum hydrocarbon plume appears to have migrated from one or more of the up-gradient gas station facilities identified during the Phase I ESA, onto the western portion of the project site. The petroleum hydrocarbon plume appears to have impacted soil and groundwater beneath the western and central portions of the project site.

Since soil vapor beneath the project site does not appear to have been adversely impacted by VOCs, which indicates that vapor-phase VOCs at the project site do not pose a threat to occupants of the property.

The results of our investigation are generally consistent with the information contained in Ecology's in-house file for Cleanup Site No. 52, which is associated with a release of petroleum hydrocarbons at the project site. As previously noted, Ecology identified two potential sources areas of contamination: (1) the 722 S Lincoln Street Property (former Round the Clock Deli), and (2) a former service station located north of the Arco Station on 8th Street. Ecology Cleanup Site no. 52 remains open. We recommend working with the Washington Department of Ecology to implement any necessary safeguards to ensure protectiveness to site occupants, and ultimately obtain regulatory closure for Cleanup Site No. 52.

11.0 LIMITATIONS

This report has been prepared for use by your firm. Reliance on this report by other parties is strictly at the risk of those parties. SEC will grant third-party reliance on a case-by-case basis, if specifically requested in writing by our client for whom this report was prepared. No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions relating to a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions relating to a property.

There is always a potential that areas with contamination that were not identified during this assessment exist at the project site or in the study areas. Further evaluation of such potential would require additional research, subsurface exploration, sampling, and/or testing. Some substances may be present in the project site vicinity in quantities or under conditions that may have led or may lead to contamination of the project site but are not included in current local, state, or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability.

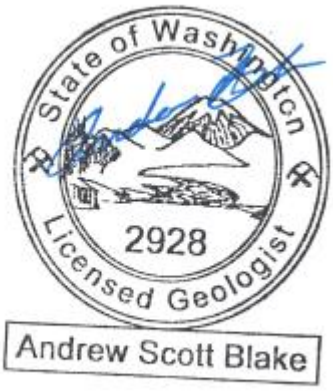
SEC cannot be responsible if the standards of all appropriate inquiry or regulatory definitions of hazardous substance change or if you are required to meet more stringent standards in the future. This report is not intended for use by others, and the information contained herein is not applicable to other sites. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with the generally accepted environmental science practices for environmental services in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

We sincerely appreciate the opportunity to be of service to you. Please call if you have questions regarding this report.

Sincerely,

Succeed Environmental Consulting LLC

Andrew S. Blake, R.G.
Principal Geologist



FIGURES

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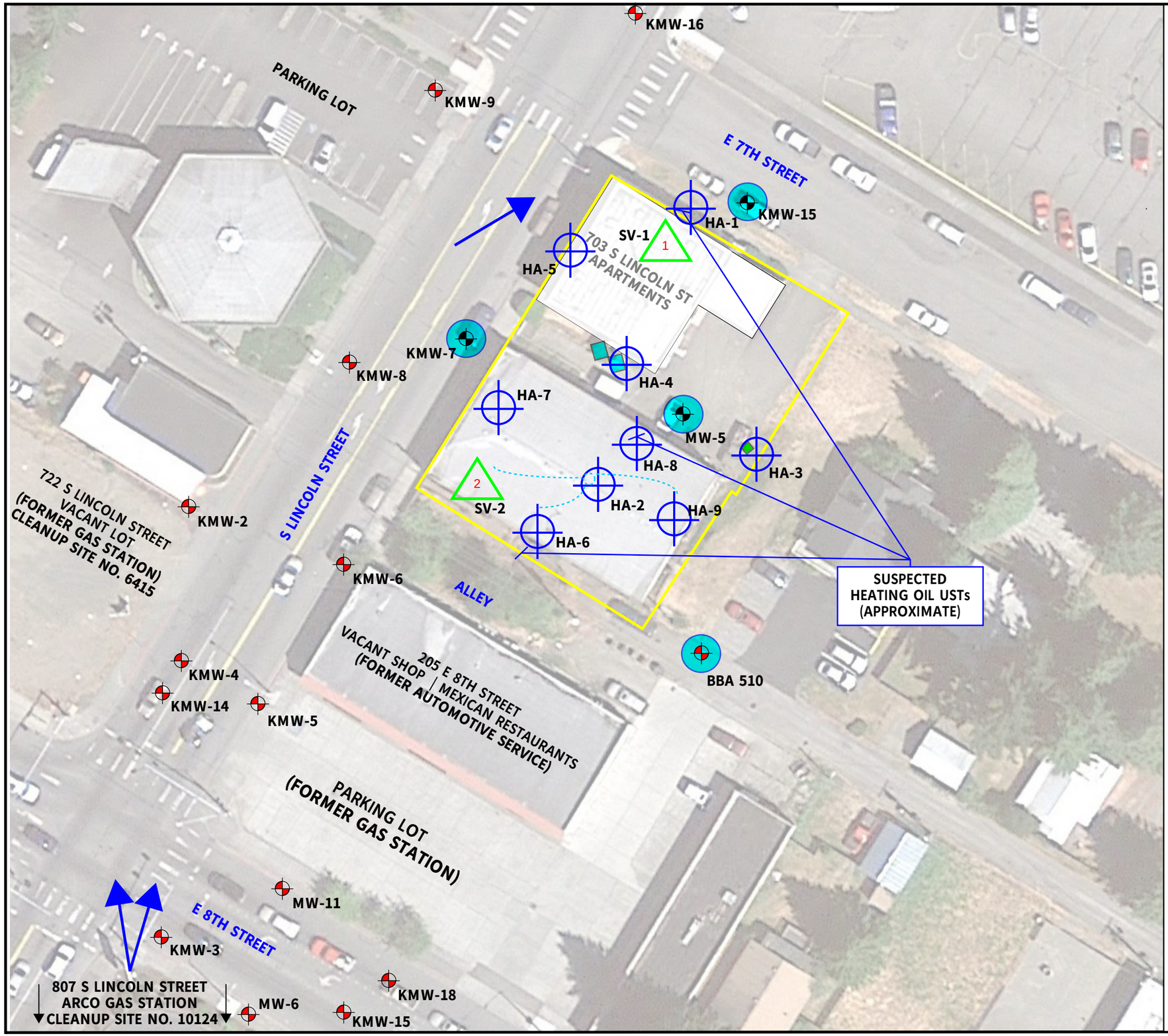
SUCCEED ENVIRONMENTAL CONSULTING, LLC	CAPPAC-26-01	VICINITY MAP	
	JUNE 2021	703 & 709 S LINCOLN STREET PORT ANGELES, WASHINGTON	FIGURE 1



LEGEND:

- APPROXIMATE SITE BOUNDARY (DISPLAYED IN YELLOW)
- SOLID WASTE ENCLOSURE
- CATCH BASIN / DRAIN
- GROUNDWATER MONITORING WELL
- INFERRED GROUNDWATER FLOW DIRECTIONS (BASED ON INFORMATION IN APPENDIX B)
- GROUNDWATER SAMPLE LOCATION
- 1 SOIL GAS SAMPLE LOCATION
- SOIL BORING LOCATION

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(APPROXIMATE SCALE IN FEET)

70

SITE PLAN BASED ON OBSERVATIONS MADE BY SEC. MEASUREMENTS DERIVED FROM THIS FIGURE SHOULD BE CONSIDERED APPROXIMATE.

SITE PLAN

703 & 709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

FIGURE 2

CAPPAC-26-02

JULY 2021

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TABLES

TABLE 1
SUMMARY OF SOIL CHEMICAL ANALYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374304-05	L1374304-06	L1374304-07	L1374304-08	L1374304-09	L1374304-10	L1374304-11	L1374304-12	L1374304-13	CALRC Soil Meth A Unres LU 2019	CALRC Soil Meth C Non Can 2019	CALRC Soil Meth B Can 2019	CALRC Soil Meth B Non Can 2019	CALRC Soil Meth C Can 2019
Client Sample ID			HA-1(4.0-5.0)	HA-2(3.0-4.0)	HA-3(8.0-9.0)	HA-4(6.0-7.0)	HA-5(8.0-9.0)	HA-6(2.0-3.0)	HA-7(1.0-2.0)	HA-8(3.0-4.0)	HA-9(2.0-3.0)					
Date Collected			07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021					
Method	Analyte	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result					
6020B	LEAD	mg/kg	--	**29.3**	**50.7**	**31.2**		**78.2**	**54.8**	**54.3 J5O1**	**55.1**	250	NE	NE	NE	NE
6020B	ARSENIC	mg/kg	--	**5.22**	--	--	--	**3.68**	**2.68**	**3.95 O1**	**3.60**	20	1100	0.67	24	88
6020B	BARIUM	mg/kg	--	**59.2**	--	--	--	**85.6**	**89.3**	**102 O1**	**91.5**	NE	700000	NE	16000	NE
6020B	CADMIUM	mg/kg	--	**0.344 J**	--	--	--	**0.504 J**	**0.139 J**	**0.513 J**	**0.173 J**	NE	NE	NE	NE	NE
6020B	CHROMIUM	mg/kg	--	**27.5 J**	--	--	--	**35.6**	**35.4**	**36.6 O1**	**39**	NE	NE	NE	NE	NE
6020B	SELENIUM	mg/kg	--	**0.291 J**	--	--	--	**0.416 J**	**0.326 J**	**0.855 J**	**0.395 J**	NE	18000	NE	400	NE
6020B	SILVER	mg/kg	--	**0.138 J**	--	--	--	<0.627	<0.631	<0.663	<0.612	NE	18000	NE	400	NE
7471B	MERCURY	mg/kg	--	**0.0571**	--	--	--	0.0635	0.0543	0.0632	0.0485	2	NE	NE	NE	NE
8082 A	PCB 1016	mg/kg	--	<0.0429	--	--	--	<0.0426	<0.0429	<0.0451	<0.0416	NE	250	14	5.6	1900
8082 A	PCB 1221	mg/kg	--	<0.0429	--	--	--	<0.0426	<0.0429	<0.0451	<0.0416	NE	NE	NE	NE	NE
8082 A	PCB 1232	mg/kg	--	<0.0429	--	--	--	<0.0426	<0.0429	<0.0451	<0.0416	NE	NE	NE	NE	NE
8082 A	PCB 1242	mg/kg	--	<0.0429	--	--	--	<0.0426	<0.0429	<0.0451	<0.0416	NE	NE	NE	NE	NE
8082 A	PCB 1248	mg/kg	--	<0.0215	--	--	--	<0.0213	<0.0215	<0.0225	<0.0208	NE	NE	NE	NE	NE
8082 A	PCB 1254	mg/kg	--	<0.0215	--	--	--	<0.0213	<0.0215	<0.0225	<0.0208	NE	70	0.5	1.6	66
8082 A	PCB 1260	mg/kg	--	<0.0215	--	--	--	<0.0213	<0.0215	<0.0225	<0.0208	NE	NE	0.5	NE	66
8260D	ACETONE	mg/kg	--	<0.0779	<0.0746	--	--	<0.0778	<3.19	<0.0878	<0.0780	NE	3200000	NE	72000	NE
8260D	ACRYLONITRILE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	140000	1.9	3200	240
8260D	BENZENE	mg/kg	--	**0.0308 J**	<0.00149	--	--	0.0016	**1.74**	0.00908	<0.00156	0.03	14000	18	320	2400
8260D	BROMOBENZENE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	28000	640	NE	NE
8260D	BROMOCHLOROMETHANE	mg/kg	--	--	--	--	--	--	--	--	--	NE	NE	NE	NE	NE
8260D	BROMODICHLOROMETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	70000	16	1600	2100
8260D	BROMOFORM	mg/kg	--	<0.0389	<0.0373	--	--	<0.0389	<1.59	<0.0439	<0.0390	NE	70000	130	1600	17000
8260D	BROMOMETHANE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	4900	NE	110	NE
8260D	N-BUTYLBENZENE	mg/kg	--	**0.0145 J**	<0.0187	--	--	**0.00927 J**	**1.96**	<0.0220	<0.0195	NE	180000	NE	4000	NE
8260D	SEC-BUTYLBENZENE	mg/kg	--	**0.00942 J**	<0.0187	--	--	**0.0173 J**	**0.754 J**	<0.0220	<0.0195	NE	350000	NE	8000	NE
8260D	TERT-BUTYLBENZENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	350000	NE	8000	NE
8260D	CARBON DISULFIDE	mg/kg	--	--	--	--	--	--	--	--	--	NE	350000	NE	8000	NE
8260D	CARBON TETRACHLORIDE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	14000	14	320	1900
8260D	CHLOROBENZENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	70000	NE	1600	NE
8260D	CHLORODIBROMOMETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	70000	12	1600	1600
8260D	CHLOROETHANE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	CHLOROFORM	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	35000	32	800	4200
8260D	CHLOROMETHANE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	NE	NE	NE	NE
8260D	2-CHLOROTOLUENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	70000	NE	1600	NE
8260D	4-CHLOROTOLUENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	1,2-DIBROMO-3-CHLOROPROPANE	mg/kg	--	<0.0389	<0.0373	--	--	<0.0389	<1.59	<0.0439	<0.0390	NE	700	1.3	16	160
8260D	1,2-DIBROMOETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	0.005	32000	0.5	720	66
8260D	DIBROMOMETHANE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	35000	NE	800	NE
8260D	1,2-DICHLOROBENZENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	320000	NE	7200	NE
8260D	1,3-DICHLOROBENZENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	1,4-DICHLOROBENZENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	250000	190	5600	24000
8260D	TRANS-1,4-DICHLORO-2-BUTENE	mg/kg	--	--	--	--	--	--	--	--	--	NE	NE	NE	NE	NE
8260D	DICHLORODIFLUOROMETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	700000	NE	16000	NE
8260D	1,1-DICHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	700000	180	16000	23000
8260D	1,2-DICHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	21000	11	480	1400
8260D	1,1-DICHLOROETHENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	180000	NE	4000	NE
8260D	CIS-1,2-DICHLOROETHENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	7000	NE	160	NE
8260D	TRANS-1,2-DICHLOROETHENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	70000	NE	1600	NE

TABLE 1
SUMMARY OF SOIL CHEMICAL ANALYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374304-05	L1374304-06	L1374304-07	L1374304-08	L1374304-09	L1374304-10	L1374304-11	L1374304-12	L1374304-13	CALRC Soil Meth A Unres LU 2019	CALRC Soil Meth C Non Can 2019	CALRC Soil Meth B Can 2019	CALRC Soil Meth B Non Can 2019	CALRC Soil Meth C Can 2019
Client Sample ID			HA-1(4.0-5.0)	HA-2(3.0-4.0)	HA-3(8.0-9.0)	HA-4(6.0-7.0)	HA-5(8.0-9.0)	HA-6(2.0-3.0)	HA-7(1.0-2.0)	HA-8(3.0-4.0)	HA-9(2.0-3.0)					
Date Collected			07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021	07/01/2021					
Method	Analyte	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result					
8260D	1,2-DICHLOROPROPANE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	140000	27	3200	3500
8260D	1,1-DICHLOROPROPENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	NE	NE	NE	NE
8260D	1,3-DICHLOROPROPANE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	CIS-1,3-DICHLOROPROPENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	NE	NE	NE	NE
8260D	TRANS-1,3-DICHLOROPROPENE	mg/kg	--	<0.00779	<0.00746	--	--	<0.00778	<0.319	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	2,2-DICHLOROPROPANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	NE	NE	NE	NE
8260D	DI-ISOPROPYL ETHER	mg/kg	--	<0.00156	<0.00149	--	--	**0.00764**	<0.0637	<0.00176	<0.00156	NE	NE	NE	NE	NE
8260D	ETHYLBENZENE	mg/kg	--	**0.0115**	<0.00373	--	--	**0.00363 J**	**11**	**0.00467**	<0.00390	6	350000	NE	8000	NE
8260D	HEXACHLORO-1,3-BUTADIENE	mg/kg	--	<0.0389	<0.0373	--	--	<0.0389	<1.59	<0.0439	<0.0390	NE	3500	13	80	1700
8260D	2-HEXANONE	mg/kg	--	--	--	--	--	--	--	--	--	NE	18000	NE	400	NE
8260D	N-HEXANE	mg/kg	--	--	--	--	--	--	--	--	--	NE	210000	NE	4800	NE
8260D	IODOMETHANE	mg/kg	--	--	--	--	--	--	--	--	--	NE	NE	NE	NE	NE
8260D	ISOPROPYLBENZENE	mg/kg	--	**0.0352**	<0.00373	--	--	**0.0703**	**1.38**	<0.00439	<0.00390	NE	350000	NE	8000	NE
8260D	P-ISOPROPYLTOLUENE	mg/kg	--	**0.00467 J**	<0.00746	--	--	**0.0109**	**0.354**	<0.00878	<0.00780	NE	NE	NE	NE	NE
8260D	2-BUTANONE (MEK)	mg/kg	--	<0.156	**0.104 J**	--	--	<0.156	<6.37	**0.153 J**	<0.156	NE	2100000	NE	48000	NE
8260D	METHYLENE CHLORIDE	mg/kg	--	<0.0389	<0.0373	--	--	<0.0389	<1.59	<0.0439	<0.0390	0.02	21000	500	480	66000
8260D	4-METHYL-2-PENTANONE (MIBK)	mg/kg	--	<0.0389	<0.0373	--	--	<0.0389	<1.59	<0.0439	<0.0390	NE	280000	NE	6400	NE
8260D	METHYL TERT-BUTYL ETHER	mg/kg	--	<0.00156	<0.00149	--	--	<0.00156	<0.0637	<0.00176	<0.00156	0.1	NE	560	NE	73000
8260D	NAPHTHALENE	mg/kg	--	<0.0195	<0.0187	--	--	**0.0107 J**	**7.36**	<0.0220	<0.0195	5	70000	NE	1600	NE
8260D	N-PROPYLBENZENE	mg/kg	--	**0.0449**	<0.00746	--	--	**0.102**	5.96	**0.00263 J**	<0.00780	NE	350000	NE	8000	NE
8260D	STYRENE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	700000	NE	16000	NE
8260D	1,1,1,2-TETRACHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	110000	38	2400	5000
8260D	1,1,2,2-TETRACHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	70000	5	1600	660
8260D	1,1,2-TRICHLOROTRIFLUOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	110000000	NE	2400000	NE
8260D	TETRACHLOROETHENE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	0.05	21000	480	480	63000
8260D	TOLUENE	mg/kg	--	**0.0541**	<0.00746	--	--	**0.0143**	**0.177 J**	**0.0164**	<0.00780	7	280000	NE	6400	NE
8260D	1,2,3-TRICHLOROBENZENE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	NE	NE	NE	NE
8260D	1,2,4-TRICHLOROBENZENE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	35000	34	800	4500
8260D	1,1,1-TRICHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	2	7000000	NE	160000	NE
8260D	1,1,2-TRICHLOROETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	14000	18	320	2300
8260D	TRICHLOROETHENE	mg/kg	--	<0.00156	<0.00149	--	--	<0.00156	<0.0637	<0.00176	<0.00156	0.03	1800	12	40	2800
8260D	TRICHLOROFLUOROMETHANE	mg/kg	--	<0.00389	<0.00373	--	--	<0.00389	<0.159	<0.00439	<0.00390	NE	1100000	NE	24000	NE
8260D	1,2,3-TRICHLOROPROPANE	mg/kg	--	<0.0195	<0.0187	--	--	<0.0194	<0.797	<0.0220	<0.0195	NE	14000	0.033	320	4.4
8260D	1,2,4-TRIMETHYLBENZENE	mg/kg	--	**0.00953**	<0.00746	--	--	**0.0591**	**26.8**	**0.00901**	<0.00780	NE	35000	NE	800	NE
8260D	1,2,3-TRIMETHYLBENZENE	mg/kg	--	**0.0463**	<0.00746	--	--	**0.0734**	**6.29**	**0.00511 J**	<0.00780	NE	35000	NE	800	NE
8260D	1,3,5-TRIMETHYLBENZENE	mg/kg	--	**0.01**	<0.00746	--	--	**0.0316**	**7.04**	<0.00878	<0.00780	NE	35000	NE	800	NE
8260D	VINYL ACETATE	mg/kg	--	--	--	--	--	--	--	--	--	NE	3500000	NE	80000	NE
8260D	VINYL CHLORIDE	mg/kg	--	<0.00389	<0.00373	--	--	--	--	--	--	NE	11000	0.67	240	88
8260D	XYLENES, TOTAL	mg/kg	--	**0.187**	**0.00191 J**	--	--	**0.118**	**27.9**	**0.0204**	<0.0101	9	700000	NE	16000	NE
NWTPHDX-SGT	DIESEL RANGE ORGANICS	mg/kg	**2.4 J1**	**14.3**	**11.5**	**2.24 J**	<5.06	**226**	**6.05**	**8.65**	<4.90	NE	NE	NE	NE	NE
NWTPHDX-SGT	RESIDUAL RANGE ORGANICS	mg/kg	**6.66 J**	**36.7**	**24**	**10.2 J**	<12.6	**103**	<12.6	**29.3**	**5.61 J**	NE	NE	NE	NE	NE
NWTPHGX	TPHG C6 - C12	mg/kg	<3.90	**18.5 B**	**14.5 B**	**4 B**	**4.66 BJ**	**9.44 B**	**209**	<4.39	<3.90	30/100	NE	NE	NE	NE

Qualifiers: B: The same analyte is found in the associated blank. **C3:** The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable. **J:** The identification of the analyte is acceptable; the reported value is an estimate. **J3:** The associated batch QC was outside the established quality control range for precision. **J5:** The sample matrix interfered with the ability to make any accurate determination; spike value is high **O1:** The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

TABLE 2
SUMMARY OF GROUNDWATER CHEMICAL ANLAYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374304-01	L1374304-02	L1374304-03	L1374304-04	CALRC GW METH A 2019	CALRC GW Meth B Can 2019	CALRC GW Meth B NC 2019	CALRC GW Meth C Can 2019	CALRC GW Meth C NC 2019	CALRC GW WA MaxC Lvl 2019
Client Sample ID			MW-5	KMW-7	KMW-15	BBA 510						
Date Collected			06/30/2021	06/30/2021	06/30/2021	06/30/2021						
Method	Analyte	Units	Result	Result	Result	Result						
6020B	LEAD	ug/l	<2.00	<2.00	**2.06**	<2.00	15	NE	NE	NE	NE	15
8260D	ACETONE	ug/l	<1.00	<25.0	<1.00	<1.00	NE	NE	7200		16000	NE
8260D	ACRYLONITRILE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	0.081	320	0.81	700	NE
8260D	BENZENE	ug/l	<0.0400	51	91.4	<0.0400	5	0.8	32	8	70	5
8260D	BROMOBENZENE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	64		140	NE
8260D	BROMOCHLOROMETHANE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	BROMODICHLOROMETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	0.71	160	7.1	350	80
8260D	BROMOFORM	ug/l	<1.00	<25.0	<1.00	<1.00	NE	5.5	160	55	350	80
8260D	BROMOMETHANE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	11	NE	25	NE
8260D	N-BUTYLBENZENE	ug/l	<0.500	**30.6**	**8.98**	<0.500	NE	NE	400	NE	880	NE
8260D	SEC-BUTYLBENZENE	ug/l	**0.194**	**23.6**	**9.39**	<0.500	NE	NE	800	NE	1800	NE
8260D	TERT-BUTYLBENZENE	ug/l	<0.200	<5.00	**0.063 J**	<0.200	NE	NE	800	NE	1800	NE
8260D	CARBON DISULFIDE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	800	NE	1800	NE
8260D	CARBON TETRACHLORIDE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	0.63	32	6.3	70	5
8260D	CHLOROBENZENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	160	NE	350	100
8260D	CHLORODIBROMOMETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	0.52	160	5.2	350	80
8260D	CHLOROETHANE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	CHLOROFORM	ug/l	<0.100	<2.50	<0.100	<0.100	NE	1.4	80	14	180	80
8260D	CHLOROMETHANE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	NE	NE	NE	NE
8260D	2-CHLOROTOLUENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	160	NE	350	NE
8260D	4-CHLOROTOLUENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	<1.00	<25.0	<1.00	<1.00	NE	0.055	1.6	0.55	3.5	0.2
8260D	1,2-DIBROMOETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	0.01	0.022	72	0.22	160	0.05
8260D	DIBROMOMETHANE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	80	NE	180	NE
8260D	1,2-DICHLOROBENZENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	720	NE	1600	600
8260D	1,3-DICHLOROBENZENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	1,4-DICHLOROBENZENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	8.1	560	81	1200	75
8260D	TRANS-1,4-DICHLORO-2-BUTENE	ug/l	<0.200	**160**	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	DICHLORODIFLUOROMETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	1600	NE	3500	NE
8260D	1,1-DICHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	7.7	1600	77	3500	NE
8260D	1,2-DICHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	5	0.48	48	4.8	110	5
8260D	1,1-DICHLOROETHENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	400	NE	880	7
8260D	CIS-1,2-DICHLOROETHENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	16	NE	35	70
8260D	TRANS-1,2-DICHLOROETHENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	160	NE	350	100
8260D	1,2-DICHLOROPROPANE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	1.2	320	12	700	5
8260D	1,1-DICHLOROPROPENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	NE	NE	NE	NE
8260D	1,3-DICHLOROPROPANE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	CIS-1,3-DICHLOROPROPENE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	NE	NE	NE	NE
8260D	TRANS-1,3-DICHLOROPROPENE	ug/l	<0.200	<5.00	<0.200	<0.200	NE	NE	NE	NE	NE	NE
8260D	2,2-DICHLOROPROPANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	NE	NE	NE	NE
8260D	DI-ISOPROPYL ETHER	ug/l	<0.0400	<1.00	<0.0400	<0.0400	NE	NE	NE	NE	NE	NE
8260D	ETHYLBENZENE	ug/l	<0.100	4180	1480	<0.100	700	NE	800		1800	700
8260D	HEXACHLORO-1,3-BUTADIENE	ug/l	<1.00	<25.0	<1.00	<1.00	NE	0.56	8	5.6	18	NE
8260D	2-HEXANONE	ug/l	<1.00	<25.0	<1.00	<1.00	NE	NE	40		88	NE

TABLE 2
SUMMARY OF GROUNDWATER CHEMICAL ANLAYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374304-01	L1374304-02	L1374304-03	L1374304-04	CALRC GW METH A 2019	CALRC GW Meth B Can 2019	CALRC GW Meth B NC 2019	CALRC GW Meth C Can 2019	CALRC GW Meth C NC 2019	CALRC GW WA MaxC Lvl 2019
Client Sample ID			MW-5	KMW-7	KMW-15	BBA 510						
Date Collected			06/30/2021	06/30/2021	06/30/2021	06/30/2021						
Method	Analyte	Units	Result	Result	Result	Result						
8260D	N-HEXANE	ug/l	<0.200	**240**	**85.4**	<0.200	NE	NE	480		1100	NE
8260D	IODOMETHANE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	NE	NE	NE	NE
8260D	ISOPROPYLBENZENE	ug/l	**0.243**	**187**	**89.6**	<0.100	NE	NE	800	NE	1800	NE
8260D	P-ISOPROPYLTOLUENE	ug/l	<0.200	**13.1**	**2.89**	<0.200	NE	NE	NE	NE	NE	NE
8260D	2-BUTANONE (MEK)	ug/l	<1.00	<25.0	<1.00	<1.00	NE	NE	4800	NE	11000	NE
8260D	METHYLENE CHLORIDE	ug/l	<1.00	<25.0	<1.00	<1.00	5	22	48	220	110	5
8260D	4-METHYL-2-PENTANONE (MIBK)	ug/l	<1.00	<25.0	<1.00	<1.00	NE	NE	640	NE	1400	NE
8260D	METHYL TERT-BUTYL ETHER	ug/l	<0.0400	<1.00	<0.0400	<0.0400	20	24	NE	240	NE	NE
8260D	NAPHTHALENE	ug/l	<0.500	674	**98.8**	<0.500	160	NE	160	NE	350	NE
8260D	N-PROPYLBENZENE	ug/l	**0.21**	**492**	**194**	<0.200	NE	NE	800	NE	1800	NE
8260D	STYRENE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	1600	NE	3500	100
8260D	1,1,1,2-TETRACHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	1.7	240	17	530	NE
8260D	1,1,2,2-TETRACHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	0.22	160	2.2	350	NE
8260D	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE		240000		530000	NE
8260D	TETRACHLOROETHENE	ug/l	<0.100	<2.50	<0.100	**0.061 J**	5	21	48	210	110	5
8260D	TOLUENE	ug/l	<0.200	**136**	**17.1**	<0.200	1000		640		1400	1000
8260D	1,2,3-TRICHLOROBENZENE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	NE	NE	NE	NE	NE
8260D	1,2,4-TRICHLOROBENZENE	ug/l	<0.500	<12.5	<0.500	<0.500		1.5	80	15	180	70
8260D	1,1,1-TRICHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	200	NE	16000	NE	35000	200
8260D	1,1,2-TRICHLOROETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	0.77	32	7.7	70	5
8260D	TRICHLOROETHENE	ug/l	<0.0400	<1.00	<0.0400	<0.0400	5	0.54	4	9.4	8.8	5
8260D	TRICHLOROFLUOROMETHANE	ug/l	<0.100	<2.50	<0.100	<0.100	NE	NE	2400	NE	5300	NE
8260D	1,2,3-TRICHLOROPROPANE	ug/l	<0.500	<12.5	<0.500	<0.500	NE	0.0015	32	0.015	70	NE
8260D	1,2,4-TRIMETHYLBENZENE	ug/l	<0.200	**3280**	**73.8**	<0.200	NE	NE	80	NE	180	NE
8260D	1,2,3-TRIMETHYLBENZENE	ug/l	**0.742**	**879**	138	<0.200	NE	NE	80	NE	180	NE
8260D	1,3,5-TRIMETHYLBENZENE	ug/l	<0.200	**776**	**1.67**	<0.200	NE	NE	80	NE	180	NE
8260D	VINYL ACETATE	ug/l	<0.500	**85.2**	**41.4**	<0.500	NE	NE	8000	NE	18000	NE
8260D	VINYL CHLORIDE	ug/l	<0.100	<2.50	<0.100	<0.100	0.2	0.029	24	0.29	53	2
8260D	XYLENES, TOTAL	ug/l	<0.260	**13900**	**510**	<0.260	1000	NE	1600		3500	10000
NWTPHDX-SGT	DIESEL RANGE ORGANICS	ug/l	<100	**1350 J3**	**445 J3**	<100	500	NE	NE	NE	NE	NE
NWTPHDX-SGT	RESIDUAL RANGE ORGANICS	ug/l	<250	**235 J**	**174 J**	<250	500	NE	NE	NE	NE	NE
NWTPHGX	TPHG C6 - C12	ug/l	**48.6 J**	**70900**	11100	<100	80	NE	NE	NE	NE	NE

Qualifiers: J: The identification of the analyte is acceptable; the reported value is an estimate. **J3:** The associated batch QC was outside the established quality control range for precision.

TABLE 3
SUMMARY OF SOIL VAPOR CHEMICAL ANALYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374612-01	L1374612-02	CALRC DSG SL MethB NC 2019	CALRC DSG SL MethB Can 2019	CALRC DSG SL MethC NC 2019	CALRC DSG SL MethC Can 2019
Client Sample ID			SV-1	SV-2				
Date Collected			06/30/2021	07/01/2021				
Method	Analyte	Units	Result	Result				
TO-15	ACETONE	ug/m3	**161**	**7.53**	--	--	--	--
TO-15	ALLYL CHLORIDE	ug/m3	<0.626	<0.626	--	--	--	--
TO-15	BENZENE	ug/m3	**25.5**	**7.54**	1400	32	3000	320
TO-15	BENZYL CHLORIDE	ug/m3	<1.04	<1.04	46	5.1	100	51
TO-15	BROMODICHLOROMETHANE	ug/m3	<1.34	<1.34	--	6.8	--	68
TO-15	BROMOFORM	ug/m3	<6.21	<6.21	--	230	--	2300
TO-15	BROMOMETHANE	ug/m3	<0.776	<0.776	230	--	500	--
TO-15	1,3-BUTADIENE	ug/m3	<4.43	<4.43	91	8.3	200	83
TO-15	CARBON DISULFIDE	ug/m3	**5.1**	<0.622	32000	--	70000	--
TO-15	CARBON TETRACHLORIDE	ug/m3	<1.26	<1.26	4600	42	10000	420
TO-15	CHLOROBENZENE	ug/m3	<0.924	<0.924	2300	--	5000	--
TO-15	CHLOROETHANE	ug/m3	<0.528	<0.528	460000	--	1000000	--
TO-15	CHLOROFORM	ug/m3	<0.973	<0.973	4500	11	9800	110
TO-15	CHLOROMETHANE	ug/m3	<0.413	**0.849**	4100	--	9000	--
TO-15	2-CHLOROTOLUENE	ug/m3	<1.03	<1.03	--	--	--	--
TO-15	CYCLOHEXANE	ug/m3	**12.5**	**3.11**	--	--	--	--
TO-15	CHLORODIBROMOMETHANE	ug/m3	<1.70	<1.70	--	--	--	--
TO-15	1,2-DIBROMOETHANE	ug/m3	<1.54	<1.54	410	0.42	900	4.2
TO-15	1,2-DICHLOROBENZENE	ug/m3	<1.20	<1.20	9100	--	20000	--
TO-15	1,3-DICHLOROBENZENE	ug/m3	<1.20	<1.20	--	--	--	--
TO-15	1,4-DICHLOROBENZENE	ug/m3	<1.20	<1.20	37000	23	80000	230
TO-15	1,2-DICHLOROETHANE	ug/m3	<0.810	<0.810	320	9.6	700	96
TO-15	1,1-DICHLOROETHANE	ug/m3	<0.802	<0.802	--	160	--	--
TO-15	1,1-DICHLOROETHENE	ug/m3	<0.793	<0.793	9100		20000	
TO-15	CIS-1,2-DICHLOROETHENE	ug/m3	<0.793	**9.35**	--	--	--	--
TO-15	TRANS-1,2-DICHLOROETHENE	ug/m3	<0.793	<0.793	--	--	--	--
TO-15	1,2-DICHLOROPROPANE	ug/m3	<0.924	<0.924	180	68	400	680
TO-15	CIS-1,3-DICHLOROPROPENE	ug/m3	<0.908	<0.908	--	--	--	--
TO-15	TRANS-1,3-DICHLOROPROPENE	ug/m3	<0.908	<0.908	--	--	--	--
TO-15	1,4-DIOXANE	ug/m3	<0.721	<0.721	--	--	--	--
TO-15	ETHANOL	ug/m3	**28.3**	<2.36	--	--	--	--
TO-15	ETHYLBENZENE	ug/m3	**1.79**	**1.47**	46000	--	100000	--
TO-15	4-ETHYLTOLUENE	ug/m3	<0.982	**1.13**	--	--	--	--
TO-15	TRICHLOROFLUOROMETHANE	ug/m3	**1.38**	**1.25**	32000	--	70000	--
TO-15	DICHLORODIFLUOROMETHANE	ug/m3	**2.31**	**2.3**	4600	--	10000	--
TO-15	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	<1.53	<1.53	230000	--	500000	--
TO-15	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	<1.40	<1.40	--	--	--	--
TO-15	HEPTANE	ug/m3	**3.36**	**3.51**	--	--	--	--
TO-15	HEXACHLORO-1,3-BUTADIENE	ug/m3	<6.73	<6.73	--	11	--	110

TABLE 3
SUMMARY OF SOIL VAPOR CHEMICAL ANALYTICAL RESULTS
703-709 S LINCOLN STREET
PORT ANGELES, WASHINGTON

Lab Sample ID			L1374612-01	L1374612-02	CALRC DSG SL MethB NC 2019	CALRC DSG SL MethB Can 2019	CALRC DSG SL MethC NC 2019	CALRC DSG SL MethC Can 2019
Client Sample ID			SV-1	SV-2				
Date Collected			06/30/2021	07/01/2021				
Method	Analyte	Units	Result	Result				
TO-15	N-HEXANE	ug/m3	**3.49**	**2.67**	32000	--	70000	--
TO-15	ISOPROPYLBENZENE	ug/m3	<0.983	<0.983	18000	--	40000	--
TO-15	METHYLENE CHLORIDE	ug/m3	<0.694	<0.694	27000	25000	60000	250000
TO-15	METHYL BUTYL KETONE	ug/m3	<5.11	<5.11	--	--	--	--
TO-15	2-BUTANONE (MEK)	ug/m3	**16.2**	<3.69	230000	--	500000	--
TO-15	4-METHYL-2-PENTANONE (MIBK)	ug/m3	<5.12	<5.12	140000	--	300000	--
TO-15	METHYL METHACRYLATE	ug/m3	<0.819	<0.819	32000	--	70000	--
TO-15	METHYL TERT-BUTYL ETHER	ug/m3	<0.721	<0.721	140000	960	300000	9600
TO-15	NAPHTHALENE	ug/m3	<3.30	<3.30	140	7.4	300	74
TO-15	2-PROPANOL	ug/m3	**144**	<3.07	--	--	--	--
TO-15	PROPENE	ug/m3	<2.15	<2.15	--	--	--	--
TO-15	STYRENE	ug/m3	<0.851	<0.851	46000		100000	
TO-15	1,1,2,2-TETRACHLOROETHANE	ug/m3	<1.37	<1.37	--	4.3	--	43
TO-15	TETRACHLOROETHENE	ug/m3	**1.62**	<1.36	1800	960	4000	9600
TO-15	TETRAHYDROFURAN	ug/m3	<0.590	<0.590	--	--	--	--
TO-15	TOLUENE	ug/m3	**15.1**	**14.9**	230000	--	500000	--
TO-15	1,2,4-TRICHLOROBENZENE	ug/m3	<4.66	<4.66	91	--	200	--
TO-15	1,1,1-TRICHLOROETHANE	ug/m3	<1.09	<1.09	230000	--	500000	--
TO-15	1,1,2-TRICHLOROETHANE	ug/m3	<1.09	<1.09	9.1	16	20	160
TO-15	TRICHLOROETHENE	ug/m3	<1.07	**8.2**	91	37	200	630
TO-15	1,2,4-TRIMETHYLBENZENE	ug/m3	**1.09**	**1.3**	2700	--	6000	
TO-15	1,3,5-TRIMETHYLBENZENE	ug/m3	<0.982	<0.982	--	--	--	--
TO-15	2,2,4-TRIMETHYLPENTANE	ug/m3	<0.934	<0.934	--	--	--	--
TO-15	VINYL CHLORIDE	ug/m3	<0.511	<0.511	4600	28	10000	280
TO-15	VINYL BROMIDE	ug/m3	<0.875	<0.875	--	--	--	--
TO-15	VINYL ACETATE	ug/m3	<0.704	<0.704	9100	--	20000	--
TO-15	M&P-XYLENE	ug/m3	<1.73	**4.77**	4600	--	10000	--
TO-15	O-XYLENE	ug/m3	<0.867	**1.51**	--	--	--	--
TO-15	TPH (GC/MS) LOW FRACTION	ug/m3	<826	<826	--	--	--	--

APPENDIX A

Cleanup Site Details

Cleanup Site ID: 52

Cleanup Site ID: 52 **Facility/Site ID:** 1001 **UST ID:** N/A Site Page | Site Documents | View Map

Cleanup Site Name: LINCOLN SQUARE APARTMENTS Glossary

Alternate Names: LINCOLN SQUARE APARTMENTS, ROUND THE CLOCK DELI

LOCATION

Address: 704 S LINCOLN ST **City:** PORT ANGELES **Zip Code:** 98362 **County:** Clallam

Latitude: 48.11304 **Longitude:** -123.43621 **WRIA:** 18 **Legislative District:** 24 **Congressional District:** 6 **TRS:** 30N 6W 1

DETAIL

Status: Cleanup Started **NFA Received?** No **Is PSI site?** No

Statute: WPCA - Ch. 90.48 RCW **NFA Date:** N/A **Current VCP?** No **Past VCP?** No

Site Rank: N/A **NFA Reason:** N/A **Brownfield?** No

Site Manager: Southwest Region **Responsible Unit:** Southwest **Active Institutional Control?** No

CLEANUP UNITS

Cleanup Unit Name	Unit Type	Unit Status	Resp Unit	Unit Manager	Current Process
LINCOLN SQUARE APARTMENTS	Upland	Cleanup Started	SW	Southwest Region	Independent Action

ACTIVE INSTITUTIONAL CONTROLS

Instrument Type	Restriction Media	Restrictions/Requirements	Date	Recording Number	Recording County	Tax Parcel
There are no current Institutional Controls in effect for this site.						

AFFECTED MEDIA & CONTAMINANTS

	MEDIA					
Contaminant	**Soil**	**Groundwater**	**Surface Water**	**Sediment**	**Air**	**Bedrock**
Petroleum Products-Unspecified	C		C			

Key:
B - Below Cleanup Level
S - Suspected
C - Confirmed Above Cleanup Level
R - Remediated
RA - Remediated-Above
RB - Remediated-Below

SITE ACTIVITIES

Activity	Status	Start Date	End Date/ Completion Date
Initial Investigation / Federal Preliminary Assessment	Completed		7/20/1988
Site Hazard Assessment/Federal Site Inspection	Completed	8/1/1988	10/1/1988
Site Hazard Assessment/Federal Site Inspection	Completed	8/11/1992	10/12/1992
Interim Action	Completed	10/25/1993	11/25/1993

COUNTY: Clallam

SITE NAME: Lincoln Square Apts.

FILE TYPE: Toxic Cleanup

YEARS ARCHIVED:

94	91
93	90
92	89

1994

Round The Clock Deli
722 S. Lincoln Street
Port Angeles, Wa 98362

January 25, 1994

CERTIFIED LETTER

Lynn Gooding
State of Washington
Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, Wa 98504-7775

Dear Ms. Gooding:

Reference your letter dated January 19, 1994 listing deficiencies contained in the site assessment submitted by Larry Morris of Petroleum Construction & Environmental, Inc.

It seems to me that when hiring a company/person registered and licensed with the State to perform certain specialized functions that a business/person should be able to expect no less than the minimum objectives required by the State. Larry Morris of the above mentioned firm was hired and paid to perform "Permanent Closure" and "Site Assessment" for the business at this address. I understand that with all the varied regulations, etc. omissions and oversights occur. It is my position that by sending Larry Morris copies of the attached three (3) "maps" he should be able to furnish the rest of the required data.

Please call me at (206) 452-1777 if I appear to fail to understand my responsibilities in this matter. I have never, and do not to wish to begin, shirking my responsibilities.

Sincerely,

David L. Cotton

Enclosures

cc: Larry Morris, Petroleum Construction & Environmental, Inc.

Round The Clock Deli
722 S. Lincoln Street
Port Angeles, Wa 98362

January 25, 1994

CERTIFIED LETTER

Larry Morris
c/o Bob Rottle
1850 Yantis St. N.W.
Olympia, Wa 98502

Dear Mr. Morris:

I am enclosing a copy of my letter to Lynn Gooding of the Department of Ecology, State of Washington, regarding their definition of "deficiencies" in the Site Assessment done by you at my place of business. I understand she sent you a copy of the Certified Letter that was sent to me regarding this subject.

I am sending you copies of site maps of my property so you can finalize the report required by the State. If you need any additional information please let me know so we can get this situation resolved and get on with business.

Sincerely,

David L. Cotton

Enclosures

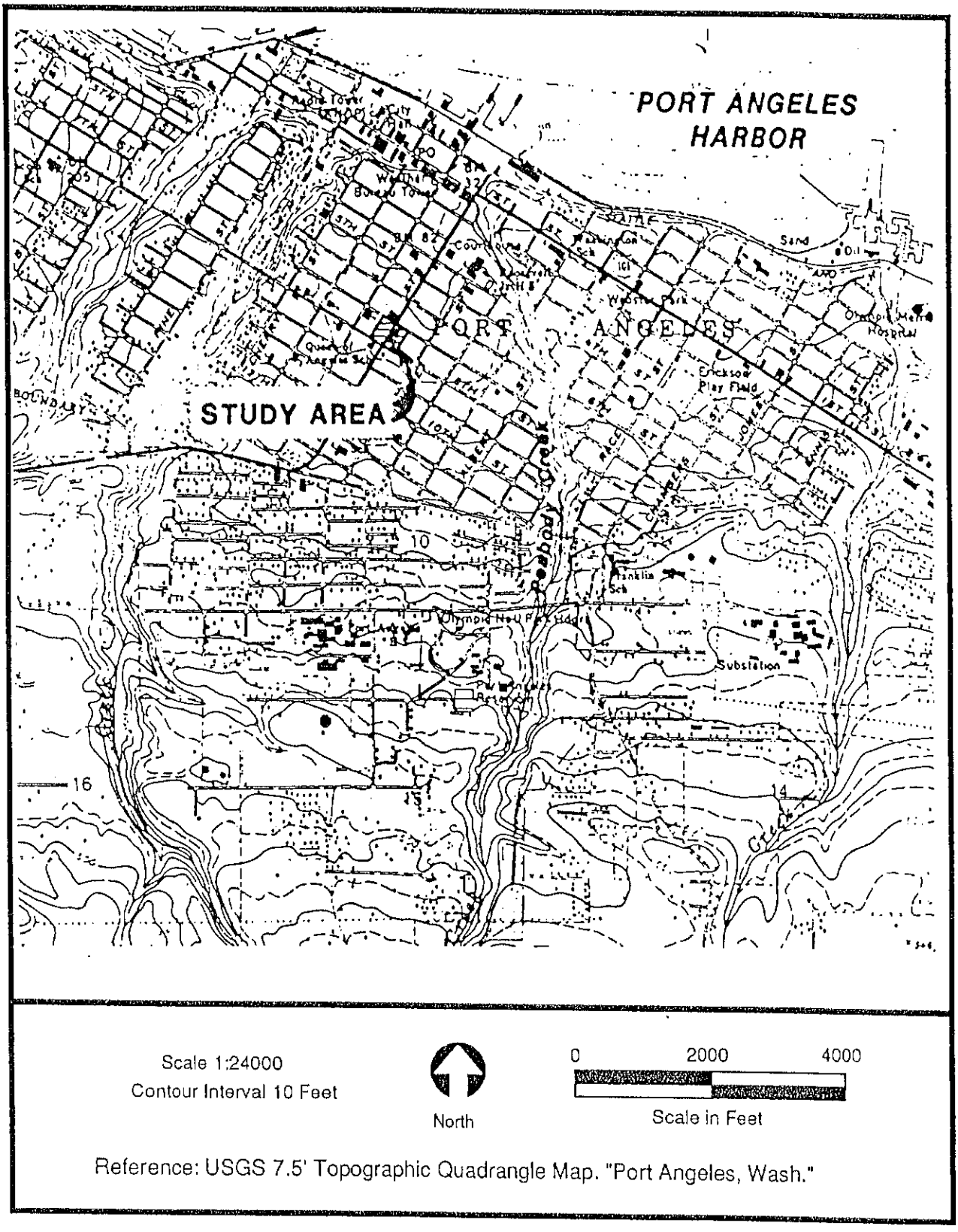


Figure 1: Site Map

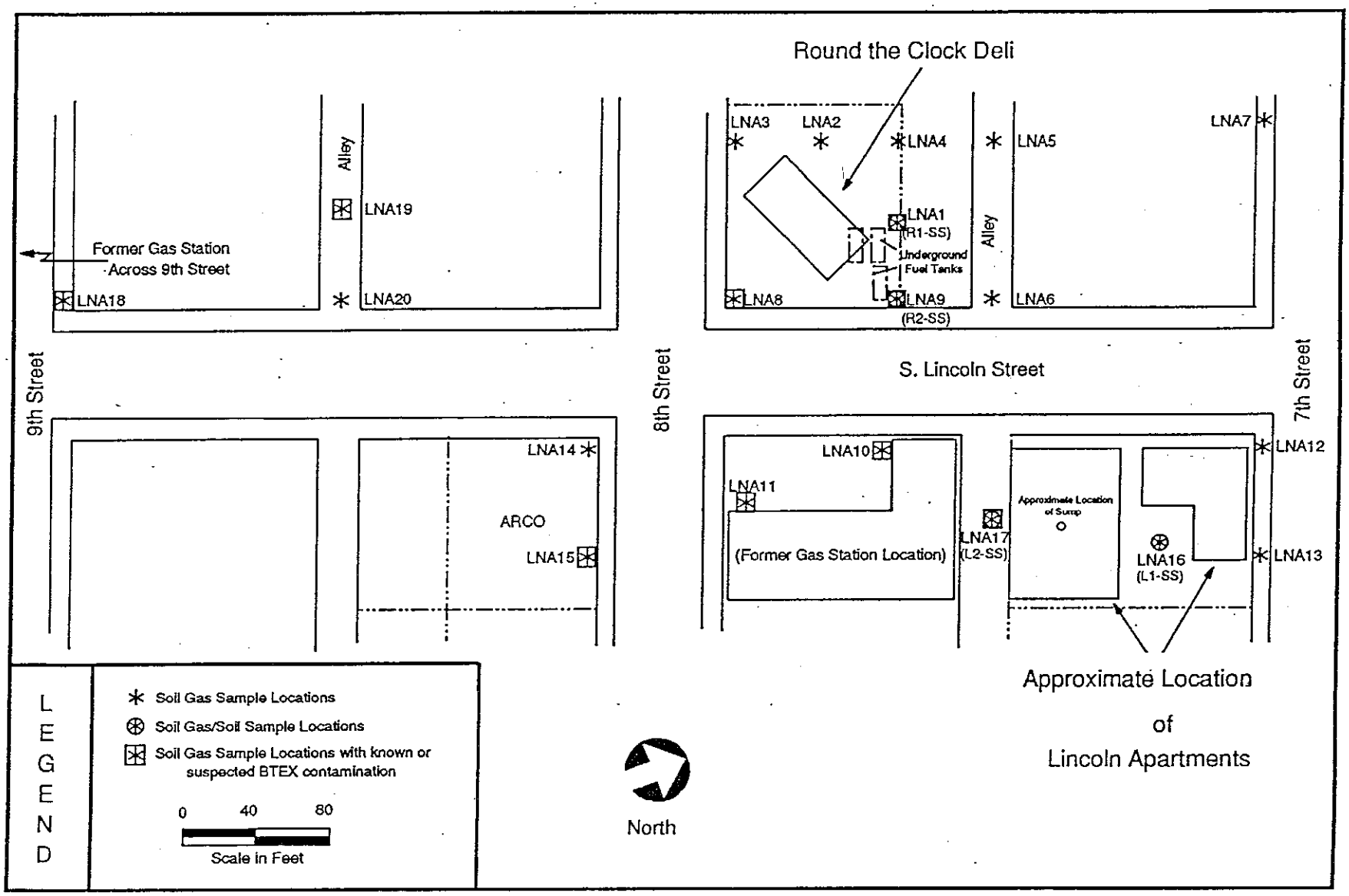
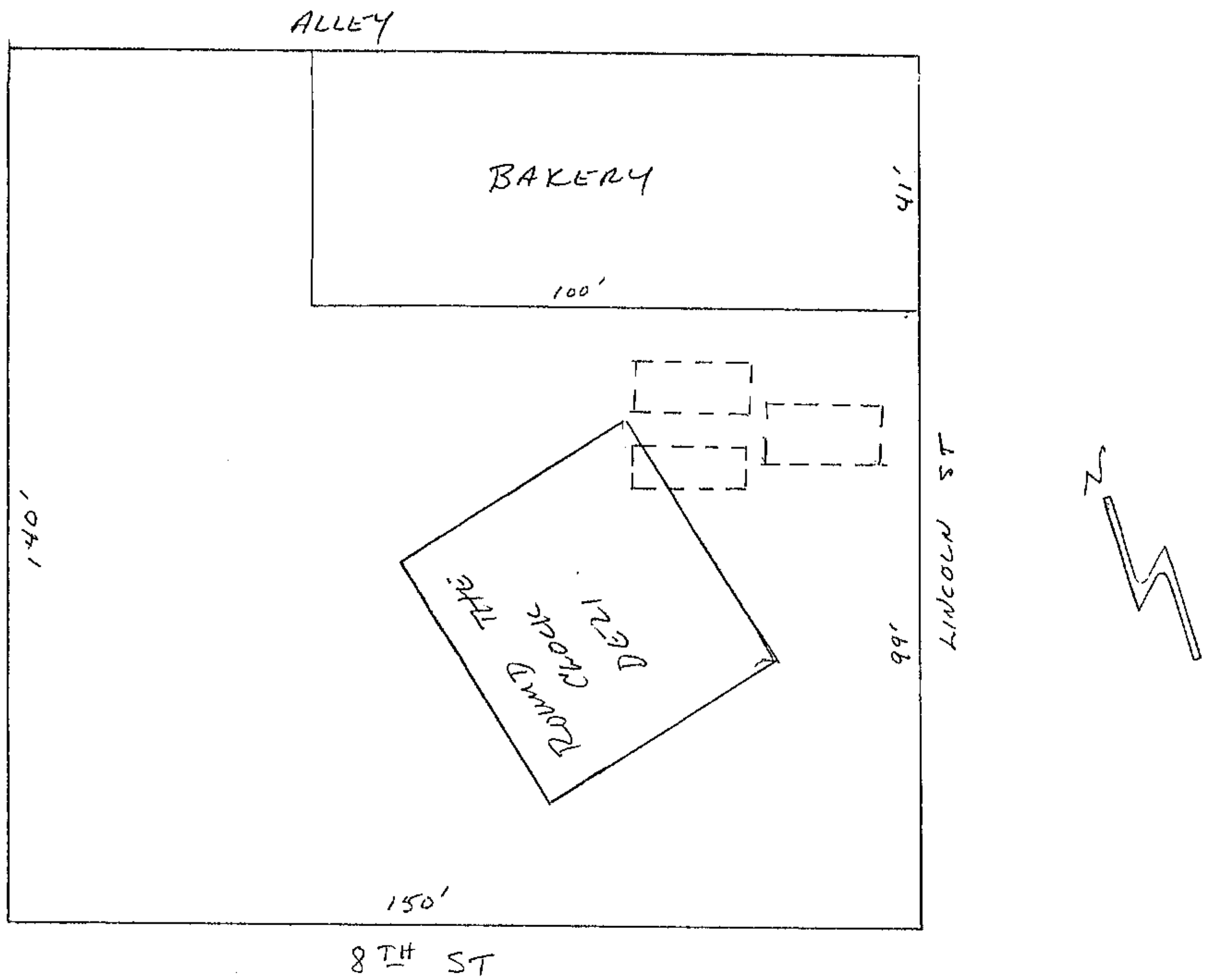


Figure 2: Lincoln Apartments - Soil Gas, Soil, and Sump Sample Locations



ALLEY
BAKERY
41'
100'
140'
THE
ROUND
CLOCK
DELI
99'
LINCOLN ST
N
150'
8TH ST

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane • PO Box 47775 • Olympia, Washington 98504-7775 • (206) 753-2353

January 19, 1994

CERTIFIED LETTER

David Cotton
Round-the-Clock Deli
722 South Lincoln
Port Angeles, Washington 98362

RE: Site Name: Round-the-Clock Deli, Port Angeles, Washington
Report Title: Site Assessment
Date Report Received: January 6, 1994

Dear Mr. Cotton:

The Department of Ecology has reviewed the report referenced above and has found the following deficiencies:

- ☐ Site name/address/owner missing.
- X Vicinity map missing.
- X Site map missing; include a site map scale.
- X Site description incomplete.
- X Incomplete UST system data.
- X Soil not characterized (i.e., clay, sandy, gravel, etc.).
- ☐ Inadequate number of samples taken.
- X Insufficient or incorrect sample analysis done.

  No lead
- X Sample location not indicated.
- ☐ Laboratory analyses not included.
- ☐ Alternate sampling plan not supplied.
- ☐ Inappropriate sampling method used.
- ☐ No information regarding a release from the UST system.

- [X] Incomplete description of the release (i.e., product types, amounts, location, how the release occurred, etc.).
- [ ] Free product information missing or incomplete.
- [X] Ground water information not included.
- [ ] Insufficient number or no monitoring wells installed.
- [ ] Monitoring wells not installed by a licensed well driller.
- [ ] Cross-sectional diagram of monitoring wells not included.
- [ ] Other:

Please submit the required additional information within 14 days of the receipt of this letter so Ecology's review can be completed.

This report will be kept in the Central Files of the Southwest Regional Office (SWRO) of the Department of Ecology. The records are made available for public review by appointment only. Appointments can be made by calling the SWRO resource person, Cathy Downs, at (206) 664-0388.

Please call me at (206) 586-5563 if you have any questions or would like to arrange a meeting to discuss reporting requirements.

Sincerely,

Lynn Gooding

Lynn Gooding
Southwest Regional Office
Toxics Cleanup Program

LG:ak
Enclosures

cc: Larry Morris, Petroleum Construction & Environmental, Inc.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

DAVID COTTON
ROUND THE CLOCK DELI
722 S LINCOLN
PORT ANGELES WA 98362

4. Article Number
P 469 203 243

Type of Service:
- ☐ Registered
- ☒ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Marianne Wilbur

7. Date of Delivery
20 JAN 1994

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

State of Washington Department of Ecology

DEPARTMENT OF ECOLOGY
ENGINEERING/TECHNICAL REVIEW

PROJECT: Round-the-Clock Deli

DISTRICT/COUNTY Clallam

DATE: 1/6/94 REV. 1/14/94

REVIEWER: Lynn Gooding

PAGE 1 OF 1

OPS UNIT/PROGRAM: TCP - LUST

Comment No.	Description
1	No vicinity map
2	No site map
3	No site description
4	Incomplete description of tank system.
5	Soil not characterized
6	No lead analysis
7	Samples not analyzed / take along piping
8.	No Sample location map
9.	Description of release not included
10	No information on local groundwater

ACCEPT	REJECT
☐ No Comments	☑ Resubmit With Additional Information Requested
☐ With Comments	☐ With Comments
☐ Plans Only	☐ Plans Only
☐ Specs Only	☐ Specs Only

ECY 030-34

WASHINGTON STATE DEPARTMENT OF ECOLOGY

TELEPHONE RECORD

Date 1/14/94

Time ☒ a.m. ☐ p.m.

☐ CALLED BY
☐ CALLED

Mr./Ms. Arthur Tobias

Telephone 206-457-481

Address

Representing 7th & Lincoln Capartment building in Port Angeles

Project 1

Discussed Patty this Lady called and said that she wants to know what is the Status.

- Called Mrs. Tobias and said I would send Ecology report to her. Lynn Goodig 1/18/94

Signed

ECY 010-46(b)

5W

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGR IND STORAGE TANK TEMPORARY/PERMANENT CLOSURE and SITE ASSESSMENT NOTICE

See back of form for instructions
Please ☑ the appropriate box(es)
Please type or print information

For Office Use Only
Owner # UOO10646
Site # 102051

☐ Temporary Tank Closure ☒ Permanent Tank Closure ☐ Change-In-Service ☒ Site Assessment/ Site Check

SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tanks are registered): _____

Site/Business Name: ROUND THE CLOCK DELI

Site Address: 722 S LINCOLN (Street) Telephone: (206) 452-1777

PORT ANGELES (City) WA (State) 98362 (ZIP-Code)

TANK INFORMATION:

Tank ID	Closure Date	Tank Capacity	Substance Stored
#1		4000	GASOLINE
#2		4000	GASOLINE
#3		6000	GASOLINE

DEPARTMENT OF ECOLOG
UNDERGROUND STORAGE TANKS
JAN 06 1994

CONTAMINATION PRESENT AT THE TIME OF CLOSURE

☒ Yes ☐ No ☐ Unknown

Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

UST SYSTEM OWNER/OPERATOR:

UST Owner/Operator: DAVE COTTON

Owners Signature: Telephone: 206 452-1777

Address: 722 S. LINCOLN ST (Street) (P.O. Box)

PORT ANGELES (City) WA (State) 98362 (ZIP-Code)

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Service Provider: PETROLEUM CONST & ENVIRO INC License Number: _____

Licensed Supervisor: LARRY MORRIS Decommissioning License Number: LN000222

Supervisors Signature:

Address: 636 A Hwy 603 (Street) (P.O. Box)

CHEHALIS (City) WA (State) 98532 (ZIP-Code)

Telephone: (___) 748-9557

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Name of Registered Site Assessor: LARRY MORRIS

Telephone: (___) 748-9557

Address: 636 A Hwy 603 (Street) (P.O. Box)

CHEHALIS (City) WA (State) 98532 (ZIP-Code)

ECY 020-34

PLEASE READ CAREFULLY

INSTRUCTIONS

Return this completed form to:

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

This form is to be completed by the Tank Owner and submitted to Ecology within 30 days of tank closure.

Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-in-Service require a site assessment be performed.

SITE INFORMATION:

Fill in the site information. Be sure to include the Ecology site ID number. This number may be found on the invoice or permit. Include a contact telephone number so any problems may be resolved quickly.

TANK INFORMATION:

List the tanks that were closed. Please use tank ID numbers and indicate the date of permanent closure. Be sure to attach your Underground Storage Tank Permits for any tanks that are now closed.

UST SYSTEM OWNER/OPERATOR:

Please fill in the owner's/operator's name, address, and telephone number. **Be sure to sign this form.**

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

List the closure company. Companies that provide UST services **MUST** be licensed by Ecology. Ask to see their supervisor's license. Make sure the licensed supervisor signs this form.

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Fill in the site assessor information for permanent closure or change-in-service. Mark the appropriate box showing whether contamination from the underground tank(s) was or is present at the site. A site check/site assessment **MUST** be conducted by a site assessor who is registered with Ecology.

If contamination at the site is found or suspected, the appropriate Ecology Regional Office must be notified within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days. If contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

Tanks exempt from notification requirements are:

Farm or residential tanks, 1100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.

Tanks used for storing heating oil that is used on the premises where the tank is located.

Tanks with a capacity of 110 gallons or less.

Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.

Emergency overflow tanks, catch basins, or sumps.

For more information call toll free in the state of Washington 1-800-826-7716 or (206) 438-7137

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

For Office Use Only	
Owner #	
Site #	

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with the Department of Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all the tanks for which the site check and site assessment is being conducted. Use the tank ID number if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/ site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): _____

Site/Business Name: Land The Clock DELI

Site Address: 722 S LINCOLN (Street) Telephone: ( ) 452-1777

PORT ANGELES (City) DEPARTMENT OF ECOLOGY UNDERGROUND STORAGE TANKS (State) 98362 (ZIP-Code)

JAN 06 1994

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
#1	4000	GASOLINE
#2	4000	GASOLINE
#3	6000	GASOLINE

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ____ Investigate suspected release due to on-site environmental contamination.
- ____ Investigate suspected release due to off-site environmental contamination.
- ____ Extend temporary closure of UST system for more than 12 months.
- ____ UST system undergoing change-in-service.
- X UST system permanently closed-in-place.
- X UST system permanently closed with tank removed.
- ____ Abandoned tank containing product.
- ____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ____ Other (describe): _____

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

		YES	NO
1.	The location of the UST site is shown on the vicinity map.	X	
2.	A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in the Site Assessment Guidance)	X	
3.	A summary of UST system data is provided. (see Section 3.1)	X	
4.	The soils characteristics at the UST site are described. (see Section 5.2)	X	
5.	Is there apparent groundwater in the tank excavation?		X
6.	A brief description of the surrounding land is provided. (see Section 3.1)	X	
7.	Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	X	
8.	A sketch or sketches showing the following items is provided:		
	- location and ID number for all field samples collected	X	
	- groundwater samples distinguished from soil samples (if applicable)	N/A	
	- samples collected from stockpiled excavated soil		X
	- tank and piping locations and limits of excavation pit	X	
	- adjacent structures and streets	X	
	- approximate locations of any on-site and nearby utilities	X	
9.	If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	N/A	
10.	A table is provided showing laboratory results for each sample collected including: sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	X	
11.	Any factors that may have compromised the quality of the data or validity of the results are described.	N/A	
12.	*The results of this site check/site assessment indicate that a confirmed release of regulated substance has occured.*	X	

SITE ASSESSOR INFORMATION

Larry Morris — PERSON REGISTERED WITH ECOLOGY

Pete Const & Enviro — FIRM AFFILIATED WITH

BUSINESS ADDRESS: 636A Hwy 603 — TELEPHONE:(___) _____

Chehalis — CITY

WA — STATE

98532 — ZIP+CODE

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173-360 WAC.

26 DEC 93 — Date

Signature of Person Registered with Ecology

SITE ASSESMENT
for
ROUND THE CLOCK DELI
722 S. Lincoln
Port Angeles, WA 98362

by

PETROLEUM CONSTRUCTION
& ENVIRONMENTAL , INC.
636 a Hwy 603
Chehalis, WA. 98532

On 27 Oct. 93 Petroleum Construction & Environmental , inc. (P.C.E.) Removed (1) 6,000 gallon and (2) 4,000 gallon underground storage tanks. P.C.E. also performed the following site assesment.

Site History: The site has been a gas station for at least 30 years.

Procedure: The three tanks were in the northeast corner of the property one 4000 gallon tank was 50% under the structure of the building and it was decided to abandon it in place. The other 2 tanks were removed and sent to scrap. The removal operation was supervised by myself and observed by Lynn Gooding of the D.O.E., and the Port Angeles fire marshal.

Soil Sampling: 9 soil samples were taken including 3 additional samples, requested by the D.C E., along the north property line to document suspected contamination migrating offsite. The sampling is per the soil sampling log and drawing attached.

Findings: The sidewall on the north property line were below clean up levels. The soil under the tank bottoms were well above clean up levels. Due to financial constraints the excavation was lined with visqueen, backfilled and repaved without any remediation performed.

Larry Morris
site assesor

SOIL SAMPLING LOG

SAMPLES#	LOCATION	TPH	BEN	TOL	E.B.	X
RTC -1	Sidewall 8ft. B.G.	ND	ND	.13	.19	.49
RTC -2	Sidewall 7ft. B.G.	ND	ND	ND	ND	.17
RTC -3	Sidewall 8ft. B.G.	16	ND	ND	ND	ND
RTC-4	Below tank 12ft BG	56	ND	ND	.12	.5
RTC-5	Below tank 10ft BG	3200	ND	24	31	68
RTC-6	Below tank 10ft BG	1800	ND	8.1	12	39
RTC-7	Below tank 10ft BG	1100	ND	.88	3.5	20
RTC-8	Below tank 10ft BG	ND	ND	ND	ND	.15
RTC-9	Below tank 10ft BG	2800	.17	3.7	25	42

NOTES: All results in PPM
BG = Below grade

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

EPA 8020 & WTPH-G

Date Extracted: 11-15-93
Date Analyzed: 11-15-93

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	RTC-1	RTC-2	RTC-3	RTC-4	Method PQL
Dilution Factor	100	100	100	100	
Benzene	**ND**	**ND**	**ND**	**ND**	.001
Toluene	**0.13**	**ND**	**ND**	**ND**	.001
Ethyl Benzene	**0.19**	**ND**	**ND**	**ND**	.001
m,p-Xylene	**0.80**	**ND**	**ND**	**0.12**	.001
o-Xylene	**0.49**	**0.17**	**ND**	**0.51**	.001
TPH-Gas	**ND**	**ND**	**16**	**56**	.100
4-BFB Surrogate Recovery	75%	78%	69%	79%	

Note: Sample PQL(practical quantitation limit)= Method PQL x dilution factor

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

EPA 8020 & WTPH-G

Date Extracted: 11-15-93
Date Analyzed: 11-15-93

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	RTC-5	RTC-6	RTC-7	RTC-8	Method PQL
Dilution Factor	100	100	100	100	
Benzene	ND	ND	ND	ND	.001
Toluene	24	8.1	0.88	ND	.001
Ethyl Benzene	31	12	3.5	ND	.001
m,p-Xylene	83	56	35	ND	.001
o-Xylene	68	39	20	0.15	.001
TPH-Gas	3200	1800	1100	ND	.100
4-BFB Surrogate Recovery	86%	82%	75%	76%	

Note: Sample PQL(practical quantitation limit)= Method PQL x dilution factor

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

EPA 8020 & WTPH-G

Date Extracted: 11-15-93
Date Analyzed: 11-15-93

Matrix: Soil
Units: mg/Kg (ppm)

Client ID	RTC-9	Method PQL
Dilution Factor	100	
Benzene	**0.17**	.001
Toluene	**3.7**	.001
Ethyl Benzene	**25**	.001
m,p-Xylene	**66**	.001
o-Xylene	**42**	.001
TPH-Gas	**2800**	.100
4-BFB Surrogate Recovery	93%	

Note: Sample PQL(practical quantitation limit)= Method PQL x dilution factor

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

EPA 8020 & WTPH-G
QUALITY CONTROL

Date Extracted: 11-15-93
Date Analyzed: 11-15-93

Matrix: Soil
Units: mg/Kg (ppm)

Sample Number	Blank	11-033-1 Original	11-033-1 Duplicate	RPD
Dilution Factor	50	100	100	
Benzene	ND	ND	ND	NA
Toluene	ND	0.13	ND	NA
Ethyl Benzene	ND	0.19	0.22	NA
m,p-Xylene	ND	0.80	0.82	2.7
o-Xylene	ND	0.49	0.37	NA
TPH-Gas	ND	ND	23	NA
4-BFB Surrogate Recovery	81%	75%	77%	

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

EPA 8020 & WTPH-G
QUALITY CONTROL

Date Extracted: 11-15-93
Date Analyzed: 11-15-93

Matrix: Soil
Units: mg/Kg (ppm)

Sample Number	11-033-1		11-033-1		
spiked @ 1 ppm	**MS**	Percent	**MSD**	Percent	
Dilution Factor	50	Recovery	50	Recovery	RPD
Benzene	**0.664**	**66%**	**0.670**	**67%**	0.80
Toluene	**0.769**	**77%**	**0.784**	**78%**	1.9
Ethyl Benzene	**0.857**	**68%**	**0.840**	**66%**	1.9
m,p-Xylene	**0.881**	**16%**	**0.923**	**20%**	4.6
o-Xylene	**0.854**	**48%**	**0.876**	**50%**	2.5
4-BFB Surrogate Recovery	74%		71%		

Date of Report: November 19, 1993
Samples Submitted: November 12, 1993
Lab Traveler: 11-033
Project: RTC

Date Analyzed: November 15, 1993

RESULTS OF DRY WEIGHT

Sample Number	% Moisture
RTC-1	11
RTC-2	20
RTC-3	23
RTC-4	5.4
RTC-5	9.0
RTC-6	6.2
RTC-7	13
RTC-8	6.3
RTC-9	3.2

COMPANY PCE

PROJECT #

PROJECT NAME

MANAGER Larry Morris

PM AAR

OnSite Environmental Inc.
14924 NE 31st CIRCLE, REDMOND, WA 98052
PHONE (206) 883-3881 FAX (206) 885-4603

REQUESTED TURNAROUND?

TRAVELER # 11-033

Dash	Sample Number	Date Sampled	Time Sampled	Type	# Jars	WTPH-HCID	WTPH-G/BTEX	WTPH-G	WTPH-D	WTPH-418.1			DRY WEIGHT	Comments
-1	RTC-1	none Given	none Given	Soil	4oz		X						X	
-2	1-2						X						X	
-3	-3						X						X	
-4	-4						X						X	
-5	-5						X						X	
-6	-6						X						X	
-7	-7						X						X	
-8	-8						X						X	
-9	-9	↓	↓	↓	↓		X						X	

Submitted _____ Date _____ Received by [signature] Date 11/12/93

Firm _____ Time _____ Firm On-Site Environmental Time 2:50

Submitted _____ Date _____ Received by _____ Date _____

Firm _____ Time _____ Firm _____ Time _____

made new file 8/23/93-
Old one was missing at
this time- carey

1993

CERTIFICATE OF UST COMPLIANCE

Please complete and return this form within seven (7) days of completion to:

Lynn Gooding
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

As the legal representative of ROUND-THE-CLOCK-DELI, I hereby certify that the UST system indicated below is in compliance with the requirements of WAC 173-360-200, WAC 173-360-380, and WAC 173-360-385:

	SITE NUMBER	TANK I.D. NUMBER	SIGNATURE
1.	* L00856	1	David L Cotton
2.	L00856	2	David L Cotton
3.	L00856	3	David L Cotton

SWORN STATEMENT:

I hereby swear under penalty of law that, based on my knowledge of the UST system identified by the Site Number, the UST system is in compliance with the applicable state requirements. I understand that if this is a false statement, I may be subject to penalties under Chapter 90.76 RCW.

David L Cotton 11/9/93

Signature of UST Owner or Authorized Representative Date

print or type: DAVID L. COTTON OWNER

Name and Title

* This is a temporary site ID number, another will be issued upon registration.

ROUND THE CLOCK DELI
722 SOUTH LINCOLN
PORT ANGELES, WASHINGTON 98362-6124

INSPECTION REPORT
NOVEMBER 8, 1993

prepared by Lynn Gooding

INSPECTION REPORT
Inspection Date: October 27, 1993

SITE INFORMATION

NAME: Round the Clock Deli
ADDRESS: 722 South Lincoln Street, Port Angeles, Washington 98362-6124
UST ID #: 102051
LUST INCIDENT #: 4503

PARTICIPANTS

Lynn Gooding -	Ecology, SWRO TCP	
Roger Sesna -	Ecology, SWRO Safety Officer	
David Cotton -	Site Owner/Operator	Phone: (206) 452-1777
Larry Morris -	Contractor/UST Decommissioner Petroleum Construction and Environment	Phone: (206) 748-9551

SITE HISTORY

A soil gas survey was conducted at and around the Site by Ecology on March 9, 1993 as part of an on going investigation of the source of gasoline contamination found under the Lincoln Square Apartments located at 709 South Lincoln Street. Results of the soil sampling indicated that a release of petroleum products had occurred at the Site. The source of the release is believed to be from the three on site underground storage tanks (USTs) or their associated piping.

The site is located on the northwest corner of the intersection of Eighth Street and Lincoln Street. The site is bordered by an alleyway, then a bakery to the northeast and a parking lot then a video store to the northwest.

The three USTs are located in the northeast corner of the Site with the alley to the northeast, the city sidewalk to the east and the store to the south. One of the USTs is located partially under the store.

INSPECTION ACTIVITIES

Observe the removal of the three USTs on site along with their associated piping. Observe soil sampling procedures and possible removal of contaminated soil. The work will be performed by a licensed UST decommissioner hired by the site owner.

SITE CONDITIONS

General Site Topography: Slightly sloping to the northeast.
Wind: Moderate breeze from the north/northeast.
Temperature: Approximately 60 degrees initially then much cooler towards the end of the day. Cloudy with heavy fog toward late afternoon.

INSPECTION

Arrived on site at 10:45 am. The tanks are located in the northeast corner of the property including the alley. One tank (#2) was already partially uncovered. The overburden (soil, asphalt) was stockpiled on black plastic in the northeast corner of the property along the sidewalk. The area was cordoned off with pink hazard tape. There was obvious contamination in the excavated soil. The soil appeared to be mostly sand with gravel with some clay.

Coastal Tank Cleaning arrived on site at 11:30 am and proceeded to clean and rinse all three tanks and the piping. Roger Sesna arrived at 11:45 am and set up the benzene monitoring equipment. After the tanks were cleaned and rinsed they were inerted using bottled CO2 gas.

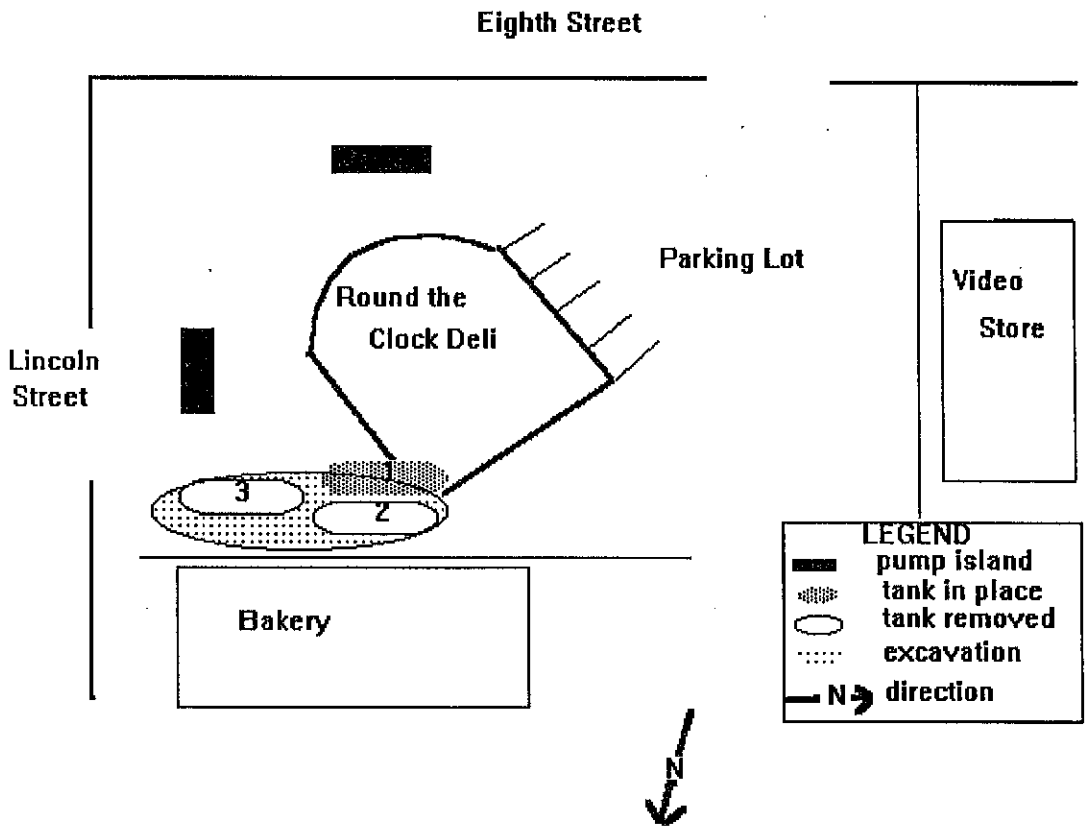
When tank #2 was inert it was uncovered and removed from the excavation. The tank (6,000 gallon gasoline) was then hauled off site for scrap. There was obvious petroleum contamination in the excavation along the northeast side up to the property line and beyond. The bakery next door is approximately 18" from the edge of the excavation. No ground water was encountered in the excavation.

Tank #1 was partially uncovered after being inerted but the contractor was unable to uncover the west end of the tank because it ran under the building. It appeared that almost one third of the tank was under the building. After the inspector from the building department arrived it was decided by the contractor to close the tank in place. The fire marshall was on and off site throughout the day.

The soil stockpiled from tanks #1 and #2 was put back into the northwest corner of the excavation so that tank #3 could be removed. The contractor proceeded to spray water on the soil put back in the excavation. When asked why they were doing this, he stated that it was to compact the soil. The contractor was asked to stop putting water on the contaminated soil to prevent any possibility of ground water contamination. The contractor stopped using the water at that time.

Tank #3 was partially uncovered after being inerted. The soil was stockpiled southwest of the excavation. During tank removal a small diameter pipe that ran across the tank from the building to the sidewalk was broken and plastic coated pipes were exposed. The fire marshall went into the building to find out what the wires were for and the Ecology inspector suggested that the backhoe operator stop work until the fire marshall found out if the wire was "live". The wire was "live", it supplied power to a floodlight at the far northeast corner of the site. The power was turned off and the wires cut. Removal of the tank continued. The Ecology inspectors left the site as the tank was being loaded onto a flat bed truck.

Photographs were taken. Left the site at 4:35 pm.


Eighth Street
Parking Lot
Round the
Clock Deli
Lincoln
Street
Video
Store
3
2
Bakery
LEGEND
pump island
tank in place
tank removed
excavation
N
direction
N

ROUND-THE-CLOCK DELI
722 SOUTH LINCOLN STREET
PORT ANGELES, WASHINGTON 98362-6124

SITE SAFETY PLAN
OCTOBER ~~26~~ 27, 1993

SITE NAME AND LOCATION

Site Name: Round-the-Clock Deli ID #: 102051

Location: 722 South Lincoln Street in Port Angeles, Washington.

SITE EMERGENCY INFORMATION

Emergency Medical: Olympic Memorial Hospital Phone: (206) 457-8513
939 Caroline Street

Rescue: _____ Phone: 911
Fire: _____ Phone: 911
Police: _____ Phone: 911
Poison Control Center: _____ Phone: 911

Location of nearest phone: on-site business or any nearby business.

Potential evacuation routes and places of safe refuge: same

Route from site to nearest hospital:
North on Lincoln then east (right turn) on First Street, turn left on Washington Street and go north until you reach Caroline Street.

Designated emergency signal to indicate site evacuation is: 3 blasts of Horn

Rally point for evacuation: Parking lot northwest of the site.

SITE HISTORY AND DESCRIPTION

A soil gas survey was conducted at and around the Site by Ecology on March 9, 1993 as part of an on going investigation of the source of gasoline contamination found under the Lincoln Square Apartments located at 709 South Lincoln Street. Results of the soil sampling indicated that a release of petroleum products had occurred at the Site. The source of the release is believed to be from the three on site underground storage tanks (USTs) or their associated piping.

The site is located on the northwest corner of the intersection of Eighth Street and Lincoln Street. The site is bordered by an alleyway, then a delicatessen to the northeast and a parking lot then a residence to the northwest.

The three USTs are located in the northeast corner of the Site with the alley to the northeast, the city sidewalk to the east and the store to the south. One of the USTs is located partially under the store.

EXPECTED INVESTIGATION ACTIVITIES

Observe the removal of the three USTs on site along with their associated piping. Observe soil sampling procedures and possible removal of contaminated soil. The work will be performed by a licensed UST decommissioner hired by the site owner.

Contact Person for Site Control and Access is :

Larry Morris (contractor) phone: (206) 748-9551
Petroleum Construction and Environment

Parking and/or Command Post Location is: site parking lot

General Site Topography: relatively flat.

Prevailing Winds are from: usually north/northeast

Site Work Zones (Exclusion, Contamination Reduction, Decontamination, Staging, and Command Post) are located as follows: Exclusion zone will be determined by the contractor.

SITE CONTACTS AND PERSONNEL

Ecology Site Manager: Lynn Gooding

Ecology UST Inspector: ~~Gus Sigma~~

Ecology Safety Officers: Rodger Sesna, ~~Scott Mosley~~

Contractor: Larry Morris, Petroleum Construction and Environment

Site Owner/Operator/PLP: David Cotton Phone: (206) 452-1777

HAZARDS AND PROTECTION

Monitoring Equipment Expected or Required for Use:

MicroTip PID, organic vapor monitors (benzene badges), Climomaster

Hazardous Substances Known or Expected On-Site and Known or Expected Concentrations:

1. Gasoline (benzene, toluene, ethylbenzene, xylenes)

Routes of Exposure and Hazard Type of Each Substance:

1. inhalation, direct contact

Monitor Action Levels and Actions for each Substance:

Material #	Instrument	Action Level	Action
1. Gasoline	PID	>3.5-8.9 ~~>2-5~~ above background for > 30 seconds sustained >89 above background for 730 sustained seconds	use full face resp. Or go up wind of site. leave affected area

PPE Materials Required by Substance:

1. possible full face respirator

Expected Personal Protective Equipment (PPE) Requirements:

Level: D

Cartridges or Canisters Required for Air Purifying Respirators: GMC-H

general

Additional Site Hazards Expected or Possible: Open excavation, explosive vapors, heavy machinery, overhead, noise.

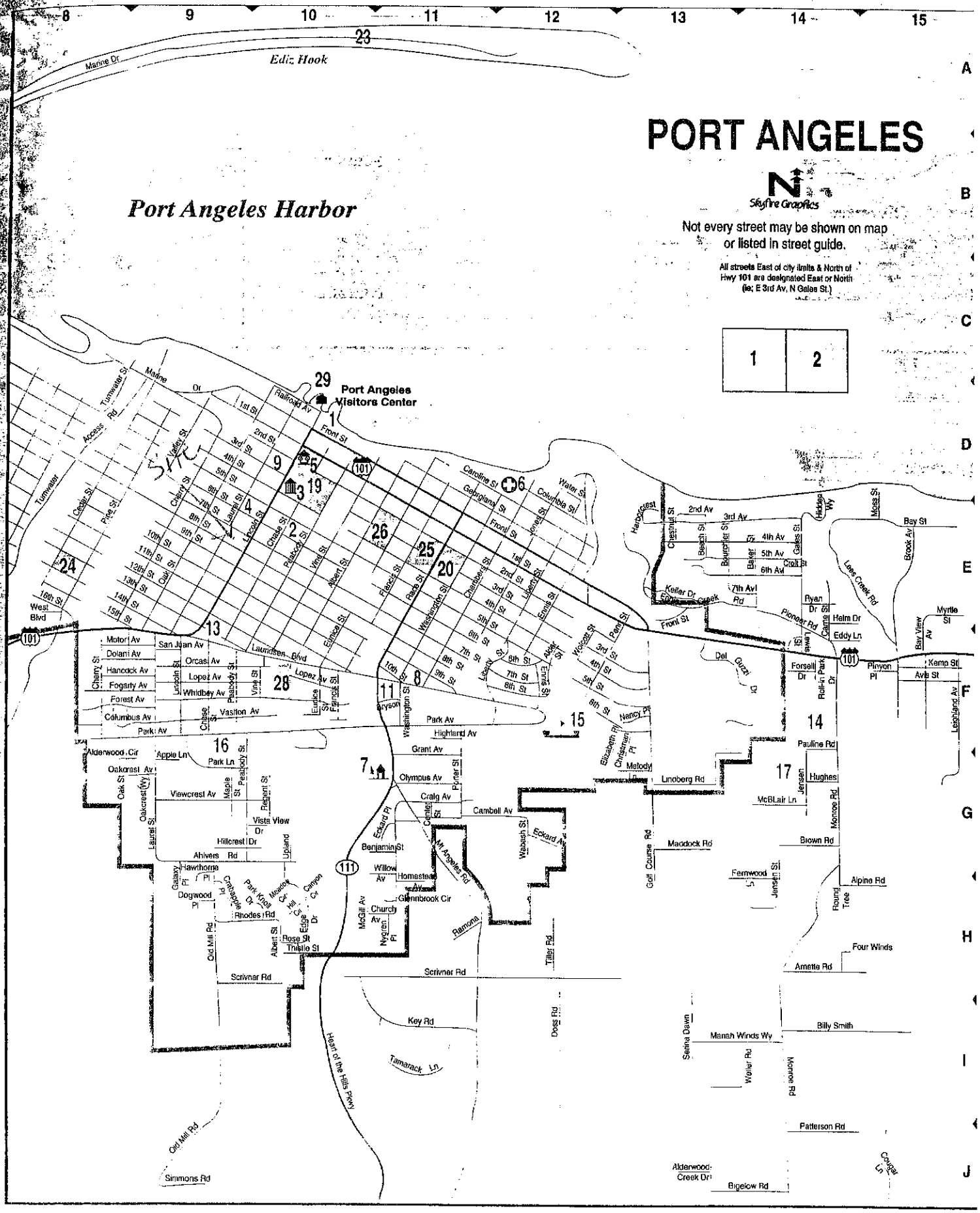
Site Map Attached? yes

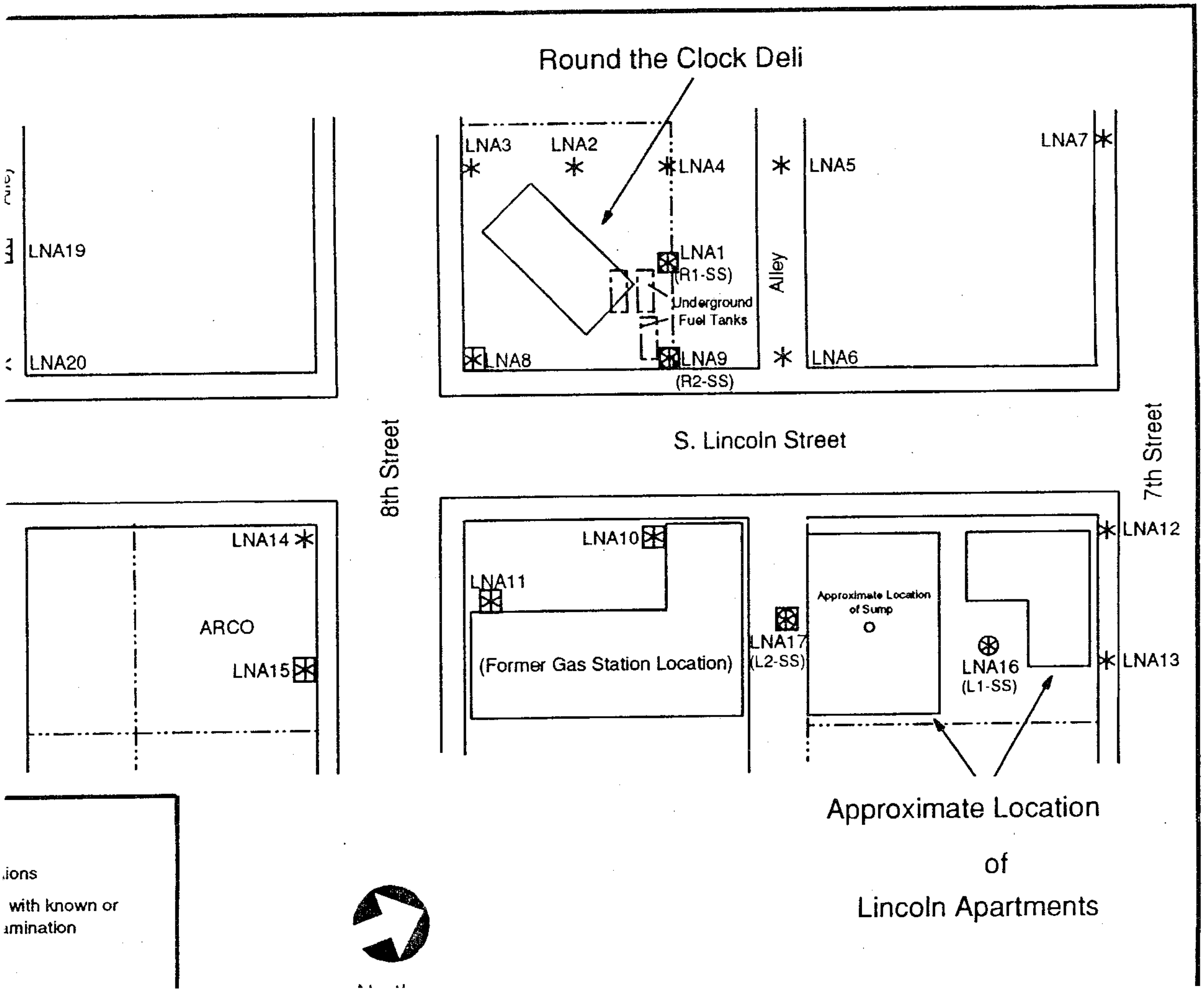
Site Map includes Exclusion Zones and Contamination Reduction Work Zones? no

ACKNOWLEDGEMENTS

The following personnel, including all site team members, have read the above site plan and are familiar with its provisions:

Name	Signature	Date
Lynn Gooding	Lynn Gooding	10/27/93
~~Dave Simms~~		
Rodger Sesna	Rodger Sesna	10/26/93
~~Scott Mosley~~		





Round the Clock Deli
LNA3
LNA2
LNA4
LNA5
LNA7
LNA19
LNA1
(R1-SS)
Underground
Fuel Tanks
Alley
LNA20
LNA8
LNA9
(R2-SS)
LNA6
8th Street
S. Lincoln Street
7th Street
LNA14
LNA10
LNA11
ARCO
Approximate Location
of Sump
LNA12
LNA15
(Former Gas Station Location)
LNA17
(L2-SS)
LNA16
(L1-SS)
LNA13
Approximate Location
of
Lincoln Apartments
ions
with known or
amination

XXXXXXXXXXXXXXXXX
rector

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

July 20, 1993

CERTIFIED MAIL

Mr. David Cotton
Round-the-Clock Deli
722 South Lincoln Street
Port Angeles, Washington 98362-6124

Re: Underground Storage Tank (UST) Compliance Schedule

Dear Mr. Cotton:

The field work associated with the Lincoln Apartments has been completed and soil gas and soil samples obtained at the Round-the-Clock Deli indicated that a release of petroleum products has occurred at the site (see attached report). Before corrective action can be taken to remediate the contamination at the site, the tanks need to be brought in compliance with the state UST regulations, Chapter 173-360 WAC. According to Department of Ecology records, the tanks have never been registered with Ecology as required. It is Ecology's understanding that the tanks have not been in service for over twelve months. In order to bring the tanks into compliance, the following actions must be taken:

1. Within thirty (30) days: The tanks must be registered with the Department of Ecology per Chapter 173-360-200 WAC. (Tanks must be registered whether they will be used or not).

2. Within ninety (90) days: The tanks must be closed by a licensed tank service provider per Chapter 173-360-380 WAC and in accordance with Chapter 173-360-385 WAC.

Enclosed is a "Certificate of Completion" for you to complete and sign when compliance is achieved. The date of compliance is calculated from the date of receipt of this letter. Please complete and submit this certification to:

Lynn Gooding
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

The certificate must be submitted upon achieving compliance, but no later than seven days after the latest compliance date noted above. Failure to correct these violations may result in administrative enforcement action and penalties. Penalties may be assessed up to five thousand dollars ($5,000) per tank for each day of violation.

If you have any questions, please contact Lynn Gooding at (206) 586-5563.

Sincerely,

Lynn Gooding

Lynn Gooding
Southwest Regional Office
Toxics Cleanup Program

LG:ak
Enclosures

Protocols and Operating Procedures
For Benzene Monitoring and Data Collection

REASONS BEHIND THIS STUDY

The Department of Labor and Industries (L&I), has required Ecology to complete a baseline study of its employees' occupational exposure to benzene. Ecology is committed to reduce or eliminate the exposures to all staff and to set the example for environmental, safety and health compliance. The information gathered in this study will aid Ecology and L&I in:

1. Preventing potential health risks to Ecology field personnel.

2. Facilitating Ecology compliance with specific L&I regulations.

3. Establishing work practices, PPE and costs related to ensuring adequate protection of field staff with respect to benzene exposure.

4. Eliminating the potential for non-compliance violations and citations.

GOALS: The goals for the Benzene study are to:

1. Comply with the WISHA benzene standard for initial monitoring to establish the extent of benzene exposure to TCP staff.

2. Measure benzene exposure to UST/LUST staff during activities related to decommissioning, cleaning, pumping, vapor recovery systems, and contaminated soils/stockpiles.

3. Establish/confirm work practices that reduce, eliminate, or control staff exposure to benzene.

4. Establish/confirm decision logic for the use of respiratory protection.

DEFINITIONS

1. Site - a site as determined by Ecology regulations and for which benzene has been determined to be a known or potential contaminant.

2. Control group- The blank samples will be the control group that tell the laboratory analyst if any background contamination is present due to the handling of the monitors in the actual work environment.

PROCEDURES: A range of tasks assigned to Ecology field staff, have been identified. For each of these tasks, benzene measurements will be taken for an Ecology employee during the execution of that task. See the Activities and Tasks sheet.

Benzene Measurements - Organic vapor monitors (passive monitoring badges) will be used to do the study. These monitors are designed to measure average concentration over a measured time interval of 8 hours or less and rely on two methods of collection. The method we will use is passive diffusion of the contaminated air as a standard collection medium onto activated charcoal. Diffusion occurs at a specific rate and depends upon the diffusion coefficient of the organic vapor being sampled, the total cross-sectional area of the badge, and the length of the cavity (Fick's Law).

Monitoring begins once the monitor cover is removed. The time is recorded and the monitor is clipped in the breathing zone of the worker usually on the collar. When sampling is completed, the monitor is removed and resealed. Again, the time is recorded. The badge is then sent to a laboratory for analysis.

Active monitoring will also be conducted during the UST/LUST activities. The MicroTip will be the primary air monitoring instrument used because of its computer printout capability. The primary purpose of active monitoring is to continuously monitor the breathing zone for indications of organic air contaminants above background. For the purposes of this study and using the relative response for the instrument used, a reading of 2-5 units above background for a sustained period of 30 seconds will require an upgrade to Level C respiratory protection. A reading of >50 units above background in the breathing zone will require a retreat and alternate course of action to complete field activities.

Additionally, we will be measuring meteorological information with a "Climomaster". This instrument measures temperature, relative humidity and wind speed.

We have created a data log for collecting information. - Site description, activity, task, passive badge ID, name of field person on whom the badge is to be placed, time of placement and removal, tip readings, and meteorological data.

Office Activities - (outline what I need to do each time to prepare for that day's measurements.)

Field Activities - (What notes I will need to do while in the field; times, wind speed, temperature date, humidity.)

Final Office Activities - (Prepare samples to send to 3M laboratory where each sample will be carefully analyzed and a written confidential report will be generated on each monitor.)

I. ACTIVITIES AND TASKS:

A. ACTIVITY: Initial Investigations and/or site visits.

1. TASK: Opening tank.
2. TASK: Sticking tank.
3. TASK: Checking tank service fittings.
4. TASK: Ground water/soil sampling.
5. TASK: Manual vapor monitoring by inspector.
6. TASK: Monitoring, sampling, or observing stockpiled contaminated soils.

B. ACTIVITY: Product transfers

1. TASK: Observation of transfer activities.
2. TASK: Vicinity of transfer activities.

C. ACTIVITY: UST/LUST decommissioning

1. TASK: Observation within "red zone".
2. TASK: Observation outside of "red zone".
3. TASK: Soil/Ground water sampling of excavation.
4. TASK: Soil/Ground water sampling of general area.
5. TASK: Sticking tank.
6. TASK: Observation of removal outside "red zone".
7. TASK: Observation of removal within "red zone".
8. TASK: Inspecting ancillary equipment.

D. ACTIVITY: UST/LUST cleaning

1. TASK: Observation within "red zone".
2. TASK: Observatioin outside of "red zone".
3. TASK: Observation of internal lining replacement of old tank.

E. ACTIVITY: UST/LUST Compliance Monitoring

1. TASK: Checking stick calibration.
2. TASK: Checking tank dispensers.
3. TASK: Checking for water in tank.
4. TASK: Observation of tightness testing on tank.
5. TASK: Checking wells for sufficient water and/or free product.
6. TASK: Checking tank service fittings.
7. TASK: Checking piping service fittings.
8. TASK: Checking spill containment manholes.

SENDER: Complete items 1 and 2 on additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

MR DAVID COTTON
ROUND THE CLOCK DELI
722 S LINCOLD ST
PORT ANGELES WA 98362-6124

4. Article Number
P 469 203 157

Type of Service:
- ☐ Registered
- ☐ Insured
- ☒ Certified
- ☐ COD
- ☐ Express Mail
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

DEPARTMENT OF ECOLOGY

July 12, 1993

TO: Patty Martin
Toxics Cleanup Program

FROM: Pam Marti PBM
Toxics, Compliance and Ground Water Investigations Section, EILS

SUBJECT: Memorandum on Soil Gas Sampling at Lincoln Apartments - Port Angeles, Washington

The attached report summarizes the findings from our sampling at Lincoln Apartments in Spring 1993.

Potential source areas of petroleum contamination were identified at two locations: Round-the-Clock Deli by the gasoline tanks, and north of the Arco station on 8th Street. High concentrations of several contaminants were detected in the soil gas samples at these locations. Total petroleum hydrocarbons (as gasoline, WTPH-G) were detected at 4.6 mg/kg in a soil sample near the gas tank at Round-the-Clock Deli. This is below the cleanup standards as established by the Model Toxics Control Act Regulations, WAC 173-340.

Primary gasoline compounds (benzene, toluene, ethylbenzene, and xylenes (BTEX)), were also tentatively identified at other soil gas sites in the study area but at low concentrations (generally less than 1 ppm). Weathered gasoline and lube oil were identified in soil adjacent to Lincoln Apartments. High concentrations of BTEX and 19.5 mg/L WTPH-G were detected in the water samples from the sump in the basement of the apartments. BTEX concentrations exceeded ground water cleanup standards as defined by the Model Toxics Control Act.

I look forward to providing any soil gas services to you in the future. If you have any questions or comments, please call me at 586-8138.

PM:krc
Attachment

cc: Bill Yake
Denis Erickson

LINCOLN APARTMENTS SOIL GAS SURVEY
PORT ANGELES, WASHINGTON
MARCH & APRIL 1993

by Pamela B. Marti
June 1993

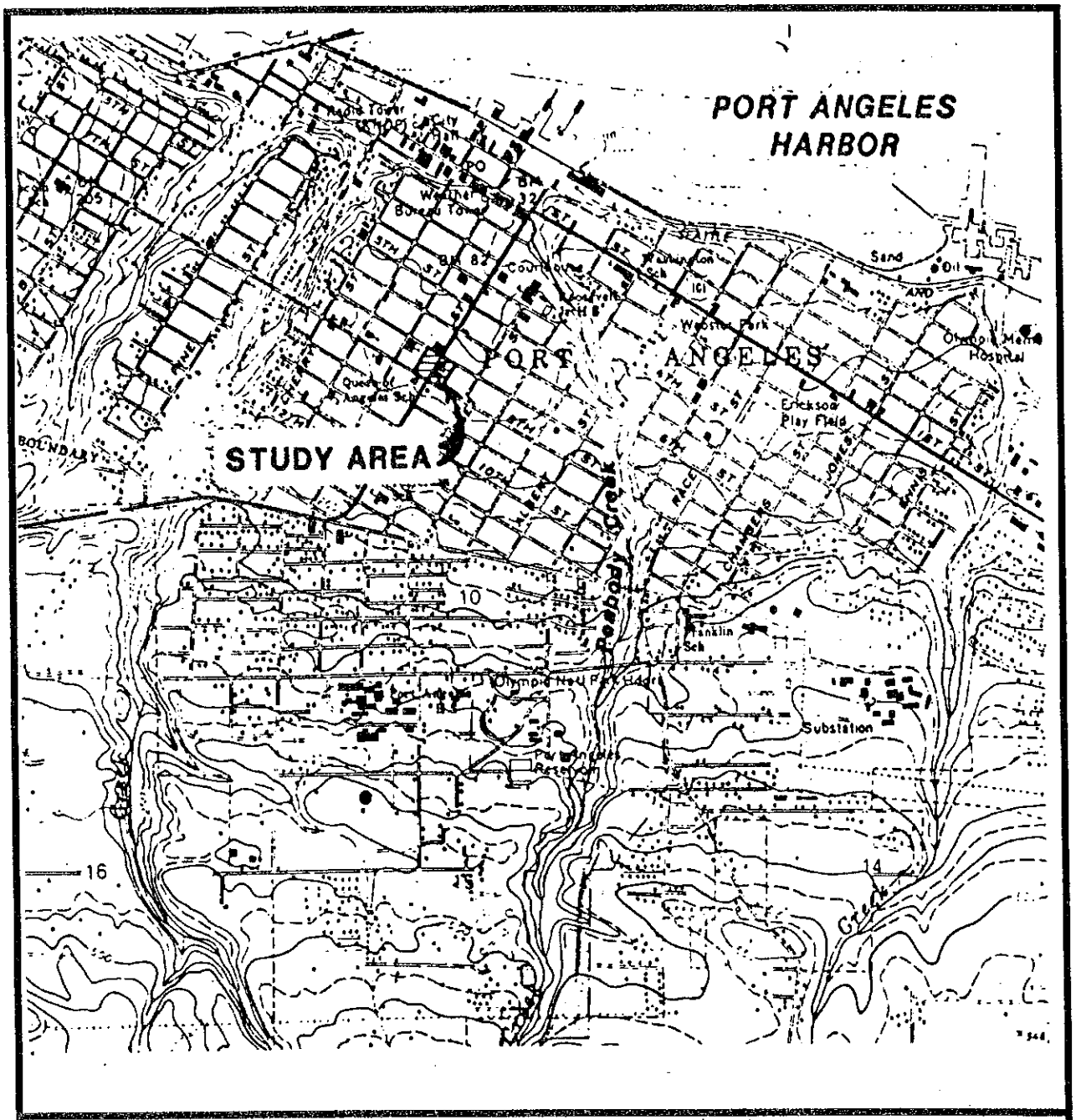
Washington State Department of Ecology
Environmental Investigations and Laboratory Services Program
Toxics, Compliance and Ground Water Investigations Section
Olympia, Washington 98504-7710

Water Body No. WA-18-3000-GW

SUMMARY

Soil gas, soil, and water samples were collected in the spring of 1993, in the vicinity of Lincoln Apartments, Port Angeles, Washington (Figure 1) as part of a leaking underground storage tank (LUST) system investigation. In the early 1980's, subsurface fuel contamination was discovered in the crawl space/basement of Lincoln Apartments. Water samples collected from a sump in the basement confirmed that the water was contaminated with gasoline. Although there are several gas stations within the immediate area, the most likely source of the fuel contamination appears to be Round-the-Clock Deli, located about 200 feet southwest of the apartments (GeoEngineers 1988). Underground gasoline tanks on the Deli property have leaked in the past. Although the leaks were repaired, suspected contaminated soil was never removed. Local ground water flow is thought to be northeast toward Peabody Creek. The objective of the soil gas survey was to determine if Round-the-Clock Deli was a source of fuel contamination beneath Lincoln Apartments. Other potential source areas were also investigated. A total of 20 soil gas samples, six soil samples and two water samples from the sump were collected and tested. Soil gas samples were analyzed in the field using a portable gas chromatograph.

Potential source areas of petroleum contamination were identified at two locations: Round-the-Clock Deli by the gasoline tanks, and north of the Arco station on 8th Street. High concentrations of several contaminants were detected in the soil gas samples at these locations. Total petroleum hydrocarbons (as gasoline, WTPH-G) were detected at 4.6 mg/kg in a soil sample near the gas tank at Round-the-Clock Deli. This is below the cleanup standards as established by the Model Toxics Control Act Regulations, WAC 173-340.



Reference: USGS 7.5' Topographic Quadrangle Map. "Port Angeles, Wash."

Figure 1: Site Map

Primary gasoline compounds (benzene, toluene, ethylbenzene, and xylenes (BTEX)), were identified at other soil gas stations in the study area but at low concentrations (generally less than 1 ppm). Weathered gasoline and lube oil were identified in soil adjacent to Lincoln Apartments. High concentrations of BTEX and 19.5 mg/L WTPH-G were detected in the water samples from the sump in the basement of the apartments. BTEX concentrations exceeded ground water cleanup standards as defined by the Model Toxics Control Act. Based on all of the sample results it appears that Round-the-Clock Deli is one of two potential sources for the petroleum contamination beneath Lincoln Apartments. The Arco station is a second possible source area.

METHODS

Sample Collection

Twenty soil gas, six soil, and two water samples were collected and tested. Sample locations are shown in Figure 2. Soil gas samples were collected up- and downgradient of Round-the-Clock Deli and Lincoln Apartments between 7th Street and 9th Street. Local ground water flow is thought to be northeast toward Peabody Creek (Figure 1). Sample locations were selected to include three former gas stations (Round-the-Clock Deli and two abandoned stations) and one existing station (ARCO). Soil samples were collected from sample stations with suspected contamination at Round-the-Clock Deli and adjacent to Lincoln Apartments. Water samples were collected from the sump beneath the apartments.

Pam Marti, Denis Erickson, and Patty Martin collected soil samples on March 9, 1993. Weather conditions were cool and clear. Soil gas samples were collected on April 13-16, 1993, by Pam Marti and Denis Erickson. Weather conditions were cool and rainy. Additional soil gas samples were collected on April 29-30, 1993, by Pam Marti, Denis Erickson, and Bernard Strong. Weather conditions were cool and overcast.

Soil Gas Sampling

Soil gas samples were obtained using portable sampling equipment. Sample stations in paved areas were drilled with an electric percussion drill equipped with a 1½-inch asphalt bit. A pilot hole was advanced to the required depth by driving a 1/2-inch diameter, solid steel rod. After removing the pilot hole rod, a stainless steel retractable soil gas sampling tip (Retract-a-Tip) was driven into the pilot hole. The retractable tip was then pulled back (about 2 inches) to expose the sampling screen. Soil gas samples were withdrawn using a suction pump through 3/16-inch ID teflon tubing and collected under vacuum pressure in 1-liter Tedlar bags. Initially, a manifold was used in sample collection. The sample probe was purged off one line and sampled off another. Due to cross contamination, the manifold was discarded.

Depth profile sampling was conducted at the first sample station, LNA1, to determine an appropriate sample depth. Soil gas samples were collected at three-foot intervals to a depth

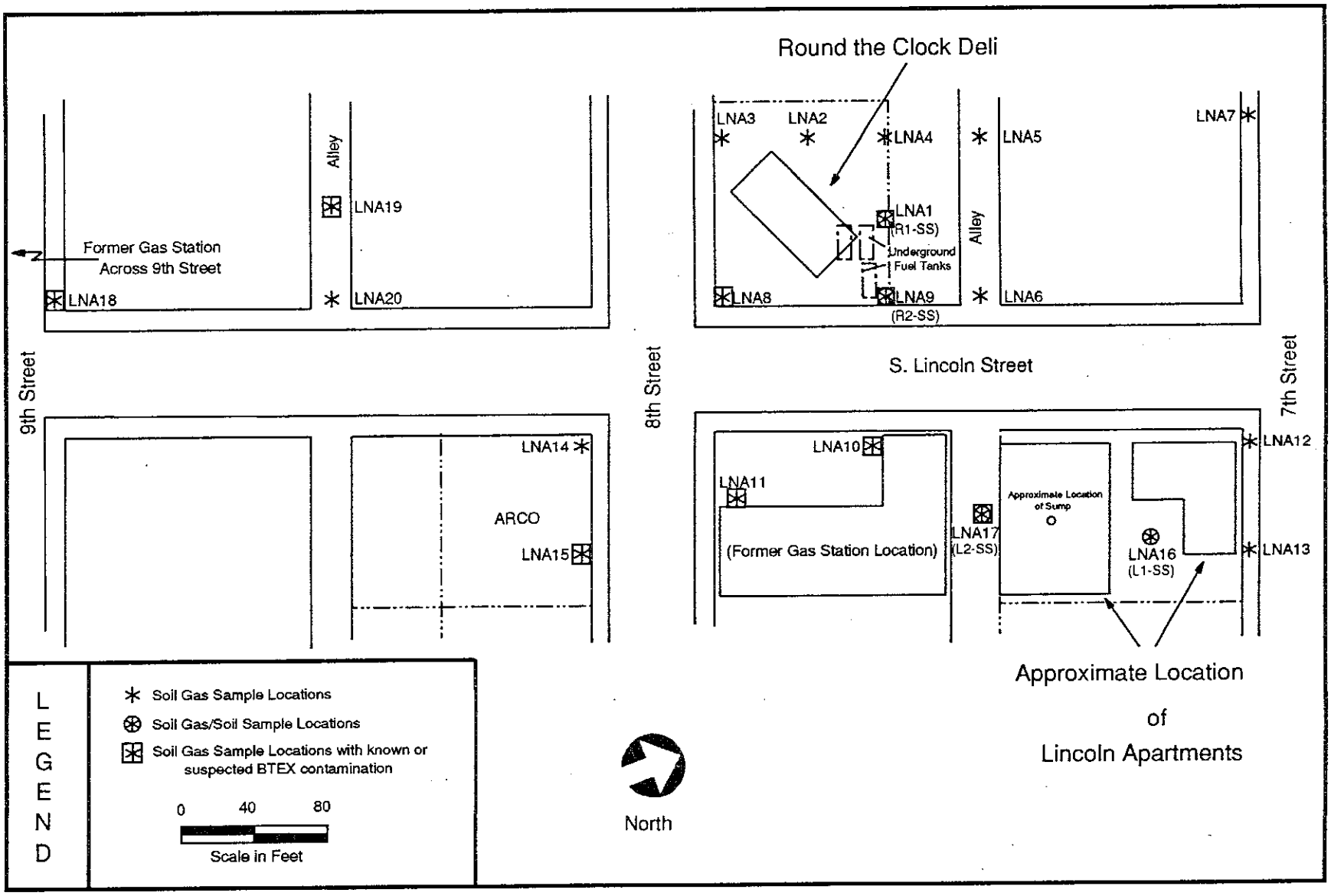


Figure 2: Lincoln Apartments - Soil Gas, Soil, and Sump Sample Locations

of nine feet. Based on depth profile results, seven feet was selected as the sample depth. Sample depth was adjusted to accommodate obstructions in the subsurface and wet soil conditions.

Soil gas samples were analyzed in the field using a portable gas chromatograph (Sentex Scentograph Plus), equipped with an Argon Ionization Detector (AID) and a 12-foot, 10% SP-1000 (80/100 mesh) packed column. Prior to sample analysis, the gas chromatograph was calibrated using a mixture of 1.01 ppm benzene and 1.52 ppm trichloroethylene. An industrial solvents chemical compound library (Sentex) was used to identify gasoline constituents of toluene, ethylbenzene and p-, m-, and o-xylene. Operating parameters such as sample time, temperature, and chart duration were adjusted to maximize results. Copies of soil gas analyses, as well as operating parameter information are included in Appendix A.

All non-disposable down-hole equipment was decontaminated between test holes using sequential washes of tap water with Liquinox® detergent, deionized water, and laboratory grade methanol. Retractable tips were completely disassembled for cleaning and decontaminated between holes. Teflon® tubing was discarded between test holes.

Test holes were plugged using hydrated bentonite. Overlying fill and asphalt cover (cold mix) were placed as necessary.

Soil and Water Sampling

Soil samples were collected using a JMC portable soil sampler. A hollow, 3-foot-long, one-inch diameter sampling tube fitted with a stainless steel liner was driven through the soil column. For deeper samples, extensions were attached to the sampling tube and driven to the required depth. The sampling tube was then pulled from the hole and the liner removed. Soil samples corresponding to the soil gas sample depth were extracted from the liner, emptied into a stainless steel beaker, mixed and then transferred to 4-ounce glass jars. All downhole soil sampling equipment and stainless steel beakers were decontaminated using a tap water/Liquinox® wash and sequential rinses with deionized water and methanol. Test holes were plugged using hydrated bentonite. Overlying fill and asphalt cover (cold mix) were placed as necessary.

Two water samples from the sump were collected in two 40 mL glass vials with teflon lined septa lids and preserved with two drops of 1:1 hydrochloric acid.

Upon sample collection and proper labeling, soil and water samples were stored on ice in an ice chest and transported to the laboratory within the required holding time. Chain-of-custody was maintained on all samples using Manchester Laboratory protocols (Ecology, 1991). Soil samples were analyzed for volatile organic compounds (VOCs), total petroleum hydrocarbons (WTPH-G) and hydrocarbon identification (HCID). The water samples were analyzed for VOCs and WTPH-G.

Quality Assurance Samples

Soil Gas

In general, soil gas results are considered to be good and usable. Soil gas quality assurance samples consisted of calibration, duplicates, and blanks. The gas chromatograph was calibrated at least once every five analytical runs with a standard pressurized mixture of 1.01 ppm benzene and 1.52 ppm trichloroethylene. Duplicate samples (repeat analyses of the same sample) were analyzed for at least 10% of all soil gas samples. Blank samples were run periodically to ensure that no contamination of the analytical system had occurred. Since sample results were determined using a portable gas chromatograph all reported analytes are considered tentatively identified and concentrations are estimates.

Soil and Water Samples

Karin Feddersen of the Manchester Laboratory evaluated laboratory quality assurance results which are included in Appendix B. The quality of the organic results is good. Acetone was detected below the quantitation limit in one soil method blank and in the soil samples. The acetone is attributed to laboratory contamination. Spike recoveries were within acceptable limits of 75-125%. Relative percent difference (%RPD) for the spike and spike duplicates were within $\pm$20%.

RESULTS AND DISCUSSION

Potential source areas of petroleum contamination were identified at two locations: at Round-the-Clock Deli by the gasoline tanks, and north of the Arco station on 8th Street. Primary gasoline compounds (benzene, toluene, ethylbenzene and xylenes (BTEX)) were also identified at other sample stations but at much lower concentrations. Table 1 presents a summary of the soil gas survey results. Sample chromatograms are included in Appendix A. Table 2 presents a summary of the soil and sump samples. Distribution of the identified compounds is discussed below.

Round-the-Clock Deli

Contamination was detected predominately at Round-the-Clock Deli near the old gas tanks at sample stations LNA1 and LNA9, as shown in Figure 2. Depth profile soil gas samples were collected at the first station, LNA1, at three, six, and nine feet below ground surface (bgs). Although little was detected from one to six feet bgs, high concentrations of several contaminants were detected below six feet (See chromatogram #168). A soil boring described several feet of clayey silty sands in this area. Based on the profile results, samples were collected at seven feet. Several more volatile contaminants were detected in the soil gas samples from station LNA9 (See chromatogram #192). Due to the high contaminant concentrations in both of these samples, the standard analysis sample time was reduced.

Table 1: Summary of Soil-Gas Results collected Spring 1993 from Lincoln Apartments Port Angeles, WA

NOTE: Reported results were determined using a Sentex portable gas chromatograph. Analytes are considered tentatively identified and concentrations are estimates.

Sample #	Sample I.D.	Depth (feet)	Benzene Retention Time (sec.)	Benzene Estimated Conc. (ppm)	TCE Retention Time (sec.)	TCE Estimated Conc. (ppm)	Toluene Retention Time (sec.)	Toluene Estimated Conc. (ppm)	Ethylbenzene Retention Time (sec.)	Ethylbenzene Estimated Conc. (ppm)	Xylenes Retention Time (sec.)	Xylenes Estimated Conc. (ppm)	Unknowns Retention Time (sec.)	Unknowns Estimated Conc. (ppm)
168	LNA1c	9	167	323 NJ	–	–	242	535 NJ	–	–	385	1392(m) NJ	56	879 NJ
											482	81(o) NJ	93	32 NJ
													113	8.1 NJ
													130	5.7 NJ
													534	3.4 NJ
													577	25 NJ
													637	3.7 NJ
													696	23 NJ
													771	12 NJ
133	LNA2	7	–	–	–	–	–	–	–	–	–	–	–	–
131	LNA3	6	–	–	–	–	–	–	–	–	–	–	–	–
136	LNA4	7	–	–	–	–	–	–	–	–	–	–	–	–
139	LNA5	6	–	–	–	–	–	–	–	–	–	–	–	–
148	LNA6	7	–	–	–	–	–	–	–	–	–	–	125	0.04 NJ
													217	0.03 NJ
66	LNA7	6	–	–	–	–	–	–	–	–	–	–	–	–
190	LNA8	3.5	–	–	190	0.06 NJ	–	–	–	–	–	–	136	0.01 NJ
192	LNA9	7	–	–	193	0.5 NJ	–	–	–	–	388	0.2(p) NJ	65	616 NJ
													81	35 NJ
													92	84 NJ
													116	9.0 NJ
													135	4.7 NJ
													159	7.9 NJ
47	LNA10	5	–	–	191	0.05 NJ	233	0.2 NJ	–	–	397	0.1(m) NJ	–	–
48	LNA11	3	–	–	191	0.01 NJ	–	–	–	–	400	0.03(m) NJ	252	0.01 NJ
184	LNA11	5	–	–	–	–	–	–	–	–	–	–	–	–
54	LNA12	7	–	–	–	–	–	–	–	–	–	–	–	–
65	LNA13	7	–	–	–	–	–	–	–	–	–	–	–	–
78	LNA14	3	–	–	–	–	–	–	–	–	–	–	–	–
79	LNA15	1	–	–	–	–	–	–	–	–	–	–	249	0.01 NJ
164	LNA15	4.5	165	6.3 NJ	–	–	–	–	363	1.1 NJ	–	–	61	445 NJ
													77	31 NJ
													90	18 NJ
													113	6.1 NJ
													133	2.4 NJ
92	LNA16	6	–	–	–	–	272	0.009 NJ	–	–	–	–	135	0.007 NJ
													166	0.001 NJ
93	LNA17	3	–	–	–	–	–	–	–	–	–	–	129	0.05 NJ
													223	0.06 NJ
99	LNA18	3	164	0.02 NJ	–	–	–	–	–	–	–	–	124	0.02 NJ
													220	0.02 NJ
100	LNA19	3.5	–	–	–	–	246	0.006 NJ	–	–	391	0.2(p) NJ	187	0.01 NJ
											489	0.05(o) NJ		
180	LNA20	6	–	–	–	–	–	–	–	–	–	–	–	–

(o) = ortho-xylene (p) = para-xylene (m) = meta-xylene

NJ = Tentatively identified compound. Associated numerical result is an estimate.

Table 2
Summary of Soil and Water Sample Results collected March 1993 at
Lincoln Apartments, Port Angeles, Washington

Sample Station Sample Identification Matrix Sample Depth Units	LNA1 R1-SSc Soil (6-9' bgs) (mg/kg)	LNA1 R1-SSa Soil (1-3' bgs) (µg/kg)	LNA9 R2-SSb Soil (3-6' bgs) (mg/kg)	LNA9 R2-SSb Soil (3-6' bgs) (µg/kg)	LNA16 L1-SSc Soil (6-9' bgs) (µg/kg)	LNA17 L2-SSb Soil (3-6' bgs) (Qualitative)	Sump Water (mg/L)	Sump Water (µg/L)
[1]Volatile Organics	NT	ND	NT	ND	ND	NT	NT	
Benzene		10 U		10 U	10 U			5000
Toluene		10 U		10 U	10 U			1300
Ethylbenzene		10 U		10 U	10 U			800
Total Xylenes		10 U		10 U	10 U			3200
[2]WTPH-G	4.6	NT	ND	NT	NT	NT	19.5	NT
[3]HCID	NT	NT	NT	NT	NT	Weathered Gasoline and Lube Oil	NT	NT

U: The analyte was not detected at or above the associated value.
NT: Not Tested
ND: Not Detected
bgs: Below Ground Surface

References:

[1]Volatile Organics Method #8240: EPA, 1986. Test Methods for Evaluating Solid Waste, SW-846. Office of Emergency Response, Washington D.C.
[2]WTPH-G: Total Petroleum Hydrocarbon-Gasoline. Washington Department of Ecology Manchester Laboratory Manual 1991.
[3]HCID: Hydrocarbon Identification. Washington Department of Ecology Manchester Laboratory Manual, 1991.

Two soil samples were collected from station LNA1 (Table 2). One sample was collected from one to three feet bgs and analyzed for priority pollutant volatile organics. No volatile organics were detected in this sample. The second sample was collected from six to nine feet bgs and analyzed for total petroleum hydrocarbons - gasoline (WTPH-G). WTPH-G was detected at 4.6 mg/kg. This is below the 100 mg/kg cleanup standard as defined by the Model Toxics Control Act (MTCA). Soil samples were also collected from station LNA9. Two samples were collected from three to six feet bgs. One sample was analyzed for volatile organics, the other for WTPH-G. Nothing was detected in either sample.

A soil gas sample from station LNA8 located at the northwest corner of Lincoln and 8th Street showed detections two contaminants; trichloroethylene and an unknown. Although concentrations were low, the sample equipment (which was covered with wet grey clay) had a strong hydrocarbon odor when it was removed from the sample hole. Due to saturated conditions at 6 feet, the sample was collected at 3.5 feet. The strong hydrocarbon odor may indicate contamination beneath six feet bgs.

Arco Station on 8th Street

A second potential source area of petroleum contamination is the ARCO station. Two soil gas samples were collected north of the Arco station. A soil gas sample from station LNA15, collected at 4.5 feet bgs, had high concentrations of lighter contaminants (See chromatogram #164). Standard analysis sample time was reduced for this sample due to the high contaminant concentrations. No contaminants were detected in a soil gas sample collected at three feet bgs from station LNA14 on the southeast corner of Lincoln and 8th.

Other Sampling Stations

Two compounds were detected at low levels from station LNA17. This station was located in a small gully directly upgradient of Lincoln Apartments. Although neither detection was identified as gasoline compounds, an HCID analysis of a soil sample collected from this station indicates the presence of weathered gasoline and lube oil. A strong hydrocarbon odor was also present on both the sample equipment and in the air.

Contaminants were identified in soil gas samples from other sample stations but at low concentrations (generally less than 1 ppm). Gasoline compounds, BTEX, were detected at low concentrations near both of the former gas stations. Contaminants were detected north of the station on the corner of Lincoln Street and 9th Street and on the property of the station directly south of Lincoln Apartments. No contaminants were detected north of Lincoln Apartments and along the west property line of Round-the-Clock Deli.

Trichloroethylene was detected at low concentrations (less than 1 ppm) in soil gas samples from four stations: LNA8, LNA9, LNA10, and LNA11.

Two water samples collected from the sump in the Lincoln Apartments basement were analyzed for volatile organics and WTPH-G. High concentrations of benzene (5000 μg/L), toluene (1300 μg/L), ethylbenzene (800 μg/L), and total xylene (3200 μg/L) and 19.5 mg/L WTPH-G were detected. BTEX concentrations exceeded ground water cleanup standards as defined by the Model Toxics Control Act (MTCA). Ground water cleanup levels under MTCA for the BTEX compounds are; benzene (5.0 μg/L), toluene (40.0 μg/L), ethylbenzene (30.0 μg/L), and xylene (20.0 μg/L).

REFERENCES

EPA, 1986. Test Methods for Evaluating Solid Waste, SW-846. Office of Emergency Response, Washington, D.C.

GeoEngineers, 1988. Report of Preliminary Geotechnical Services/Subsurface Fuel Contamination Lincoln Apartments; Port Angeles, Washington for the Washington State Department of Ecology.

Washington State Department of Ecology, 1991. Manchester Environmental Laboratory - Laboratory Users Manual. Edited by D. Huntamer and J. Hyre.

State of Washington Department of Ecology
Manchester Environmental Laboratory
7411 Beach Dr. East Port Orchard WA. 98366

Data Review
March 2, 1993

Project: **Lincoln Apartments**

Samples: 048000 = 048001 = 048002

Laboratory: Analytical Resources Inc. C794

By: Karin Feddersen KF
Through: Stuart Magoon SM

Case Summary

These samples were received at the Manchester Environmental Laboratory on January 21, 1993, and transported to Analytical Resources Inc. on January 25, 1993 for VOA, WTPH-G and WTPH-D analysis. All three laboratory numbers actually refer to the same sample.

These analyses were reviewed for qualitative and quantitative accuracy, validity, and usefulness.

There is no need to assimilate the "dilution factor" or "sample wt/vol" into the final values reported; these calculations have already been figured into the reported values.

"Dup" is an abbreviation for duplicate.

DATA QUALIFIER DEFINITIONS

U - The analyte was not detected at or above the reported result.

UJ - The analyte was not detected at or above the reported estimated result.

J - The analyte was positively identified. The associated numerical result is an estimate.

NJ - The analyte was tentatively identified. The associated numerical result is an estimate.

Volatiles

Holding Times:

This sample was analyzed within the SW-846 recommended holding time.

Method Blank:

No target analytes were detected in the method blank.

GC/MS Tuning and Calibration:

Calibration against Bromofluorobenzene (BFB) is acceptable for the initial calibration, continuing calibration and all associated sample analyses.

Initial Calibration:

The initial calibration met the minimum response criteria of greater than 0.05 for the average relative response. The % Relative Standard Deviation was within the maximum of 30%, with the exception of 2-Butanone. Positive results for this analyte have been qualified with a "J", and non-detected results have been qualified with a "UJ".

Continuing Calibration:

The average relative response factors for all target analytes were above the minimums, and the percent deviations between the initial and continuing calibration standards were within the maximum of 25%, with several exceptions. Positive results for these analytes have been qualified with a "J", and non-detected results have been qualified with a "UJ".

Surrogates:

All surrogate recoveries for this sample and the associated method blank are reasonable, acceptable, and within QC limits.

Sample results:

This data is acceptable for use without the need as amended.

WTPH-G

Holding Times:

This sample was analyzed within the suggested maximum holding time.

Method Blank:

No target analytes were detected in the method blank.

Initial Calibration:

The initial calibration met the minimum response criteria for the average relative response. The % Relative Standard Deviations were within the maximum of 30%.

Continuing Calibration:

The average relative response factors for all target analytes were above the minimums. The percent deviations between the initial and continuing calibration standards were within the maximum of 25%.

Surrogates:

Surrogate recoveries for this sample and the associated method blank are reasonable, acceptable, and within WTPH method QC limits of 50 to 150 %.

Sample results:

The petroleum hydrocarbons detected exhibited a pattern match for gasoline.
This data is acceptable for use without the need for additional data qualifiers.

WTPH-D

Holding Times:

This sample was analyzed within the suggested maximum holding time.

Method Blank:

No target analytes were detected in the method blank.

Initial Calibration:

The initial calibration met the minimum response criteria for the average relative response. The % Relative Standard Deviation was within the maximum of 30%.

Continuing Calibration:

The average relative response factor was above the minimums. The percent deviations between the initial and continuing calibration standards were within the maximum of 25%.

Surrogates:

Surrogate recoveries for this sample and the associated method blank are reasonable, acceptable, and within WTPH method QC limits of 50 to 150 %.

Sample results:

The petroleum hydrocarbons detected did not exhibit a pattern match for diesel.
This data is acceptable for use without the need for additional data qualifiers.

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(206) 621-6490
(206) 621-7523 (FAX)

27 February 1993

Karin Feddersen
WA State Dept. of Ecology
7411 Beach Drive East
Port Orchard, WA 98366-8204

RE: Lincoln Apartments /ARI Job No. C794

Dear Ms. Feddersen:

Please find enclosed original reports and sample deliverables for the above referenced project. Three water samples (**048000**, **048001** and **048002**) were received intact on January 25, 1993. It was indicated on the chain-of-custody that these three samples were received from the same field station.

The samples were analyzed according to WDOE method WTPH-G, USEPA method 8260 and WDOE method WTPH-D, as requested on the COC.

Sample analysis was completed within the required holding time and no problems were encountered. The fuel pattern detected by method WTPH-D is similar to a gasoline pattern. The reported diesel fuel quantitation value may be attributed to gasoline constituents that elute within the diesel fuel range.

As always, a copy of these reports and all associated raw data will remain on file with ARI. If you have any questions or require additional information, please feel free to contact me at your convenience. I can be reached at the number listed above, or you can call me direct at (206)340-2866, extension 116. If I am unavailable please leave a message on my voice mail and I will promptly return your call.

Sincerely,

ANALYTICAL RESOURCES, INC.

Bryan D. Anderson

Bryan D. Anderson
Project Coordinator

enclosures
cc: File C794

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TOTAL GASOLINE RANGE HYDROCARBONS
WA TPHG Method by GC/FID

Matrix: Waters

QC Report No: C794 - WDOE
Project: Lincoln Apartments

VTSR: 01/25/93

Data Release Authorized _____
Data Prepared: 02/15/93 - MAC: mb

Lab ID	Client Sample ID	Date Analyzed	Dilution Factor	Gasoline Range Hydrocarbons †	Gas ID *	Surrogate A	Surrogate B
C794 MB0126	*Method Blank*	01/26/93	-	0.25 U	-	98.6%	98.0%
C794 A	**048000**	**01/26/93**	**-**	**3.1**	**Yes**	**98.3%**	**106%**

k
Surrogal
QA/QC
Limits
50% 150

Surrogate A = Trifluorotoluene
Surrogate B = Bromobenzene
Values reported in ppm (mg/L).

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TOTAL DIESEL RANGE HYDROCARBONS
WA TPHD Method by GC/FID

QC Report No: C794 - WDOE

Matrix: Waters

Project: Lincoln Apartments

VTSR: 01/25/93

Data Release Authorized _____
Data Prepared: 02/21/93 *MAC:sk*

Date Extracted: 01/27/93

Lab ID	Client Sample I.D.	Date Analyzed	Dilution Factor	Diesel Range Hydrocarbons †	Diesel ID *	Surrogate Recovery
C794 MB0127	*Meth Blank*	*1/30/93*	-	*0.25 U*	-	*71.2%*
C794 C	048002	1/30/93	-	**0.46**	No	74.7%

Surrogate is Me-Arachidate.
Values reported in ppm (mg/L).

GC Data Reporting Qualifiers

U Indicates compound was analyzed for but not detected at the given detection limit.
X Indicates a value above the linear range of the detector. Dilution required.
J Indicates an estimated value when the value is less than the calculated detection limit.
S Indicates no value reported due to saturation of the detector. Dilution required.
D Indicates that surrogate was not detected because of dilution of the extract.
C Indicates a probable value which is unable to be confirmed due to matrix interference.
NR Indicates no recovery due to matrix interference and/or dilution.
* In the opinion of the analyst, was there a pattern match for diesel (yes or no).
† Value based on total peaks in range from C12-C24.

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ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
Lab ID: C794B
Matrix: Waters

Sample: 048001

QC Report No: C794 - WDOE
Project: Lincoln Apartments

Data Release Authorized: _____
Report: 02/23/93 MAC:ctr

VTSR: 01/25/93

Instrument: FINN 3
Date Analyzed: 01/30/93

Amount Purged: 5.0 ml
Conc/Dilution: 1 to 1

CAS Number		µg/L	
74-87-3	Chloromethane	2.0 U	
74-83-9	Bromomethane	2.0 UJ	KF
75-01-4	Vinyl Chloride	2.0 U	
75-00-3	Chloroethane	2.0 UJ	KF
75-09-2	Methylene Chloride	2.0 U	
67-64-1	Acetone	5.0 U	
75-15-0	Carbon Disulfide	1.0 U	
75-35-4	1,1-Dichloroethene	1.0 U	
75-34-3	1,1-Dichloroethane	1.0 U	
156-60-5	Trans-1,2-Dichloroethene	1.0 U	
156-59-2	Cis-1,2-Dichloroethene	1.0 U	
67-66-3	Chloroform	1.0 U	
107-06-2	1,2-Dichloroethane	1.0 U	
78-93-3	**2-Butanone**	9 MJ	KF
71-55-6	1,1,1-Trichloroethane	1.0 U	
56-23-5	Carbon Tetrachloride	1.0 U	
108-05-4	Vinyl Acetate	1.0 U	
75-27-4	Bromodichloromethane	1.0 U	
78-87-5	1,2-Dichloropropane	1.0 U	

CAS Number		µg/L	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	
79-01-6	Trichloroethene	1.0 U	
124-48-1	Dibromochloromethane	1.0 U	
79-00-5	1,1,2-Trichloroethane	1.0 U	
71-43-2	**Benzene**	9.1	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	
110-75-8	2-Chloroethylvinylether	1.0 U	
75-25-2	Bromoform	1.0 U	
108-10-1	4-Methyl-2-Pentanone	5.0 UJ	KF
591-78-6	2-Hexanone	5.0 U	
127-18-4	Tetrachloroethene	1.0 UJ	KF
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	
108-88-3	**Toluene**	0.6 M	KF
108-90-7	Chlorobenzene	1.0 U	
100-41-4	Ethylbenzene	1.0	KF
100-42-5	Styrene	1.0 U	
1330-20-7	**Total Xylenes**	23	
75-69-4	Trichlorofluoromethane	2.0 U	
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U	

Surrogate Recoveries

d8-Toluene	97.6%
Bromofluorobenzene	111%
d4-1,2-Dichloroethane	103%

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: 048001

Lab ID: C794B
Matrix: Waters

QC Report No: C794 - WDOE
Project No: Lincoln Apartments.

Data Release Authorized: _____
Report: 02/23/93 MAC:ctr

Date Received: 01/25/93

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	Unknown (bp m/e 43)	VOA	445	35 J
2	-	Benzene, Trimethyl C9.H12 Isomer (bp m/e 105)	VOA	1559	23 J NJ
3	-	Benzene, Ethyl, Methyl C9.H12 Isomer(bp m/e 105)	VOA	1594	29 J
4	-	Benzene, Trimethyl C9.H12 Isomer (bp m/e 105)	VOA	1671	32 J
5	-	Benzene, C9.H10 Isomer (bp m/e 117)	VOA	1715	23 J
6	1758-88-9	Benzene, 2-Ethyl-1, 4-Dimethyl- (bp m/e 119)	VOA	1745	14 J
7	-	Benzene, Tetramethyl C10.H14 Isomer (bp m/e 119)	VOA	1793	15 J
8	-	Benzene, Tetramethyl C10.H14 Isomer (bp m/e 119)	VOA	1804	19 J
9	-	Benzene, Tetramethyl C10.H14 Isomer (bp m/e 119)	VOA	1863	14 J
10	-	1H-Indene, 2,3-Dihydro-Methyl C10.H12 Isomer (bp m/e 119)	VOA	1878	18 J
11					
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ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Lab ID: MB0130
Matrix: Waters

Sample: Method Blank

QC Report No: C794 - WDOE
Project: Lincoln Apartments

Data Release Authorized: _____
Report: 02/22/93 MAC:ctr

VTSR: NA

Instrument: FINN 3
Date Analyzed: 01/30/93

Amount Purged: 5.0 ml
Conc/Dilution: 1 to 1

CAS Number		µg/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	2.0 U
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	Trans-1,2-Dichloroethene	1.0 U
156-59-2	Cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	1.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U

CAS Number		µg/L
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
1330-20-7	Total Xylenes	2.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U

Surrogate Recoveries

d8-Toluene	103%
Bromofluorobenzene	111%
d4-1,2-Dichloroethane	96.2%

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ORGANIC ANALYSIS DATA SHEET - Tentatively Identified Compounds

Sample No: Method Blank

Lab ID: MB0130
Matrix: Waters

QC Report No: C794 - WDOE
Project No: Lincoln Apartments

Data Release Authorized: _____
Report: 02/22/93 MAC:ctr

Date Received: NA

	CAS Number	Compound Name	Fraction	Scan Number	Estimated Concentration (µg/L)
1	-	No UNKNOWN pks > 10% IS peak height	VOA	-	-
2					
3					
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WATER VOLATILE SURROGATE RECOVERY

ARI Job No: C794

Client: WDOE
Project: Lincoln Apartments

Client Sample ID	S1 (TOL)	S2 (BFB)	S3 (DCE)	Other	TOT OUT
Method Blank	103	111	96.2		0
048001	97.6	111	103		0

	QC LIMITS
S1 (TOL)=Toluene-d8	(88-110)
S2 (BFB=Bromofluorobenzene	(86-115)
S3 (DCE)=1,2-Dichloroethane-d4	(76-114)

Asterisked values outside QC Limits

FORM II VOA-1

Report:MAC:D sk

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VOLATILE METHOD BLANK SUMMARY

ARI Job No: C794
Lab Sample ID: MB0130
Date Analyzed: 01/30/93
Matrix: Waters
Instrument ID: FINN 3

Client: WDOE
Project: Lincoln Apartments

Time Analyzed: 13:18

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS,MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Time Analyzed
048001	C794B	F3C794B	22:04

Comments:

→ Tom / Patty

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7171 Cleanwater Lane, Building 8, P.O. Box 47710 • Olympia, Washington 98504-7710

February 11, 1993

TO: Bill Yake

FROM: Pam Marti and Denis Erickson

LINCOLN APARTMENTS SOIL GAS SURVEY

APPROVAL: William E Yake
William E. Yake

Problem Description: In the early 1980s, subsurface fuel contamination was detected in the daylight crawl space of Lincoln Apartments in Port Angeles, Washington. Fuel odors had been a nuisance to apartment residents on several occasions. To mediate the problem a ventilation system was installed to disperse fuel odors. Subdrains were used to direct all drainage beneath the apartment to a common sump. The sump drains to the Port Angeles storm sewer system and eventually into nearby Peabody Creek. Water within the sump has had an intermittent fuel sheen for several years. Samples collected from the sump have confirmed that the water is contaminated with gasoline. Although there are several gas stations within the immediate area, the most likely source of the fuel contamination appears to be Round the Clock Deli. The Round the Clock Deli is located about 200 feet southwest of Lincoln Apartments. There are three underground gasoline tanks on the deli property which are no longer in use. Onsite tanks and lines have leaked in the past. Although the leaks were repaired, the suspected contaminated soil was never removed.

Objective: The objective of the soil gas survey is to determine if Round the Clock Deli is a source of fuel contamination beneath Lincoln Apartments. Tasks to meet this objective are:

- Conduct a soil-gas survey using a portable gas chromatograph to provide information on possible source areas of the fuel contamination.
- Based on field soil gas results, collect and test soil samples for volatile organic contaminants from suspected contaminated areas.

If possible, the study will provide information on the extent of the contaminant plume.

Lead: Pam Marti

Proposed Lab Costs: $1,500.00

Completion Dates:

Field Work: March 1993
Laboratory Data Reported: May 1993
Preliminary Information to Client: June 1993
Draft Memo: July 1993
Final Memo: August 1993

Client: Dick Heggen, Toxics Cleanup Program

PM:DE:krc

cc: Lynn Singleton, Megan White, Will Kendra, Dick Heggen, Patty Martin, Ken Dzinbal, Carol Fleskes, Bill Kammin, Pat Lee, Cliff Kirchmer

CONSENT FOR ACCESS TO PROPERTY

NAME: Mr. Kyle Christie

ADDRESS: ARCO Products Company
P.O. Box 5811
San Mateo, CA 94402

PHONE:

I give my consent to authorized employees, agents, or contractors of the Department of Ecology (Ecology) to enter and have access to my property at the above address, at reasonable times to conduct investigations to determine the nature or extent of any release or threatened release of hazardous substances. I also understand that Ecology retains the legal authority to respond to emergency conditions on this property.

(Signature)

KYLE CHRISTIE
(Printed Name)

2/26/93
(Date)

I do not give my consent to authorized employees, agents, or contractors of the Department of Ecology to enter and have access to my property at the above address.

(Signature)

(Printed Name)

(Date)

#5719

CHRISTINE O. GREGOIRE
Director

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

February 18, 1993

CERTIFIED

RECEIVED 2 2 1993

Mr. Kyle Christie
ARCO Products Company
P.O. Box 5811
San Mateo, CA 94402

Dear Mr. Christie:

Re: Soil Gas Survey of Lincoln Street Apartments and Vicinity

The Department of Ecology (Ecology) is planning an investigation of petroleum contamination in soils in association with a gasoline contamination found beneath Lincoln Street Apartments. The investigation will involve testing soils by a method called a soil gas survey.

Ecology plans to tests the soils at the Lincoln Street Apartments and at several locations near the Lincoln Street Apartments during the week of March 8, 1993. The area to be studied will extend from 7th to 9th Street and from Laurel to Chase Avenue.

Ecology would like to sample soils in an area within your property during the week of March 8, 1993. Therefore, Ecology would like to obtain permission from you to enter your property in order to do the testing.

Under the Model Toxics Control Act (RCW 70.105D.030) Ecology is authorized to enter property and to conduct investigations and cleanup of hazardous waste sites. Unless earlier access is granted by an owner or operator of a facility, Ecology is required to provide owners and operators with either, a 24-hour notice in person or over the phone, or a 3-day written notice by regular mail, explaining the need and intent to access property.

It is suspected that the gasoline contamination had originated from the Round the Clock Deli property in the 1980s. The purpose of the study is to investigate the limits of the plume of the petroleum contamination.

A soil-gas survey involves several steps. First, a small probe is punched into the soil from several inches to several feet. The hole punched into the soil is approximately 3" in diameter. Second, an air sample is drawn from the hole and tested for the presence of petroleum vapors. Third, the probe is removed and the hole is sealed. The disruption to the surface is very minor. The testing is conducted from a modified van.

It is estimated that the sampling procedure will take approximately two hours for each location tested. The amount of time needed to conduct the soil sampling will depend upon the number of samples to be collected and the soil type encountered.

The testing will be conducted by the Environmental Investigation and Laboratory Services branch of Ecology. The testing will be performed by Pam Marti and her assistants. I, also, will be present during the testing.

> Ecology would like to test two to three locations within the area along the 8th Street boundary at the ARCO Service Station. The testing should take approximately two hours. Efforts will be made to arrange a time for the testing which will minimize the impact on business activities.

While on the property, all investigators shall comply with the state and federal health and safety requirements determined appropriate to the circumstances at the site by the best judgment of the investigator.

Ecology would appreciate you permission to access your property to do the testing. In preparation for Ecology's entry to you property, please complete the enclosed "Consent for Access to Property" form and return it to Ecology in the addressed and stamped enclosed envelope. Thank you for your cooperation in this matter.

Enclosed please find a copy of C. 70.105D RCW, the Model Toxics Control Act and Ch. 173-340 WAC, the implementing regulations for the act.

I will contact you to confirm a date and time as to when the work will be done. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

PM:dc
Enclosures

CHRISTINE O. GREGOIRE
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

February 18, 1993

CERTIFIED

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ARCO Products Company
P.O. Box 5811
San Mateo, CA 94402

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Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

PM:dc
Enclosures

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

KYLE CHRISTIE
ARCO PRODUCTS CO
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FEB 2 3 1993

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PS Form **3811**, Mar. 1988 ★ U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

CONSENT FOR ACCESS TO PROPERTY

NAME: Mr. David Cotton

ADDRESS: Round the Clock Deli & Grocery
722 So. Lincoln Street
Port Angeles, WA 98362-6124

PHONE: (206) 452-1777

I give my consent to authorized employees, agents, or contractors of the Department of Ecology (Ecology) to enter and have access to my property at the above address, at reasonable times, to conduct investigations to determine the nature or extent of any release or threatened release of hazardous substances. I also understand that Ecology retains the legal authority to respond to emergency conditions on this property.

David L Cotton
(Signature)

DAVID L COTTON
(Printed Name)

2-16-93
(Date)

I do not give my consent to authorized employees, agents, or contractors of the Department of Ecology to enter and have access to my property at the above address.

_____
(Signature)

_____
(Printed Name)

_____
(Date)

CONSENT FOR ACCESS TO PROPERTY

NAME: Mr. Robert K. Erickson

ADDRESS: Erickson and Associates
1721 E 5th Street
Port Angeles, WA 98362-4917

PHONE: (206) 452-2226

I give my consent to authorized employees, agents, or contractors of the Department of Ecology (Ecology) to enter and have access to my property at the above address, at reasonable times, to conduct investigations to determine the nature or extent of any release or threatened release of hazardous substances. I also understand that Ecology retains the legal authority to respond to emergency conditions on this property.

Robert K. Erickson
(Signature)

Robert K. Erickson
(Printed Name)

2-15-93
(Date)

I do not give my consent to authorized employees, agents, or contractors of the Department of Ecology to enter and have access to my property at the above address.

_____
(Signature)

_____
(Printed Name)

_____
(Date)

SAMPLE and ANALYSIS PLAN
for
LINCOLN APARTMENTS SOIL GAS SAMPLING

Prepared by
Pamela B. Marti

WASHINGTON STATE DEPARTMENT OF ECOLOGY
ENVIRONMENTAL INVESTIGATIONS AND LABORATORY SERVICES

for the
WASHINGTON STATE DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM
SOUTHWEST REGIONAL OFFICE

February 1993

PROJECT DESCRIPTION

Problem Description

In the early 1980s, subsurface fuel contamination was detected in the daylight crawl space of Lincoln Apartments in Port Angeles, Washington (Figure 1). Fuel odors had been a nuisance to apartment residents on several occasions. To mediate the problem a ventilation system was installed to disperse fuel odors. Subdrains were placed to direct all drainage beneath the apartment to a common sump. The sump drains to the Port Angeles storm sewer system and eventually into nearby Peabody Creek. Water within the sump has had an intermittent fuel sheen for several years. Samples collected from the sump have confirmed that the water is contaminated with gasoline. Although there are several gas stations within the immediate area, the most likely source of the fuel contamination appears to be Round the Clock Deli. Round the Clock Deli is located about 200 feet southwest of Lincoln Apartments. There are three underground gasoline tanks on the Deli property which are no longer in use. Onsite tanks and lines have leaked in the past. Although the leaks were repaired, the suspected contaminated soil was never removed.

A soil boring log from the corner of Lincoln and 8th Street shows eight inches of sandy gravel fill, eight feet of clayey silty sand, two feet of a sandy gravel with perched water at eight feet, and a dense sandy silt to the bottom of the hole (14 feet). Ground water flow is thought to be generally northward towards the Strait of Juan De Fuca. The Strait is about one-half mile north of Lincoln Apartments. The regional water table lies at a depth of about 30 feet below ground surface.

The soil gas survey and collection of soil samples will be conducted in March 1993, weather permitting.

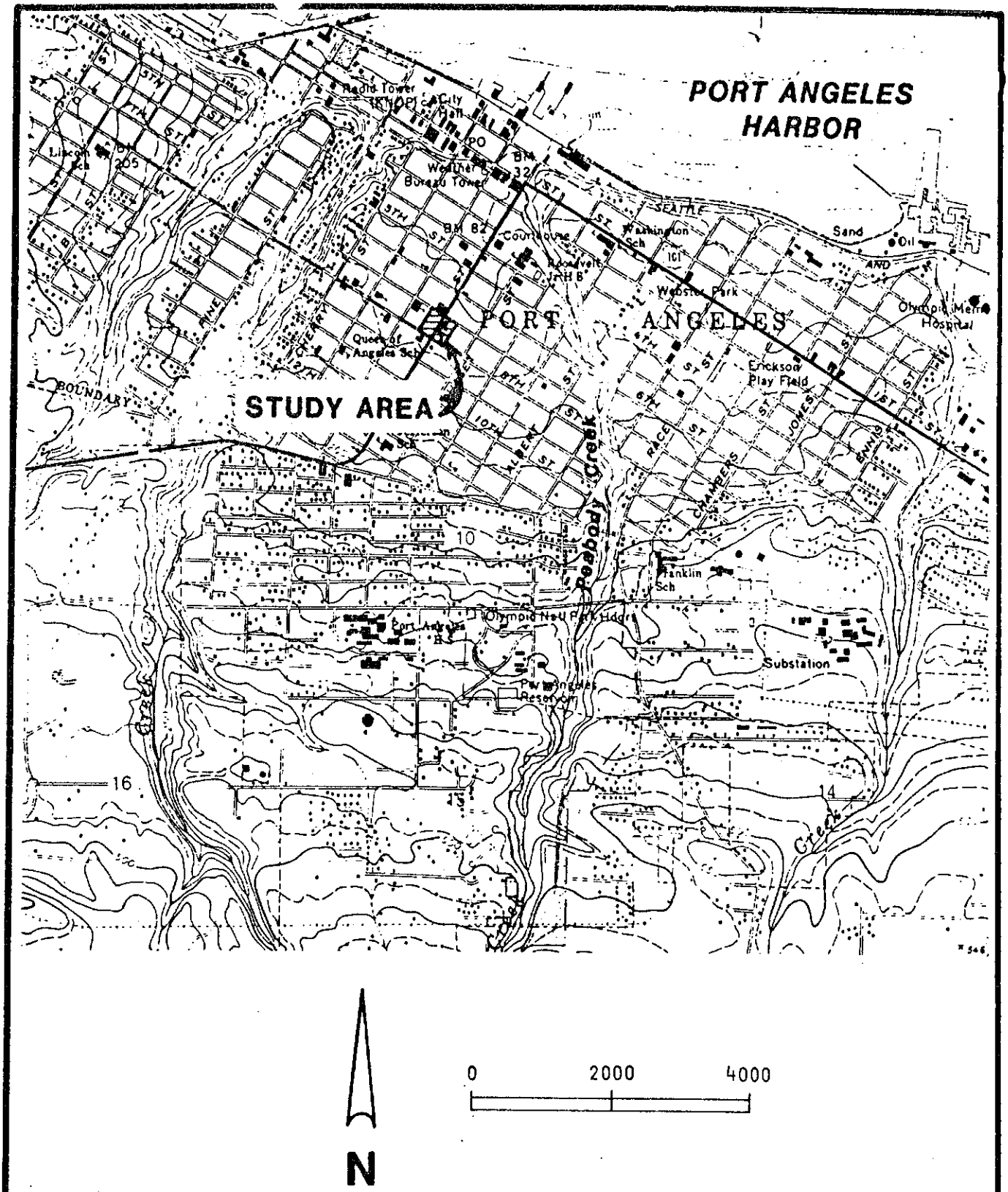
Objective

The objective of the soil gas survey is to determine if Round the Clock Deli is a source of fuel contamination beneath Lincoln Apartments. Tasks to meet this objective are:

- Conduct a soil-gas survey using a portable gas chromatograph to provide information on possible source areas of the fuel contamination.

- Based on field soil gas results, collect and test soil samples for volatile organic contaminants from suspected contaminated areas.

If possible, the study will provide information on the extent of the contaminant plume.



REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE MAP "PORT ANGELES, WASH."

VICINITY MAP

FIGURE 1

SAMPLING PROCEDURES

Site Selection

Soil gas sample locations have been selected up- and down-gradient of Round the Clock Deli and Lincoln Apartments. Sample locations for soil gas and soil samples will be determined relative to site landmarks (buildings, fences, etc.) using a surveyor's tape. Where possible, sample locations will be recorded with a Global Positioning System (GPS NAV 1000 Plus Magellan).

Soil Gas

Soil gas samples will be collected from about 20 locations as shown on Figure 2. Samples locations have been selected up- and down-gradient of Round the Clock Deli and Lincoln Apartments. At 10% of the sample locations, vertical profile samples will be collected and analyzed at 3-foot intervals to a maximum depth of 12 feet to help determine an optimum depth for sampling.

Soil Samples

Soil samples will be collected from areas of concern based on soil gas results. Soil samples will be sent to the laboratory for analysis.

Quality Control Samples

Sampling activities will be supported for the soil gas and soil samples by preparing and analyzing quality control samples. These quality control samples are discussed below.

Soil Gas Samples

Calibration Standard: The gas chromatograph will be calibrated after every five analysis runs with a standard pressurized mixture of 1.01 ppm benzene and 1.52 ppm trichloroethylene. If the instrument response has changed significantly since the previous calibration, the last five samples will be re-analyzed.

Quality Control Standard: A quality control standard will be analyzed daily to determine the accuracy of the gas chromatograph. The standard will consist of a Tedlar bag filled with the 1.01 ppm benzene/1.52 ppm trichloroethylene calibration mixture.

Duplicate Measurements: Duplicate analysis (repeat analyses of the same sample) will be conducted on at least 10% of all soil gas samples. Duplicate analyses will be conducted only on samples with positive results. Duplicate samples will be used to estimate analytical precision.

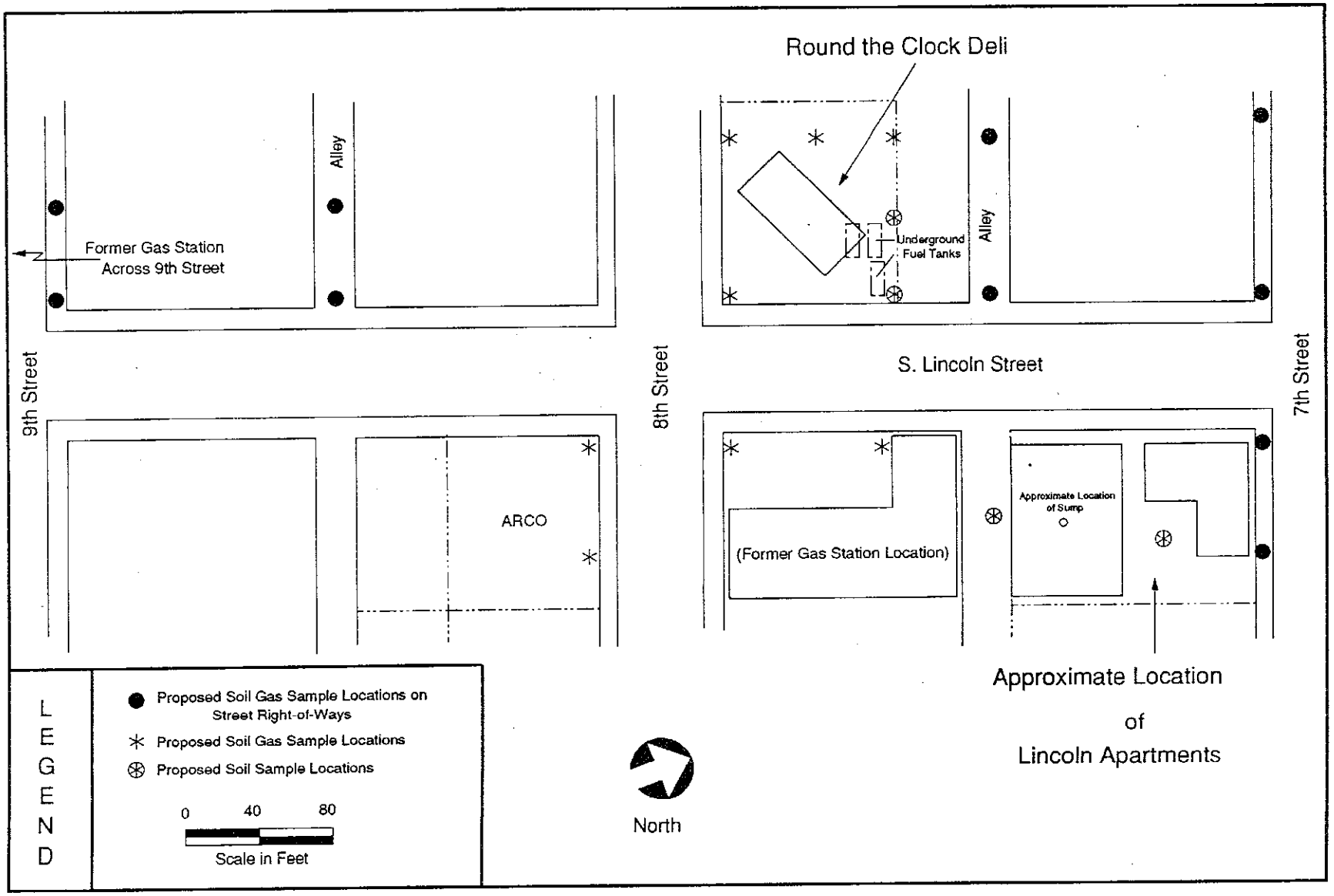


Figure 2: Lincoln Apartments - Proposed Soil Gas Sample Locations

Blank Samples: Blank samples of ambient air will be run through the gas chromatograph periodically to determine if contamination of the analytical system has occurred. Blank samples will be run after the analyses of samples with high concentrations.

Soil Samples

Duplicate Samples: Duplicate samples will be collected from at least 10% of all soil sample locations. Duplicate samples will be collected from suspected contaminated areas.

Rinsate Blank: A rinsate blank will be prepared by passing organic free water through decontaminated soil sampling equipment to determine the completeness of the cleaning procedures.

Sampling Methods

Soil Gas Sampling

A pilot hole will be drilled to the required depth using a 1/2-inch diameter, solid steel rod. After removing the pilot hole rod, a stainless steel retractable soil gas sampling tip (Retract-a-Tip) will be driven to the required depth in the pilot hole. The retractable tip will be pulled back about two inches to expose the sampling screen. Soil gas samples will be withdrawn using a suction pump through 3/16-inch ID teflon tubing, and collected under vacuum pressure in labeled 1-liter Tedlar bags. Teflon tubing will be discarded between test holes.

Soil gas samples will be analyzed using a portable gas chromatograph within one hour of collection by field staff. Analyses operating parameters, peak identification, retention time, peak area and component concentration will be displayed on the gas chromatograph computer screen and stored on a site specific computer diskette. Backup copies of the site specific data discs will be made for further in-office review and interpretation.

Soil Sampling

Soil samples will be obtained using the JMC portable soil sampler. A hollow, three-foot-long, one-inch diameter sampling tube fitted with a stainless steel liner will be driven through the soil column. The sampling tube will be pulled from the hole and the liner removed from the sampler. The soil will then be extracted from the liner by inserting a cylindrical rod. Portions of the soil column corresponding to the soil gas sample depth will be placed in four ounce glass jars and sent to the laboratory for analysis. If additional deeper samples are needed, a new liner will be inserted into the sampling tube and the tube lowered down the same hole to the desired depth. Extensions will be attached to the sampling tube so that the tube may be driven to the next required depth.

Soil samples will be described and logged. Descriptions will include depth interval, color, texture, estimated grain size, odor, and any visible contamination.

Test holes will be plugged using hydrated bentonite. Overlying fill and asphalt cover (cold mix) will be placed as necessary.

Sample Containers

Soil gas samples will be collected in 1-liter Tedlar® bags with polypropylene fittings. Soil samples will be collected in four ounce wide mouth glass jars with teflon lined septa lids.

Equipment Decontamination

All non-dedicated down-hole equipment will be decontaminated between test holes using sequential washes of deionized water with Liquinox® detergent, deionized water, and laboratory grade methanol. Retractable tips will be completely disassembled for cleaning and decontamination between holes.

Management of Investigation-Derived Wastes

Excess soil from soil sampling will be sealed in five gallon buckets and stored onsite until laboratory results are available to determine proper disposal methods.

Sample Identification

Soil gas samples will be labeled as follows LNA1 . . LNAn in the order that samples are collected. At sample locations in which vertical profile sampling is conducted, samples will be labeled as described previously followed by a letter denoting the three-foot depth intervals. The letter "a" will represent the shallowest depth, three feet. Soil samples will be labeled in conjunction with the soil gas samples. All sample locations will be recorded in a field notebook and on a site map.

Sample Custody

Upon sample collection and proper labeling, ground water and soil samples will be stored on ice in an ice chest. Chain-of-custody procedures will be followed according to Manchester Laboratory protocol (Ecology, 1991).

SAMPLE ANALYTICAL PROCEDURES

Soil Gas Samples

Soil gas samples will be analyzed in the field using a portable gas chromatograph (Sentex Scentograph Plus). The gas chromatograph is equipped with an Argon Ionization Detector (AID), a 12' 10%SP-1000 (80/100 mesh) packed column and a chemical compound library (Sentex). The gas chromatograph will be calibrated using a standard pressurized mixture of 1.01 ppm benzene and 1.52 ppm trichloroethylene. Operating parameters will be set so that

calibration peaks coincide with retention times established on the industrial solvents chemical compound library (Sentex). The 19 compounds contained in the library will be used to help identify onsite contaminants. Operating parameters such as sample time, temperature, and chart duration will be adjusted in the field to maximize results.

Soil Gas Samples

Soil samples will be analyzed for volatile organics and Hydrocarbon Identification (HCID). Samples will be analyzed using EPA SW846 Method #8260 (EPA 1986) and in-house laboratory procedures, respectively.

Data Reduction, Validation, and Reporting

Since the soil gas survey is purely for site screening and source identification, all compounds identified are considered to be tentatively identified and associated concentrations estimates. Data obtained during this study will be reported in a technical document.

REFERENCES

Washington State Department of Ecology, 1974-present. Lincoln Apartment Files.

Washington State Department of Ecology, 1991. Manchester Environmental Laboratory - Laboratory Users Manual. Edited by D. Huntamer and J. Hyre.

U.S. Environmental Protection Agency, 1986. Test Methods for Evaluating Solid Waste, SW-846. Office of Emergency Response, Washington D.C.

INITIAL INVESTIGATION SITE H & S CHECKLIST

PRE SITE CHECK LIST PREPARATION **Prepared by** PAM MARTI

Site/Incident SURFWRACK PARK CONT. **Date** 3/8-10/92 **Arrival Time** ——
Site Location PORT ANGELES **Address** BLOCK OF 7TH & LINCOLN
Team Name(s) **Nearest City** PORT ANGELES
1. PAM MARTI **County** CLALLAM
2. DENIS ERICKSON **Contact Person**
3. PATTY MARTIN
4.
5.

First Site Visit: Y or (N)
Nearest Hospital/Emergency Facility and address
OLYMPIC MEMORIAL HOSPITAL
CAROLINE ST (DOWN BY WATER)
Phone 457-8513

PURPOSE OF SITE VISIT/ACTIVITY
Sampling: Water
soil / SOIL GAS
air
drums
other
2. Site Evaluation
3. Site Inspection
4. Well Drilling
5. Other

SITE DESCRIPTION
Rural **Suburban** **Urban** X
Other

TERRAIN
Slopes **Level** X **Water Hazard**
Other

PHYSICAL HAZARDS
(1) Unstable stacks/piles
(2) Pits/trenches
(3) Confined spaces
(4) Steep slopes
(5) Construction/Machinery
(6) Weather/Temperature
(7) Overhead
(8) Slippery/tripping
(9) Traffic X
(10) Noise/Source
(11) Radioactive Materials
(12) Other/explain

CHEMICAL hazards
(1) Solvents(volatile) , , , ,
(2) Corrosives
(3) Oxidizers
(4) Pesticides
(5) Dusts
(6) Metals

(7) Gases, vapors_____
(8) Flammables X
(9) Explosives_____
(10) Carcinogens_____
(11) Other/explain_____

INFECTIOUS AGENTS_____

EXPOSURE CONTROL METHODS: Avoidance_____ Work Practices X
PPE X Other/describe_____

SURVEY EQUIPMENT:
(1) CGI-Multimeter (O2,LEL,H2S,CO)_____
(2) TIP(PID) X
(3) OVA(FID)_____
(4) RAM 1(particulate)_____
(5) Radiation Meter_____
(6) Sensidyne Tubes(specify)_____,_____,_____,
(7) Calibration Info:_____
(8) Other, explain:_____

KNOWN ACTION LEVELS	INSTRUMENT READINGS Type	Response	Location
(1) [redacted]	[redacted]	[redacted]	[redacted]
(2) NONE → CHECK	TIP	EVACUATE	LINCOLN / 7TH
(3) AREA W/ DRAGER TUBES OR AIR SAMPLE			
(4) IF READING EXCEEDS 5 PPM			

REQUIRED PERSONAL PROTECTIVE EQUIPMENT:
Level of Protection: (B)_____ (C)_____ (D) X
Comments_____

(1) Body: Tyvec_____, Keppler_____, Saranex_____, Raingear X
Coveralls X, Other_____
(2) Head: HardHat X, Goggles_____, Earplugs X,
Faceshield_____
(3) Hands: Gloves X, Outer_____, Inner_____,
Specify Type_____
(4) Footware: Workshoes X, CPC boots_____, Booties_____

RESPIRATORY PROTECTION: Level B_____, Level C_____, Level D X
Comments_____
Full face_____, Half Face_____, Cartridge/Canister_____
LISA (Supplied Air) ESCAPE ONLY_____

LEVEL B RESPIRATOR USE SHALL REQUIRE TCP STAFF TO FOLLOW THE SOP FOR LEVEL B ACTIVITY

MISC EQUIPMENT: Drinking Water(electrolyte?) X,
Eye Wash_____, Fire Extinguisher X, Camera X, Binocular_____,
Radio_____ Flashlight_____, Safety Vest X,
Other_____

COMMUNICATION INSTRUCTIONS: _____

EMERGENCY CONTACTS: Police 911 Medical 911
Ecology_____

NOTICE:HAZARDS NOT ADEQUATELY PROTECTED FOR,PRECLUDE WORK IN THE VICINITY OF THE HAZARD, AND MAY PRECLUDE SITE ENTRY ENTIRELY.

Total Time on the Site_____; Known Chemical Exposure _____
_____, Protected_____ Unprotected_____

Signature:_____ Date_____ Time_____

Space for: sketches, diagrams or comments.

Mary Riveland
XXXXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

February 10, 1993

CERTIFIED MAIL

Mr. and Mrs. Art Tobias
435 West 3rd Street
Port Angeles, Washington 98362-2215

RE: Soil Gas Survey of Lincoln Street Apartments and Vicinity

Dear Mr. and Mrs. Tobias:

The Department of Ecology (Ecology) is planning an investigation of petroleum contamination in soils in association with a gasoline contamination found beneath Lincoln Street Apartments. The investigation will involve testing soils by a method called a soil gas survey.

Ecology plans to test the soils at the Lincoln Street Apartments and at several locations near the Lincoln Street Apartments during the week of March 8th, 1993. The area to be studied will extend from 7th to 9th Street and from Laurel to Chase Avenue.

Ecology would like to sample soils in an area within your property during the week of March 8, 1993. Therefore, Ecology would like to obtain permission from you to enter your property in order to do the testing.

Under the Model Toxics Control Act (RCW 70.105D.030) Ecology is authorized to enter property and to conduct investigations and cleanup of hazardous waste sites. Unless earlier access is granted by an owner or operator of a facility, Ecology is required to provide owners and operators with either a 24 hour notice in person or over the phone or a 3 day written notice by regular mail explaining the need and intent to access property.

It is suspected that the gasoline contamination had originated from the Round the Clock Deli property in the 1980's. The purpose of the study is to investigate the limits of the plume of the petroleum contamination.

A soil-gas survey involves several steps. First, a small probe is punched into the soil from several inches to several feet. The hole punched into the soil is approximately 3" in diameter. Second, an air sample is drawn from the hole and tested for the presence of petroleum vapors. Third, the probe is removed and the hole is sealed. The disruption to the surface is very minor. The testing is conducted from a modified van.

It is estimated that the sampling procedure will take approximately two hours for each location tested. The amount of time needed to conduct the soil sampling will depend upon the number of samples to be collected and the soil type encountered.

The testing will be conducted by the Environmental Investigation and Laboratory Services branch of Ecology. The testing will be performed by Pam Marti and her assistants. I, also, will be present during the testing.

Ecology would like to test in two locations within the Lincoln Apartment property: (1) between Lincoln Apartments and the Springtime Robins and Rainbows building; and (2) within the Lincoln Apartment court yard. The testing should take approximately three hours. Efforts will be made to arrange a time for the testing which will minimize the impact on apartment activities.

While on the property, all investigators shall comply with the state and federal health and safety requirements determined appropriate to the circumstances at the site by the best judgment of the investigator.

Ecology would appreciate your permission to access your property to do the testing. In preparation for Ecology's entry to your property, please complete the enclosed "Consent for Access to Property" form and return it to Ecology in the addressed and stamped enclosed envelope. Thank you for your cooperation in this matter.

Enclosed please find a copy of Chapter 70.105D RCW, the Model Toxics Control Act and Chapter 173-340 WAC, the implementing regulations for the act.

I will contact you to confirm a date and time as to when the work will be done. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Southwest Regional Office
Toxics Cleanup Program

PLM:ak

Enclosures

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

MR & MRS ART TOBIAS
435 WEST 3RD STREET
PORT ANGELES WA 98362-2215

4. Article Number

P 469 203 074

Type of Service:

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- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

X Opal Tobias

6. Signature — Agent

X

7. Date of Delivery

2-12-93

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

Mary Riveland
[illegible]
Director

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

February 10, 1993

CERTIFIED MAIL

Mr. Robert K. Erickson
Erickson and Associates
1721 E. 5th Street
Port Angeles, WA 98362-4917

RE: Soil Gas Survey of Lincoln Street Apartments and Vicinity

Dear Mr. Erickson:

The Department of Ecology (Ecology) is planning an investigation of petroleum contamination in soils in association with a gasoline contamination found beneath Lincoln Street Apartments. The investigation will involve testing soils by a method called a soil gas survey.

Ecology plans to test the soils at the Lincoln Street Apartments and at several locations near the Lincoln Street Apartments during the week of March 8th, 1993. The area to be studied will extend from 7th to 9th Street and from Laurel to Chase Avenue.

Ecology would like to sample soils in an area within your property during the week of March 8, 1993. Therefore, Ecology would like to obtain permission from you to enter your property in order to do the testing.

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It is suspected that the gasoline contamination had originated from the Round the Clock Deli property in the 1980's. The purpose of the study is to investigate the limits of the plume of the petroleum contamination.

A soil-gas survey involves several steps. First, a small probe is punched into the soil from several inches to several feet. The hole punched into the soil is approximately 3" in diameter. Second, an air sample is drawn from the hole and tested for the presence of petroleum vapors. Third, the probe is removed and the hole is sealed. The disruption to the surface is very minor. The testing is conducted from a modified van.

It is estimated that the sampling procedure will take approximately two hours for each location tested. The amount of time needed to conduct the soil sampling will depend upon the number of samples to be collected and the soil type encountered.

The testing will be conducted by the Environmental Investigation and Laboratory Services branch of Ecology. The testing will be performed by Pam Marti and her assistants. I, also, will be present during the testing.

Ecology would like to test at two to three locations within the parking lot area between the mini mall and Lincoln Street. The testing should take approximately two hours. Efforts will be made to arrange a time for the testing which will minimize the impact on business activities.

While on the property, all investigators shall comply with the state and federal health and safety requirements determined appropriate to the circumstances at the site by the best judgment of the investigator.

Ecology would appreciate your permission to access your property to do the testing. In preparation for Ecology's entry to your property, please complete the enclosed "Consent for Access to Property" form and return it to Ecology in the addressed and stamped enclosed envelope. Thank you for your cooperation in this matter.

Enclosed please find a copy of Chapter 70.105D RCW, the Model Toxics Control Act and Chapter 173-340 WAC, the implementing regulations for the act.

I will contact you to confirm a date and time as to when the work will be done. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Southwest Regional Office
Toxics Cleanup Program

PLM:ak

Enclosures

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3. Article Addressed to:

ROBERT ERICKSON
ERICKSON & ASSOCIATES
1721 E 5TH STREET
PORT ANGELES WA 98362-1497

4. Article Number

P 469 203 073

Type of Service:

- ☐ Registered
- ☒ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ COD
- ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address

X Bernice Erickson

6. Signature — Agent

X

7. Date of Delivery

2-12-93

8. Addressee's Address *(ONLY if requested and fee paid)*

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Mary Riveland
XXXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

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February 10, 1993

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Round the Clock Deli & Grocery
722 So. Lincoln Street
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Ecology would like to sample soils in an area within your property during the week of March 8, 1993. Therefore, Ecology would like to obtain permission from you to enter your property in order to do the testing.

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It is suspected that the gasoline contamination had originated from the Round the Clock Deli property in the 1980's. The purpose of the study is to investigate the limits of the plume of the petroleum contamination.

A soil-gas survey involves several steps. First, a small probe is punched into the soil from several inches to several feet. The hole punched into the soil is approximately 3" in diameter. Second, an air sample is drawn from the hole and tested for the presence of petroleum vapors. Third, the probe is removed and the hole is sealed. The disruption to the surface is very minor. The testing is conducted from a modified van.

It is estimated that the sampling procedure will take approximately two hours for each location tested. The amount of time needed to conduct the soil sampling will depend upon the number of samples to be collected and the soil type encountered.

The testing will be conducted by the Environmental Investigation and Laboratory Services branch of Ecology. The testing will be performed by Pam Marti and her assistants. I, also, will be present during the testing.

Ecology would like to test in three location within the Round the Clock Deli property: (1) two samples near the tank farm; (2) two samples on the west side of the property; and (3) two samples on the south side of the property. The testing should take approximately four to eight hours. Efforts will be made to minimize the impact on store activities.

While on the property, all investigators shall comply with the state and federal health and safety requirements determined appropriate to the circumstances at the site by the best judgment of the investigator.

Ecology would appreciate your permission to access your property to do the testing. In preparation for Ecology's entry to your property, please complete the enclosed "Consent for Access to Property" form and return it to Ecology in the addressed and stamped enclosed envelope. Thank you for your cooperation in this matter.

Enclosed please find a copy of Chapter 70.105D RCW, the Model Toxics Control Act and Chapter 173-340 WAC, the implementing regulations for the act.

I will contact you to confirm a date and time as to when the work will be done. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Southwest Regional Office
Toxics Cleanup Program

PLM:ak

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1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:

DAVID COTTON
ROUND THE CLOCK DELI & GROCERY
722 S LINCOLN STREET
PORT ANGELES WA 98362-6124

4. Article Number
P 469-203-072

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Lorna Foster

7. Date of Delivery
13 FEB 93 - CARY

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 **DOMESTIC RETURN RECEIPT**

LINCOLN APARTMENTS SOIL-GAS SURVEY

Feb. 1993

Sites to be notified of soil gas survey:

1. City of Port Angeles

   a. area along side of Lincoln Apt on the south site of 7th St; area along side of the Bank on the south side of 7th St;

   b. area in the alley between Gin's Bakery and the Bank

   c. area along side of the vacant lot on the north side of 9th St (across the street from Angeles Video).

   d. area in the alley between 8th Street and 9th Street

2. Mr. and Mrs. Art Tobias
   435 West 3rd St
   Port Angeles, WA
   (206) 457-4818 98362-2215

   NOTIFIED

   a. area within the parking lot courtyard;
   b. area between the apartment and the building next door (south side of Lincoln Apt).

3. Robert K. Erickson
   Erickson and Associates
   1721 E. 5th St
   Port Angeles, WA 98362-4917
   (206) 452-2226

   a. area between Springtime Robins and Captain T (parking lot of the mini mall;

4. Mr. David Cotton
   Round the Clock Deli & Grocery
   722 S. Lincoln St
   Port Angeles, WA
   (206) 452-1777 98362-6124

   a. area around the tanks;

   b. area on the south side of the site on 9th St; and the

   c. area on the west side of the property

Lincoln Apartments Soil Gas Survey (Continues)

5. Arco Station #5719
807 S. Lincoln St
Port Angeles, WA 98362-7850
(206) 457-8131

Darryl Rumble -

a. area on the south side of 9th St

6. Angeles Video
902 S. Lincoln St
Port Angeles, WA
(206) 452-1255

Lien Lam
P. O. Box 395
Sequim, WA
(206)

See City of Port Angeles

7. Mall Shops to notify of planned soil gas survey:

a. Springtime Robins and Rainbows,
(New & Used Furniture)
719 South Lincoln St
Port Angles, WA
(206) 452-4019

98362-6123

b. Gabe & Mel Barber Shop
719-1/2 So. Lincoln St
Port Angeles, WA
(206) 457-3636

c. The Hair Necessities
723 So. Lincoln St
Port Angeles, WA
(206) 452-5354

d. Kirk and Johnnie Rector
Captain T's Shirt Shop
P. O. Box 993
Port Angeles, WA
(206) 452-6549

98362-0806

(Feb 8, 1993)

CONSENT FOR ACCESS TO PROPERTY

NAME: MINE

ADDRESS:

PHONE:

I give my consent to authorized employees, agents, or contractors of the Department of Ecology (Ecology) to enter and have access to my property at the above address, at reasonable times to conduct investigations to determine the nature or extent of any release or threatened release of hazardous substances. I also understand that Ecology retains the legal authority to respond to emergency conditions on this property.

Arlene –

4 LETTERS

All Certified

1.) Arco Service Station

2.) Erickson & Associates

3.) Lincoln Apt.

4.) Round The Clock

5.) Deli City of Port Angeles

PAM

Enclose:

Consent Form

MTCA

WAC 173-340

Stamped & Addressed Envelope –

_____ (Signat

_____ (Printe

_____ (Date)

I do n loyees, agents, or contractors of the De ve access to my property at the above

_____ (Signa –

_____ (Print –

_____ (Date)

(Feb 8, 1993)

CERTIFIED

Address

RE: Soil Gas Survey of Lincoln Street Apartments and Vicinity

Dear :

The Department of Ecology (Ecology) is planning an investigation of petroleum contamination in soils in association with a gasoline contamination found beneath Lincoln Street Apartments. The investigation will involve testing soils by a method called a soil gas survey.

Ecology plans to tests the soils at the Lincoln Street Apartments and at several locations near the Lincoln Street Apartments during the week of March 8th, 1993. The area to be studied will extend from 7th to 9th Street and from Laurel to Chase Avenue.

Ecology would like to sample soils in an area within your property during the week of March 8, 1993. Therefore, Ecology would like to obtain permission from you to enter your property in order to do the testing.

Under the Model Toxics Control Act (RCW 70.105D.030) Ecology is authorized to enter property and to conduct investigations and cleanup of hazardous waste sites. Unless earlier access is granted by an owner or operator of a facility, Ecology is required to provide owners and operators with either, a 24 hour notice in person or over the phone, or a 3 day written notice by regular mail, explaining the need and intent to access property.

It is suspected that the gasoline contamination had originated from the Round the Clock Deli property in the 1980's. The purpose of the study is to investigate the limits of the plume of the petroleum contamination.

A soil-gas survey involves several steps. First, a small probe is punched into the soil from several inches to several feet. The hole punched into the soil is approximately 3" in diameter. Second, an air sample is drawn from the hole and tested for the presence of petroleum vapors. Third, the probe is removed and the hole is sealed. The disruption to the surface is very minor. The testing is conducted from a modified van.

It is estimated that the sampling procedure will take approximately two hours for each location tested. The amount of time needed to conduct the soil sampling will depend upon the number of samples to be collected and the soil type encountered.

The testing will be conducted by the Environmental Investigation and Laboratory Services branch of Ecology. The testing will be performed by Pam Marti and her assistants. I, also, will be present during the testing.

(Description of where and how many samples, see examples at the bottom of this form letter.)

While on the property, all investigators shall comply with the state and federal health and safety requirements determined appropriate to the circumstances at the site by the best judgment of the investigator.

Ecology would appreciate you permission to access your property to do the testing. In preparation for Ecology's entry to you property, please complete the enclosed "Consent for Access to Property" form and return it to Ecology in the address and stamped enclosed envelope. Thank you for your cooperation in this matter.

Enclosed please find a copy of C. 70.105D RCW, the Model Toxics Control Act and C. 173-340 WAC, the implementing regulations for the act.

I will contact you to confirm a date and time as to when the work will be done. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

(Enclosures: Model Toxics Control Act
WAC 173-340

Modify paragraph 9 for each site, may want to indent

Examples of site descriptions:

ARCO

Ecology would like to test two to three locations within the area along the 8th Street boundary at the ARCO Service Station. The testing should take approximately two hours. Efforts will be made to arrange a time for the testing which will minimize the impact on business activities.

Erickson & Associates

Ecology would like to test two to three locations within the parking lot area between the mini mall and Lincoln Street. The testing should take approximately two hours. Efforts will be made to arrange a time for the testing which will minimize the impact on business activities.

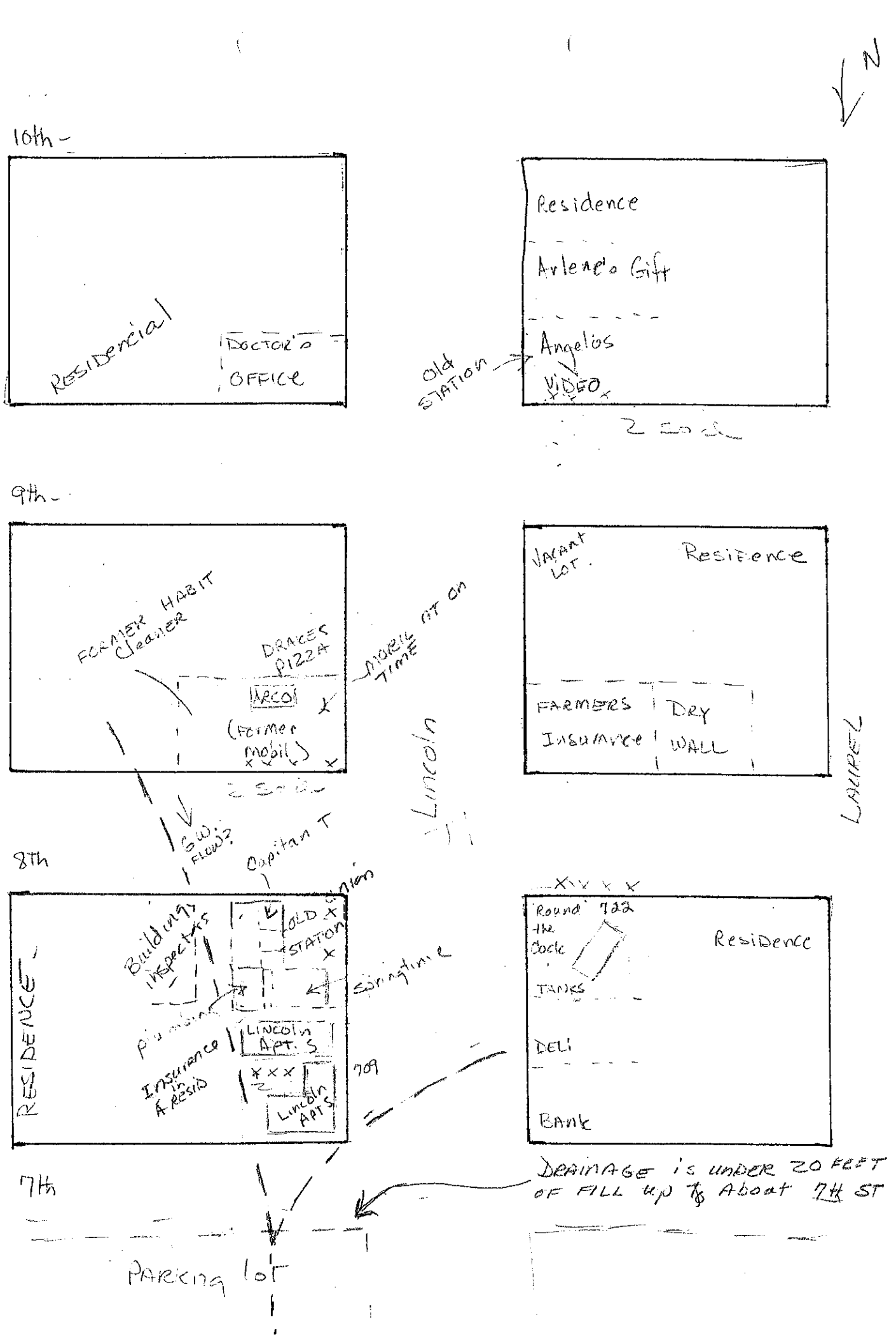
Lincoln Apartments

Ecology would like to test in two locations within the Lincoln Apartment property: (1) between Lincoln Apartments and the Springtime Robins and Rainbows building; and (2) within the Lincoln Apartment court yard. The testing should take approximately three hours. Efforts will be made to arrange a time for the testing which will minimize the impact on apartment activities.

Round the Clock Deli

Ecology would like to test in three location within the Round the Clock Deli property: (1) two locations near the tank farm; (2) two locations on the west side of the property; and (3) two locations on the south side of the property. The testing should take approximately four to eight hours. Efforts will be made to minimize the impact on store activities.

City of Port Angeles


N
10th
RESIDENCIAL
DOCTOR'S OFFICE
Residence
Arlene's Gift
Angelos
VIDEO
old STATION
2 Story
9th
FORMER HABIT Cleaner
DRAGES PIZZA
ARCO
(former mobil)
2 Story
MORE AT ON TIME
VACANT LOT.
Residence
FARMERS INSURANCE
DRY WALL
CHASE
Lincoln
LAUREL
S.W. FLOWS?
8th
Capitan T
Union
RESIDENCE
Building Inspectors
OLD STATION
Springtime
LINCOLN APT. S
Insurance in A RESID
709
LINCOLN APTS
Round the Clock
722
TANKS
Residence
DELI
BANK
DRAINAGE is under 20 FEET OF FILL up & About 7th ST
7th
PARKING lot

ARCO SITE — FEB-1993

010295 Nadler, Mobil
805 So. Lincoln

12

TANK
1. ~~Removed~~ Change 10-28-1990 by Delhav Industries
Closure date 3-31-90
Contamination found —
Last billing 6-30-90
Site Assessor
GeoTech Consultants

2. Same -
3 "
4. "

(5th Tank - not on record - exempt - due to ~~Heat~~ being a heating oil tank - 300 gals)
Sampled 4 sides, bottom

310-402-1294
Michelle Johnston — (Darrell RAMble) Referred to
STATION MANAGER
Kyle Christie
Arco - man in charge of decisions for the Arco SITE —

100396 Arco

1—4 Installed 8-01-90
Corrosion ~~protection~~ resistant material
Catch basin
Auto shutoff
Fiberglass
Double wall —
weekly gauging
Interstitial Monitoring -
Line tightness testing
Self insured

- Tanks removed March 5 & 6, 1990,
- Cont. removed to Stockpile — (458 yds)
- Site below cleanup
- NOTE: TANKS Removed prior to the Tank Removal at Habit

Michele Johnston
~~Atlantic~~ Prestige Stations, Inc #5233

(over)

~~Jan 10, 92~~
~~Mar. 2, 92~~
~~Arco~~
~~Chevron~~

90 1183
— Habit Clearance —
E. 8th & S. Lincoln
214 E. 8th
Report 4-17-90
- Delhur removed the tanks (Anthony Sample) 3-21-90
Geotech Consultants - Site Assessment -
5 TANKS (4) 1000 H.O, (2) 250 STODDART (1) 500 STODDART,
STODDARD & Heating Oil (1) 135 STODDART
- Site map is the same as for the Arco Report
- Stoddard tanks in poor to fair condition
- soils excavated & exported
- building demolished & cont. soil excavated
- contaminated soil removed.

State of Washington Department of Ecology

SAMPLE DATA & ANALYSIS REQUIRED

δ 344

Program Code J 5 K 54

Project Code Patricia L. Martin 586 5562

Project/Name Lincoln Apartments

☐ Enforcement/Custody ☐ Class II

☐ Possible Toxic/Hazardous Notes Gasoline contaminated water samples

Date Yr	Date Mo	Date Da	Time Hr	Time Mn	Field Station Identification	Lab Sample Number Wk	Lab Sample Number Seq	Matrix Code	Source Code	No. of Containers	Volatile Organics	WTPH-G	BTEX	TPH-D
93	01	20	13	AM	SUMP	04	8000	10		2	X			
93	01	20	13	AM	SUMP	04	8001	10		2		X	X	
93	01	20	13	PM	SUMP	04	8002	10		1				X

General Chemistry: Turbidity, pH, Conductivity, Total Hardness, Chloride, TS, TSS, TNVS, TNVSS, TSS, % Solids, Nutrients (4), Ammonia, Nitrate-Nitrite, Total Phosphorous, Ortho-Phosphate, BOD/5 Day, COD Chem Oxy Demand

Biology: Fecal Coliform Bacteria, Total Coliform Bacteria, Enterococcus, Fish Bioassay

Organic Chem.: Base/Neutrals/Acids, Volatile Organics, Pesticides/PCB's, PCB's Only, Purgeable Halocarbons, Herbicides, Hydrocarbon Analysis, Phenolics (AAP), Oil & Grease, WTPH-G, BTEX, TPH-D

METALS: P.P. Metals, EP Tox Metals, Specific List: Total, ☐ Recoverable, ☐ Totals, ☐ Dissolved

SW Patricia L. Martin
Project Officer

Sampler(s) Sample 048000 is preserved with 2 drops 1:1 HCl

Recorder [illegible]

Date __/__/__

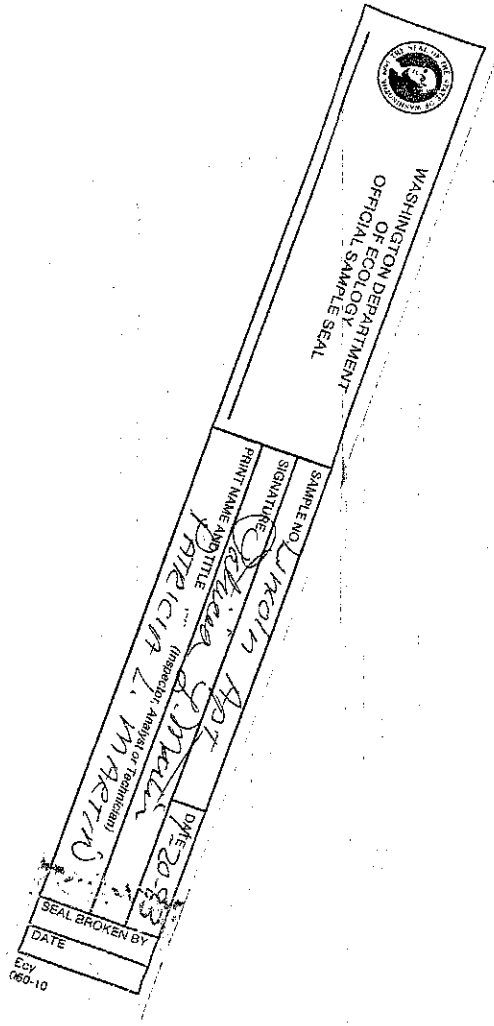
Chain Of Custody Record

Relinquished By:	Received By:	Yr	Mo	Da	Hr	Mn	Seal I.D.	Condition of Seals	Comments
Patricia L Martin		93	01	20	15	00	Signature		
	[signature]	93	01	21	09	30	—	intact, but easily peeled	

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

Ecy 040-115 Rev. 7/87

All CK

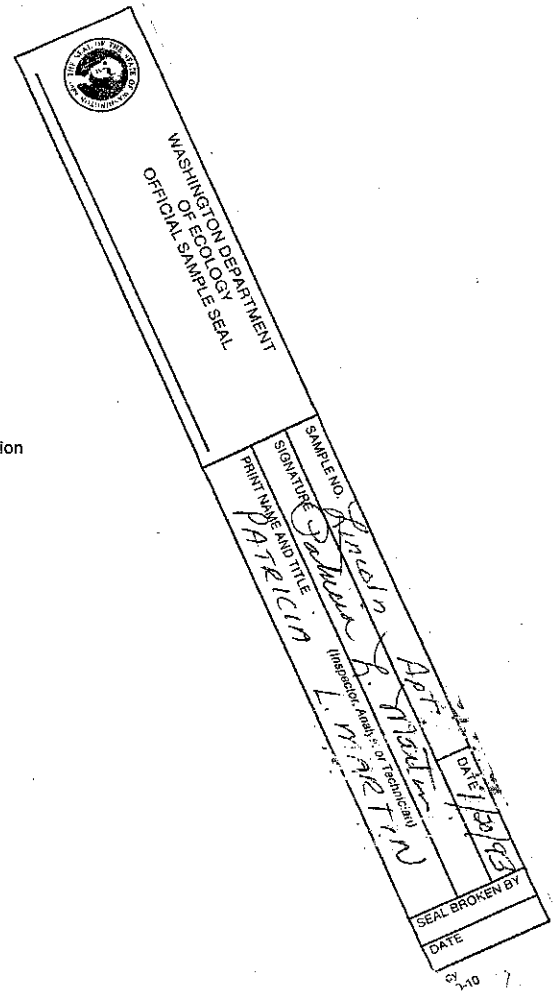


★ Source Codes and Descriptions ★

Code	Description
00	Unspecified Source
01	Unknown Liquid Media (Drum/Tank)
02	Unknown Liquid Media (Spill Area)
03	Unknown Liquid Media (Waste Pond)
10	Water (General)
12	Ambient Stream/River
13	Lake/Reservoir
14	Estuary/Ocean
15	Spring/Seepage
16	Rain
17	Surface Runoff/Pond (General)
18	Irrigation Canal/Return Flow
20	Well (General)
21	Well (Industrial/Agricultural)
22	Well (Drinking Water Supply)
23	Well (Test/Observation)
24	Drinking Water Intake
25	Drinking Water (At Tap)
30	Effluent Wastewater (General)
31	Municipal Effluent
32	Municipal Inplant Waters
33	Sewage Runoff/Leachate
34	Industrial Effluent
35	Industrial Inplant Waters
36	Industrial Surface Runoff/Pond
37	Industrial Waste Pond
38	Landfill Runoff/Pond/Leachate
40	Sediment (General)
42	Bottom Sediment or Deposit
44	Sludge (General)
45	Sludge (Waste Pond)
46	Sludge (Drum/Tank)
48	Soil (General)
49	Soil (Spill/Contaminated Area)
50	Bore Hole Material
60	Air (General)
61	Ambient Air
62	Source or Effluent Air
63	Industrial or Workroom Air
64	Hi-Vol Filter
70	Tissue (General)
71	Fish Tissue
72	Shellfish Tissue
73	Bird Tissue
74	Mammal Tissue
75	Macroinvertebrate
76	Algae
77	Periphyton
78	Plant/Vegetation
80	Oil/Solvent (General)
81	Oil (Transformer/Capacitor)
82	Oil/Solvent (Drum/Tank)
83	Oil/Solvent (Spill Area)
84	Oil/Solvent (Waste Pond)
90	Commercial Product Formulation
95	Well Drill Water
96	Well Drill Mud
97	Well Sealing Material
98	Gravel Pack Material

Matrix Codes

10	Water-Total
11	Water-Dissolved
40	Sediment/Soil
45	Semi-Solid/Sludge
46	Sediment for EP Toxicity
70	Tissue
80	Oil/Solvent
00	Other



REQUEST FOR ANALYSIS

LAB USE ONLY
Project Code _____
Lab Numbers _____

Approved By: _____

Request Date: _____ **Program Code:** J5K54
Requested By: PATTY MARTIN Scan No. 321-5562
Report Data To: " "

Project Name: Lincoln Apartments
Project Location: Port Angeles
Sampling Dates: 1-20-93 Date To Lab: _____
Sample Pickup Location: SWRO - Tumwater

☐ Enforcement (Chain of Custody REQUIRED)
☐ Emergency (enclose separately REASONS and Approval by)
☐ Other Matrix (Describe): _____

No. of Sam. Other	Sed	H20	General Chem	No. of Sam. Other	Sed	H20	Gen Chem, Biology	No. of Sam. Other	Sed	H20	Organics & Toxics
			Turbidity				BOD/5 day				Base/Neutral/Acids
			pH				COD				Acid/Neutrals Only
			Conductivity				TOC				Volatile Organics
			Total Alkalinity								Pesticides/PCBs
			Hardness				Nutrients (3)				PCBs Only
			Chloride				Ammonia				Organophosphate Pest.
			Sulfate				Nitrate-Nitrite				Cl PhenoxyAcid Herb.
			Fluoride				Total Phosphorous				Purgeable Halocarbons
			Cyanide				Ortho-Phosphate				PAH
							Fecal Coli Bacteria				
			SOLIDS (4)								Hydrocarbon Analysis
			TSS				PP Metals				Phenolics (AAP)
			TS				EP Tox Metals				Oil & Grease
				Total			Diss	Specified Metals (list)			Ignitability
				Other	Sed	H20	H20				TOX
											Bioassay
			% Solids								NPDES (% effluent)
											HW Designation
			% Lipids								Other:

Comments:

NOTE: Chain of Custody is recommended on all sampling events.

Sample Bottles Required:

Sample Disposition After Analysis:

ECY 040-2-62 (Rev. 7/88)

DEPARTMENT OF ECOLOGY
MANCHESTER ENVIRONMENTAL LABORATORY

SAMPLE REQUIREMENTS

Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Holding Time, days	Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Hold Time, days
Alkalinity	100		14	Solids (4)	500		7
Biochemical Oxygen Demand	2000	Store in the dark	2	Solids, Suspended	250		7
Chloride	100		28	Solids, Settleable	1000		2
Chemical Oxygen Demand	100	H_2SO_4 to pH < 2	28	Sulfate	100		28
Color	100		2	Turbidity	100		2
Conductivity	100		28	Bacteria, Coliform	200	Do not freeze	30 hours
Cyanide	500	NaOH to pH 12	14	Bacteria, Other	200	Do not freeze	30 hours
Fluoride, Total	100 P		28	Bioassay	100g G		-
Fluoride, Soluble	100 P		28	Lipids	20g G		-
Hardness	100		6 months				
Metals, Total	200	HNO_3 to pH < 2	6 months	Priority Pollutants	2000 GT		7
Metals, Dissolved	200	Filter, then HNO_3 to pH < 2	6 months	Volatile Organics	20 GT		14
Metals, Suspended	200		6 months	PCB	200 GT		14
Mercury	200 G		28	Purgeable Chlorinated HC	200 GT		14
				Halogenated HC (HW)	100 GT		14
				Polynuclear Aromatics (HW)	100 GT		14
Nitrogen, Total Kjeldahl	500	H_2SO_4 to pH < 2	28				
Nitrogen, Ammonia	200	H_2SO_4 to pH < 2	28	EP Toxicity, Metals	200 GT		6 months
Nitrate	200	H_2SO_4 to pH < 2	2	EP Toxicity, Organics	2000 GT		14
Nitrite	200	H_2SO_4 to pH < 2	2	Ignitability	100 G		28
Oil and Grease	500 G	H_2SO_4 pH < 2	28	Reactivity	50 G		28
				TOX	500		28
pH	50		2 hours				
Phosphorous, Total	200		28				
Phosphorous, Ortho	200		2				
Phenolics, Recoverable	500 G	H_2SO_4 pH < 2	28				
Salinity	200		28	Analysis not listed: Discuss with lab chemist.			

G = Use only a glass container.

GT = Use only an organic-free glass container with Teflon lid liner.

P = Use only a plastic container

g = gram

AV/MB2/121814/84

REQUEST FOR ANALYSIS

ECOLOGY

LAB USE ONLY
Project Code _____
Lab Numbers _____

Approved By: W Hamon Jr

Request Date: 1-7-93 **Program Code:** J5K54
Requested By: PATTY MARTIN Scan No. 321-5562
Report Data To: " "

Project Name: LINCOLN APARTMENTS
Project Location: PORT ANGELES
Sampling Dates: 1-20-93 Date To Lab: _____
Sample Pickup Location: SWRO - Tumwater

☐ Enforcement (Chain of Custody REQUIRED)
☐ Emergency (enclose separately REASONS and Approval by)
☒ Other Matrix (Describe): Routine H2O Sample

No. of Sam. Other	Sed	H2O	General Chem	No. of Sam. Other	Sed	H2O	Gen Chem, Biology	No. of Sam. Other	Sed	H2O	Organics & Toxics
			Turbidity				BOD/5 day				Base/Neutral/Acids
			pH				COD				Acid/Neutrals Only
			Conductivity				TOC			✓	Volatile Organics
			Total Alkalinity								Pesticides/PCBs
			Hardness				Nutrients (3)				PCBs Only
			Chloride				Ammonia				Organophosphate Pest.
			Sulfate				Nitrate-Nitrite				Cl Phenoxy Acid Herb.
			Fluoride				Total Phosphorous				Purgeable Halocarbons
			Cyanide				Ortho-Phosphate				PAH
										✓	BTEX/WTPH-G
							Fecal Coli Bacteria			✓	WTPH-D
			SOLIDS (4)								Hydrocarbon Analysis
			TSS				PP Metals				Phenolics (AAP)
			TS				EP Tox Metals				Oil & Grease
				Total			Diss	Specified			Ignitability
				Other	Sed	H2O	H2O	Metals (list)			TOX
											Bioassay
			% Solids								NPDES (% effluent)
											HW Designation
			% Lipids								Other:

Comments: Water Sample Will be Taken from a Water Sump Contaminated With Petroleum.

NOTE: Chain of Custody is recommended on all sampling events.

Sample Bottles Required: YES

Sample Disposition After Analysis:

ECY 040-2-62 (Rev. 7/88)

DEPARTMENT OF ECOLOGY
MANCHESTER ENVIRONMENTAL LABORATORY

SAMPLE REQUIREMENTS

Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Holding Time, days	Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Hold Time, days
Alkalinity	100		14	Solids (4)	500		7
Biochemical Oxygen Demand	2000	Store in the dark	2	Solids, Suspended	250		7
Chloride	100		28	Solids, Settleable	1000		2
Chemical Oxygen Demand	100	H_2SO_4 to pH < 2	28	Sulfate	100		28
Color	100		2	Turbidity	100		2
Conductivity	100		28	Bacteria, Coliform	200	Do not freeze	30 hours
Cyanide	500	NaOH to pH 12	14	Bacteria, Other	200	Do not freeze	30 hours
Fluoride, Total	100 P		28	Bioassay	100g G		-
Fluoride, Soluble	100 P		28	Lipids	20g G		-
Hardness	100		6 months				
Metals, Total	200	HNO_3 to pH < 2	6 months	Priority Pollutants	2000 GT		7
Metals, Dissolved	200	Filter, then HNO_3 to pH < 2	6 months	Volatile Organics	20 GT		14
Metals, Suspended	200		6 months	PCB	200 GT		14
Mercury	200 G		28	Purgeable Chlorinated HC	200 GT		14
				Halogenated HC (HW)	100 GT		14
				Polynuclear Aromatics (HW)	100 GT		14
Nitrogen, Total Kjeldahl	500	H_2SO_4 to pH < 2	28				
Nitrogen, Ammonia	200	H_2SO_4 to pH < 2	28	EP Toxicity, Metals	200 GT		6 months
Nitrate	200	H_2SO_4 to pH < 2	2	EP Toxicity, Organics	2000 GT		14
Nitrite	200	H_2SO_4 to pH < 2	2	Ignitability	100 G		28
Oil and Grease	500 G	H_2SO_4 pH < 2	28	Reactivity	50 G		28
				TOX	500		28
pH	50		2 hours				
Phosphorous, Total	200		28				
Phosphorous, Ortho	200		2				
Phenolics, Recoverable	500 G	H_2SO_4 pH < 2	28				
Salinity	200		28	Analysis not listed: Discuss with lab chemist.			

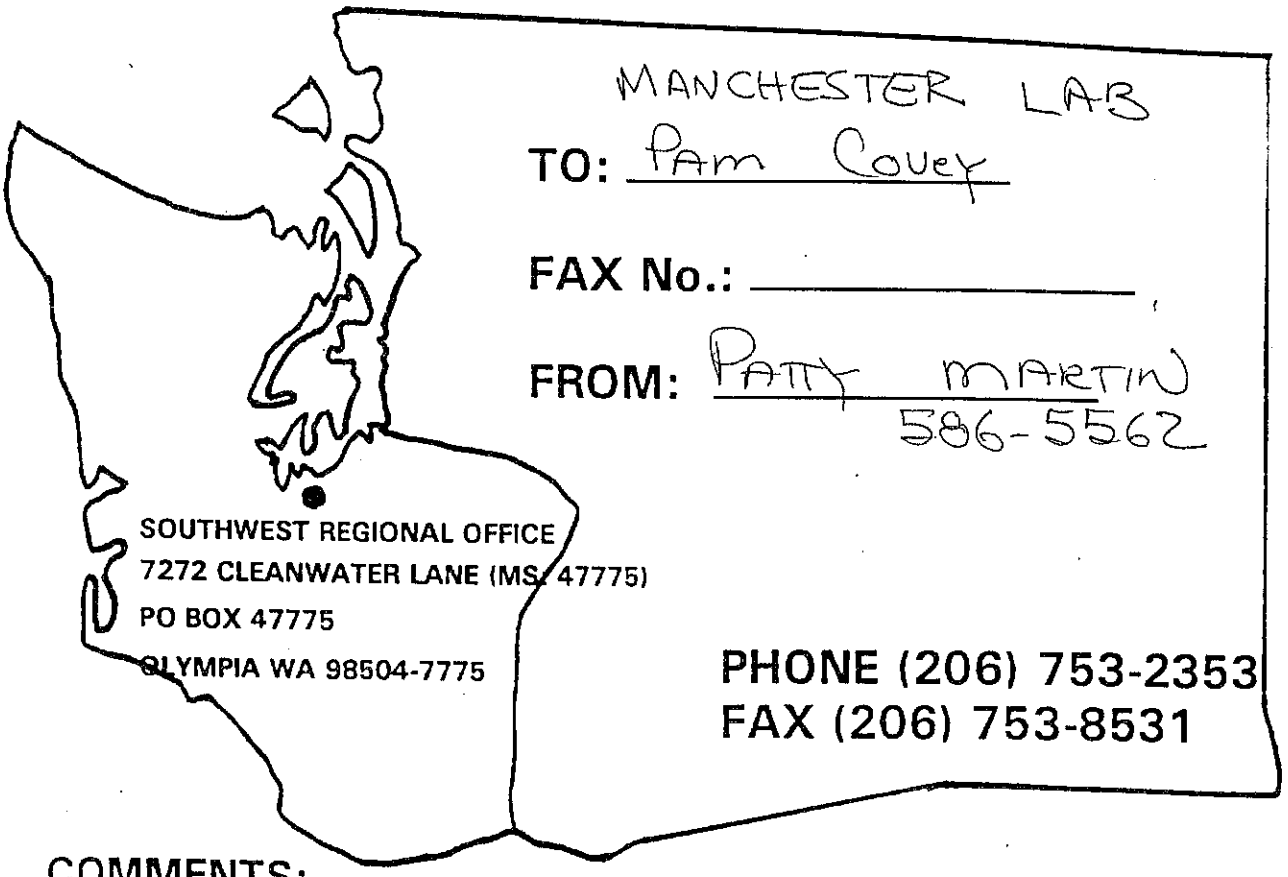
G = Use only a glass container.
GT = Use only an organic-free glass container with Teflon lid liner.
P = Use only a plastic container
g = gram

AV/MB2/121814/84

FAX COVER SHEET

DATE: 1-7-93
TIME: 1:40
PAGES: 2

WASHINGTON STATE DEPARTMENT OF ECOLOGY



MANCHESTER LAB

TO: Pam Covey

FAX No.: _____

FROM: Patty Martin
586-5562

SOUTHWEST REGIONAL OFFICE
7272 CLEANWATER LANE (MS 47775)
PO BOX 47775
OLYMPIA WA 98504-7775

PHONE (206) 753-2353
FAX (206) 753-8531

COMMENTS: _____

(FAX2/3PF
9/1

1992

XXXXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

December 24, 1992

Mr. and Mrs. Art Tobias
Lincoln Apartments
435 West 3rd
Port Angeles, WA 98362-6124

Dear Mr. and Mrs. Tobias:

I stated in my November letter to you that I would keep you up to date on any activities planned by Ecology on the investigation of the source of the petroleum contamination found beneath the Lincoln Apartments.

Due to the short fall in the Ecology budget, the investigation on the site has been reduced to a snail's pace. The next step in the investigation is to do a soil-gas survey of the potential properties involved.

A soil-gas survey is a technical tool to determine the presence or absence of petroleum vapors in the soil. The process is fairly non-invasive. The equipment is operated from the back of a van. Small holes a few inches in diameter are punched into the soil up to a depth of several feet. The depth of penetration is based upon the composition of the soil. An air sample is taken within the soil and an instrument measures the presence or absence of petroleum compounds.

The present plan is to take several samples from the tank area at the Round the Clock Deli and the Arco station and from locations near the Lincoln Apartments.

The work will be conducted by the Environment Investigation and Laboratory Services (EILS) branch of Ecology.

The investigative work will probably be performed during the month of March 1993. March is the earliest time that EILS can perform the work due to a very full schedule.

Also in March, I plan to take water samples from beneath the apartment building.

I will be in contact with you prior to March and at that time I will go into greater detail on the plans made by Ecology. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

XXXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

December 24, 1992

CERTIFIED MAIL

Mr. David Cotton
722 South Lincoln Street
Port Angeles, WA 98362-6124

Dear Mr. Cotton:

I stated in my November letter to you that I would keep you up to date on any activities planned by Ecology on the investigation of the source of the petroleum contamination found beneath the Lincoln Apartments.

Due to the short fall in the Ecology budget, the investigation on the site has been reduced to a snail's pace. The next step in the investigation is to do a soil-gas survey of the potential properties involved.

A soil-gas survey is a technical tool to determine the presence or absence of petroleum vapors in the soil. The process is fairly non-invasive. The equipment is operated from the back of a van. Small holes a few inches in diameter are punched into the soil up to a depth of several feet. The depth of penetration is based upon the composition of the soil. An air sample is taken within the soil and an instrument measures the presence or absence of petroleum compounds.

The present plan is to take several samples from the tank area on your site as well as the Arco station site and from locations near the Lincoln Apartments.

The work will be conducted by the Environment Investigation and Laboratory Services (EILS) branch of Ecology.

The investigative work will probably be performed during the month of March 1993. March is the earliest time that EILS can perform the work due to a very full schedule.

The results of this study may very well indicate that it will be necessary for you to remove your tanks and deal with any petroleum contamination associated the tanks.

We talked a little about this possibility when I met with you in November. At the meeting, you mentioned that the removal of the tanks and dealing with any contamination would probably cause a financial hardship. If this step becomes necessary, I would strongly recommended that you apply for financial assistance from Ecology at that time.

I will be in contact with you prior to March and at that time I will go into greater detail on the plans made by Ecology. Please call me at (206) 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

PLM:ak

PROJECT/SERVICES REQUEST
ENVIRONMENTAL INVESTIGATIONS

12-1-92

Directions: Fill out Project Request Form.

Proposed Project Title: Lincoln Square Apartments J5K54

Project Type: Private Property affected by a LUST Site

Client Section/Region: Toxics Cleanup Program / SWRO

Name of Individual Client: Patricia L. Martin 586-5562

Short Description of Proposed Work: A soil gas survey in Port Angeles in an area surrounding an apartment building, two gas stations and one abandoned gas station site.

Project Objectives:

1) To determine the source of a gasoline contamination
2) presently confirmed to be beneath the Lincoln Square
3) Apartment building.
4)

Are there certain dates or time periods when the work should be conducted?

Yes ✓ No _____ If yes, please specify and explain:

FEB OR March 1993. The results of the survey are needed in order to make plans for cleanup actions for the site before the end of the biennium.

Are there deadlines by which the work should/must be completed?

Yes ✓ No _____ If yes, please specify and explain:

FEB or March 1993 See above -

Final Product (Data, Technical Memorandum, Report, etc.) Data from the soil gas survey

Actions which are likely to be taken as a result of this work:

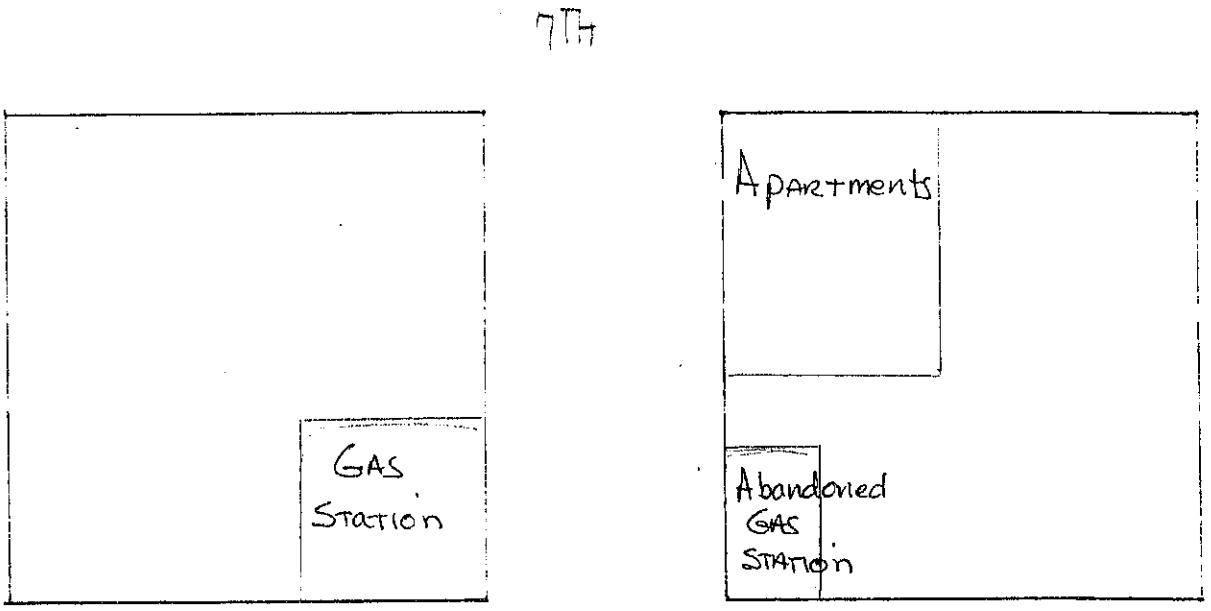
1) An Ecology directed cleanup of a gasoline contaminated
2) Site.
3)

Other information: The locations where the soil gas survey is to be performed are parking lot asphalted areas. The total surface areas to be studied combined may cover one city block. The soils are a combination of fill and/or Clallam - Hoypus sandy loams, 0 to 15% Slope - (Slope is probably 0 - 5%).

Requestor's Priority: _____

Generalized MAP IS ATTACHED

Lincoln Square Apartments Project



Below is a list of solvents used at our shop:

Citrus based parts cleaner (contains no petroleum distillates)
Safety Kleen parts washer (5 gallon)
Mineral Spirits (1 gallon)
Xylol (1 gallon) hardly ever used
Spot Remover (1 gallon) chlorinated hydrocarbon

Per our conversation 10-28-92 – I doublechecked and found no acetone on the premises.

Johnnie Rector
owner

Captain T's
CUSTOM SCREENPRINTING
Caps • Jackets • Sweats • T-Shirts
Team Uniforms • Lettering • Embroidery

P.O. Box 993
205 E. 8th
Port Angeles, WA 98362

KIRK & JOHNNIE
RECTOR

Call for quotes
(206) 452-6549
1-800-462-8593

XXXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
"372 Cleanwater Lane, LO-11 • Olympia, Washington 98504-80[illegible] • (206) 753-2353

November 2, 1992

Mr. David Cotton
722 South Lincoln Street
Port Angeles, WA 98362-6124

Dear Mr. Cotton:

Thank you for taking time to talk with me on October 28, 1992. The information you gave me concerning the past activities at the Round the Clock Deli site is valuable to Ecology and will be used for future decisions.

In August, 1992, I took some water samples from beneath the Lincoln Apartments and had the samples analyzed for volatile organic compounds. The test results indicate that gasoline is present in the water that runs beneath the apartments.

The volatile organic compound test results were as follows:

COMPOUND	RESULTS	MAXIMUM ALLOWABLE
Acetone	33 ppb*	-
Benzene	3,700 ppb	5 ppb
Toluene	280 ppb	40 ppb
Ethylbenzene	390 ppb	30 ppb
Xylenes	970 ppb	20 ppb

*ppb = parts per billion

The Round the Clock Deli and the Arco station are the two most likely sources for the contamination. Two other locations that are suspect are the abandoned Exxon station and Angeles Video.

I am gathering information at this time in order to determine the best course of action. I will keep you informed as to any activities planned by Ecology.

I have enclosed the literature that I had promised you. Thank you again for being so helpful, especially on such short notice. My telephone number is 206-586-5562, please call if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

enclosures

11-2-92

Summary of site visit to Lincoln Apts —

5 ppb
4,000 ppb
800 X

1. Drove to Port Angeles on Oct. 27, with Mohsen Konnehdar
2. Day 1 - walked the area - mapped business locations -

   Mr. Tobias showed us the apartment basement - It was a good review - It ~~was~~ gave a good review of locations of piping.

3. Day 2 - Interview w/ Round the Clock Deli Owner Dave Cotton & w/ Capitan Tower Johnnie Rector (concerned possible source of Acetone)

4. Reviewed the information - tentative map of future location for a soil gas survey

5. Searched for sump along Peabody Creek -

10/28/92

Round the Clock Deli

David Cotton
206-452-1777
Bought April 84
Property 86

3 tanks in the ground
1½" product
R 6,000
UL(2) 4,000

Tested—N 89 ,

722 So. Lincoln St

Tanks not used for one year

Oct— last time you pumped gas—
left the tanks w/ ~ 3" of gas

One tank relined in 85 (unleaded tank)

Possibly will be removing the tanks—
third summer—Very short on cash, inhouse
theft recently, recovering from the loss—

Arco use to be Mobil —
(across the street)

Send a copy of Site Checks/Site Assessments
" " Guidance Contaminated Soil
MTCA Act

(Done)

-Exxon-

SWRO

UST

LUST
From Todd
Gatty
Co.
Lynn

10/28/92

Capitan T - Johnnie Rector

Solvent Tank from Safety Clean TANK

Please send a copy of the Solvents used here for 3 to 4 years,

Previously owned by Kinneys Plumbing

Talked to Johnnie (MS, Owner) She will send to me a list of the Solvent they use.

XXXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane (LU-11) • Olympia, Washington 98504-8611 • (206) 753-2353

October 12, 1992

Mr. and Mrs. Art Tobias
Lincoln Apartments
435 W. 3rd
Port Angeles, WA 98362-3204

Re: Water Sample Results for Lincoln Apartments

Dear Mr. and Mrs. Tobias:

I received the results from the water samples I collected from Lincoln Apartments at 709 S. Lincoln on August 11, 1992. I apologize for the lateness in getting this information to you. I did not receive the sample results until October 9, 1992.

The volatile organic analysis (VOA), indicate the presents of the following compounds:

COMPOUND	RESULTS	MAXIMUM ALLOWABLE
Acetone	33 ppb	-
Benzene	3,700 ppb	5 ppb
Toluene	280 ppb	40 ppb
Ethylbenzene	390 ppb	30 ppb
Xylenes	970 ppb	20 ppb

The total petroleum hydrocarbons (TPH) for gasoline was 6,500 ppb. The maximum allowable under the Model Toxics Control Act (MTCA) is 1,000 ppb. The gasoline contamination in the water is very high.

I am doing a historical review of the area in order to determine possible sources for the contamination. I will be in Port Angeles October 27 and 28th to obtain background information.

I plan to keep you up to date on any activities planned by Ecology. Please call me at 206 586-5562 if you have any questions.

Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

XXXXXXXXXXXXXX
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
7272 Cleanwater Lane, LU-11 • Olympia, Washington 98504-6811 • (206) 753-2353

October 12, 1992

Mr. Dave Becker
City of Port Angeles
Fire Department
102 E. 5th Street
Port Angeles, WA 98362-3014

Re: Water Sample Results for Lincoln Apartments

Dear Mr. Becker:

I received the results from the water samples I collected from Lincoln Apartments at 709 S. Lincoln on August 11, 1992. I did not receive the sample results until October 9, 1992.

The volatile organic analysis (VOA), indicate the presents of the following compounds:

COMPOUND	RESULTS	MAXIMUM ALLOWABLE
Acetone	33 ppb	-
Benzene	3,700 ppb	5 ppb
Toluene	280 ppb	40 ppb
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I am doing a historical review of the area in order to determine possible sources for the contamination. I will be in Port Angeles October 27 and 28th to obtain background information.

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Sincerely,

Patricia L. Martin

Patricia L. Martin
Toxics Cleanup Program
Southwest Regional Office

1102 Tacoma Ave S.
Library 2356 Tacoma Ave So. Oct 9, 92

- Sandborn mapps
- SCS for Clallam Co.

(1) Sandborn maps -
April 1891

*Oct 1934 - 1949

(2) SCS for Clallam County
- The majority of the land beneath the main city of Port Angeles is #14 - Clallam - Hoypus gravelly sandy loam 0 to 15 % Slope -

- The ravenies such as Peabody is #44 Neilton very gravelly loamy sand 30 to 70 % Slope -

State of Washington Department of Ecology
Manchester Environmental Laboratory
7411 Beach Dr. East Port Orchard WA. 98366

Data Review
October 7, 1992

Project:	Lincoln Apartments	
Samples:	338015 338016 338017	
Laboratory:	Laucks Testing Laboratories	9208892
By:	Karin Feddersen KF	
Through	Stuart Magoon	

Case Summary

These samples were received at the Manchester Environmental Laboratory on August 11, 1992, and transported to Laucks Testing Laboratories on August 14, 1992 for volatiles, BTEX, WTPH-G, and WTPH-D analysis.

These analyses were reviewed for qualitative and quantitative accuracy, validity, and usefulness.

There is no need to assimilate the "dilution factor" or "sample wt/vol" into the final values reported; these calculations have already been figured into the reported values.

DATA QUALIFIER DEFINITIONS

U - The analyte was not detected at or above the reported result.

UJ - The analyte was not detected at or above the reported estimated result.

J - The associated numerical result is an estimated quantity.

NJ - There is evidence that the analyte is present. The associated numerical result is an estimate.

Volatiles

Holding Times:

Sample 338015 was analyzed within the SW-846 recommended holding time.

Method Blank:

No target analytes were detected in the method blank.

GC/MS Tuning and Calibration:

Calibration against Bromofluorobenzene (BFB) is acceptable for the initial calibration, continuing calibration and all associated sample analyses.

Initial Calibration:

The initial calibration met the minimum response criteria of greater than 0.05 for the average relative response. The % Relative Standard Deviation was within the maximum of 30%.

Continuing Calibration:

The average relative response factors for all the target analytes were all above the minimums, and the percent deviation between the initial and continuing calibration standards was within the maximum of 25%.

Surrogates:

All surrogate recoveries for this sample and the associated method blank are reasonable, acceptable, and within QC limits.

Sample results:

As explained in Laucks' narrative, the sample was diluted due to the high concentration of benzene in the initial injection. Therefore, the results from all compounds marked with "E" in the undiluted sample should be ignored, and the values from the diluted analysisshould be used for these analytes. This data is acceptable for use without the need for additional data qualifiers.

BETX

Holding Times:

Sample 338016 was analyzed within the SW-846 recommended holding time.

Method Blank:

A trace amount of toluene was detected in the method blank. Toluene was detected in the sample at a concentration more than 10 times that of the blank. Therefore, toluene is most likely native to the sample, and the contribution of toluene due to laboratory contamination is negligible. No other target analytes were detected in the method blank.

Matrix Spikes (MS/MSD):

Matrix spike recovery and precision data are reasonable, acceptable, and within advisory QC limits.

Surrogates:

Surrogate recoveries for this sample and the associated method blank are reasonable, acceptable, and within method QC limits of 50 to 150 % , as well as Laucks in-house QC limits shown in the table below.

Surrogate:	4-Bromofluorobenzene	1,2,3-Trichlorobenzene
QC limits in percent:	78 - 119	61 - 145

Sample Data:

This data is acceptable for use without the need for additional data qualifiers.

WTPH- G

Holding Times:

Sample 338016 was analyzed within the SW-846 recommended holding time.

Method Blank:

No gasoline was detected in the method blank.

Surrogates:

Surrogate recoveries for this sample, the duplicate, and the associated method blank are reasonable, acceptable, and within WTPH method QC limits of 50 to 150 % .

Calibration:

The continuing calibration standard was out of compliance. A second calibration standard was run after the samples. The gasoline result was determined using the new calibration standard. Due to the uncertainty of the calibration standard, the result has been qualified with a "J" to denote an estimated value.

Sample Data:

This data is acceptable for use as amended.

WTPH-D

Holding Times:

Sample 338017 was analyzed within the SW-846 recommended holding time.

Method Blank:

No diesel was detected in the method blank.

Surrogates:

Surrogate recoveries for this sample, the duplicate, and the associated method blank are reasonable, acceptable, and within WTPH method QC limits of 50 to 150 %.

Sample Data:

This data is acceptable for use without the need for additional data qualifiers.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

TO: Washington State Department of Ecology
Project Name: Lincoln Apt.
Laboratory No.: 9208892
Date of this report: September 16, 1992

SAMPLE RECEIPT, IDENTIFICATION, AND GENERAL COMMENTS:

Sample Receipt and Identification:

The samples submitted under the laboratory number(s) indicated above were identified and analyzed as tabulated below. The samples were collected and received on the dates noted on the enclosed chain-of-custody copies, Attachment A.

Client Sample Identification	Laucks Sample Identification	Testing Analytical Request
338015	9208892-01	VOA
338016	9208892-02	BTEX/WTPHG
338017	9208892-03	WTPHD

Analytical Request Key:

VOA = Volatile Organics (Method 8240)
BTEX = Benzene, Toluene, Ethylbenzene, and Xylene (Method 8020)
WTPHG = Washington Total Petroleum Hydrocarbons - Gas
WTPHD = Washington Total Petroleum Hydrocarbons - Diesel

Sample Identification on Forms:

When completing forms created through the CLP software, every attempt is made to use both your sample IDs as well as the laboratory sample IDs. The forms have varied default sizes to their sample identification fields, and are not amenable to alteration or editing. When it is not possible to use your complete sample ID because of field length limitations, Laucks will usually do one of two things: 1) use as much of your ID as will fit, beginning from the RIGHT hand side of the sample ID number; or 2) select some sub-set of your sample identifier if it is clearly a discrete number. In addition, ALL forms will contain our sample IDs, which can be cross-referenced from the table above.

Many of the CLP-package forms include the words "EPA Sample No.," or some variation, which again cannot be edited. Where a reference is made to the EPA, you may take this to mean more generally, "the client." These data are not part of an actual EPA case.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

GENERAL REMARKS ON ORGANIC ANALYSES:

The following comments describe general analysis conditions. For remarks specific to the samples reported in this case, see "SPECIFIC REMARKS ON ORGANIC ANALYSES."

All GC/MS Fractions:

The computerized printout for sample analysis may tabulate values for target analytes that are not reported on the relevant Form I. In that case, we have manually searched the mass spectral data and have eliminated the compound(s) as reportable based on this search.

The data system that is used to perform the searches for Tentatively Identified Compounds (TICs) is set with a threshold of 5% fit for TICs. In some cases, fewer than three compounds in the NBS library pass this threshold setting. When this occurs there will not be spectra and fits for the associated unknown compound, as called out on the first page of the data system report and reflected in the spectra that are drawn (i.e., there will be less than three best-fit spectra). This generally has one of two meanings. First, that there are no compounds passing the fit criteria; or, second, that one or more compounds pass the fit criteria. It is our opinion that the threshold setting for fit is set low enough that all reasonable and possible "hits" will be reported (up to a maximum of three).

Volatile Fraction:

All volatile analyses were performed using a DB-624 megabore capillary. Listed below are the correct elution order and the internal standard with which each compound is associated.

Bromochloromethane (IS)	1,4-Difluorobenzene (IS)	d5-Chlorobenzene (IS)
Chloromethane	Benzene	Cis-1,3-Dichloropropene
Vinyl Chloride	1,2-Dichloroethane	4-Methyl-2-Pentanone
Bromomethane	Trichloroethene	d8-Toluene (SURR)
Chloroethane	1,2-Dichloropropane	Toluene
1,1-Dichloroethene	Bromodichloromethane	Trans-1,3-Dichloropropene
Acetone		1,1,2-Trichloroethane
Carbon Disulfide		Tetrachloroethene
Methylene Chloride		2-Hexanone
Trans-1,2-Dichloroethene		Dibromochloromethane
1,1-Dichloroethane		Chlorobenzene
Cis-1,2-Dichloroethene		Ethylbenzene
2-Butanone		M,P-Xylene
Chloroform		O-Xylene
1,1,1-Trichloroethane		Styrene
Carbon Tetrachloride		Bromoform
d4-1,2-Dichloroethane (SURR)		Bromofluorobenzene (SURR)
		1,1,2,2-Tetrachloroethane

The analytes listed above were assigned to their respective internal standards on the basis of relative retention time (RRT).

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

Separation of cis- and trans- dichloroethylene isomers is achievable on a DB-624 megabore capillary column. When these isomers are found in a sample, they are reported as total-1,2-dichloroethylene.

Due to the tight band in which the volatile compounds are delivered onto the column, separation of the gases can be achieved without the use of subambient temperatures. It has been noted that the purge and trap, the condition of the trap, and the type of column all play important roles on the affect of the early eluting compounds. With an initial temperature of 30 degrees Celsius, not only can the gases be separated by the ElCP, but also the response factors of the gases are well above the required minimum response factor of 0.1 (for bromomethane and vinyl chloride.) This is demonstrated on Form 6V, where the average response factors vary from 0.4 to 1.0. The reproducibility of the gases is exemplary as shown by the low relative standard deviations on Form 6V and the low percent differences on Form 7V. Bromoform has also been demonstrated to yield response factors well above the minimum RRF of 0.1, as shown on Form 6V, where the average response is greater than 0.6. Given these results, subambient temperatures have not been employed in the volatile analyses.

SPECIFIC REMARKS ON ORGANIC ANALYSES:

Holding Time Compliance:

Following the Contract Laboratory Program (CLP) model, Laucks calculates holding time compliance for organic determinations based on the first injection and/or analysis of an extract or sample. Subsequent analyses (for instance, for the purpose of dilution) are not tabulated.

Volatile Organic Compounds:

The holding time is 10 days calculated from Verified Time of Sample Receipt (VTSR) under the CLP model or 14 days from date of collection in both soil and water samples. Sample 338015 was analyzed within holding time.

BTEX:

The holding time is 14 days calculated from date of collection. Sample 338016 was analyzed within holding time.

WTPH-G:

The holding time to extraction is 7 days in water and 14 days in soil calculated from date of collection. The holding time from extraction to analysis is 14 days in water and 21 days in soil. Sample 338016 was analyzed within holding time.

WTPH-D:

The holding time to extraction is 7 days in water and 14 days in soil calculated from date of collection. The holding time from extraction to analysis is 30 days. Sample 338017 was extracted and analyzed within holding time.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

VOA Fraction

The high level of benzene detected in sample 388015 saturated the detector, causing a split peak in benzene and a truncated peak for surrogate 1,2-dichloroethane-d4. (Benzene and 1,2-dichloroethane-d4 elute within 0.06 minutes). Due to the truncated peak of the surrogate 1,2-dichoroethane-d4, recovery was 54 percent, which is outside the lower control limit. The sample was diluted 1:25 and reanalyzed, resulting in recovery of all surrogates within control limits.

The concentration detected for benzene in the original analysis was not accurate because of the split peak. Therefore, the amount detected for benzene in the dilution reflects a more accurate quantitation of this compound.

Both analyses have been submitted.

BTEX:

Sample results for 338016 were confirmed by second column confirmation.

Toluene concentration in the method blank was above the Sample Detection Limit (SDL).

WTPH-G:

The opening calibration (C0826WTG.WC1) did not fit the linear regression curve. Therefore, C0826WTG.WC3 was used.

C0826WTG.WC1 exhibited an out-of-control recovery because of carryover from a high concentration sample.

WTPH-D:

No data were acquired for closing standard C0817TPD.WE2, so opening standard C0818TPD.WE1 from the following sequence was used to close the run.

LAUCKS TESTING LABORATORIES
940 S. Harney
Seattle, WA 98108

RELEASE OF DATA

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette (if requested) has been authorized by the Laboratory Manager or his designee, as verified by the following signatures.

Respectfully submitted,

Barbara Azzato
Operations Manager
9-16-92
(date)

Mike Nelson
Chief Chemist
9-16-92
(date)

HOW TO CONTACT US:

All Laucks Testing Laboratories staff members can be reached at the same telephone and facsimile numbers: (206) 767-5060 by phone, (206) 767-5063 by FAX.

	Primary Contact	Alternate
Technical	Mike Nelson	Barbara Azzato
Administrative/billing	Barbara Azzato	Charlene Nix
Package	Charlene Nix	Kari Lotan

REQUESTS FOR DUPLICATE COPIES:

This packet has been checked for accuracy. All pages are present and in sequential order. Please see Attachment B for a detailed record.

In the event that duplicate data copies are needed, Laucks will accommodate your request at a fee of twenty-five cents ($0.25) per copy, plus shipping. If the data are in storage, there will also be a fee for retrieval.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

DOE SAMPLE NO.

338015

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

Matrix: (soil/water) WATER Lab Sample ID: 08892-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: >OH17D

Level: (low/med) LOW Date Received: 08/14/92

% Moisture: not dec. Date Analyzed: 08/17/92

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	3	U
75-09-2	Methylene Chloride	1	U
67-64-1	Acetone	33	
75-15-0	Carbon Disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	3	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	3	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	3	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	490	E
10061-02-6	trans-1,3-Dichloropropene	3	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
591-78-6	2-Hexanone	3	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U
108-88-3	Toluene	360	E
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	470	E
100-42-5	Styrene	1	U
1330-20-7	Xylene (total)	1100	E

E - estimated value (outside calibration range) KF

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

DOE SAMPLE NO.: 338015DL

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

Matrix: (soil/water) WATER Lab Sample ID: 08892-01DL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: >0H17I

Level: (low/med) LOW Date Received: 08/14/92

% Moisture: not dec. Date Analyzed: 08/17/92

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 25.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	25	U
74-83-9	Bromomethane	25	U
75-01-4	Vinyl Chloride	25	U
75-00-3	Chloroethane	75	U
75-09-2	Methylene Chloride	25	U
67-64-1	Acetone	75	U
75-15-0	Carbon Disulfide	25	U
75-35-4	1,1-Dichloroethene	25	U
75-34-3	1,1-Dichloroethane	25	U
540-59-0	1,2-Dichloroethene (total)	25	U
67-66-3	Chloroform	25	U
107-06-2	1,2-Dichloroethane	25	U
78-93-3	2-Butanone	75	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon Tetrachloride	25	U
75-27-4	Bromodichloromethane	25	U
78-87-5	1,2-Dichloropropane	25	U
10061-01-5	cis-1,3-Dichloropropene	75	U
79-01-6	Trichloroethene	25	U
124-48-1	Dibromochloromethane	75	U
79-00-5	1,1,2-Trichloroethane	25	U
71-43-2	Benzene	3900	D
10061-02-6	trans-1,3-Dichloropropene	75	U
75-25-2	Bromoform	25	U
108-10-1	4-Methyl-2-Pentanone	75	U
591-78-6	2-Hexanone	75	U
127-18-4	Tetrachloroethene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	75	U
108-88-3	Toluene	280	D
108-90-7	Chlorobenzene	75	U
100-41-4	Ethylbenzene	390	D
100-42-5	Styrene	25	U
1330-20-7	Xylene (total)	970	D

D- result determined from diluted sample. dilution has been accounted for in final value. KF

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

	DOE SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
01	VBLK01	104	104	101		0
02	338015	106	108	54 *		1
03	338015DL	102	103	101		0
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

4A

VOLATILE METHOD BLANK SUMMARY

DOE SAMPLE NO.: VBLK01

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

Lab File ID: >OH17C Lab Sample ID: B0817MV0W01

Date Analyzed: 08/17/92 Time Analyzed: 1327

GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: 59700

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	DOE SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	338015	08892-01	>OH17D	1414
02	338015DL	08892-01DL	>OH17I	1739
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Method Blank KF
VBLK01

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

Matrix: (soil/water) WATER Lab Sample ID: B0817MV0W01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: >0H17C

Level: (low/med) LOW Date Received: 08/14/92

% Moisture: not dec. Date Analyzed: 08/17/92

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	1	U
74-83-9	Bromomethane	1	U
75-01-4	Vinyl Chloride	1	U
75-00-3	Chloroethane	3	U
75-09-2	Methylene Chloride	1	U
67-64-1	Acetone	3	U
75-15-0	Carbon Disulfide	1	U
75-35-4	1,1-Dichloroethene	1	U
75-34-3	1,1-Dichloroethane	1	U
540-59-0	1,2-Dichloroethene (total)	1	U
67-66-3	Chloroform	1	U
107-06-2	1,2-Dichloroethane	1	U
78-93-3	2-Butanone	3	U
71-55-6	1,1,1-Trichloroethane	1	U
56-23-5	Carbon Tetrachloride	1	U
75-27-4	Bromodichloromethane	1	U
78-87-5	1,2-Dichloropropane	1	U
10061-01-5	cis-1,3-Dichloropropene	3	U
79-01-6	Trichloroethene	1	U
124-48-1	Dibromochloromethane	3	U
79-00-5	1,1,2-Trichloroethane	1	U
71-43-2	Benzene	1	U
10061-02-6	trans-1,3-Dichloropropene	3	U
75-25-2	Bromoform	1	U
108-10-1	4-Methyl-2-Pentanone	3	U
591-78-6	2-Hexanone	3	U
127-18-4	Tetrachloroethene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	3	U
108-88-3	Toluene	1	U
108-90-7	Chlorobenzene	3	U
100-41-4	Ethylbenzene	1	U
100-42-5	Styrene	1	U
1330-20-7	Xylene (total)	1	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DOE SAMPLE NO.

method Blank KF
VBLK01

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: 38015

Matrix: (soil/water) WATER Lab Sample ID: B0817MV0W01

Sample wt/vol: 5.00 (g/ml) ML Lab File ID: >0H17C

Level: (low/med) LOW Date Received: 08/14/92

% Moisture: not dec. Date Analyzed: 08/17/92

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC 3/90

Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID : 9208892-02DL
Client ID : 338016

Matrix : WATER
Reporting Units: ug/L

Sample Size : 0.1 ml
Final Ext Vol : 10.0
Percent Moist : 100

Collection Date: N/A
Date Received : 08/14/92
Ext Started : 08/21/92
Ext Completed : 08/21/92
Date Analyzed : 08/21/92
Date Confirmed : 08/27/92
Dil Factor : 100

CAS No.	Compound	Result	SDL
71432	Benzene	3700	20
108883	Toluene	290	20
108907	Chlorobenzene	*	
100414	Ethylbenzene	390	20
1330207	m+p-xylene	800	20
1330207	o-xylene	240	20
1330207	1,3-Dichlorobenzene	*	
106467	1,4-Dichlorobenzene	*	
95501	1,2-Dichlorobenzene	*	

* = SEE RESULTS FROM UNDILUTED SAMPLE

SDL = Sample Detection Limit

Form OADS GC

Multi-Component Blanks Database Report

Lab Name : LAUCKS TESTING LABS

Lab Sample ID : B0821GVO.WB1 Method Blank 1 SF

Test Code: 8020_W
Matrix : WATER

Description : Volatile aromatics in water

(Database Reference: B082192_GVO_WK2)

Analyte Name	Sample Conc	Flag	Control Limit
Benzene	0.20	U	2.0
Chlorobenzene	0.20	U	2.0
1,4-Dichlorobenzene	0.30	U	3.0
1,3-Dichlorobenzene	0.40	U	4.0
1,2-Dichlorobenzene	0.40	U	4.0
Ethyl Benzene	0.20	U	2.0
Toluene	0.22	J	10
m,p-Xylene	0.20	U	2.0
o-Xylene	0.20	U	2.0
Total Xylenes	0.20	U	2.0

Comments

Toluene was above the SDL.

* = Value exceeded control limit.

Form MXBLANK-1

Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID : 9208892-02
Client ID : 338016

Matrix : WATER
Reporting Units: mg/L
Sample Size : ~~2.0~~ 0.2 KF ml
Final Ext Vol : 2.0
Percent Moist : 100

Collection Date: N/A
Date Received : 08/14/92
Ext Started : 08/26/92
Ext Completed : 08/26/92
Date Analyzed : 08/26/92
Date Confirmed :
Dil Factor : 10.0

CAS No.	Compound	Result	SDL
	Gasoline	6.5J Dilution KF	2.5

6,500 ppb

SDL = Sample Detection Limit

Form OADS GC

Surrogate Recovery Summary Report

Lab Name: LAUCKS TESTING LABS

BTEX

Matrix: WATER

Lab Sample ID	Client Sample ID	Rec (1)	Rec (2)	Rec (3)	Rec (4)
B082192GVOWK2	Method Blank	97		94	
9208892-02	338016	101		102	

Surrogate Recovery Control Limits

	Compound	LCL	UCL
1	4-Bromofluorobenzene	78	119
2			
3	1,2,3-Trichlorobenzene	61	145
4			

* = values outside of recovery limits
D = surrogate diluted out
LCL = Lower Control Limit
UCL = Upper Control Limit

FORM SURR GC

MS/MSD Report

Lab Name : LAUCKS TESTING LABS

Client ID : MW-1 Lab ID : 9208554-01

Matrix : WATER

Description : Purgeable Aromatic Compounds Units : UG/L

(Database Reference: K081992_GVOWk1)

Matrix Spike Data					
Analyte	Spike Added	Sample Found	MS Found	MS Rec	Recovery Limits
Benzene	40.000	0	41.060	103	65 112
Toluene	40.000	0	40.985	102	60 121
Chlorobenzene	40.000	0	40.974	102	20 160
Ethylbenzene	40.000	0	41.041	103	71 110
m+p-Xylene	40.000	0	41.178	103	81 106
o-Xylene	20.000	0	20.665	103	80 106
1,3-Dichlorobenzene	20.000	0	20.685	103	20 160
1,4-Dichlorobenzene	20.000	0	20.820	104	20 160
1,2-Dichlorobenzene	20.000	0	20.871	104	20 160

Matrix Spike Duplicate Data					Control Limits	
Analyte	Spike Added	MSD Found	MSD Rec	RPD	Recov	RPD
Benzene	40.000	39.788	100	3	65 112	16
Toluene	40.000	39.852	100	2	60 121	18
Chlorobenzene	40.000	39.190	98	4	20 160	50
Ethylbenzene	40.000	39.707	99	4	71 110	14
m+p-Xylene	40.000	39.710	99	4	81 106	16
o-Xylene	20.000	19.817	99	4	80 106	15
1,3-Dichlorobenzene	20.000	19.575	98	5	20 160	50
1,4-Dichlorobenzene	20.000	19.452	97	7	20 160	50
1,2-Dichlorobenzene	20.000	19.210	96	8	20 160	50

Comments

* = Recovery or RPD exceeded control limit

Form MS/MSD-1

Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID : METHOD BLANK H2O
Client ID :

Matrix : WATER
Reporting Units: mg/L

Sample Size : 2.0 ml
Final Ext Vol : 2.0
Percent Moist : 100

Collection Date:
Date Received :
Ext Started : 08/26/92
Ext Completed : 08/26/92
Date Analyzed : 08/26/92
Date Confirmed : 08/26/92
Dil Factor : 1

CAS No.	Compound	Result	SDL
	Gasoline	0.25 U	0.25

SDL = Sample Detection Limit

Form OADS GC

Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID	: 9208892-03	Collection Date:	N/A
Client ID	: 338017	Date Received	: 08/14/92
		Ext Started	: 08/15/92
Matrix	: WATER	Ext Completed	: 08/15/92
Reporting Units:	mg/L	Date Analyzed	: 08/16/92
		Date Confirmed	: N/A
Sample Size	: 400 ml	Dil Factor	: 1
Final Ext Vol	: 2.0		
Percent Moist	: 100		

CAS No.	Compound	Result	SDL
	Diesel	0.25 U	0.25

Diesel

SDL = Sample Detection Limit

Form OADS GC

Surrogate Recovery Summary Report

Lab Name: LAUCKS TESTING LABS

WTPH-G KC

Matrix: WATER

Lab Sample ID	Client Sample ID	Rec (1)	Rec (2)	Rec (3)	Rec (4)
M.BLANK H2O		97	103		
9208892-02	338016	94	100		

Surrogate Recovery Control Limits

	Compound	LCL	UCL
1	Bromofluorobenzene	50	150
2	Trifluorotoluene	50	150
3	1,2,3-Trichlorobenzene	50	150
4			

* = values outside of recovery limits
D = surrogate diluted out
LCL = Lower Control Limit
UCL = Upper Control Limit

FORM SURR GC

Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID : M.BLANK 8892
Client ID :

Matrix : WATER
Reporting Units: mg/L

Sample Size : 400 ml
Final Ext Vol : 2.0
Percent Moist : 100

Collection Date: N/A
Date Received : N/A
Ext Started : 08/15/92
Ext Completed : 08/15/92
Date Analyzed : 08/16/92
Date Confirmed : N/A
Dil Factor : 1

CAS No.	Compound	Result	SDL
	Diesel	0.25 U	0.25

SDL = Sample Detection Limit

Form OADS GC

Surrogate Recovery Summary Report

Lab Name: LAUCKS TESTING LABS

WTPH-D KF

Matrix: WATER

Lab Sample ID	Client Sample ID	Rec (1)	Rec (2)	Rec (3)	Rec (4)
9208892-03	338017	80	87		
M.BLANK8892		91	97		

Surrogate Recovery Control Limits

	Compound	LCL	UCL
1	2-Fluorobiphenyl	50	150
2	p-Terphenyl	50	150
3			
4			

* = values outside of recovery limits
D = surrogate diluted out
LCL = Lower Control Limit
UCL = Upper Control Limit

Oct. 6, 92 Lincoln Apt JSK54

met w/ Mohsin to discuss options for investigating the source of contamination & potential PLPs -

Plans

NOTES
FIELD
NOTES

Historical review -

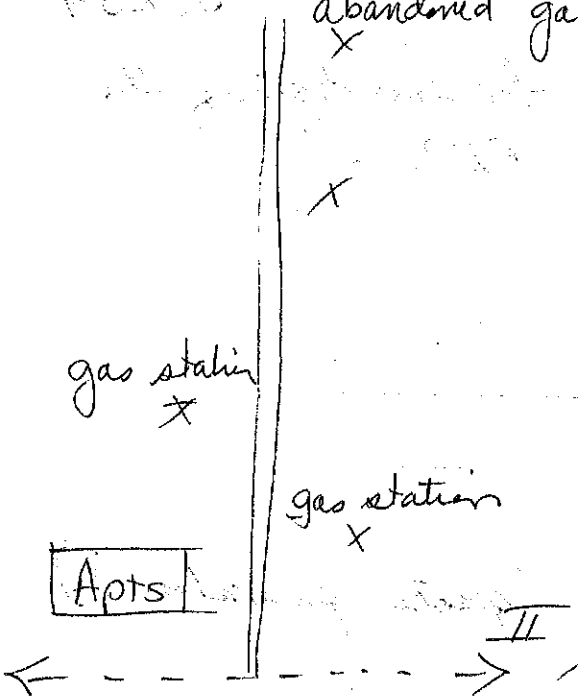
Library
UST/LUST database
Solid & Hazardous Waste (waste generators?)
etc.
well logs - soil types

Types of businesses

Gas stations
auto repair
manufacturers - fiberglass
Painting
Printing
Labs - legal & illegal.

Site view -

Library
canvas the area -
decide on potential location for sampling -

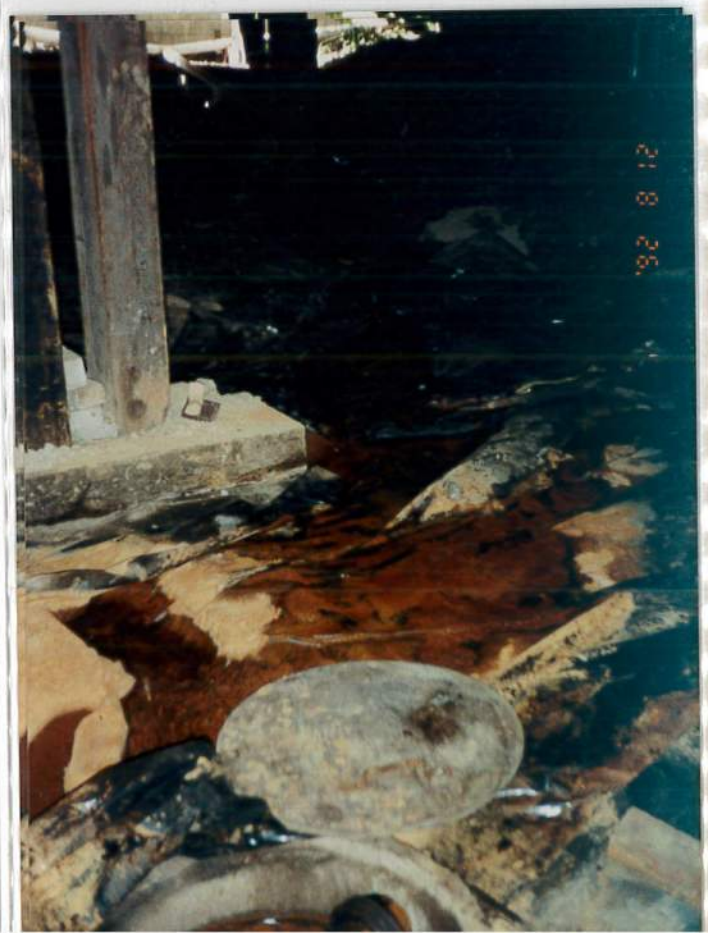


I Locate possible sources
- do soil gas survey down-gradient
- take discrete soil & water samples

II may want to determine lateral extent of the plume

Budget would be for:
- soil gas survey (travel, per diems)
- discrete soil + samples -
- preparing a report -

may want to look at examples presented by Lynn McCullough



2

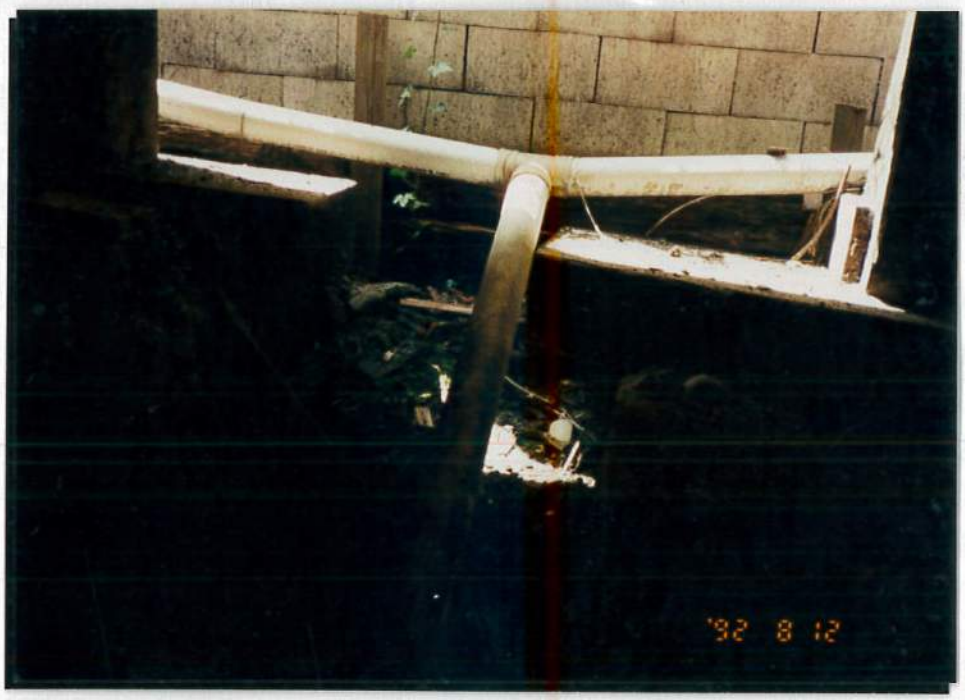
NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 2
COMMENT: Sump in the basement

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 1
COMMENT: Basement

1

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 3
COMMENT: Sump in the basement

3


'92 8 12


'92 8 26

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 5
COMMENT: Basement - White PVC leads to the sump

5

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 6
COMMENT: Basement - White PVC leads to the sump

6

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 7
COMMENT: Exit drain coming from the sump

7

10

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 10

View of the back of the apartment Bldg- up gradient.

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 9

View - out of the back of the apt. building looking up gradient

9

NAME OF FACILITY: Lincohn Apts
CITY: Port Angeles COUNTY: Clallam
INSPECTOR: P. L. Martin
DATE: 8/11/92 PHOTO #: 8

View - out of the back of the apartment building looking up- gradient

8

State of Washington Department of Ecology

SAMPLE DATA & ANALYSIS REQUIRED

$ 731

Page 1 of 1

Program Code 5 5 K 54 2

Project Code Patricia L. Martin 586-5562

Project/Name Lincoln Apt

☐ Enforcement/Custody ☐ Class II

☐ Possible Toxic/Hazardous Notes

Date Yr	Date Mo	Date Da	Time Hr	Time Mn	Field Station Identification	Lab Sample Number Wk	Lab Sample Number Seq	Matrix Code	Source Code	No. of Containers	Volatile Organics	WTPH-G	WTPH-D	BTEX
92	08	11	1	00	Sump		15	10		2	X			
92	08	11	1	00	Sump	33	16			2		X		X
92	08	11	1	00	Sump	33	17			1			X	

General Chemistry: Turbidity, pH, Conductivity, Total Hardness, Chloride, TS, TSS, TNVS, TNVSS, TSS, % Solids, Nutrients (4), Ammonia, Nitrate-Nitrite, Total Phosphorous, Ortho-Phosphate, BOD/5 Day, COD Chem Oxy Demand

Biology: Fecal Coliform Bacteria, Total Coliform Bacteria, Enterococcus, Fish Bioassay

Organic Chem.: Base/Neutrals/Acids, Volatile Organics, Pesticides/PCB's, PCB's Only, Purgeable Halocarbons, Herbicides, Hydrocarbon Analysis, Phenolics (AAP), Oil & Grease, WTPH-G, WTPH-D, BTEX

METALS: P.P. Metals, EP Tox Metals, Specific List: Total, ☐ Recoverable, ☐ Totals, ☐ Dissolved

Project Officer P.L. Martin

Sampler(s) 338015 & 338016 preserved with HCl

Recorder P.L. Martin

Date 8/11/92

Chain Of Custody Record

Relinquished By:	Received By:	Yr	Mo	Da	Hr	Mn	Seal I.D.	Condition of Seals	Comments
P. Martin		92	08	11	01	00	0010092		
	Will White	92	08	12	07	00	0010090	Intact	
Will White	[illegible]	92	08	1[illegible]	09	50	0010092		Couldn't remove lid w/o breaking; sealed w/ lock tape

Ecy 040-115 Rev. 7/87

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

★ Source Codes and Descriptions ★

Code	Description
00	Unspecified Source
01	Unknown Liquid Media (Drum/Tank)
02	Unknown Liquid Media (Spill Area)
03	Unknown Liquid Media (Waste Pond)
10	Water (General)
12	Ambient Stream/River
13	Lake/Reservoir
14	Estuary/Ocean
15	Spring/Seepage
16	Rain
17	Surface Runoff/Pond (General)
18	Irrigation Canal/Return Flow
20	Well (General)
21	Well (Industrial/Agricultural)
22	Well (Drinking Water Supply)
23	Well (Test/Observation)
24	Drinking Water Intake
25	Drinking Water (At Tap)
30	Effluent Wastewater (General)
31	Municipal Effluent
32	Municipal Inplant Waters
33	Sewage Runoff/Leachate
34	Industrial Effluent
35	Industrial Inplant Waters
36	Industrial Surface Runoff/Pond
37	Industrial Waste Pond
38	Landfill Runoff/Pond/Leachate
40	Sediment (General)
42	Bottom Sediment or Deposit
44	Sludge (General)
45	Sludge (Waste Pond)
46	Sludge (Drum/Tank)
48	Soil (General)
49	Soil (Spill/Contaminated Area)
50	Bore Hole Material

Code	Description
60	Air (General)
61	Ambient Air
62	Source or Effluent Air
63	Industrial or Workroom Air
64	Hi-Vol Filter
70	Tissue (General)
71	Fish Tissue
72	Shellfish Tissue
73	Bird Tissue
74	Mammal Tissue
75	Macroinvertebrate
76	Algae
77	Periphyton
78	Plant/Vegetation
80	Oil/Solvent (General)
81	Oil (Transformer/Capacitor)
82	Oil/Solvent (Drum/Tank)
83	Oil/Solvent (Spill Area)
84	Oil/Solvent (Waste Pond)
90	Commercial Product Formulation
95	Well Drill Water
96	Well Drill Mud
97	Well Sealing Material
98	Gravel Pack Material

Matrix Codes

10	Water-Total
11	Water-Dissolved
40	Sediment/Soil
45	Semi-Solid/Sludge
46	Sediment for EP Toxicity
70	Tissue
80	Oil/Solvent
00	Other

WASHINGTON STATE DEPARTMENT OF ECOLOGY

TELEPHONE RECORD

Date 8-5-92

Time ☐ a.m. ☑ p.m.

☐ CALLED BY
☑ CALLED

Mr./Ms. Lincoln Apt.

Address Port Angeles

Telephone

Representing (1) Called City of Port Angeles Fire Dept. - notified them I was going to be taking water samples from beneath Lincoln Apt. to see if there was still a problem there - I will send them copies of any testing results -

Project

Send to:
Bruce Becker, ~~ENVIRONMENTAL~~ C.ty of Port Angeles FIRE Dept.
102 E. 5th Street
Port Angeles, WA -

Discussed

- They gave me the name & number of the Owner of Lincoln Apt.
Art & Opal Tobias 457-4818

(2) Called the Tobias Residence - Talked to OPAL TOBIAS - Let her know I was going to be there & take water samples next. Tues. NO problem - Call them when I get into town.

Signed

ECY 010-46(b)

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

January 8, 1992

TO: UST Unit Supervisors

FROM: Mary Ellen McKain

SUBJECT: UST Enforcement Training

The UST Enforcement training is scheduled for January 27, from 8:30 until 4:00. It will be held in the Attorney General's conference room located at 670 Woodland Square Loop SE in Lacey (please see the enclosed map). Someone from headquarters will meet you on the first floor, outside the elevator in order to help you find the conference room. Enclosed is a draft schedule of the training.

As you can see from the schedule, we have a very busy day planned. In order to cover all the material and leave time for work sessions, please have all staff who plan to attend review the enclosed documents. These documents consist of policies related to enforcement, enforcement guidelines, enforcement boilerplate, penalty guidelines, penalty matrix, and penalty worksheets. Careful review of these documents is especially important for any LUST staff who plan to attend (I am assuming they are not as familiar with the UST program as your UST staff).

You will note that in the afternoon Dick Walker will train staff in the new field citation program. No one will be permitted to write citations until he or she has attended this training.

At the end of the day attendees will be asked to evaluate the training and to offer suggestions for future training sessions. It may be desirable to offer follow-up enforcement training either at headquarters or in each region.

I will be out of the office until January 19. If you have questions please call Dick Walker. Also, please let me know how many of your staff will attend the training on Jan. 27. You can either let Dick know or you can leave a message on my phone mail.

MEM:mem
Enclosures

cc: TCP Section Managers
Christina Beusch, AG's Office
Robert Cuttler, EPA
Doug Mosich, Enforcement Unit
Nedda Turner, TPCHD

1991

June 25, 1991

To: Files

From: Tom Todd TT

Subject: **Sampling at Lincoln Square Apartments, Port Angeles, Clallam County**

Today, April 25, 1991, I sampled the manhole underneath (in the sub-basement) the Lincoln Apartments in Port Angeles. I collected 4 VOA vials. I had requested that they be analysed for WTPH-G and BTEX by 8020. The manhole was covered with three layers of black plactic upon my arrival. I uncovered the manhole and then removed the wooden lid. I observed a slight sheen on the water surface. Also in the water was a layer of sediment at the bottom of the manhole. The amount of non-cloudy water was only a couple of inches thick. The sediment looked as if it might be an anaerobic bacterial colony. It was rust colored and of a loose consistency. There was an odor of pesticide throughout the garage floor and in the lower level (sub-basement).

The samples remained in my custody until they were secured in the SWRO Cooler. I placed the sample bottles on ice while they were in transit.

State of Washington Department of Ecology
Manchester Environmental Laboratory
7411 Beach Dr. East Port Orchard WA. 98366

Data Review
June 15, 1991

Project: **Lincoln Square Apts**

Sample: 177921

Laboratory: Pacific Northwest Environmental Laboratory Inc. 3114

By: Stuart Magoon

Case Summary

These analyses were reviewed for qualitative and quantitative accuracy, validity, and usefulness. Specific methods used and problems incurred during the analysis are detailed in the Case Narrative and will not be addressed here. Specific problems with the QC will be noted and referenced to the Case Narrative.

There is no need to assimilate the "dilution factor" or "sample wt/vol" into the final values reported; these calculations have already been figured into the reported values.

DATA QUALIFIER DEFINITIONS

U - The material was not detected at or above the associated level.

J - The associated numerical value is an estimated quantity.

D - The associated numerical value was from an analysis that was performed at a secondary dilution.

E - The compound exceeded the calibration range and the value is considered an estimate.

BETX

Sample	Date Collect	Date Extd	Date Anlz	#Days collect to ext	#Days Collect to anal
177921	4/25	NA	5/6	NA	11 of 14
177921D	4/25	NA	5/8	NA	13 of 14

This sample was analyzed within the SW-846 recommended holding time. The "D" suffix in an abbreviation for dilution.

Surrogates:

Surrogate recoveries for this sample, and the associated method blanks are reasonable, acceptable, and within QC limits.

Sample Data:

This data is acceptable for use. This sample was re-analyzed at a secondary dilution because the Benzene exceeded the calibration range. Use the value of 5400 ppb for Benzene, reported from the secondary dilution analysis, for the other three analytes (TEX) use the values reported from the first analysis on 5/6/91.

Total Volatile Petroleum Hydrocarbons (TVPH)
as gasoline

Sample	Date Collect	Date Extd	Date Anlz	#Days collect to ext	#Days Collect to anal
177921	4/25	NA	5/6	NA	11 of NE

This sample was analyzed within a reasonable period of time. Fourteen days is the SW-846 recommended holding time limit for volatile compounds.

NE = None Established

Surrogates:

Surrogate recoveries for this sample, and the associated method blank are reasonable, acceptable, and within QC limits.

Sample Data:

This data is acceptable for use.

NATIONAL EXPRESS LABORATORIES, INC.

NATEX

Pacific Northwest Environmental Laboratory, Inc.
3820 159th Avenue, N.E.
Redmond, WA 98052
(206) 885-0083
FAX (206) 867-2214

June 6, 1991

Stuart Magoon
Department of Ecology
7411 Beach Drive East
Port Orchard WA 98366

NARRATIVE FOR PNELI 3114

Enclosed are data summary sheets and supporting documentation for the samples received on May 1, 1991 of the LSA project. The samples were received as follows:

FIELD ID	DOE LATB CLIENT ID	PNELI ID	DATE COLLECTED
MANHOLE	177921	3114-01	05-01-91

Listed below are anomalies and narratives associated with the receipt and/or analysis of these samples.

Sample Receiving

There were no anomalies associated with the receipt of these samples.

Purgeable Aromatics (BTEX) by GC Benzene, Toluene, Ethylbenzene, and Xylene by Method 8020, Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency, SW-846, 3rd Ed., 1986.

Total Petroleum Hydrocarbons as Gasoline by GC Purge and Trap Method 5030 followed by Modified 8015 of Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency, SW-846, 3rd Ed., 1986.

There were no anomalies associated with the preparation and/or analysis of these samples.

Sample 3114-01 required dilution.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Rand G. Jenkins

Enclosures

NatEx Laboratories, Inc.
Pacific Northwest Environmental Laboratory, Inc.

\BTEX

PURGEABLE AROMATICS (BTEX) BY GC

Client Sample ID	177921	177921 D
PNELI Sample ID	3114-01	3114-01D
Sample Matrix	Water	water
Date Sample Received	05-01-91	5/1/91
Date Sample Analyzed	05-06-91	5-8-91
Units of Measure	µg/l	mg/L
dilution	1/100	1/1000

Compounds		
Benzene	6600 ~~5,400~~ E	5400
Toluene	2900 ~~2,600~~	2600
Ethylbenzene	480	1000
Total Xylene	4,600	4600

Surrogate		QC limits
% Fluorobenzene	106 ~~97~~	97 72-111
~~% 4-Bromofluorobenzene~~	~~100~~	

NatEx Laboratories, Inc.
Pacific Northwest Environmental Laboratory, Inc.

\BTEX

PURGEABLE AROMATICS (BTEX) BY GC

Client Sample ID	Method Blank	Method Blank
PNELI Sample ID	3114-MB	3114-MB
Sample Matrix	Water	Water
Date Sample Received	~~05-01-91~~ NA	~~05-01-91~~ NA
Date Sample Analyzed	05-06-91	05-08-91
Units of Measure	µg/ℓ	µg/ℓ

Compounds				
Benzene	0.5	U	0.5	U
Toluene	0.5	U	0.5	U
Ethylbenzene	0.5	U	0.5	U
Total Xylene	1.0	U	1.0	U

Surrogate			QC limits
% Fluorobenzene	98	97	72-111
~~% 4-Bromofluorobenzene~~	~~100~~	~~100~~	

NA = NOT APPLICABLE

NatEx Laboratories, Inc.
Pacific Northwest Environmental Laboratory, Inc.

\TVPH

TPH - GASOLINE RANGE PETROLEUM PRODUCTS BY GC

Client Sample ID	177921
PNELI Sample ID	3114-01
Sample Matrix	Water
Date Sample Received	05-01-91
Date Sample Analyzed	05-06-91
Units of Measure	µg/ℓ

Compounds	
TPH Quantitated as:	
Gasoline	28,000

Surrogate		QC Limits
% Fluorobenzene	101	78 - 113
% 2-Chlorotoluene	90	70 - 126

* Quantitated against the full range of gasoline.

TPH - GASOLINE RANGE PETROLEUM PRODUCTS BY GC

Client Sample ID	Method Blank
PNELI Sample ID	3114-MB
Sample Matrix	Water
Date Sample Received	05-01-91
Date Sample Analyzed	05-08-91
Units of Measure	µg/ℓ

Compounds		
TPH Quantitated as:		
Gasoline	20	U

Surrogate		QC Limits &
% Fluorobenzene	105	78 - 113
% 2-Chlorotoluene	103	70 - 126

* Quantitated against the full range of gasoline.

Neighbors

Baker

■ **Amy Baker**, an eighth grader at Queen of Angels School, served as a legislative page in the Washington state House of Representatives April 22 through 26.

Baker was sponsored by Rep. Jim Hargrove of Hoquiam. She is the daughter of **Margaret** and **Larry Baker** of Port Angeles.

She plays the flute, is a member of the school basketball team and is participating in the school's version of *Tom Sawyer*.

■ Members of the SunLand-Sequim Camera Club can "take their best shot" when they attend the meeting at 7 p.m. Thursday in room 6 of the Sequim Bible Church.

"By best shot, we mean the two best slides and/or prints you have taken," said club president **Scott Wilson**. He added, "Some members interpret this as the best shot in the past year. However, there's no time limit."

A program "Composition, the Key to Perception" by the Photographic Society of America will be shown. Members will vote on the subjects to be featured at next year's meetings.

This is the last meeting before summer hiatus. Meetings will resume in September.

■ The Sequim American Legion Post will host the Royal Canadian Legion Malahat Branch during the Sequim Irrigation Festival.

Department of Washington commander **Gene Foley** will participate as well as the Legion band from Olympia Post. The Sauer Kraut Band from Snohomish is to present a program after the parade.

Following the parade, at 5 p.m., the post will hold a fellowship gavel passing ceremony with the Canadian Legion at the post home followed by

Debbie Ross

The hole thing

A large hole at the Jackpot store on Front Street in Port Angeles was created to install new underground fuel storage tanks Tuesday. Once the new tanks are installed, the old tanks will be removed. Canal Construction operates the shovel.

REQUEST FOR ANALYSIS

LAB USE ONLY
Project Code
Lab Numbers

Approved By: M. White

Request Date: 4-25-91 **Program Code:** J5J10

Requested By: Todd Scan No. 586-4689

Report Data To: Tom Todd

Project Name: Lincoln Square Apts. ☒ Enforcement (Chain of Custody REQUIRED)

Project Location: Port Angeles ☐ Emergency (enclose separately REASONS and Approval by)

Sampling Dates: 4-25-91 Date To Lab: 4-26-91

Sample Pickup Location: Tumwater ☐ Other Matrix (Describe): _____

No. of Sam. Other	Sed	H20	General Chem	No. of Sam. Other	Sed	H20	Gen Chem, Biology	No. of Sam. Other	Sed	H20	Organics & Toxics
			Turbidity				BOD/5 day				Base/Neutral/Acids
			pH				COD				Acid/Neutrals Only
			Conductivity				TOC				Volatile Organics
			Total Alkalinity								Pesticides/PCBs
			Hardness				Nutrients (3)				PCBs Only
			Chloride				Ammonia				Organophosphate Pest.
			Sulfate				Nitrate-Nitrite				Cl PhenoxyAcid Herb.
			Fluoride				Total Phosphorous				Purgeable Halocarbons
			Cyanide				Ortho-Phosphate				PAH
							Fecal Coli Bacteria			X	BTEX by 8020
										X	TPH by WTPH-G
			SOLIDS (4)								Hydrocarbon Analysis
			TSS				PP Metals				Phenolics (AAP)
			TS				EP Tox Metals				Oil & Grease
				Total			Diss	Specified			Ignitability
				Other	Sed	H20	H20	Metals (list)			TOX
											Bioassay
			% Solids								NPDES (% effluent)
											HW Designation
			% Lipids								Other:

Comments: Gasoline dissolved

NOTE: Chain of Custody is recommended on all sampling events.

Sample Bottles Required:

Sample Disposition After Analysis:

ECY 040-2-62 (Rev. 7/88)

DEPARTMENT OF ECOLOGY
MANCHESTER ENVIRONMENTAL LABORATORY

SAMPLE REQUIREMENTS

Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Holding Time, days	Parameter	Minimum Volume mL	Preservation Hold all samples at 4°C	Hold Time, days
Alkalinity	100		14	Solids (4)	500		7
Biochemical Oxygen Demand	2000	Store in the dark	2	Solids, Suspended	250		7
Chloride	100		28	Solids, Settleable	1000		2
Chemical Oxygen Demand	100	H_2SO_4 to pH < 2	28	Sulfate	100		28
Color	100		2	Turbidity	100		2
Conductivity	100		28	Bacteria, Coliform	200	Do not freeze	30 hours
Cyanide	500	NaOH to pH 12	14	Bacteria, Other	200	Do not freeze	30 hours
Fluoride, Total	100 P		28	Bioassay	100g G		-
Fluoride, Soluble	100 P		28	Lipids	20g G		-
Hardness	100		6 months				
Metals, Total	200	HNO_3 to pH < 2	6 months	Priority Pollutants	2000 GT		7
Metals, Dissolved	200	Filter, then HNO_3 to pH < 2	6 months	Volatile Organics	20 GT		14
Metals, Suspended	200		6 months	PCB	200 GT		14
Mercury	200 G		28	Purgeable Chlorinated HC	200 GT		14
				Halogenated HC (HW)	100 GT		14
				Polynuclear Aromatics (HW)	100 GT		14
Nitrogen, Total Kjeldahl	500	H_2SO_4 to pH < 2	28				
Nitrogen, Ammonia	200	H_2SO_4 to pH < 2	28	EP Toxicity, Metals	200 GT		6 months
Nitrate	200	H_2SO_4 to pH < 2	2	EP Toxicity, Organics	2000 GT		14
Nitrite	200	H_2SO_4 to pH < 2	2	Ignitability	100 G		28
Oil and Grease	500 G	H_2SO_4 pH < 2	28	Reactivity	50 G		28
				TOX	500		28
pH	50		2 hours				
Phosphorous, Total	200		28				
Phosphorous, Ortho	200		2				
Phenolics, Recoverable	500 G	H_2SO_4 pH < 2	28				
Salinity	200		28	Analysis not listed: Discuss with lab chemist.			

G = Use only a glass container.

GT = Use only an organic-free glass container with Teflon lid liner.

P = Use only a plastic container

g = gram

AV/MB2/121814/84

MESSAGE CONFIRMATION

DATE:04/25/91 TIME:08:28

ID:DEPT OF ECOLOGY

DATE	TIME	TX-TIME	DISTANT STATION ID	MODE	PAGES	RESULT
04/25	08:27	00'41"	206 895 4357	G3-S	001	OK

State of Washington Department of Ecology

210

SAMPLE DATA & ANALYSIS REQUIRED

Program Code ☐☐☐

Project Code JSJ10

Project/Name Lincoln Square Apt.

☑ Enforcement/Custody ☐ Class II

☐ Possible Toxic/Hazardous Notes ____________

SAMPLING DATE Yr	Mo	Da	TIME Hr	Mn	FIELD STATION IDENTIFICATION	LAB SAMPLE NUMBER Wk	Seq	Matrix Code	Source Code	No. of Containers	Organic Chem. WTPH-G	Organic Chem. BTEX-8020
1	04	25	1	47	MANH LE	17	7920	1	1	5	X	X

General Chemistry: Turbidity, pH, Conductivity, Total Hardness, Chloride, TS, TSS, TNVS, TNVSS, TSS, % Solids, Nutrients (4), Ammonia, Nitrate-Nitrite, Total Phosphorous, Ortho-Phosphate, BOD/5 Day, COD Chem Oxy Demand

Biology: Fecal Coliform Bacteria, Total Coliform Bacteria, Enterococcus, Fish Bioassay

Organic Chem.: Base/Neutrals/Acids, Volatile Organics, Pesticides/PCB's, PCB's Only, Purgeable Halocarbons, Herbicides, Hydrocarbon Analysis, Phenolics (AAP), Oil & Grease, WTPH-G, BTEX-8020

METALS: P.P. Metals, EP Tox Metals; Specific List: Total ☐ Recoverable ☐ Totals ☐ Dissolved

Project Officer Todd

Sampler(s) Todd

Recorder Todd

Date 4 25 91

Chain Of Custody Record

Relinquished By:	Received By:	Yr	Mo	Da	Hr	Mn	Seal I.D.	Condition of Seals	Comments
Todd	Sandro Carter	91	04	25			000037		
	Bill Whitte	91	04	26	1	00	000037	Intact	
Bill Whitte		91	04	26	09	30			
	[illegible]								

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink

Ecy 040-115 Rev. 7/87

★ Source Codes and Descriptions ★

Code	Description
00	Unspecified Source
01	Unknown Liquid Media (Drum/Tank)
02	Unknown Liquid Media (Spill Area)
03	Unknown Liquid Media (Waste Pond)
10	Water (General)
12	Ambient Stream/River
13	Lake/Reservoir
14	Estuary/Ocean
15	Spring/Seepage
16	Rain
17	Surface Runoff/Pond (General)
18	Irrigation Canal/Return Flow
20	Well (General)
21	Well (Industrial/Agricultural)
22	Well (Drinking Water Supply)
23	Well (Test/Observation)
24	Drinking Water Intake
25	Drinking Water (At Tap)
30	Effluent Wastewater (General)
31	Municipal Effluent
32	Municipal Inplant Waters
33	Sewage Runoff/Leachate
34	Industrial Effluent
35	Industrial Inplant Waters
36	Industrial Surface Runoff/Pond
37	Industrial Waste Pond
38	Landfill Runoff/Pond/Leachate
40	Sediment (General)
42	Bottom Sediment or Deposit
44	Sludge (General)
45	Sludge (Waste Pond)
46	Sludge (Drum/Tank)
48	Soil (General)
49	Soil (Spill/Contaminated Area)
50	Bore Hole Material

Code	Description
60	Air (General)
61	Ambient Air
62	Source or Effluent Air
63	Industrial or Workroom Air
64	Hi-Vol Filter
70	Tissue (General)
71	Fish Tissue
72	Shellfish Tissue
73	Bird Tissue
74	Mammal Tissue
75	Macroinvertebrate
76	Algae
77	Periphyton
78	Plant/Vegetation
80	Oil/Solvent (General)
81	Oil (Transformer/Capacitor)
82	Oil/Solvent (Drum/Tank)
83	Oil/Solvent (Spill Area)
84	Oil/Solvent (Waste Pond)
90	Commercial Product Formulation
95	Well Drill Water
96	Well Drill Mud
97	Well Sealing Material
98	Gravel Pack Material

Matrix Codes

10	Water-Total
11	Water-Dissolved
40	Sediment/Soil
45	Semi-Solid/Sludge
46	Sediment for EP Toxicity
70	Tissue
80	Oil/Solvent
00	Other

April 25, 1991

To: Files

From: Tom Todd

Subject: **Sampling at Lincoln Square Apartments, Port Angeles, Clallam County**

Today, April 25, 1991, I sampled the manhole underneath (in the sub-basement) the Lincoln Apartments in Port Angeles. I collected 4 VOA vials. I had requested that they be analysed for WTPH-G and BTEX by 8020. The manhole was covered with three layers of black plactic upon my arrival. I uncovered the manhole and then removed the wooden lid. I observed a slight sheen on the water surface. Also in the water was a layer of sediment at the bottom of the manhole. The amount of non-cloudy water was only a couple of inches thick. The sediment looked as if it might be an anaerobic bacterial colony. It was rust colored and of a loose consistency. There was an odor of pesticide throughout the garage floor and in the lower level (sub-basement).

The samples remained in my custody until they were secured in the SWRO Cooler. I placed the sample bottles on ice while they were in transit.

1990

s10H

s17H MILESTONE TRACKING SYSTEM

PROJECT DETAIL REPORT

April 18, 1990

HWICP ID: S-05-0003-000
SITE NAME: [redacted]
ALIAS NAME:
TEAM:

COMMENTS:

ASSUMPTIONS:

HWICP ID NUMBER	MILESTONE TITLE	LEAD PERSON	START DATES: HWICP EST	START DATES: SCAP	START DATES: ACTUAL	COMPLETION DATES: HWICP EST	COMPLETION DATES: SCAP	COMPLETION DATES: ACTUAL	COMMENTS
S-05-0003-000	INITIAL INVESTIGATION	JULIE ATWOOD	07/20/88			07/20/88			
	SITE INSPECTION	JULIE ATWOOD	08/01/88			10/01/88			
	Administrative Order	W. Thomas Todd	06/01/90			08/01/90			

SITE DESCRIPTION FILE Page 1 of 10

SITE ID

DATE ENTERED: 00/00/00 UPDATE DATE: 02/02/90

REGION* S SOUTHWEST
COUNTY 05 Clallam
SITE NO 0003 SUB-SITE NO 000
HWICP ID S-05-0003-000 EPA ID

SITE NAME Lincoln Square Apartments
ALTERNATE NAME(S)

SITE LOCATION

LOCATION ADDRESS Lincoln St. & 8th Avenue
CLOSEST CITY Port Angeles ZIP 98362

LEGISLATIVE DISTRICT 24 CONGRESSIONAL DISTRICT 02

* C=CENTRAL, E=EASTERN, N=NW, S=SW

Press <PgDn> for Page 2

AREA

GEOGRAPHIC LOCATION N/A

SITE STATUS

SITE CATEGORY: C1

A = NPL (Federal Lead)
B = NPL (State Lead)
C1 = State (Confirmed Contamination)
C2 = State (Potential Contamination)
D = RA Completed (70.105B, MTCA, Fed Law)
L = Long-Term Monitoring
M = NFA (No Hazardous Waste)
N = RA Completed (Other Statutes)

SITE STATUS:
P1 HWICP PROGRAM PLAN

P1 = HWICP Program Plan
P2 = Other Program Plan

WARM BIN #: (1,2,3,4 or 5; 1 = Highest Risk)

Press <PgDn> for Page 3

SITE STATUS (Continued)

LEGAL AUTHORITY: 5
90.48 WATER POLLUTION CONTROL ACT

Codes:
1 = RCW 70.105D (MTCA)
2 = RCW 70.105 (Haz Wst Mgmt)
3 = RCW 70.94 (WA Clean Air Act)
4 = RCW 70.95 (Solid Wst Mgmt)
5 = RCW 90.48 (Water Poll Ctrl)
6 = RCRA
7 = CERCLA Superfund
8 = LUST
9 = NPDES
10 = TOSCA
11 = CERCLA Fed Facility

EPA HRS SCORE
CERCLIS STATUS UNKNOWN
(A=Active, N=No Further Action)

NPL DATES:
NOMINATION 00/00/00 FINAL 00/00/00 DELETION 00/00/00

Press <PgDn> for Page 4

SITE STATUS (Continued)

RESPONSIBLE UNIT S SOUTHWEST REGIONAL OFFICE

Codes:

HQ=HQ Site Mgmt Sec C=Central Region N=Northwest Region
FF=Federal Facility E=Eastern Region S=Southwest Region
H=Hanford I=Industrial Section

SITE DESCRIPTION

FACILITY ACTIVE? A Codes: A=Active M=Mixture
I=Inactive U=Unknown

OWNERSHIP TYPE 1 PRIVATE
OPERATOR TYPE 1 PRIVATE

1=Private 5=State 9=Unknown
2=Municipal 6=Tribal 10=Publicly-Owned (Bnkrpt)
3=County 7=Mixed 11=Fin-Inst-Owned (Bnkrpt)
4=Federal 8=Other

Press <PgDn> for Page 5

SITE DESCRIPTION (Continued)

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES:

1.
2.
3.

WASTE MANAGEMENT PRACTICE(S):

1. 11 TANK
2. N/A
3. N/A

Codes:

1=Drug Lab 5=Landfill 9=Spill
2=Drum 6=Land Appliction 10=Storm Drain
3=Impoundment 7=Pesticide Applic 11=Tank
4=Improper Handling 8=Pesticide Dispsl 12=Unknown

Press <PgDn> for Page 6

SITE DESCRIPTION (Continued)

PRELIMINARY ASSESSMENT (PA) RATING: N/A

Codes: H = High
M = Medium
L = Low
N = None
P = Pending Outcome of Investigation

SITE INSPECTION (SI) RECOMMENDATION:

N/A

Codes: 1 = No Further Action
2 = Refer to EPA for HRS Score
3 = State Follow-Up
4 = Follow-Up SI

Press <PgDn> for Page 7

WASTE DESCRIPTION

GENERAL WASTE CATEGORIES

Codes: S = Suspected, C = Confirmed, R = Remediated

BASE/NEUTRAL ORGANIC COMPOUNDS	
HALOGENATED ORGANIC COMPOUNDS	
METALS - PRIORITY POLLUTANTS	
METALS - OTHER	
POLYCHLORINATED BI-PHENYLS (PCB)	
PESTICIDES (INCL. HERBICIDES)	
PETROLEUM PRODUCTS	C
PHENOLIC COMPOUNDS	
NON-CHLORINATED SOLVENTS	
DIOXIN	
POLYNUCLEAR AROMATIC HYDROCARBONS(PAH)	

Press <PgDn> for Page 8

WASTE DESCRIPTION (Continued)

GENERAL WASTE CATEGORIES (Cont.)

Codes: S = Suspected, C = Confirmed, R = Remediated

REACTIVE WASTES	
CORROSIVE WASTES	
RADIOACTIVE WASTES	
CONVENTIONAL CONTAMINANTS-ORGANIC	
CONVENTIONAL CONTAMINANTS-INORGANIC	

AFFECTED MEDIA:

Codes: T = True, F = False, P = Potential, R = Remediated, U = Unknown

GROUNDWATER	P	
SURFACE WATER	P	
AIR	P	
SOIL	T	
SEDIMENT	P	
DRINKING WATER	U	*TYPE

*Drinking Water Types:
1 = Single-Family Res
2 = Community Water

Press <PgDn> for Page 9

CONTACT PERSONS

EPA CONTACT PERSON:
HWICP PROJECT MANAGER:
REGIONAL OFFICE CONTACT: MARIA PEELER
OTHER ECOLOGY CONTACT:

GEOGRAPHIC COORDINATES

TOWNSHIP T RANGE R SECTION
Calculated: T/R-

LATITUDE: Degrees 0 Minutes 0 Seconds 0
LONGITUDE: Degrees 0 Minutes 0 Seconds 0

STATE PLANE (Feet): X 0 Y 0

Press <PgUp> for Page 8

INTEGRATED REPORTING INFO (Optional)	SCHEDULE ASSUMPTIONS: SCHEDULE COMMENTS: CHANGE NUMBER 19

FINISHED? Press <PgUp> for Page 9

MEMORANDUM

30 January 1990

TO: Files

FROM: Tom Todd TT

SUBJECT: Lincoln Street Apartments - Port Angeles

1. A file review of the history of this site reveals that there has been a long history of petroleum contamination that apparently leads to the "Round the Clock Deli", as it is now known.

A. In the mid-1970's there was a oil sheen noticed on the water in the harbor and in a creek that discharges to the harbor. No successful resolution of that situation was found. No source of the petroleum is indicated in the files.

B. On several occasions in the 1980's there were evacuations of the Lincoln Street Apartments the complaints always were of gasoline odors in the basement. Due to it being uphill and closest to the apartments the obvious source investigated always was "Red's ARCO", currently operated under different owners as "Round the Clock Deli".

C. It appears, after a review of files and talking to residents of Port Angeles that the Lincoln Street Apartments is built upon an old ravine that leads to the harbor. The ravine is now filled and not visible from the surface level. However if one goes into the basement of the apartments, the old topography can be observed.

D. In June 1988 another series of complaints was received indicating that yet again the gasoline vapors were being found in the Lincoln Street Apartments. As part of the response Ecology had "Round the Clock Deli" test their tanks for tightness. As part of the testing procedure a collar used for overfill protection was tightened. Afterwards the tank tested tight.

E. Since that period there have been no more complaints from residents of the apartments. I was told this by both the Environmental Health Director of Clallam County and the Port Angeles Fire Marshall.

2. As a consequence of the above, a strategy for confirmation has been developed. I plan to have the water below the apartments sampled several times during the year to confirm or refute the presumption that the contamination has been washed down the filled ravine that Lincoln Street and the Apartments are built upon.

(samples confirmed contamination

1989

SITE ID

DATE ENTERED: 00/00/00 UPDATE DATE: 10/30/89

REGION* S SOUTHWEST
COUNTY 05 Clallam
SITE NUMBER 0003
SUB-SITE NO 000

* C=CENTRAL, E=EASTERN, N=NORTHWEST, S=SOUTHWEST

HWICP ID S-05-0003-000 EPA ID

SITE NAME

SITE NAME Lincoln Square Apartments
ALTERNATE NAME(S)

Press <PgDn> for Page 2

SITE LOCATION

GEOGRAPHIC LOCATION:
N/A

CBN = COMM BAY NEARSHORE
CBS = COMM BAY S TACOMA CHANNEL
EB = ELLIOTT BAY
HA = HANFORD
HI = HARBOR ISLAND
PS = OTHER PUGET SOUND
SRV = SPOKANE RIVER VALLEY

FINISHED?

Press <PgUp> for Page 1

OWNER/OPERATOR SITE INFORMATION — WASHINGTON DEPARTMENT OF ECOLOGY

Date of Last Update: 02/02/90 —

I. SITE ID

Region	S	SOUTHWEST
County	05	Clallam
Site No	0003	
Sub-Site No	000	

HWICP ID: S-05-0003-000 EPA ID: _____

Site Name: Lincoln Square Apartments
Alternate Name(s): _____

II. SITE STATUS (STATE)

Site Status: P1 HWICP Program plan (P1=HWICP Program Plan)
State Ranking: _____

Site Category: C1
A = Federal Lead NPL; B = State Lead NPL; C1= Confirmed State Site; C2= Potential Haz Wst Site; D = RA Complete (70.105B/MTCA); L = Long Term Monitoring; M = No Haz Wst Found; N = RA Complete (Other Statutes)

III. LOCATION DESCRIPTION

Site Location Address: Lincoln St. & 8th Avenue
Port Angeles WA 98362
Legislative District: 24 Congressional District: 02

Legal Description T/R-
Latitude Longitude

Geographic Location: ___ N/A
Codes: CBN = Comm Bay Nearshore; CBS = Comm Bay So Tacoma Chnl; EB = Elliot Bay; HA = Hanford; HI = Harbor Island; PS = Other Puget Sound

IV. SITE STATUS (FEDERAL)

EPA HRS Score: ____
NPL Dates: Nomination _____ Final _____ Deletion _____
CERCLIS Status: ___ (A = Active, N = No Further Action)

VI. SITE DESCRIPTION

Facility Active? A
Codes: A = Active; I = Inactive; M = Mixture; U = Unknown

Ownership Type 1 Operator Type 1
Codes :
1= Private; 2= Municipal; 3= County; 4= Federal; 5= State; 6= Tribal; 7= Multiple Sites/Ownership; 8= Other; 9= Unknown; 10= Public Ownership due to bankruptcy; 11= Fincial Inst. owned due to bankruptcy

Standard Industrial Classification (SIC) Code(s):
1. ____ _____
2. ____ _____
3. ____ _____

Preliminary Assessment Rating: N/A
Site Inspection Recommendation: ___
Codes:

SITE ADDRESS LIST Page 1 of 3

SITE ID

DATE ENTERED: 00/00/00 UPDATE DATE: 10/30/89

REGION CODE* S SOUTHWEST
COUNTY NO 05 Clallam
SITE NO 0003
SUB-SITE NO 000

HWICP ID S-05-0003-000 EPA ID

SITE NAME Lincoln Square Apartments
ALTERNATE NAME(S)

* C=CENTRAL, E=EASTERN, N=NW, S=SW

Press <PgDn> for Page 2

ADDRESS TYPE

ADDRESS TYPE: 1 CURRENT OWNER

Codes:
1 = Current Owner
2 = Current Operator
3 = Current Generator
4 = Current Transporter
5 = Former Owner
6 = Former Operator
7 = Former Generator
8 = Former Transporter

SITE CONTACT

ORGANIZATION Lincoln Square Apartments
CONTACT PERSON
MAILING ADDRESS 709 South Lincoln Street
Port Angeles WA

TELEPHONE (000) 000-0000

Press <PgDn> for Page 3

SITE OWNERSHIP

BEGINNING DATE 00/00/00
ENDING DATE 00/00/00

SITE RESPONSIBILITY

OWNER/OPERATOR PLP? Y YES

Y = Yes
N = No
U = Unknown

FINISHED? Y

Press <PgUp> for Page 2

State of Washington
Department of Ecology

TELEPHONE RECORD

Date 10-13-89

Time 16:45 ☐ a.m. ☒ p.m.

☑ CALLED BY
☐ CALLED

Mr./Ms. Jim RAM

Telephone 457-6350

Address 134 E. LAURIDSEN
PORT ANGELES

Representing

Project LINCOLN STREET APARTMENTS

Discussed He will tell Mickelson Const. To get me a copy of the Applied Geotech report. He has hired Applied Geotech to oversee tank abandonment. Tanks were tested 3 yrs. ago and they were all tight. Told him a little about Lincoln St. Apt. (DID NOT tell him about EPA involvement yet). Told him I will try to be there at time of excavation.

Signed Dick Walker

ECY 010-46(b)

UST : NOTICE OF RELEASE

Complaint received by J. Hickey ENVIRONMENTAL COMPLAINT FORM

1. SPILL OR COMPLAINT (circle one)

2. DATE: 10-5-89
TIME: 2:48 P

3. COUNTIES (✓one)

Northwest	Southwest		Central	Eastern	
__ K2 King S.E.	✓ CL Clallam	__ MA Mason	__ BE Benton	__ AD Adams	__ LI Lincoln
__ K1 King	__ CK Clark	__ PA Pacific	__ CH Chelan	__ AS Asotin	__ PO Pend Orielle
__ KI Kitsap	__ CO Cowlitz	__ PC Pierce	__ DO Douglas	__ CM Columbia	__ SP Spokane
__ SJ San Juan	__ GH Grays Harbor	__ SK Skamania	__ KL Klickitat	__ FE Ferry	__ ST Stevens
__ SK Skagit	__ JF Jefferson	__ TH Thurston	__ KI Kittitas	__ FR Franklin	__ WW Walla Walla
__ SN Snohomish	__ LE Lewis	__ WK Wahkiakum	__ OK Okanogan	__ GA Garfield	__ WH Whitman
__ WH Whatcom			__ YA Yakima	__ GR Grant	

4. COMPLAINTANT
Name: Jim Ray - co-owner
Address: Same as at right
City:
Phone: w. 457-6350 h. ~~683-3724~~ 683-3024

5. ANONYMOUS
__ YES
✓ NO

6. ALLEGED VIOLATOR
Name: L.R. TOZER DISTRIBUTOR
Address: 134 EAST 3 BLVD.
City: PORT ANGELES
Phone: 457-6350

7. MEDIA CODE (✓one)
__ A Air
✓ GW Ground Water
✓ S Soil
__ SW Surface Water
__ WR Water Right
__ O Other

8. MATERIAL CODE (✓one)
__ AC Aquaculture
__ AG Agriculture
__ HW Hazardous Waste
✓ OP Oil/Petroleum
__ SW Solid Waste
__ WW Wastewater
__ O Other

9. ECOLOGY 1st RESPONSE (✓one)
__ CU Cleanup
__ EA Enforcement
__ I Inspection
__ LW Letter Written
__ NA No Action
__ RE Referred
__ TC Telephone Call
__ O Other

COMMENTS: (Who, What, Where, When, Why and How) EXXON STA. "SHORT STOP" (PRIVATE OWNERSHIP)

10. Where did the violation occur?: Street

City PORT ANGELES County CLALLAM

Directions to place of incident:
Use reverse side for notes

Watercourse, if any

11. Description of damage (dead fish, etc.) 1400ppm TPH very high water (2.5'). Also high TPH in water. Applied Geotechnoly 453-8383 as consultants (Chuck Soule & Gary Squires) Ike Ikenberry from Michelson Construction also involved 357-6285. Five or Six UST's will be removed in near future. The plan is to remediate at that time

8-9-89

SITE SAFETY PLAN

SITE NAME AND LOCATION:

Site Name: LINCOLN SQUARE APARTMENTS ID#: _____

Location: 722 LINCOLN ST. PORT ANGELES

SITE EMERGENCY INFORMATION:

Emergency Medical: OLYMPIC MEMORIAL HOSP. Phone: 457-8513

Rescue: PORT ANGELES FIRE DEPT. Phone: 911

Fire: PORT ANGELES FIRE DEPT. Phone: 911

Police: PORT ANGELES POLICE DEPT. Phone: 911

Poison Control Ctr: OLYMPIC MEMORIAL HOSP. Phone: 457-8513
SEATTLE 1-800-732-6985

Location of nearest phone: ACROSS LINCOLN ST. AT THE "ROUND THE CLOCK DELI"

Potential evacuation routes and places of safe refuge:
LEAVE BUILDING IN ANY DIRECTION — ACROSS 7th ST. TO PARKING LOT

Route from site to nearest hospital:
NORTH ON LINCOLN ST. TO FRONT ST., EAST ON FRONT ST. TO WASHINGTON ST., NORTH ON WASHINGTON TO HOSPITAL ON CARolyn ST.

Designated emergency signal to indicate site evacuation is:
SHOUT "LEAVE BUILDING" (TOO MUCH LOCAL TRAFFIC FOR HORNS TO BE EFFECTIVE

Rally point for evacuation:
CORNER OF 7th AND LINCOLN

SITE HISTORY AND DESCRIPTION:

Brief Site History:
THIS IS AN APARTMENT BUILDING WHICH PERIODICALLY IS IMPACTED BY GASOLINE FUMES MIGRATING INTO THE CRAWL SPACE UNDER THE BUILDING.

Expected Investigation and Cleanup Activities for Life of Site:
VERY LITTLE ACTIVITY EXPECTED AT APARTMENT BUILDING, BUT SOME DRILLING/BORING AND SOIL GAS TESTING EXPECTED ALONG LINCOLN ST., AND SOME SOIL EXCAVATION MAY TAKE PLACE.

Site Control and Access is by:

N/A Phone _____

Parking and/or Command Post Location is: PARKING LOT AT CORNER OF 8th AND S. LINCOLN ST.

General Site Topography: FLAT AND PAVED (VERY GENTLE SLOPE DOWN TO THE NORTH

Prevailing Winds Are From: NORTH

Site Work Zones (Exclusion, Contamination Reduction, Decontamination, Staging and Command Post) are Located as Follows (see map):

SITE CONTACTS AND PERSONNEL:

Site Manager: DICK WALKER

Site Hydrogeologist:

Site Engineer:

Other/Role:

Ecology Contractor(s):

_____ Phone _____

_____ Phone _____

Site Owner/Operator/PLP:

ROUND THE CLOCK DELI : DAVE COTTON Phone 452-1773

_____ Phone _____

PLP Contractor(s):

_____ Phone _____

_____ Phone _____

HAZARDS AND PROTECTION:

Monitoring Equipment Expected or Required for Use:

CGI

TIP II

Hazardous Substances Known or Expected On Site and Known or Expected Concentrations:

1. GASOLINE FUMES
2.
3.
4.
5.

Routes of Exposure and Hazard Type of Each Substance:

1. GASOLINE : INHALATION ; EXPLOSION
2.
3.
4.
5.

Monitor Action Levels and Actions for Each Substance:

Material #	Instrument	Action Level	Action
1. GASOLINE	CGI	10% of LEL	EVACUATE AREA
2.			
3.			
4.			
5.			

PPE Materials Required By Substance:

1. LEVEL D FOR MOST WORK
2.
3.
4.
5.

Expected Personal Protective Equipment (PPE) Requirements:

Task: MONITORING FOR FUMES Level: C MAY BE NECESSARY

Task: MONITORING WORK IN PROGRESS (BORING/EXCAVATION) Level: D

Task: Level:

Task: Level:

Task: Level:

Cartridges or Cannisters Required for Air Purifying Respirators:

Additional Site Hazards Expected or Possible:
VEHICLE TRAFFIC HAZARD OVER MOST OF THE AREA

Radio Channel _____ will be used for on-site communications.

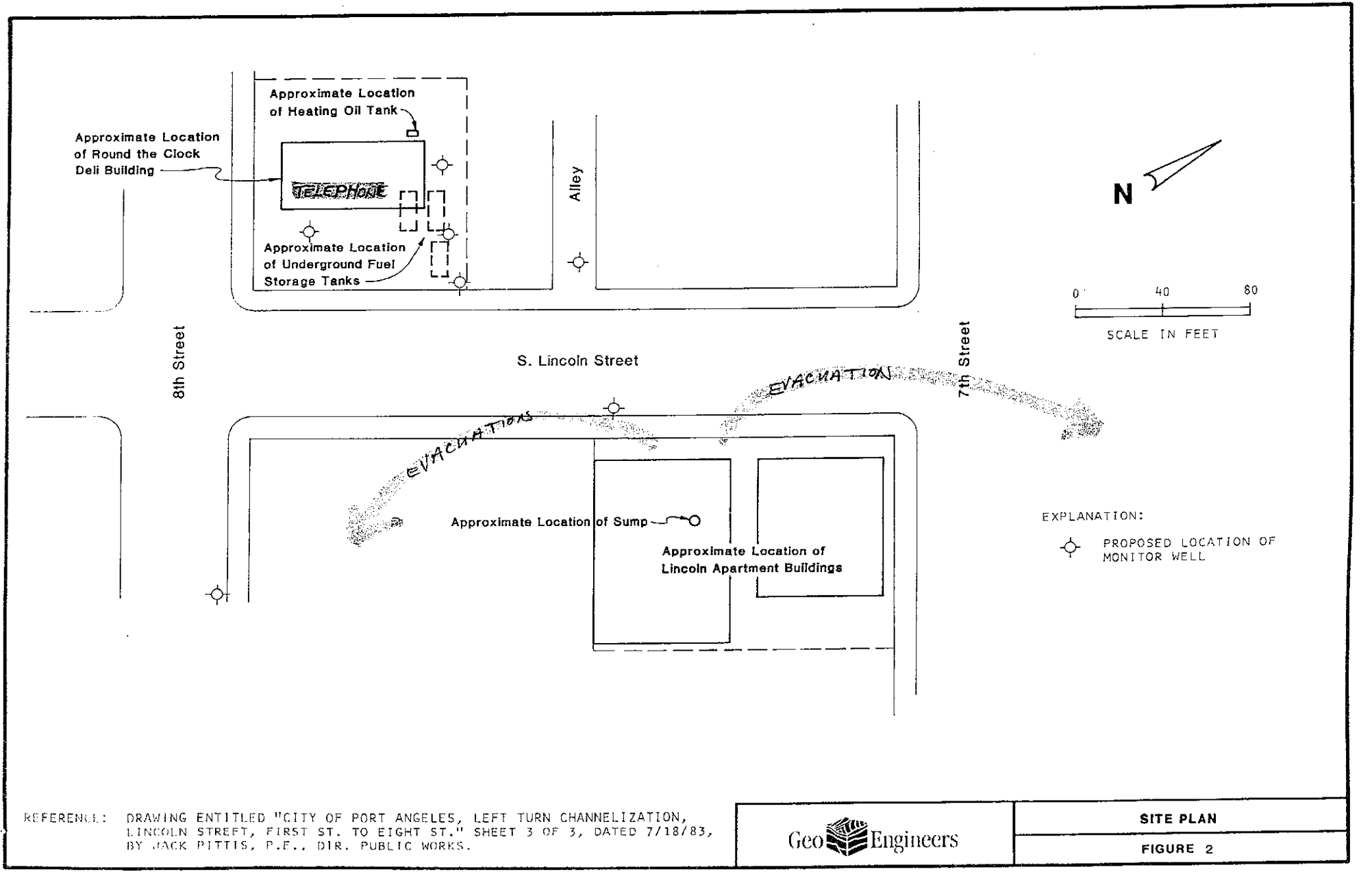
Site Map Attached? YES

Site Map includes Exclusion zones and Contamination Reduction work zones?_____

AKNOWLEDGEMENTS:

The following personnel, including all site team members, have read the above Site Plan and are familiar with its provisions:

Name	Signature	Date
Dick WALKER	Dick Walker	8-9-89



0504-07-4 JAM:KKT 7-13-88

REFERENCE: DRAWING ENTITLED "CITY OF PORT ANGELES, LEFT TURN CHANNELIZATION, LINCOLN STREET, FIRST ST. TO EIGHT ST." SHEET 3 OF 3, DATED 7/18/83, BY JACK PITTIS, P.E., DIR. PUBLIC WORKS.

GeoEngineers

SITE PLAN

FIGURE 2

Undated

Tim Johnson —

3049 — Chevron 9/102 Aberdeen —
City complaining about - ~~dang~~ threat / road —
up to / city to go to Chevron
Needs to address the off site contamination

Crystal Steam bath —
— want to open a health oriented business
Battling w/ Chevron —
— may be a contaminated site of its own —

3998 9-1125 Chevron
remediation on-going — soil remediation
is it a class 3
C very shallow groundwater —
— may want to take it to a landfill —
— may have to bring / export —?

3491 U-Haul —
Mark Robinson from N.W Environ.
G.W.
MW some benzene —
don't recom. hand pumping
Reco. Quarterly sampling
Prob. will want a closer /

2596 U.S. West
Vacant lot
Cleanup
One foot further —
Land gas (street side)
" heating Oil (alley side)
Want a buy off in the discrete property
— need them to look at potential
- DOT owns the highway —
put in infiltration trench —

3485 Wynnochee Dam Project
Want a letter
need to let us know what they did w/ the

709 Lincoln - (?pt

719 Lincoln - Spring time
new & used furniture
Do you refinish furniture - ?
What kind of solvent.

Barber Shop
Hair Necessities

725 Lincoln Capitan T Custom Screen printing

8th 901 8th Tack N' Tack
UPHOLSTERY

AUG 23 1993

207 1½ Howey's Plumbing

←

Arco 8th & Lincoln

Drakes Pizza

901 Dr. office
across the street

Arlene's 9th

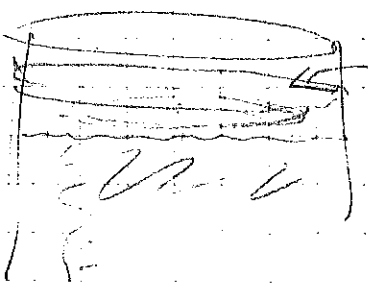
902 S. Lincoln - Angelas Video

Wells loop

7:00 Am 10:30

1) WATER SAMPLE
2) perus the area —
3) County Utility lines
4) land ownership

sample —



Gas discharging to waters of the state, representing an imminent threat to the environment
(See emergency provisions of WAC 173-303)
" RCW 90.48

5-1-1991 – water sample BTEX 8-11-92

B	5400	ppb	3900 ppb
T	2600		280
E	1000		390
X	4600		970
TPH	28,000	ppb	6,500

1.) MAP City.
2.) MAP – site –
3.) Soils –

04702	113 West First	- Coast to Coast Store	1	Exempt nos. 5-6 F		
100478	121 So. Lincoln	City library Parking lot (McCrorie Warehouse)				F.O.
07710	210 E. First	Port Angeles Gull #275	1	in use		UL G
			2	"		L G
			4	"		UL G
011945	210 N. Laurel		1			
			2			
011183	214 E. 8th St.	The Habit Cleaners	1	Removed		
			2	"		
			3	"		
100078	223 E. 4th	Clallam Co. Courth. main	1	in use		
007555	"	" " "	1	Removed		LG
			2	"		ULG
			3	"		Die
			4	in use		ULG
			5	"		ULG
			6	"		Diesel
100075	"	Clallam Co. Rd. Dep.	1	in use		
			2	"		
002794	302 S. Lincoln	Phillips 70669	77	Temp out		✓
			80	"		✓
			82	"		used O
			84	"		LG
			93	"		ULG

000796	302 W. 8th	Gene Robinson	2	permen. out	L.G
007158	315 E 8th	Kenneth A. Clark	1	Temp. out	ULG.
	325 W. 2nd		1		
			2		
109990	406 Laurel	P.A.G. #070243	1	In Use	Kerosene
			2	Perm Out	Unknown
100766	418 S. Lincoln	Olympic laundry & Cleaners	1	in use	
			2	"	
			3	"	
			4	perm out	
003421	504 S. Lincoln	Denny's Texaco	1	in use	LG
			2	"	LG
			3	"	ULG
			4	"	ULG
			5	"	ULG
005136	517 S. Lincoln	Chevron #93220	1	in use	ULG
	Bert's Chevron	457-5661	2	"	LG
			3	"	ULG
			4	exempt	
			5	in use	used oil
010295	805 S. Lincoln	John W Sadler	1	Removed	LG
			2	"	ULG
			3	"	ULG
			4	"	used/oil
100396	807 S. Lincoln	Arco 5719	1	in use	LG
			2	"	ULG
			3	"	ULG
			4	"	ULG Sup.

Addressess: ?

FIRE MARSHAL (Chief?) City of Port Angeles 452-4545
Bruce Becker Ed Rondello
102 E. 5th Street Old Fire Dept. Building -
Port Angeles, WA 5th & Laural

Mr. & Mrs. Art Tobias 206 - 457-4818
Lincoln Apt.
435 West 3rd
Port Angeles 98362-6124

Mr. David Cotton 206-452-1777
722 South Lincoln Street
Port Angeles, WA 98362-6124

1) Well logs

2.) Call — Cotton
Tobias
Arco?

3) Sites 2 — Lynn

S

Sites to research - (①

004478 121 So Lincoln
* 3006 City Library Parking lot.
FILE McCrorie Warehouse.

007710	210 E. FIRST	1	installed 1983	A	U
ID ~~40002974~~)	P.A. Gull # 275	2		A	L
	O: David Delaney (206-452-3600)	4		A	U

02 E 3rd Lincoln? is this a site address - probably 200 even S. Lincoln

100078	223 E. 4th (Same Ad. for all 3 site nos) Court house	1	(no date)	A	
007555	① Tim Ducan Maint. Dir.	1	Removed 10-25-89	D	L
	(206 452-7831)	2	" "	D	U
	② Raymond A. Ross Pur. Agent	3	" "	D	D
	(206-452-7831)	4	4-1-88	A	U
	③ Pam Thompson Pur. Agent	5	" " "	A	U
100075		1		A	
		2		A	

002794	302 So. Lincoln	77	Last used 2-1-75	B	
	Phillips # 70669	80	" " "	B	
	Ron Smoller	82	" " "	B	waste/oil
	(918) 661-7012	84	" " "	B	L
		93	" " "	B	U

A - active B. Temp. closed

Sites to Research (2)

— ↳ 300 Even So. Lincoln
OR 100 odd 4th

FILE. Jackpot FOOD MART, 331 W 1st

— ↳ 400 Even So Lincoln
OR 100 Even 4TH

— ↳ 400 odd So. Lincoln
OR 200 Even 4TH -

100766 418 So. Lincoln
Olympic Laundry & Cleaners
Malcolm Malcolm S. White
Malcolm phone Book (206 457-3315)

1	INSTALLED 3-21-77	A
2	" "	A
3	1-1-58	A
4		C

003421 504 So Lincoln
Denny's Texaco
Ralph E. Bauman (457-3553)
phone Book (206-457-3623)

1	installed 10-1-60	A	L
2	"	A	L
3	"	A	L
4	"	A	L
5	" 6-1-71	A	L

Sites to be Researched (3)

00 5136
#3013 F
517 So. Lincoln
Berto Chevron
93220
(306-457-5661)

1	installed	1-1-73	A	U
2	"	"	A	L
3	"	"	A	U
4	"	"	E	D
5	"	1-10-78	A	W.O.

—
700 odd S. Lincoln
Aband. STATION
or -200 odd E. 8th

Haven't found any record —

—
205 E. 8th
Capilano T

2.

010295
#1265
805 So. Lincoln
John W. Sadler
Sadler Mobil
(906) 457-5372
owner
Richard J. Michel
(906) 457-9637

Removed 3-5,6-90 TEST. Below Clean-up

1	Removed	10-28-90	D	L
2	"	"	D	U
3	"	"	D	U
4	"	"	D	W/O

100396
#3531 F
807 So Lincoln, ZIP 98362-7850
Arco 5719 (Prestige Stations #5233)
Contact: Michelle Johnston
(906) 457-8131

1	Installed	8-1-90	A	L
2	"	"	A	U
3	"	"	A	U
4	"	"	A	E

Prestige Stations
franchised from
Arco

Lincoln Apt F:
722 So. Lincoln #
Round the Clock - Deli
David Colton
452-1777
same as Rudi's Arco —

~~File — Habit Dry Cleaners — 8th & Lincoln~~

central file - Exxon Station (P.A.)

file not located — Liberty Gas Station

FILE
same as Stoddard, Robert
902 So. Lincoln
Angeles Video
425-1255

214 E. 8th
~~344~~ Habit Cleaners
Bob Burke
(306) 457-5618
(306) 457-4202
3-21-90 Removal - Contamination found

1 10-28-90 D
2 " D
3 " D

Charge ~~Removal~~ 10-28-90

FILE

007158

315 E. 8th
Kenneth A. Clark -
(306) 683-1185
Sequim
CLARK, Kenneth (Conley)

1 3-10-92 D U
"Cont. not found"
Charge 3-10-92
Closure - 10-23-91
by Dickinson Const.

009269
3210

134 E. Lawrideson
Exxon S.S

~~00358~~
J595
FILE

9th & Lincoln
STODDARD Property
(Angeles Video)

AUG 23 1993

UST PENALTY MATRIX

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-130	**Tank permits and delivery of regulated substances**				
173-360-130(1) Dates of noncomp. =	Operating regulated UST without a valid permit [Date permit required to date applied for]	(T)	Major	Minor	500
173-360-130(4)	Delivery to tank without a valid operating permit	(T)	Major	Major	1,500
173-360-130(5)	Waste oil tank pumped without a valid operating permit	(T)	Major	Minor	500
173-360-130(6)	Delivery to a leaking UST	(T)	Major	Major	1,500
173-360-130(7) Dates of noncomp. =	Failure to remove permit from display within 24 hours of a confirmed release [Date of confirmed release to date permit removed]	(T)	Major	Major	1,500
173-360-130(8) Dates of noncomp. =	Failure to surrender permit to Ecology upon request [Date notice received to date surrendered]	(T)	Major	Major	1,500
173-360-200	**Notification requirements**				
173-360-200(2) Dates of noncomp. =	Failure to notify Ecology within 30 days of bringing regulated UST system into use [Date notification required to date received]	(T)	Major	Major	$1500
173-360-200(2)(b) Dates of noncomp. =	Failure to report regulated tanks [Date report required to date report received]	(F)	Major	Moderate	$750
173-360-200(2)(d) Dates of noncomp. =	Failure to provide information required on the notification form [Date information required to date received]	(F)	Moderate	Minor	$100
173-360-200(4) Dates of noncomp. =	Failure to notify Ecology of existing UST system [Date notification required to date received]	(T)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-200(7)	Failure by seller of tank to inform tank purchaser of notification requirements	(T)	Major	Major	$1500
173-360-210	**Reporting and recordkeeping requirements**				
173-360-210(1) Dates of noncomp. =	Failure to report required information [Date report required to date received]	(T)	Major	Moderate	750
173-360-210(2)	Failure to keep adequate records	(T)	Moderate	Minor	100
173-360-210(3)	Failure to maintain records and keep available	(T)	Moderate	Minor	100

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-300	**Performance standards for deferred UST systems**				
173-360-300 Dates of noncomp. =	Violation of performance standards for deferred UST systems [Date installation completed to date UST emptied]	(T)	Varies[1]	Varies[1]	
173-360-305	**Performance standards for new UST systems**				
173-360-305(1) Dates of noncomp. =	Installation of an improperly designed and constructed tank [Date installation completed to date UST emptied]	(T)	Major	Major	$1500
173-360-305(1) Dates of noncomp. =	Installation of a tank without corrosion protection [Date installation completed to date UST emptied]	(T)	Major	Moderate	$750
173-360-305(1)(b)(i) Dates of noncomp. =	Installation of a metal tank without a suitable dielectric coating [Date installation completed to date UST emptied]	(P)	Major	Moderate	$750
173-360- 305(1)(b)(ii) Dates of noncomp. =	Installation of an metal tank without a properly designed cathodic protection system [Date installation completed to date UST emptied]	(T)	Moderate	Moderate	$500
173-360- 305(1)(b)(iii) Dates of noncomp. =	Installation of tank cathodic protection system without provisions for testing [Date installation completed to date UST emptied]	(T)	Moderate	Moderate	$500

[1]Deviation from requirement and potential for harm will vary depending upon specific code or standard violated.

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-305(1)(b)(iv) Dates of noncomp. =	Improper operation and maintenance of tank cathodic protection system [Date required system out of compliance to date required system brought into compliance]	(T)	Major	Moderate	$750
173-360-305(2) Dates of noncomp. =	Installation of improperly designed and constructed piping [Date installation completed to date no longer used]	(P)	Major	Major	$1500
173-360-305(2) Dates of noncomp. =	Installation of piping without corrosion protection [Date installation completed to date no longer used]	(P)	Major	Moderate	$750
173-360-305(2)(b)(i) Dates of noncomp. =	Installation of metal piping without a suitable dielectric coating [Date installation completed to date no longer used]	(T)	Major	Moderate	$750
173-360-305(2)(b)(ii) Dates of noncomp. =	Installation of metal piping without properly designed cathodic protection system [Date installation completed to date no longer used]	(P)	Moderate	Moderate	$500
173-360-305(2)(b)(iii) Dates of noncomp. =	Installation of piping cathodic protection system without provisions for testing [Date installation completed to date piping no longer used, or date system tested]	(P)	Moderate	Moderate	$500
173-360-305(2)(b)(iv) Dates of noncomp. =	Improper operation and maintenance of cathodic protection system for metal piping [Date required system installed to date piping no longer used, or date system is in compliance]	(P)	Major	Moderate	$750
173-360-305(3)(a) Dates of noncomp. =	Failure to install spill and overfill prevention equipment on a new tank [Date UST installation completed to date UST emptied, or in compliance]	(T)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank: (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-305(3)(a)(i) Dates of noncomp. =	Installation of inadequate spill prevention equipment in a new tank [Date UST installation completed to date UST emptied, or in compliance]	(T)	Major	Major	$1500
173-360-305(3)(a)(ii) Dates of noncomp. =	Installation of inadequate overfill prevention equipment in a new tank [Date UST installation completed to date UST emptied, or in compliance]	(T)	Major	Moderate	$750
173-360-305(4)	Failure to properly install tank in accordance with accepted codes and manufacturer's instructions	(T)	Varies[2]	Varies[1]	see matrix
173-360-305(4)	Failure to properly install piping in accordance with accepted codes and manufacturer's instructions	(P)	Varies[1]	Varies[1]	see matrix
173-360-305(5) Dates of noncomp. =	Failure to submit properly completed installation checklist [Date checklist required to date received]	(F)	Moderate	Minor	$100
173-360-310	**Upgrading requirements for existing UST systems[3]**				
173-360-310(1) Dates of noncomp. =	Failure to meet all applicable tank upgrade standards [Date upgrade required to date violation discovered]	(T)	Major	Major	$1500
173-360-310(2)(a)(i) Dates of noncomp. =	Improper installation of internal lining [Date of installation to date violation discovered]	(T)	Major	Major	$1500

[2]Deviation from requirement and potential for harm will vary depending upon specific code or standard violated.

[3]Until December 22, 1998, only applies to UST systems repaired to correct a structural defect.

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-310(2)(a)(ii) Dates of noncomp. =	Failure to meet internal lining inspection requirements [Date required to date violation discovered]	(T)	Major	Moderate	$750
173-360-310(2)(b) Dates of noncomp. =	Failure to ensure the integrity of a tank when upgrading with cathodic protection [Date of upgrade to date violation discovered]	(T)	Major	Moderate	$750
173-360-310(3) Dates of noncomp. =	Failure to provide cathodic protection for metal piping [Date required to date violation discovered]	(P)	Major	Major	$1500
173-360-310(4) Dates of noncomp. =	Failure to provide spill prevention system [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-310(4) Dates of noncomp. =	Failure to provide overfill prevention system [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-310(5) Dates of noncomp. =	Failure to certify compliance by submitting appropriate checklist [Date 30 days after work completed to date checklist provided]	(T/F)	Major	Minor	$500
173-360-315	**Spill and overfill control requirements**				
173-360-315(1)	Failure to take necessary precautions to prevent overfill/spillage during the transfer of product	(F)	Major	Major	$1500
173-360-315(2) Dates of noncomp. =	Failure to report a spill/overfill [Date spill occurred to date violation discovered]	(F)	Major	Major	$1500
173-360-315(2) Dates of noncomp. =	Failure to investigate and clean up a spill/overfill [Date spill occurred to date violation discovered]	(F)	Major	Major	$1500
173-360-320	**Operation and maintenance of corrosion protection**				

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-320(1)	Failure to operate and maintain corrosion protection system to provide continuous protection	(F/T)	Major	Major	$1500
173-360-320(2)(a) Dates of noncomp. =	Failure to ensure that cathodic protection system is tested when required [Date test required to date violation discovered]	(F/T)	Major	Major	$1500
173-360-320(2)(b)	Failure to inspect cathodic protection system using criteria in accordance with accepted codes	(T/F)	Major	Moderate	$750
173-360-320(3) Dates of noncomp. =	Failure to inspect impressed current cathodic protection systems every 60 days [Date required to date violation discovered]	(T/F)	Major	Moderate	$750
173-360-320(4) Dates of noncomp. =	Failure to maintain records of cathodic protection inspections [Date of first inspection to date records provided]	(T/F)	Major	Moderate	$750
173-360-320(5) Dates of noncomp. =	Failure to certify compliance by submitting appropriate checklist [30 days from work to date checklist provided]	(T/F)	Major	Minor	$500
173-360-323	**Compatibility**				
173-360-323	Failure to use UST system made of or lined with materials compatible with and impermeable to substance stored	(T/P)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-325	**Repairs of UST systems**				
173-360-325 Dates of noncomp. =	Failure to upgrade UST system repaired to correct a structural defect [Date of repair to date violation discovered]	(T/F)	Major	Major	$1500
173-360-325(1)	Failure to repair UST system in accordance with accepted codes and standards	(T/F)	Varies[4]	Varies[1]	see matrix
173-360-325(2)	Failure to repair fiberglass-reinforced UST in accordance with accepted codes or manufacturer's specifications	(T)	Varies[1]	Varies[1]	see matrix
173-360-325(3)	Failure to replace metal piping that has released regulated substances	(P)	Major	Major	$1500
173-360-325(3)	Failure to repair fiberglass-reinforced piping in accordance with manufacturers specifications	(P)	Major	Major	$1500
173-360-325(4) Dates of noncomp. =	Failure to ensure that repaired tank systems are tightness tested within 30 days of completion of repair, if required [Date test required to date test conducted]	(T)	Major	Moderate	$750
173-360-325(5) Dates of noncomp. =	Failure to test cathodic protection system within six months of repair of cathodically protected UST system [Date required to date test conducted]	(T)	Major	Moderate	$750
173-360-325(6) Dates of noncomp. =	Failure to test repair of cathodic protection system at time of repair and between one to six months following repair [Date required to date test conducted]	(T/F)	Major	Moderate	$750

[4]Deviation from requirement and potential for harm will vary depending upon specific code or standard violated.

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-325(7) Dates of noncomp. =	Failure to maintain records of each repair to an UST system [Date of earliest known repair to date records provided]	(T)	Major	Major	$1500
173-360-325(8) Dates of noncomp. =	Failure to certify compliance by submitting appropriate checklist [Date work done to date checklist submitted]	(T/F)	Major	Minor	$500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-330	**Release detection compliance schedule**				
173-360-330 Dates of noncom. =	Failure to provide release detection by phase-in date [Date required to date violation discovered]	(F)	Major	Major	$1500
173-360-335	**Release detection for petroleum UST system**				
173-360-335(1)(a)	Failure to provide release detection method capable of detecting a release from any portion of tank or piping that routinely contains a regulated substance	(T/F)	Major	Major	$1500
173-360-335(1)(b)	Failure to install, calibrate, operate, or maintain release detection method in accordance with manufacturer's instructions	(T/F)	Major	Major	$1500
173-360-335(1)(c)	Failure to provide a release detection method that meets performance requirements	(T/F)	Major	Major	$1500
173-360-335(2)(a) Dates of noncomp. =	Failure to monitor tanks at least every 30 days, if appropriate [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-335(3) Dates of noncomp. =	Failure to close any UST system that cannot meet release detection requirements [Date release detection required to date ust closed]	(F)	Major	Major	$1500
173-360-340	**Releases detection for hazardous substance UST systems**				
173-360-340(1) Dates of noncomp. =	Failure to provide required release detection for an existing hazardous substance tank system [Date required to date violation discovered]	(F)	Major	Major	$1500
173-360-340(2) Dates of noncomp. =	Failure to provide adequate release detection for a new hazardous substance UST system [Date required to date violation discovered]	(F)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-340(2)(a) Dates of noncomp. =	Failure to provide adequate secondary containment of tank for a hazardous substance UST [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-340(2)(b) Dates of noncomp. =	Failure to provide adequate double-walled tank for a hazardous substance UST [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-340(c) Dates of noncomp. =	Failure to provide adequate external liner for a hazardous substance UST [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-340(d) Dates of noncomp. =	Failure to provide adequate secondary containment of piping for a hazardous substance UST [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-345	**Methods of release detection for tanks**				
173-360-345(2) Dates of noncomp. =	Failure to conduct tank tightness testing every 5 years, if appropriate [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-345(3) Dates of noncomp. =	Failure to conduct annual tank tightness testing, if appropriate [Date required to date violation discovered]	(T)	Major	Major	$1500
173-360-345(6)(d)	Use of a tightness testing method which does not meet the required performance standards	(T/F)	Moderate	Major	$750
173-360-350	**Methods of release detection for piping**				
173-360-350(1) Dates of noncomp. =	Failure to provide required release detection for underground piping [Date required to date violation discovered]	(P)	Major	Major	$1500
173-360-350(2)(a) Dates of noncomp.=	Failure to provide adequate leak detection for underground pressurized piping [Date required to date violation disovered]	(P)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-350(2)(b)	Failure to provide required leak detection for underground suction piping	(P)	Major	Major	$1500
173-360-355	**Release detection recordkeeping**				
173-360-355 Dates of noncomp. =	Failure to maintain records demonstrating compliance with all applicable release detection requirements [Date release detection records required to date records provided]	(F)	Moderate	Minor	$100
173-360-355(1) Dates of noncomp. =	Failure to maintain documentation of all release detection performance claims for 5 years after installation [Date of installation to date violation discovered]	(F)	Moderate	Minor	$100
173-360-355(2) Dates of noncomp. =	Failure to maintain results of all sampling, testing or monitoring for release detection for at least five years [Date of first test to date violation discovered]	(F)	Moderate	Minor	$100
173-360-355(2) Dates of noncomp. =	Failure to retain results of tank tightness testing until the next test is conducted [Date of test to date violation discovered]	(F)	Major	Major	$1500
173-360-355(3) Dates of noncomp. =	Failure to maintain documentation of all calibration, maintenance, and repair of release detection equipment for at least five years [Date records required to date violation discovered]	(F)	Major	Major	$1500
173-360-360	**Reporting of suspected releases**				
173-360-360 Dates of noncomp. =	Failure to report a suspected release within 24 hours to Ecology or delegated agency [Date of release to date violation discovered]	(F)	Major	Major	$1500
173-360-365	**Investigation due to off-site impacts**				

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Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-365 Dates of noncomp. =	Failure to investigate for a release when required by Ecology or delegated agency [Date of order to date penalty written]	(F)	Major	Major	$1500
173-360-372	**Reporting of confirmed releases**				
173-360-372 Dates of noncomp. =	Failure to report all confirmed releases to Ecology or delegated agency within 24 hours [Date of release to date violation discovered]	(F)	Major	Major	$1500
173-360-375	**Cleanup and reporting of spills and overfills**				
173-360-375(1) Dates of noncomp. =	Failure to immediately contain and clean up any spill or overfill [Date of spill to date violation discovered]	(F)	Major	Major	$1500
173-360-375(1)(a) Dates of noncomp. =	Failure to report a spill/overfill of petroleum (if appropriate) to Ecology or delegated agency within 24 hours [Date of spill to date violation discovered]	(F)	Major	Major	$1500
173-360-375(1)(b) Dates of noncomp. =	Failure to report a spill/overfill of a hazardous substance to Ecology or delegated agency within 24 hours [Date of spill to date violation discovered]	(F)	Major	Major	$1500
173-360-375(2) Dates of noncomp. =	Failure to take appropriate actions to contain and clean up spill/overfill [Date of spill to date violation discovered]	(F)	Major	Major	$1500
173-360-375(3)(a), (b), or (c) Dates of noncomp. =	Failure to take appropriate action for petroleum spill/overfill [Date of spill to date violation discovered]	(F)	Major	Major	$1500
173-360-375(3)(d) or (e)	Failure to take appropriate action for hazardous substance spill/overfill	(F)	Major	Major	$1500
173-360-380	**Temporary closure of UST systems**				

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-380(1) Dates of noncomp. =	Failure to continue operation and maintenance of corrosion protection system in a temporarily closed UST system [Date of closure to date violation discovered]	(F/T)	Major	Moderate	$750
173-360-380(1) Dates of noncomp. =	Failure to continue operation and maintenance of release detection in temporarily closed UST system [Date of closure to date violation discovered]	(F/T)	Major	Major	$1500
173-360-380(2) Dates of noncomp. =	Failure to comply with temporary closure requirements for UST system temporarily closed for three or more months [Date of closure to date violation discovered]	(F/T)	Major	Moderate	$750
173-360-380(3) Dates of noncomp. =	Failure to conduct tightness test, if applicable, for UST system brought back into service after temporary closure [Date UST in service to date tightness test done]	(T)	Major	Major	$1500
173-360-380(4)	Failure to permanently close or upgrade an UST system temporarily closed for more than 12 months	(F/T)	Major	Major	$1500
173-360-385	**Permanent closure and changes-in-service**				
173-360-385(1) Dates of noncomp. =	Failure to properly notify Ecology or delegated agency of a closure or change-in-service [Date of closure to date violation discovered]	(F/T)	Major	Major	$1500
173-360-385(2)	Failure to complete permanent closure within 60 days after expiration of 30-day notice	(F)	Major	Minor	$500
173-360-385(3)	Failure to remove all liquid and sludge from tank	(F/T)	Major	Major	$1500
173-360-385(4) Dates of noncomp. =	Failure to remove closed tank from the ground or fill tank with an inert solid material [Date UST closed to date violation discovered]	(F/T)	Major	Moderate	$750

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-385(5) Dates of noncomp. =	Failure to remove all liquid and sludge from tank and conduct a site assessment prior to a change-in-service [Date of change to date violation discovered]	(F/T)	Major	Major	$1500

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-390	**Site assessment at closure or change-in-service**				
173-360-390(1) Dates of noncomp. =	Failure to conduct a proper site assessment, if applicable, before a permanent closure or change-in-service [Date of closure to date violation discovered]	(T/F)	Major	Major	$1500
173-360-390(1)	Failure to have a site assessment conducted by a person registered with Ecology	(F)	Major	Major	$1500
173-360-390(5) Dates of noncomp. =	Failure to submit properly completed site assessment checklist [From 30 days after field work to date provided]	(F)	Major	Minor	$500
173-360-398	**Closure records**				
173-360-398 Dates of noncomp. =	Failure to maintain closure records for at least five years (unless records are sent to Ecology) [Date of closure to date violation discovered]	(F)	Major	Major	$1500
173-360-398 Dates of noncomp. =	Failure to maintain change-in-service records for at least five years (unless records are sent to Ecology) [Date of change to date violation discovered]	(F)	Major	Major	$1500
173-360-399 Dates of noncomp. =	Failure to take appropriate action upon confirmation of a release [Date of spill to date violation discovered]	(T/F)	Major	Major	$1500
173-360-400	**Financial responsibility requirements**				
173-360-403 Dates of noncomp. =	Failure to comply with financial responsibility requirements by the required compliance date [Date required to date violation discovered]	(F)	Major	Moderate	$750
173-360-406 Dates of noncomp. =	Failure to meet the requirement for per-occurrence coverage of insurance [Date insurance needed to date violation discovered]	(F)	Major	Moderate	$750

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Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-406 Dates of noncomp. =	Failure to meet the requirement for annual aggregate coverage of insurance [Date insurance needed to date violation discovered]	(F)	Major	Moderate	$750
173-360-406(4) Dates of noncomp. =	Failure to review and adjust financial assurance after acquiring new or additional USTs [Date new of USTs to date violation discovered]	(F)	Major	Moderate	$750
173-360-410 Dates of noncomp. =	Failure to use an approved mechanism or combination of mechanisms to demonstrate financial responsibility [Date required to date violation discovered]	(F)	Major	Moderate	$750
173-360-413 Dates of noncomp. =	Use of falsified financial documents to pass financial test of self-insurance [Date insurance needed to date violation discovered]	(F)	Major	Moderate	$750
173-360-446 Dates of noncomp. =	Failure to report evidence of financial responsibility to Ecology if the provider becomes incapable of providing financial assurance and the owner or operator is unable to obtain alternate coverage within 60 days [Date of 60th day to date violation discovered]	(F)	Moderate	Minor	$100
173-360-446(1) Dates of noncomp. =	Failure to document evidence of financial responsibility to Ecology within 30 days of detecting a known or suspected release [Date of 30th day to date violation discovered]	(F)	Moderate	Minor	$100
173-360-446(2) Dates of noncomp. =	Failure to certify compliance with financial responsibility requirements when new tanks are installed [Date installed to date violation discovered]	(F)	Moderate	Minor	$100

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-450(1) Dates of noncomp. =	Failure to maintain evidence of financial assurance mechanism(s) used to comply with financial responsibility rule and certification that the mechanism is in compliance with the requirements of the rule at the UST site or place of business [Date insurance needed to date violation discovered]	(F)	Moderate	Minor	$100
173-360-630	**Registration and licensing of tank service providers**				
173-360-630(3)	Providing tank services without a tank services providers license or being registered, as appropriate	(SP)	Major	Minor	$500
173-360-630(8)(c)	Failure to meet applicable state or federal standards relating to the service being performed	(SP)	Varies[5]	Varies[1]	
173-360-630(8)(d)	Failure to employ and designate licensed supervisor for each UST project directly overseen by the service provider	(SP)	Major	Minor	$500
173-360-630(12)	Failure to complete a checklist for each regulated activity performed [Date 30 days after work to date violation discovered]	(SP)	Major	Minor	$500
173-360-630(13)	Failure to report confirmed release to Ecology [Date 72 hours after release to date of report]	(SP)	Major	Major	$1500
173-360-650	**Examination and licensing of tank service supervisors**				

[5]Deviation from requirement and potential for harm will vary depending upon specific code or standard violated.

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

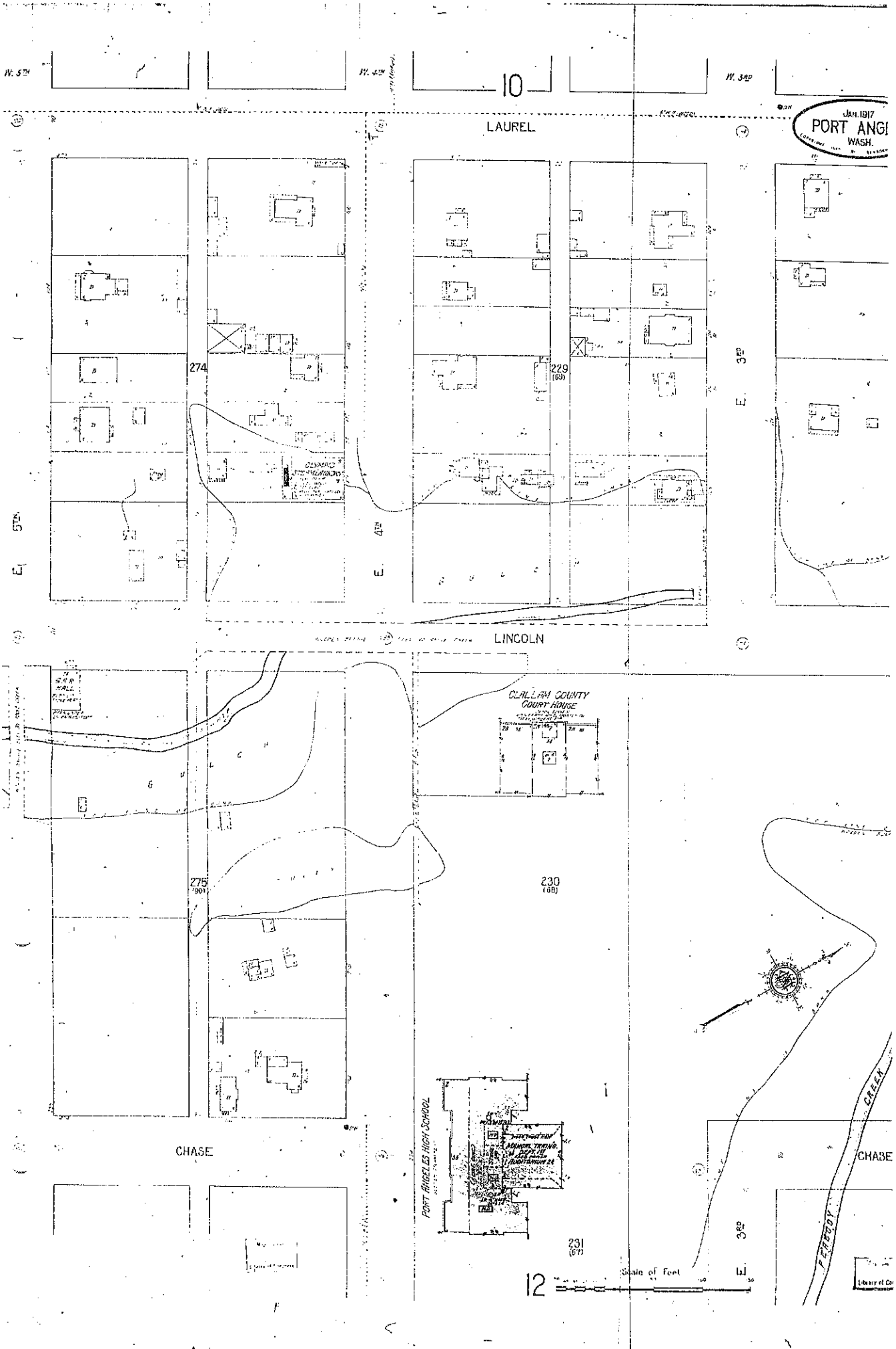
Regulatory Citation	Violation	Unit Assessment*	Deviation from Requirement	Potential for Harm	Matrix Value
173-360-650(1)	Failure to have a licensed tank services supervisor present on-site during tank services activities	(SP)	Major	Major	$1500
173-360-650(1)	Supervising specified activities without a valid tank services supervisor license appropriate to the activity being performed	(SP)	Major	Minor	$500
173-360-650(7)	Failure to have a supervisor's license identification card available for inspection at any project site supervised by the license	(SP)	Minor	Minor	$50
173-360-650(11)	Failure to comply with any state or federal law, regulation, or procedure pertaining to USTs	(SP)	Varies[6]	Varies[1]	

(November 25, 1992)

[6]Deviation from requirement and potential for harm will vary depending upon specific code or standard violated.

*Unit assessment refers to whether the penalty should be applied per tank (T), per facility (F), per site assessor, or per service provider (SP). Where the violation applies to piping (P), the assessment will depend on whether the piping is associated with one tank or more than one tank.

8 TH
E.
143
144
7 TH
E.
Scale of Feet
132
131
CHASE
LINCOLN
6 TH
E.
102
103
5 TH
E.
91
90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LAUREL
LINCOLN
CHASE
CHASE
CLALLAM COUNTY
COURT HOUSE
PORT ANGELES HIGH SCHOOL
274
275
(90)
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230
(68)
231
(67)
W. 5TH
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W. 3RD
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E. 3RD
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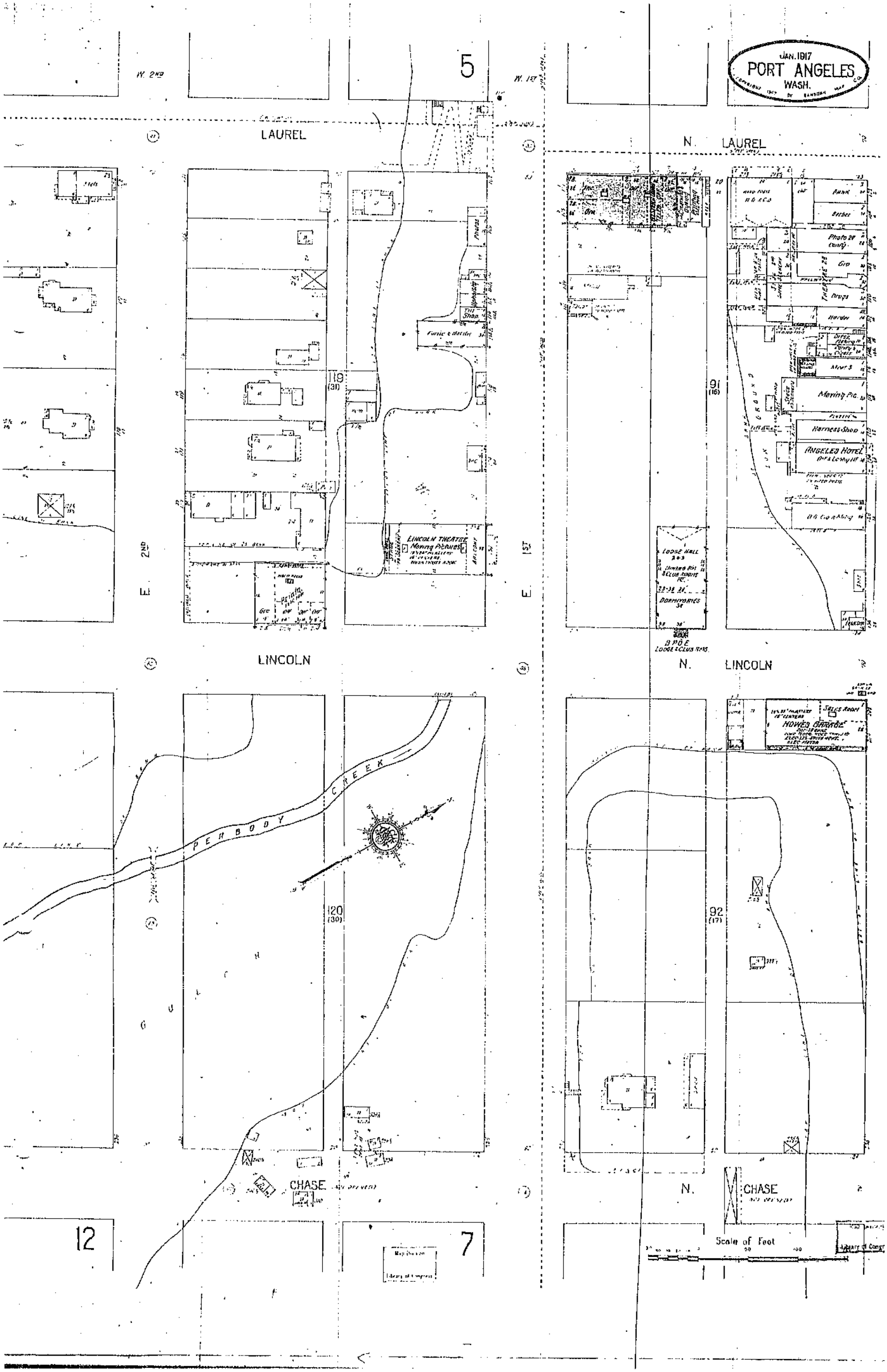
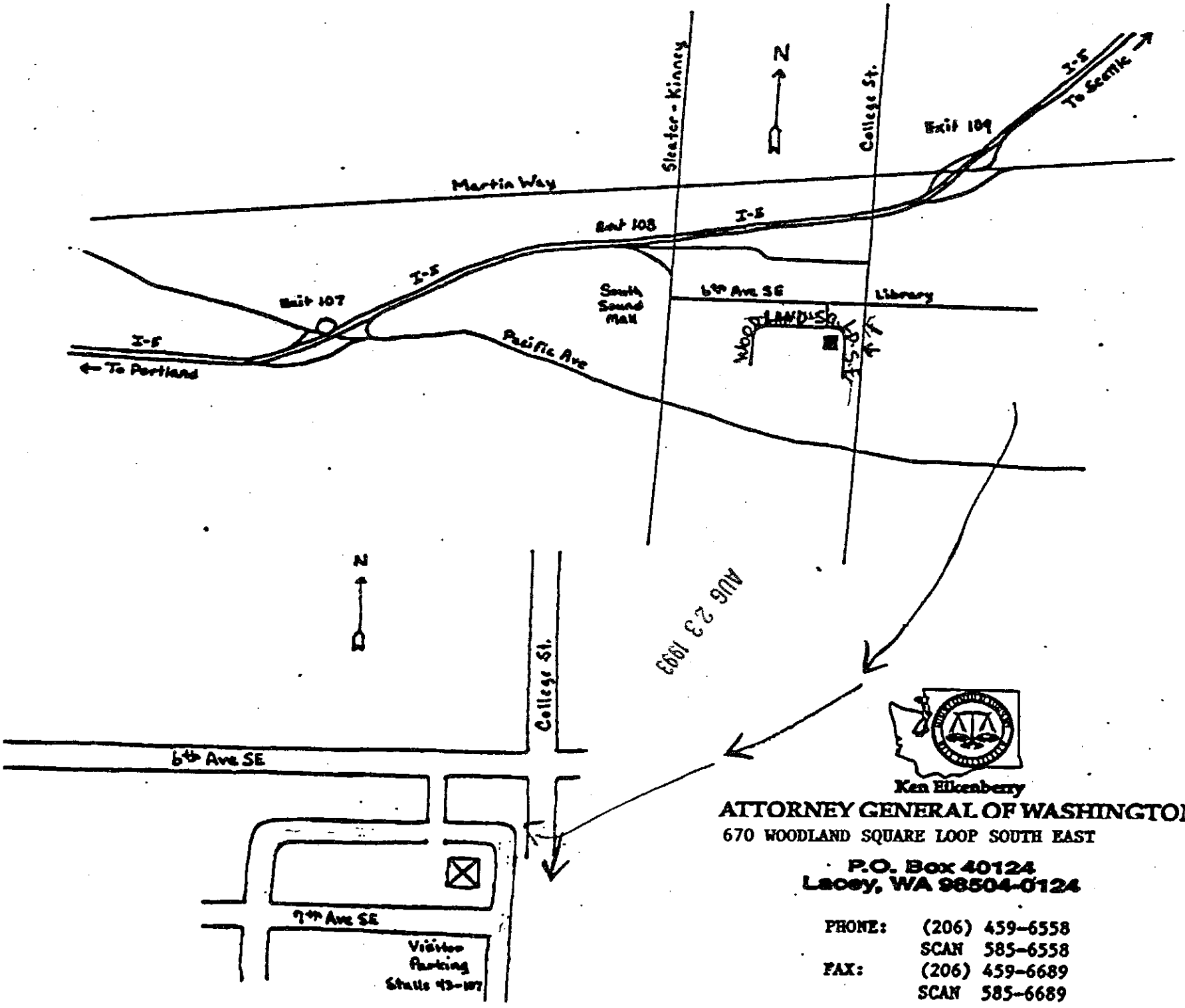
PORT ANGE
WASH.


JAN. 1917
PORT ANGELES
WASH.
5
W. 2ND
W. 1ST
LAUREL
N. LAUREL
Bank
Barber
Gro
Drugs
Moving Pic.
Harness Shop
ANGELES HOTEL
119
(31)
91
(16)
LINCOLN THEATRE
Moving Pictures
Shop
LODGE HALL
DORMITORIES
B.P.O.E.
LODGE & CLUB RMS.
E. 2ND
E. 1ST
LINCOLN
N. LINCOLN
HOWES GARAGE
Sales Room
PEABODY CREEK
120
(30)
92
(17)
CHASE
N. CHASE
12
7
Scale of Feet
Map Division
Library of Congress



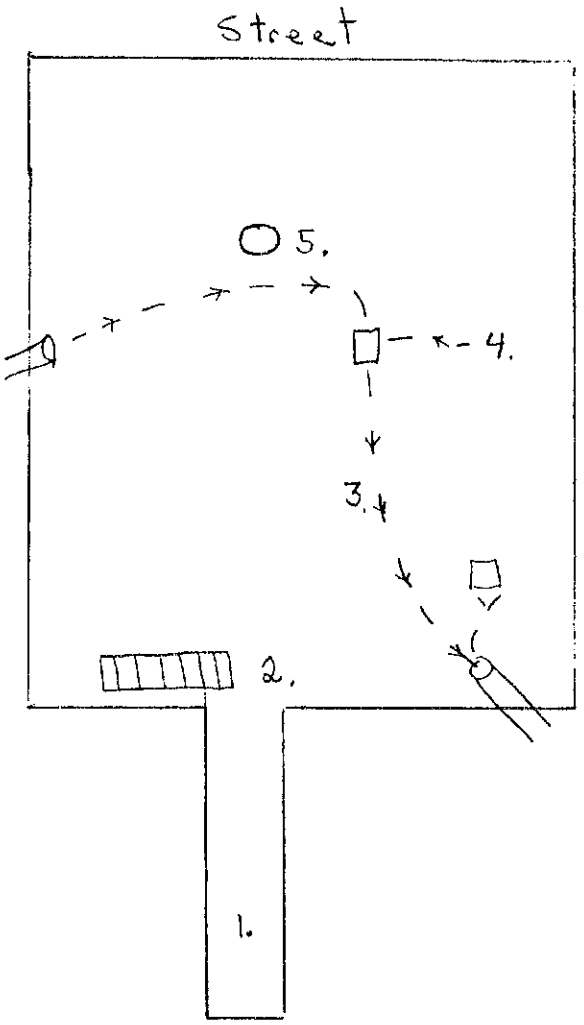
AUG 23 1993

ATTACHMENT A

Ken Eikenberry
ATTORNEY GENERAL OF WASHINGTON
670 WOODLAND SQUARE LOOP SOUTH EAST

P.O. Box 40124
Lacey, WA 98504-0124

PHONE: (206) 459-6558
SCAN 585-6558
FAX: (206) 459-6689
SCAN 585-6689



"Crawl Space"

AUG 23 1993

Sta. #	LEL Chest Level	ppm	LEL Ground Level
1	0		0
2	0		0
3	0	0	.1%
4	0		1% *
5	0		1% *
6	0		.7%

LEL-lower explosive limit

* Holding probe ½" above product.

LINCOLN APARTMENTS, PORT ANGELES

AUG 23 1993

(LINCOLN SQUARE APARTMENTS)

709 South Lincoln Street, Port Angeles

History:

1974 June 1974, the City of Port Angeles discovered a ground water seep located near the center of town had become contaminated with gasoline plus a mixture of heavier oil fractions. The oily mixture was entering Peabody Creek, a small stream which enters Port Angeles Harbor near the Black Ball ferry dock.

1975 January 13-14, 1975, the area was investigated by Ecology. The petroleum contamination surfaced near Lincoln Street and crossed over the surface and entered a small corrugated culvert which travels northward for about 150 feet and empties into Peabody Creek. The source was not pinpointed.

It was recommended that the City of Port Angeles be ordered to immediately install an oil/water separator or other means of oil containment at the upper end of the culvert which receives the oil/gas mixture from the groundwater seep.

1976 April 5. Memo from Jim O. of a meeting held with the City of P. A. on March 31, 1976. The City drilled a 13' deep test holes near the most probable source, Olympic Laundry. A product very similar to what show up in the creek appeared in the test holes near the laundry.

Several 6000 gal. tanks of stodard solvent were stored in the parking lot near the test holes. The laundry was built in 1927, the UST are approx. as old. Several years ago the laundry replaced a heating oil tank on the other side of the building. It had totally deteriorated. A few drops of 3# heating oil was added to a sample of Stodard solvent and the solution turned black. This could explain black oil appearance in the creek.

1980 December 30, 1980 it was reported to DOE that a gasoline leak was discovered under the Lincoln Apartments in P.A.

1981 January 13, 1981, Greg Cloud, DOE, investigated the Lincoln Apartments, ~~January 13, 1981~~. Photos of Red's Arco and under Lincoln Square Apartments by Greg.

January 16, 1981, contacts were made with Mobil to pressure test their tanks and with Arco ("Red Crumb"), Red's Arco to pressure test his tanks (by Darrel Anderson, DOE).

Jan 19. Pressure tested tanks at Red's Arco, found leaks in the plumbing to dispenser. Test done by Golden Company in Tacoma.

February 11, 1981. Memorandum from Jim Oberlander of the events that occurred between January 20, and January 21 during a spills response to P.A.. Residents of the Lincoln Square Apartments were evacuated due to petroleum fumes. Red's Arco is approximated 180 feet away. Red's Arco dug up leaking unleaded gas piping. Two sumps were dug under the apart. bldg. It took about 2 hours for the dye to reach Peabody Creek.

Jan 26 thru Jan 27, Feb 9. Memo from Ken Mauermann and Darrel Anderson. Station leak secured. Suggested removal of all debris from under the apartment. Plan to include placement of drain tile connected to a common sump to separate product from water. Sump to be ventilated to the atmosphere. Cover the drain tile with soil and a layer of visquien. The Fire Department is to monitor the situation daily.

February 9, 1981 The City of Port Angeles implemented Ecology's recommendations.

1985 May 30, 1985, letter to Mr. Dave Cotton, Round the Clock Deli, stating that a fuel product was appearing under the Lincoln Apartments. Requested Mr. Cotton to do a voluntary test of tanks and lines for tightness.

June 18, 1985. Don Golden Co. did a tank and line tightness testing on "Round the Clock Deli located at 722 No. Lincoln, P.A. Tank #1 was found not to be tight.

(Jan 1, 21, 81. A newspaper article stated that equipment was brought in to test tank tightness and results of the test showed the UST at Read's was the source of the leak of unleaded gas.)

1985 June 2, 1985 Complaint. Gas vapors at Lincoln Apartments.

June 17, 1988. DOE inspects Lincoln Apartments. Product sheen can be seen continuously in the water flowing through the sump. Evidence of spillage at Round the Clock Deli.

19 - 1983 Red's Arco owned by Red Crumb.

1983 - 1986 Red's Arco owned by John Delange

1986 - ? Bought by Dave Cotton, renamed "Round the Clock Deli".

Recommended tank and tightness testing.

July 18, 1985, Tank Liners, Inc. lined one 4,000 gal unleaded tank for Around the Clock Deli.

1988 June 17, 1988. Ecology notes. Investigated Lincoln St. Apt. Product sheen seen on the water flowing through the sump. visited the Mobil Station and the Deli (Dave Cotton). Evidence of spillage by the unleaded tank at the Deli. Filler neck flange was not tight. Required a pressure test of all tanks and lines.

June 23, 1988. Notes from Diane Harvester. Don Golden Tank Testers are at the Deli. Tests indicate that both the leaded and unleaded tanks leak. No line leaks. Tanks not(?) registered. Dip test indicates that there is water in the tank for reg. leaded tank. Had tanks pumped. Dye studies may not give an accurate picture of how product is moving. Made arrangements for the tanks to be excavated.

July 14, 1988. GeoEngineers submitted a draft report on their preliminary study of the subsurface fuel contamination at Lincoln Apartments. Ecology hired GeoEngineers to do the study.

> June 28 tanks and lines tested tight by Don Golden Company Soil samples were contaminated by gasoline and a lesser amount of diesel. Because of the many underground utilities present in the area, positive identification of the source of fuel cannot be made without further subsurface explorations.
>
> The water within the apartment building sump contains concentrations of organic contaminants that greatly exceed drinking water standards. This water is toxic to freshwater aquatic life.

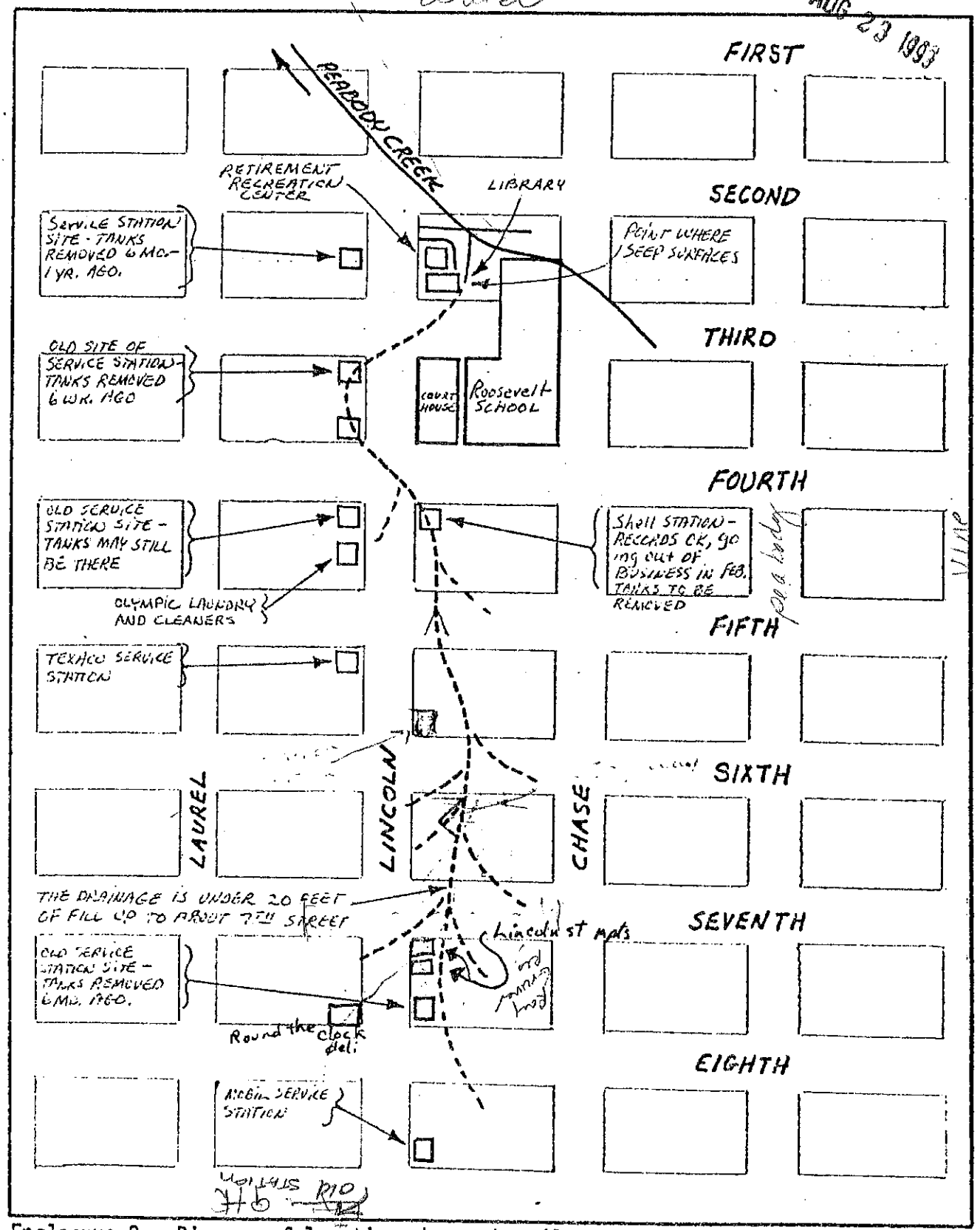
July 21, 1988. Notes from Maria Peeler of a site visit. Encountered a dry well on the NW side of the Deli (8th ST). Neither the Mobil or the Deli have sold diesel during the present ownership. There was a Union Station at one time were Harvey's Hardware is now. It may have sold diesel at one time.

1989 August 9. 1989. Site Safety Plan (Dick Walker).

October 13, 1989. Telephone message to Dick Walker. Report of a release at 134 E Lauridsen, Port Angeles.

1990 January 30, 1990, memorandum from Tom Todd to the files.

1991 April 25, 1991. Tom Todd went to Lincoln Apartments in Port Angeles and collected VOA samples. Gasoline contamination confirmed.



Enclosure 2 - Diagram of location where the oil-contaminated groundwater seep, or subsurface stream, surfaces and portion of the creek covered with fill.

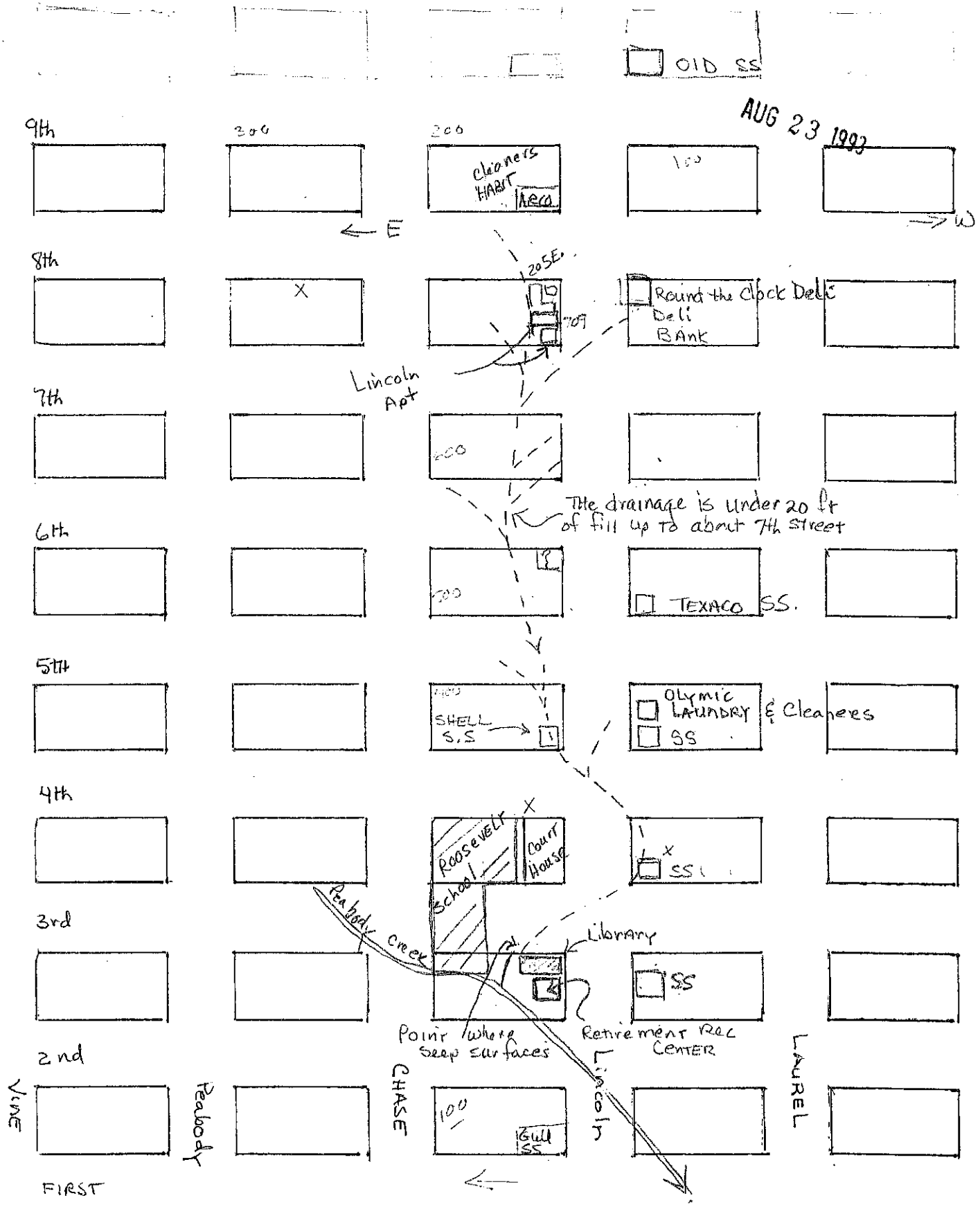


Diagram of location where the oil-contaminated G.W. seep or subsurface stream, surfaces & portion of the creek covered with fill.

N

PORT ANGELES, WASHINGTON

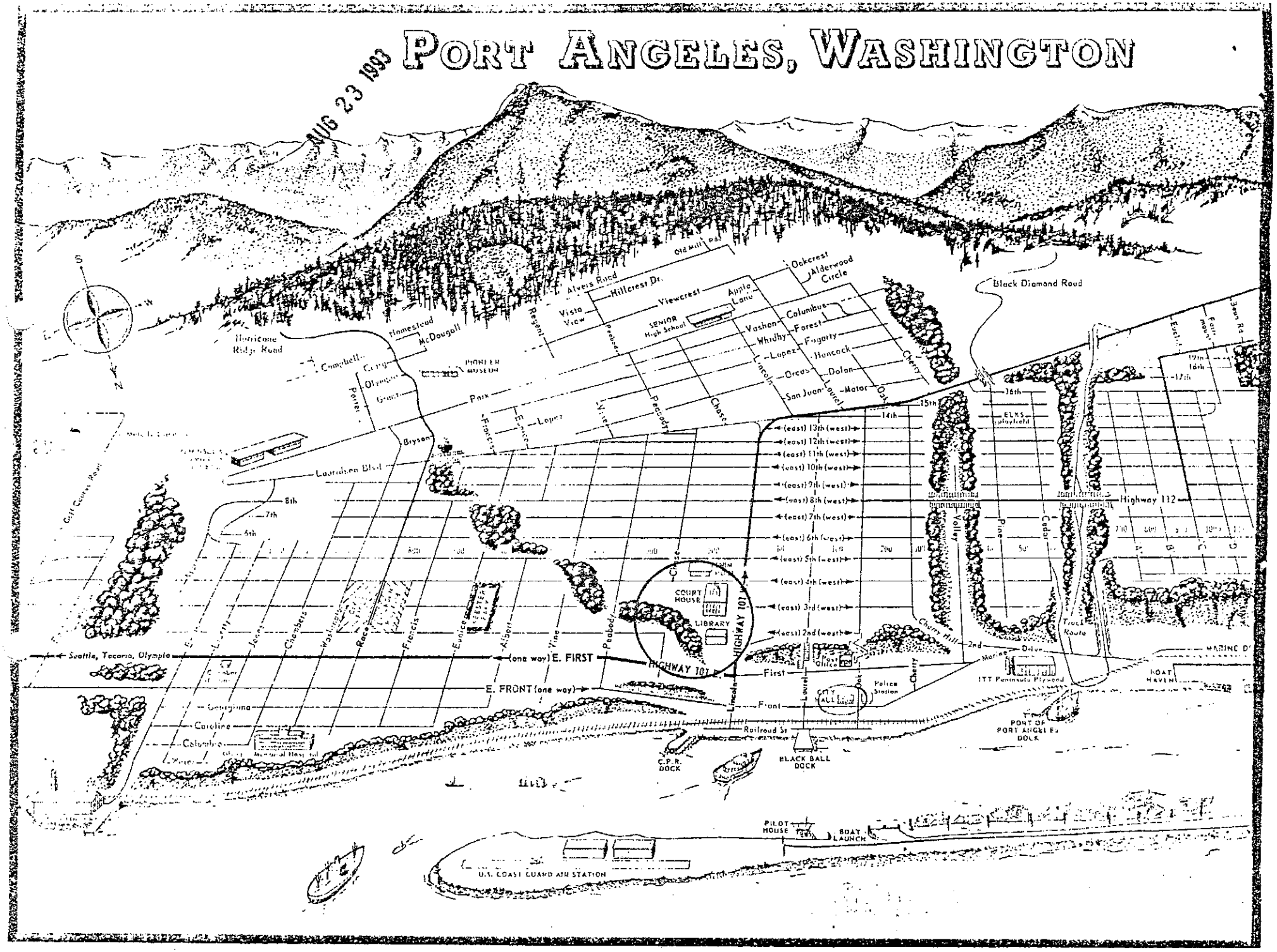
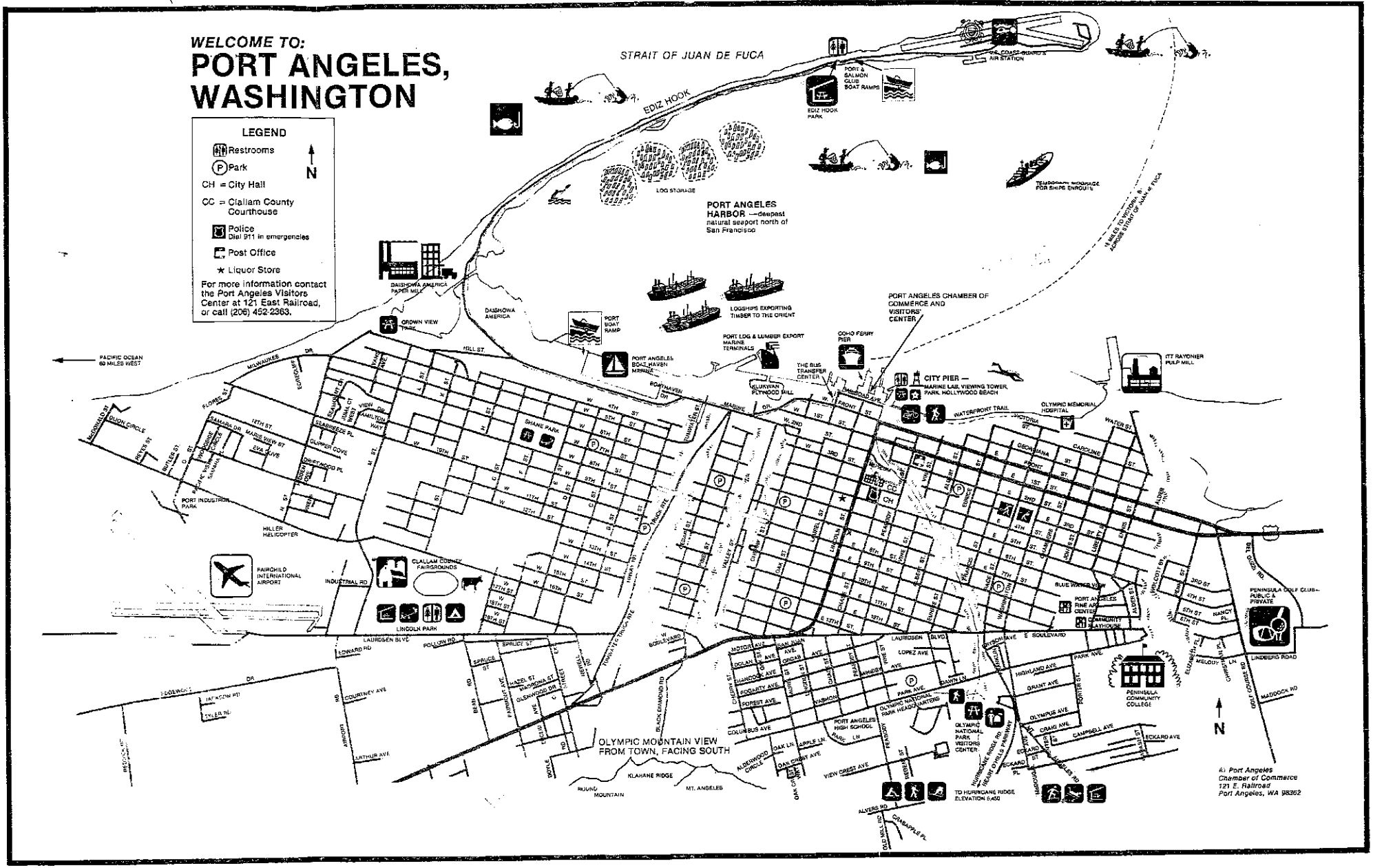
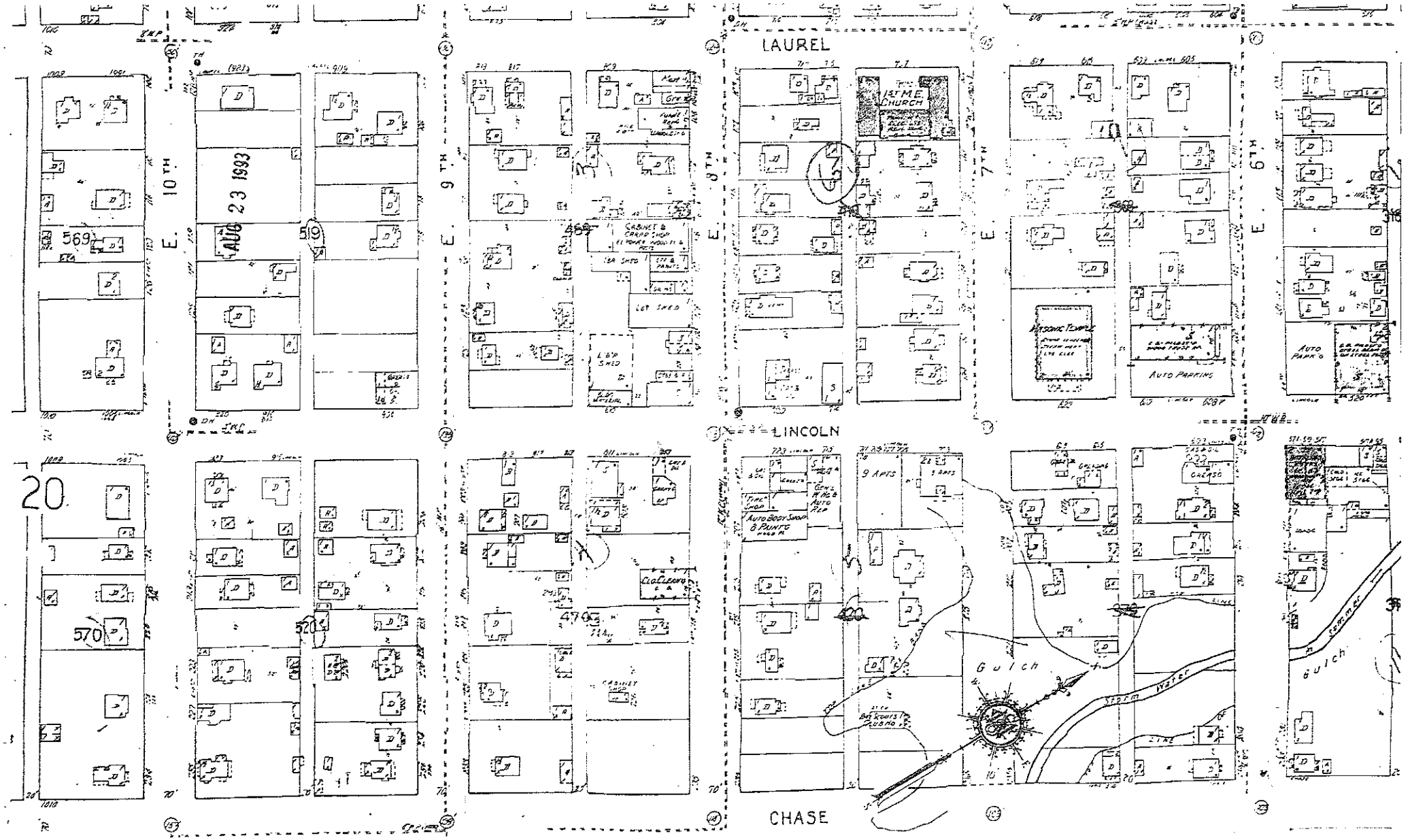


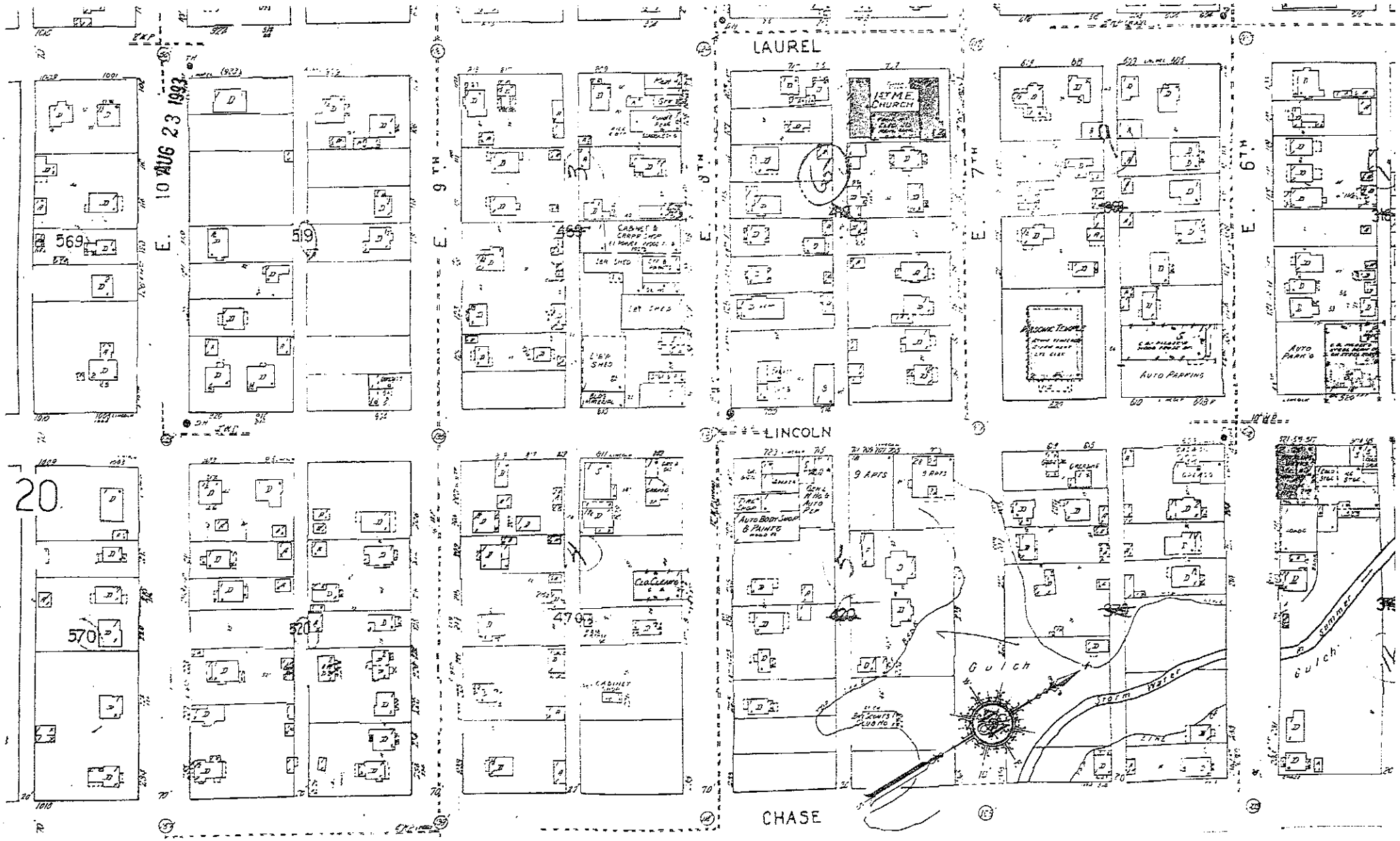
Exhibit 1

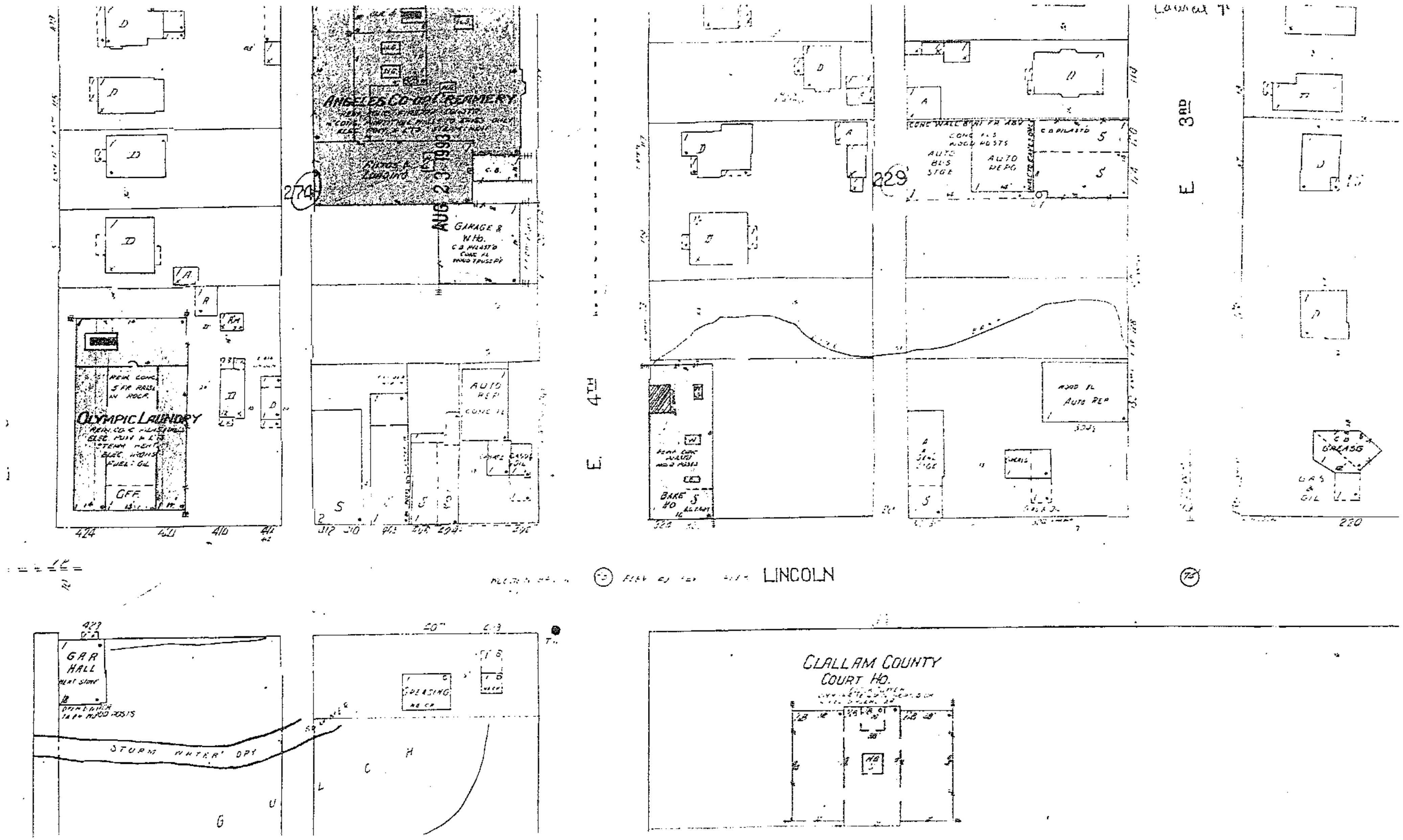
WELCOME TO:

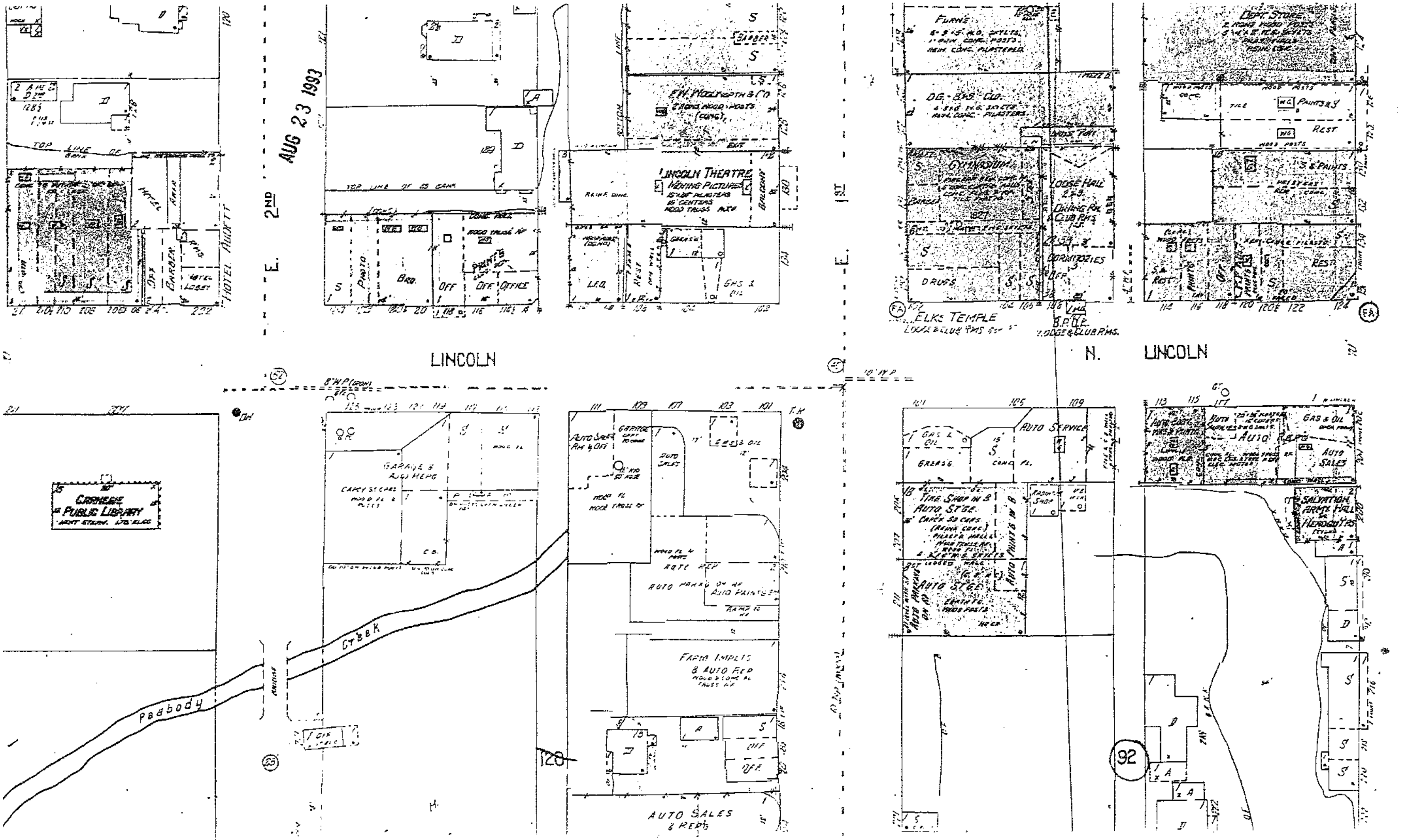
PORT ANGELES, WASHINGTON



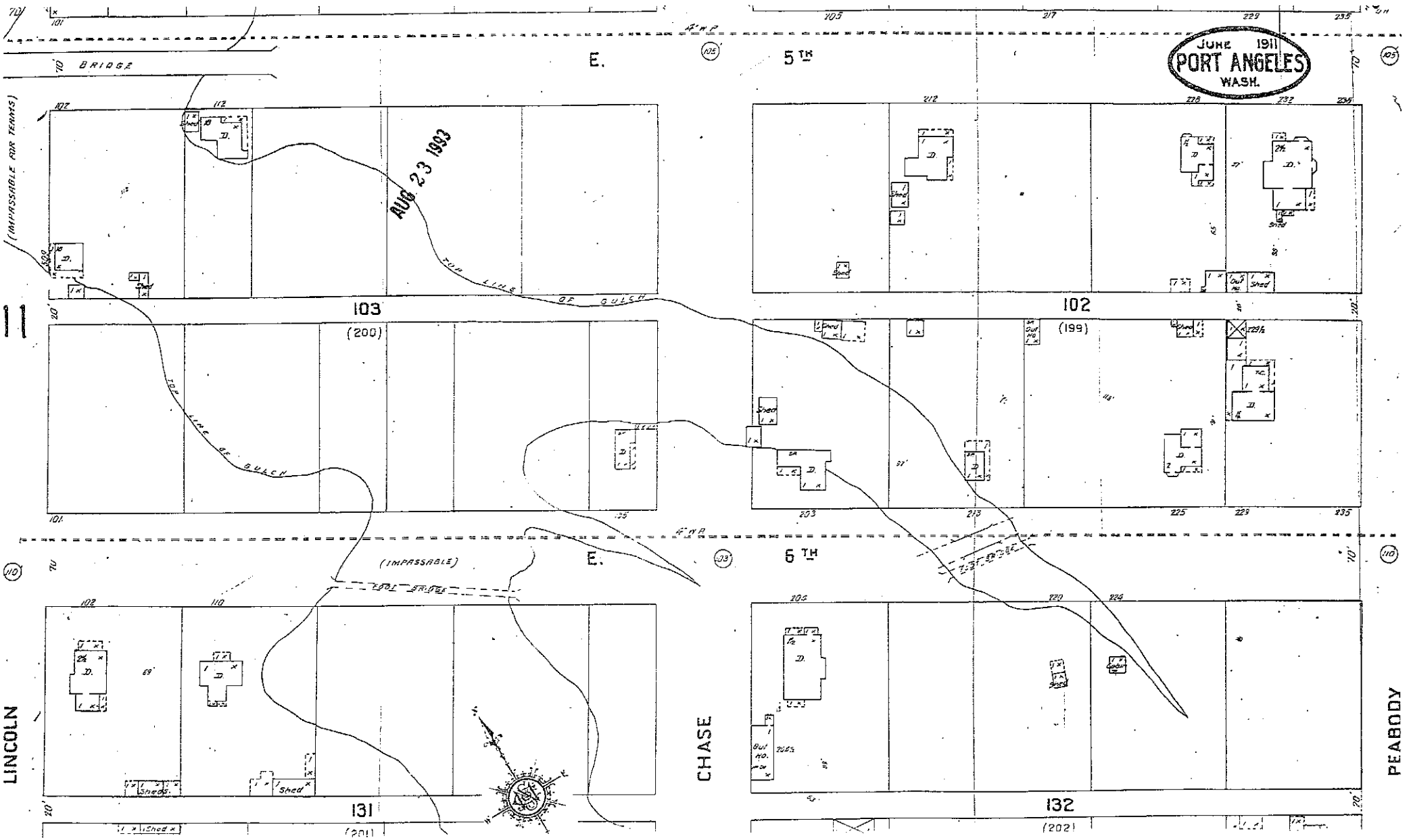

LAUREL
LINCOLN
CHASE
E. 10TH
E. 9TH
E. 8TH
E. 7TH
E. 6TH
569
570
20
AUG 23 1993
1ST M.E. CHURCH
CABINET & CARPET SHOP
LBR SHED
AUTO PARKING
9 APTS
AUTO BODY SHOP & PAINTS
Gulch


AUG 23 1993
LAUREL
LINCOLN
CHASE
E. 9TH
E. 8TH
E. 7TH
E. 6TH
1ST M.E. CHURCH
MASONIC TEMPLE
AUTO PARKING
AUTO PARK'G
AUTO BODY SHOP & PAINTS
9 APTS
Gulch
Storm Water
569
570
519
520
20


ANGELES CO-OP. CREAMERY
OLYMPIC LAUNDRY
GARAGE & W. Ho.
AUTO REP.
AUTO BUS STGE
AUTO REPG
AUTO REP.
BAKE HO.
E 4TH
E 3RD
LINCOLN
229
274
AUG 23 1993
GAR HALL
GREASING
STORM WATER DRY
CLALLAM COUNTY COURT HO.
GAS & OIL
424
420
416
412
312
310
220
423



AUG 23 1993
E. 2ND
E. 1ST
LINCOLN
N. LINCOLN
LINCOLN THEATRE
MOVING PICTURES
BALCONY
F.W. WOOLWORTH & CO.
BARBER
HOTEL AUDITT
HOTEL
BARBER
HOTEL LOBBY
PHOTO
OFF
OFFICE
PAINTS
DRUGS
GYMNASIUM
LODGE HALL
DINING RM. & CLUB RMS.
DORMITORIES
ELKS TEMPLE
LODGE & CLUB RMS.
B.P.O.E. LODGE & CLUB RMS.
DEPT. STORE
PAINTS & G
REST
FURN'G
DG. & S. CO.
CARNEGIE PUBLIC LIBRARY
Peabody Creek
BRIDGE
GARAGE & AUTO REPG
AUTO SALES & OFF
GARAGE
AUTO REPG
AUTO PAINTG
FARM IMPLTS & AUTO REP
AUTO SALES & REPG
GAS & OIL
GREASG
AUTO SERVICE
RADIATOR SHOP
TIRE SHOP W. S. AUTO STGE.
AUTO PAINTG
AUTO STGE.
AUTO PARKING
AUTO REPG
AUTO SALES
SALVATION ARMY HALL & HEADQUTRS
92
120


JUNE 1911
PORT ANGELES
WASH.
AUG 23 1953
11
E.
5TH
6TH
BRIDGE
(IMPASSABLE FOR TEAMS)
(IMPASSABLE)
FOOT BRIDGE
TOP LINE OF GULCH
103
102
131
132
(200)
(199)
(201)
(202)
LINCOLN
CHASE
PEABODY

tank absorption fields. Absorption lines should be installed on the contour.

This map unit is in capability subclass IVe, nonirrigated.

14—Clallam-Hoypus gravelly sandy loams, 0 to 15 percent slopes. This map unit is on hills and outwash terraces. The native vegetation is mainly conifers and shrubs. Elevation is 100 to 400 feet. The average annual precipitation is 25 to 30 inches, the average annual air temperature is about 48 degrees F, and the average frost-free period is 180 to 200 days.

The unit is 40 percent Clallam gravelly sandy loam and 40 percent Hoypus gravelly sandy loam. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

The Clallam soil is moderately deep and moderately well drained. It formed in compact glacial till. Typically, the surface is covered with a mat of organic material 2.5 inches thick. The surface layer, where mixed to a depth of 6 inches, is dark brown gravelly sandy loam. The upper part of the subsoil is brown gravelly sandy loam about 4 inches thick, and the lower part is brown very gravelly sandy loam about 18 inches thick. Compact glacial till is at a depth of 28 inches. Depth to compact glacial till ranges from 20 to 40 inches. In some areas of similar included soils, the surface layer is sandy loam or very gravelly sandy loam.

Permeability of the Clallam soil is moderate to the compact glacial till and very slow through it. Available water capacity is low. Effective rooting depth is 20 to 40 inches. Runoff is medium, and the hazard of water erosion is slight. Water is perched above the glacial till from January through April. The effect of the layer of glacial till on use and management is similar to that of a hardpan.

The Hoypus soil is very deep and somewhat excessively drained. It formed in glacial outwash. Typically, the surface is covered with a mat of organic material 1 inch thick. The surface layer is very dark grayish brown gravelly sandy loam 3 inches thick. The upper 7 inches of the subsoil is dark brown gravelly sandy loam, and the lower 21 inches is dark yellowish brown very gravelly loamy sand. The upper 14 inches of the substratum is dark brown very gravelly sand, and the lower part to a depth of 60 inches or more is dark yellowish brown gravelly sand. In some areas of similar included soils, the surface layer is gravelly loamy sand, very gravelly sandy loam, or gravelly loamy sand.

Permeability of the Hoypus soil is rapid. Available water capacity is very low. Effective rooting depth is 60 inches or more. Runoff is slow, and the hazard of water erosion is slight.

Included in this unit are small areas of Bellingham, Catla, Dick, and McKenna soils. Also included are small areas of Hoypus soils that have slopes of more than 15 percent. Included areas make up about 20 percent of the total acreage. The percentage varies from one area to another.

This unit is used mainly as homesites. It is also used as woodland.

If the Clallam soil is used for homesite development, the main limitation is wetness. Excavation for roads and buildings increases the risk of erosion.

Use of this soil for septic tank absorption fields is limited by wetness and depth to the compact glacial till. Because of the depth to compact glacial till, onsite sewage disposal systems often fail or do not function properly during periods of high rainfall. Use of heavy equipment during construction compacts the soil and thus reduces permeability, particularly during periods when the soil moisture content is high. The steepness of slope is a concern when installing septic tank absorption fields. Absorption lines should be installed on the contour.

If the Hoypus soil is used for homesite development, the main limitation is the steepness of slope. Preserving the existing plant cover during construction helps to control erosion. Excavation for roads and buildings increases the risk of erosion.

Use of this soil for septic tank absorption fields is limited by the rapid permeability. The soil is a poor filter. The steepness of slope is a concern when installing septic tank absorption fields. Absorption lines should be installed on the contour.

The Clallam soil is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the estimated mean site index for Douglas-fir is 130, and on the basis of a 50-year site curve, the estimated mean site index is 98. At the culmination of the mean annual increment (CMAI), the production of Douglas-fir at age 70 is 130 cubic feet per acre per year. The trees of limited extent are western hemlock, grand fir, western redcedar, red alder, and Pacific madrone. Among the common forest understory plants are salal, evergreen huckleberry, red huckleberry, Oregon-grape, oceanspray, twinflower, blackberry, western swordfern, and western brackenfern. Floral use of salal, evergreen huckleberry, and western swordfern is common on this soil.

The Clallam soil is suited to year-round harvesting operations. Logging roads require suitable surfacing. Rock for road construction is not available in areas of this soil. Seedling establishment and the hazard of windthrow are the main concerns in the production of timber. The low precipitation during the growing season and low available water capacity contribute to seedling mortality. Reforestation can be accomplished by planting Douglas-fir seedlings. If seed trees are present, natural reforestation of cutover areas by Douglas-fir occurs periodically. When openings are made in the canopy, invading brushy plants can delay the establishment of seedlings. Because the rooting depth is restricted by the

compact glacial till, trees occasionally are subject to windthrow.

The Hoypus soil is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the estimated mean site index for Douglas-fir is 134, and on the basis of a 50-year site curve, the estimated mean site index is 101. At the culmination of the mean annual increment (CMAI), the production of Douglas-fir at age 70 is 136 cubic feet per acre per year. The trees of limited extent are western hemlock, western redcedar, bigleaf maple, and Pacific madrone. Among the common forest understory plants are salal, Oregon-grape, red huckleberry, western brackenfern, blackberry, western swordfern, and deer fern. Floral use of salal and western swordfern is common on this soil.

The Hoypus soil is suited to year-round logging operations. Disturbance of the protective layer of duff can be reduced with the careful use of wheeled and tracked equipment. Logging roads require suitable surfacing for year-round use. Rounded gravel for road construction is readily available in areas of this soil.

Seedling establishment is the main concern in the production of timber. The low precipitation during the growing season and the droughtiness of the surface layer contribute to seedling mortality. Reforestation can be accomplished by planting Douglas-fir seedlings. Seedlings planted in the less fertile subsoil exhibit poor growth and vigor. When openings are made in the canopy, invading brushy plants can delay the establishment of seedlings.

This map unit is in capability subclass VIs, nonirrigated.

15—Clallam Variant gravelly loam, 10 to 30 percent slopes. This moderately deep, moderately well drained soil is on hills. It formed in glacial till and volcanic ash overlying compact glacial till. The native vegetation is mainly conifers and shrubs. Elevation is 1,300 to 2,000 feet. The average annual precipitation is 30 to 40 inches, the average annual air temperature is about 46 degrees F, and the average growing season is 210 to 240 days.

Typically, the surface is covered with a mat of organic material 1 inch thick. The surface layer, where mixed to a depth of 7 inches, is brown gravelly loam. The upper 8 inches of the subsoil is brown very gravelly loam, and the lower 15 inches is dark yellowish brown very gravelly sandy loam. Compact glacial till is at a depth of 30 inches. Depth to compact glacial till ranges from 20 to 40 inches.

Included in this unit are small areas of Elwha, Louella, and McKenna soils. Also included are small areas of Clallam Variant soils that have slopes of less than 10 percent or more than 30 percent and soils that are more than 40 inches deep to compact glacial till. Included areas make up about 20 percent of the total acreage. The percentage varies from one area to another.

Permeability of this Clallam Variant soil is moderate the compact glacial till and very slow through it. Available water capacity is low. Effective rooting depth 20 to 40 inches. Runoff is medium, and the hazard of water erosion is moderate. Water is perched above the compact glacial till from January through March. The effect of the layer of compact glacial till on use and management is similar to that of a hardpan.

This unit is used as woodland.

This unit is suited to the production of Douglas-fir. O the basis of a 100-year site curve, the estimated mean site index for Douglas-fir is 134, and on the basis of a 50-year site curve, the estimated mean site index is 10 At the culmination of the mean annual increment (CMA the production of Douglas-fir at age 70 is 136 cubic fee per acre per year. The trees of limited extent are western hemlock, western redcedar, and red alder. Among the common forest understory plants are red huckleberry, twinflower, salal, Oregon-grape, oceanspra western swordfern, deer fern, and western brackenfern

The main limitation for harvesting timber is muddines when the soil is wet. Use of wheeled and tracked equipment when the soil is wet produces ruts and compacts the soil. A perched seasonal high water table may limit the use of equipment to dry periods. Disturbance of the protective layer of duff can be reduced with the careful use of wheeled and tracked equipment. Unsurfaced roads and skid trails are soft when wet, and they may be impassable during rainy periods. Logging roads require suitable surfacing for year-round use. Rock for road construction is not readil available in areas of this unit.

Seedling establishment and the hazard of windthrow are the main concerns in the production of timber. Reforestation can be accomplished by planting Douglas fir seedlings. If seed trees are present, natural reforestation of cutover areas by Douglas-fir occurs periodically. When openings are made in the canopy, invading brushy plants can delay the establishment of seedlings. Because the rooting depth is restricted by the compact glacial till, trees occasionally are subject to windthrow.

This map unit is in capability subclass IVe, nonirrigated.

16—Dick loamy sand, 0 to 15 percent slopes. This very deep, somewhat excessively drained soil is on outwash terraces. It formed in glacial outwash. The native vegetation is mainly conifers and shrubs. Elevation is near sea level to 500 feet. The average annual precipitation is 17 to 25 inches, the average annual air temperature is about 50 degrees F, the average frost-free period is 160 to 200 days, and the average growing season (at 28 degrees) is 230 to 260 days.

Typically, the surface is covered with a mat of organic material about 2 inches thick. The surface layer is

can prevent the establishment of seedlings. Because the rooting depth is restricted by the seasonal high water table, trees frequently are subject to windthrow when the soil is wet and winds are strong.

This map unit is in capability subclass Vw, nonirrigated.

44—Neilton very gravelly loamy sand, 30 to 70 percent slopes. This very deep, excessively drained soil is on terrace escarpments. It formed in glacial outwash. The native vegetation is mainly conifers and shrubs. Elevation is near sea level to 1,600 feet. The average annual precipitation is 30 to 60 inches, the average annual air temperature is about 50 degrees F, and the average growing season (at 28 degrees) is 220 to 260 days.

Typically, the surface is covered with a mat of organic material 2 inches thick. The surface layer is dark grayish brown very gravelly loamy sand 4 inches thick. The subsoil is dark yellowish brown very gravelly loamy sand 19 inches thick. The upper 31 inches of the substratum is yellowish brown very gravelly loamy sand, and the lower part to a depth of 60 inches or more is yellowish brown extremely gravelly sand. In some areas of similar included soils, the surface layer is very gravelly sandy loam or gravelly loamy sand.

Included in this unit are small areas of Elwha, Schnorbush, and Terbies soils. Also included are small areas of soils that are sandy and soils that have a very gravelly sandy loam surface layer more than 10 inches thick. Included areas make up about 30 percent of the total acreage. The percentage varies from one area to another.

Permeability of this Neilton soil is very rapid. Available water capacity is very low. Effective rooting depth is 60 inches or more. Runoff is slow, and the hazard of water erosion is severe.

This unit is used as woodland.

This unit is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the estimated mean site index for Douglas-fir is 141, and on the basis of a 50-year site curve, the estimated mean site index is 105. At the culmination of the mean annual increment (CMAI), the production of Douglas-fir at age 65 is 146 cubic feet per acre per year. The trees of limited extent are grand fir, western hemlock, and western redcedar. Among the common forest understory plants are Oregon-grape, western brackenfern, salal, western swordfern, blackberry, red huckleberry, oceanspray, and twinflower.

The main limitation for harvesting timber is steepness of slope. Steepness of slope restricts the use of wheeled and tracked equipment in skidding operations; cable yarding systems generally are safer and disturb the soil less. Steep yarding paths, skid trails, and firebreaks are subject to rilling and gullying unless they are protected by water bars or vegetation. Logging roads require suitable surfacing for year-round use. Rounded gravel for road construction is readily available in areas of this unit. Establishing plant cover on the steeper slopes that h been cut or filled reduces erosion. During the first fe years following road construction in combination with clearcutting, road failures and landslides are likely to occur.

Seedling establishment is the main concern in the production of timber. The droughtiness of the surface layer contributes to seedling mortality. Reforestation be accomplished by planting Douglas-fir seedlings. Seedlings planted in the less fertile subsoil exhibit pc growth and vigor. When openings are made in the canopy, invading brushy plants can delay the establishment of seedlings.

This map unit is in capability subclass VIIs, nonirrigated.

45—Neilton very gravelly sandy loam, 5 to 30 percent slopes. This very deep, excessively drained is on terraces. It formed in glacial outwash. The nativ vegetation is mainly conifers and shrubs. Elevation is near sea level to 1,600 feet. The average annual precipitation is 30 to 60 inches, the average annual a temperature is about 50 degrees F, the average frost free period is 160 to 200 days, and the average grow season (at 28 degrees) is 220 to 260 days.

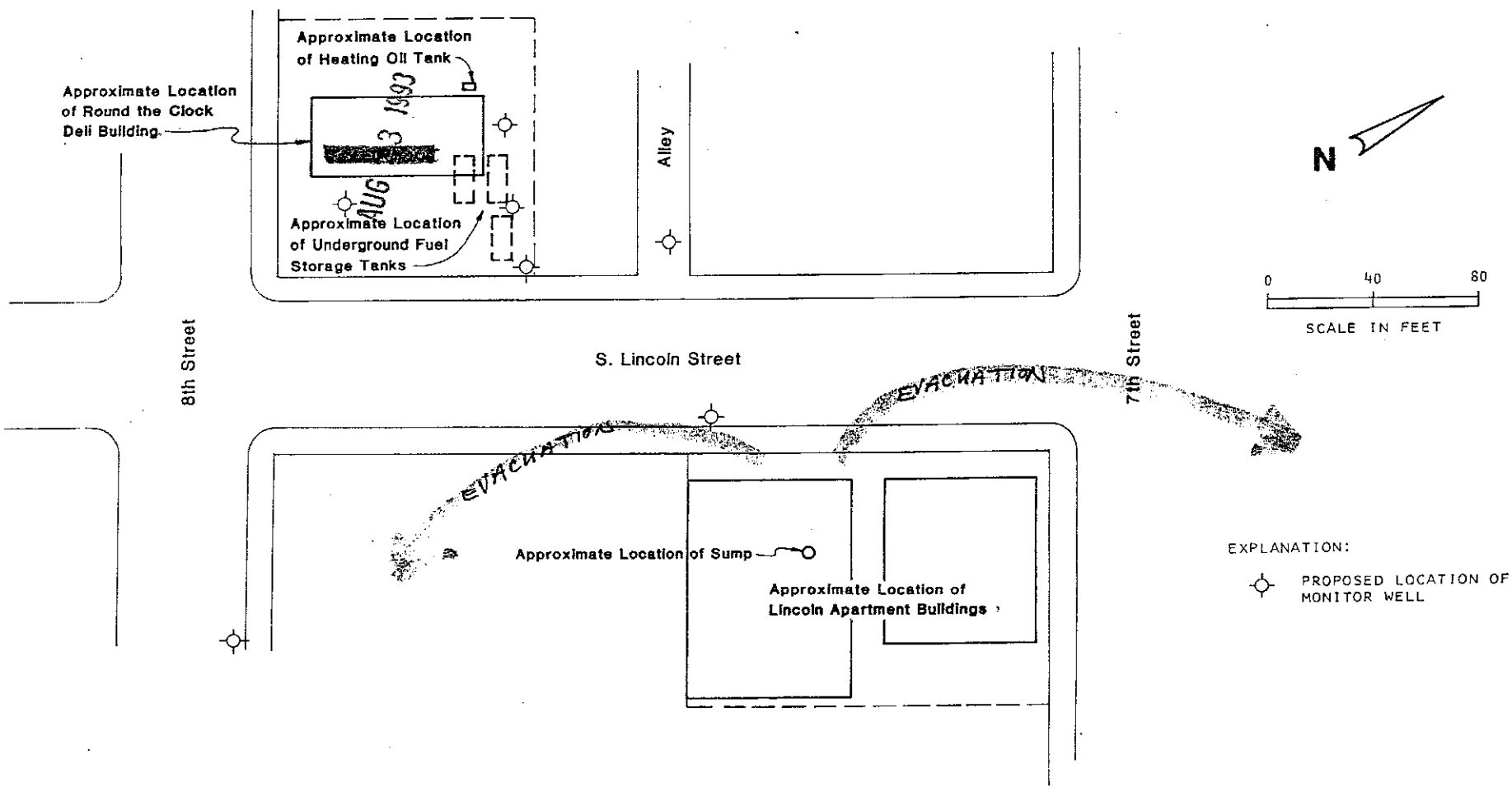
Typically, the surface is covered with a mat of orga material 1 inch thick. The surface layer is dark brown very gravelly sandy loam 6 inches thick. The subsoil dark yellowish brown very gravelly loamy sand 13 inc thick. The substratum to a depth of 60 inches or mor olive brown extremely gravelly sand. In some areas c similar included soils, the surface layer is very cobbly sandy loam or very gravelly loamy sand.

Included in this unit are small areas of Elwha, McKenna, and Schnorbush soils. Also included are s areas of soils that are sandy, soils that have a very gravelly sandy loam surface layer more than 10 inche thick, and Neilton soils that have slopes of less than percent. Included areas make up about 25 percent o total acreage. The percentage varies from one area t another.

Permeability of this Neilton soil is very rapid. Availa water capacity is very low. Effective rooting depth is inches or more. Runoff is slow, and the hazard of wa erosion is moderate.

This unit is used mainly as woodland. It is also use as hayland, pastureland, and homesites.

This unit is suited to the production of Douglas-fir. the basis of a 100-year site curve, the estimated mea site index for Douglas-fir is 141, and on the basis of a 50-year site curve, the estimated mean site index is At the culmination of the mean annual increment (CM the production of Douglas-fir at age 65 is 146 cubic f per acre per year. The trees of limited extent are gra fir, western hemlock, and western redcedar. Among t common forest understory plants are Oregon-grape, western brackenfern, salal, western swordfern,



REFERENCE: DRAWING ENTITLED "CITY OF PORT ANGELES, LEFT TURN CHANNELIZATION, LINCOLN STREET, FIRST ST. TO EIGHT ST." SHEET 3 OF 3, DATED 7/18/83, BY JACK PITTIS, P.E., DIR. PUBLIC WORKS.

GeoEngineers

SITE PLAN

FIGURE 2

APPENDIX B

SEC observed subsurface explorations and obtained soil samples during this assessment. The soil encountered in the explorations was visually classified in general accordance with ASTM D 2488.

SOIL SAMPLING

Continuous soil samples were collected from the explorations. Soil samples obtained from the explorations were collected from decontaminated samplers. Soil samples were placed in laboratory-supplied containers and immediately placed in an ice chest and kept cool until delivery to the laboratory. Standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

SOIL SAMPLE FIELD SCREENING METHODS

SEC performed field screening tests on selected soil samples collected from the explorations. Field screening results aided in the selection of soil samples for chemical analysis. Screening methods included visual examination, water sheen screening, and headspace vapor screening using a MiniRAE PID. Visual screening consisted of inspecting the soil for discoloration indicative of the presence of petroleum material in the sample. Water sheen screening involved placing soil in water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen	No visible sheen on the water surface.
Slight Sheen	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
Moderate Sheen	Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on water surface.
Heavy Sheen	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

GROUNDWATER SAMPLING

SEC collected groundwater samples at the project site. The samples were collected in laboratory-prepared containers via peristaltic pumps and unused LDPE tubing. The groundwater samples were placed into labeled, laboratory-prepared containers and immediately placed in a cooler with ice and transported under chain-of-custody procedures to Pace Analytical of Mt. Juliet, Tennessee.

DECONTAMINATION

All sampling equipment used in the collection of samples was decontaminated prior to use. Decontamination was performed on all sample re-usable processing equipment that came into contact with sampling media, including tools, stainless steel implements, trowels, etc. Decontamination was performed prior to sampling each location using the following procedures:

1. Rinsed with tap water and scrubbed with a scrub brush until free of large particles (e.g., sediment or soil)
2. Washed with phosphate-free (Alconox™) detergent solution
3. Rinsed with tap water
4. Rinsed with distilled water

IDW

All IDW was returned to its respective exploration location upon completion.

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type:	Diameter:
					AMS Stainless Steel	1- to 3-Inch Diamater Auger
--			Groundwater Depth:		Elevation:	Total Depth of Boring:
			Not Measured		Not Measured	5'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	6" Brown SILT FILL Brown SAND (SP), trace SILT (ML), moist	NO	NS	No Odors or Staining Observed
4		N	A		NO	NS	Soil Sample HA-1(4.0-5.0) Collected
				Boring complete at 5' BGS (Refusal)	NO	NS	
6		N	A				

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CP-26-02	Boring HA-1	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type:	Diameter:
					AMS Stainless Steel	1- to 3-Inch Diamater Auger
--			Groundwater Depth:		Elevation:	Total Depth of Boring:
			Not Measured		Not Measured	5'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Brown GRAVEL (GP) with SILT (ML), varying FILL Gray SILT (ML), varying fine sand and Clay, Wet	Y	SS	Petroleum Odor & Staining Observed
4		N	A		Y	MS	Soil Sample HA-2(3.0-4.0) Collected
				Boring complete at 5' BGS.	Y	MS	
6		N	A				

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CP-26-02	Boring HA-2	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type:	Diameter:
					AMS Stainless Steel	1- to 3-Inch Diamater Auger
--			Groundwater Depth:		Elevation:	Total Depth of Boring:
			Not Measured		Not Measured	9'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Brown GRAVEL (GP) with SILT (ML), varying FILL	NO	NS	
					NO	NS	
4		N	A	Gray SILT (ML), trace to some fine sand and clay, moist.	NO	NS	Soft Soil Conditions
6		N	A		NO	NS	

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Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 9'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
8		N	A	Gray SILT (ML), trace to some fine sand and clay, moist.	NO	NS	Soft Soil Conditions Soil Sample HA-3(8.0-9.0) Collected
					NO	NS	Dense Soil Conditions
10		N	A	Boring complete at 9' BGS.			
12		N	A				

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 8'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
		N	A	6" Brown SILT FILL Brown SAND (SP), trace SILT (ML), moist	NO	NS	No Odors or Staining Observed
2							
		N	A		NO	NS	Soil Sample HA-4(6.0-7.0) Collected
4							
		N	A		NO	NS	
6							
		N	A		Y	SS	Soft Soil @ 6' BGS Petroleum-Like Odor Observed
				Boring complete at 8' BGS.			Stiff Soil @ 8' BGS

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CP-26-02	Boring HA-4	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type:	Diameter:
					AMS Stainless Steel	1- to 3-Inch Diamater Auger
--			Groundwater Depth:		Elevation:	Total Depth of Boring:
			Not Measured		Not Measured	9'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	6" Brown SILT FILL Brown SAND (SP), trace SILT (ML), moist	NO	NS	
4		N	A		NO	NS	
6		N	A		NO	NS	
					NO	NS	

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Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 9'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
8		N	A	Brown SAND (SP), trace SILT (ML), moist	NO	NS	Soil Sample HA-5(8.0-9.0) Collected
					NO	NS	
10		N	A	Boring complete at 9' BGS.			
12		N	A				

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 5'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Gray SILT (ML), varying fine sand and Clay, Moist Wet at 1' BGS	Y	SS	Soil Sample HA-6(2.0-3.0) Collected
4		N	A		Y	MS	
				Boring complete at 5' BGS.	Y	MS	
6		N	A				

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CP-26-02	Boring HA-6	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 5'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Gray SILT (ML), varying fine sand and Clay, Moist Wet at 1' BGS	Y	MS	Soil Sample HA-6(1.0-2.0) Collected
4		N	A		Y	MS	
				Boring complete at 5' BGS.	Y	MS	
6		N	A				

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CP-26-02	Boring HA-7	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type:	Diameter:
					AMS Stainless Steel	1- to 3-Inch Diamater Auger
--			Groundwater Depth:		Elevation:	Total Depth of Boring:
			Not Measured		Not Measured	3'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Brown SILT Brown GRAVEL (GP) with SILT (ML), varying FILL	NO	NS	No Petroleum-Like Odor Observed Soil Sample HA-8(3.0-4.0) Collected
4		N	A	Tan to Brown SILT (ML), trace to some fine sand and clay, moist. Becomes Gray and Wet at 3' BGS	NO Y	NS SS	Petroleum-Like Odor Observed
6		N	A	Boring complete at 4' BGS.			

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CP-26-02	Boring HA-8	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

Logged By:	A.B.	Date	Started:	7/1/21	Drilling Contractor:	Drill Rig Type:
Driller:	A.B.		Completed:	7/1/21	NA	Hand Drill/Auger
Locate Number:			Backfilled:	7/1/21	Bit Type: AMS Stainless Steel	Diameter: 1- to 3-Inch Diamater Auger
--			Groundwater Depth: Not Measured		Elevation: Not Measured	Total Depth of Boring: 4'

Depth (feet)	Graphic Log	Drilled Depth	Depth Recovered	Description	Odor / Staining	Sheen Test Result	Additional Comments
2		N	A	Tan to Brown SILT (ML), trace to some fine sand and clay, moist.	NO	NS	
					NO	NS	Soil Sample HA-9(2.0-3.0) Collected
4		N	A	Boring complete at 4' BGS.			
6		N	A				

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CP-26-02	Boring HA-9	
JULY 2021	703-709 S Lincoln Street Port Angeles, Washington	Appendix B

APPENDIX C

CHEMICAL ANALYTICAL PROGRAM

GENERAL

Chain-of-custody procedures were followed during handling and transport of the samples to the analytical laboratory. The laboratory holds the samples in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference, and laboratory QC records are presented in this appendix. The analytical results also are summarized in the tables of this report.

REVIEW OF ANALYTICAL DATA

The analytical laboratories used for this project maintain an internal quality assurance programs consisting of a combination of the following:

Blanks: Blanks are laboratory-prepared water samples that are free of contaminants. The blanks are carried through the analysis procedure along with the field samples to document that contaminants were not introduced to the samples during sample handling and analysis.

Surrogate Recoveries: Surrogates are organic compounds that are similar in nature to the analytes of concern but are not normally found in nature. The surrogates are added to QC and field samples prior to analysis. The percent recovery of the surrogate is calculated to demonstrate acceptable method performance.

Duplicates: Duplicates are obtained by splitting a sample into two parts. The two separate parts are carried through the analyses. The analytical results are then compared by calculating the RPD between the samples.

MS/MSD Recoveries: An MS sample is a sample that has been split into a second portion. The MSD is obtained by further splitting the MS sample. A known concentration of the analyte of interest is added to the MS and MSD samples. The analytical results for both samples are then compared for RPD and percent recovery to demonstrate acceptable method performance.

BS/BSD Recoveries: BS and BSD samples are obtained and analyzed in the same procedure as the MS/MSD samples; however, the laboratory blank sample is used to obtain the BS/BSD samples. The percent recovery and RPD of the known concentration of analyte of interest added to the BS/BSD sample is calculated after chemical analyses to demonstrate acceptable method performance.

SUMMARY OF ANALYTICAL DATA REVIEW

SEC reviewed the attached analytical data reports for data quality exceptions and deviations from acceptable method performance criteria. Based on our review of the analytical reports, the analytical data appear acceptable for their intended use.

ANALYTICAL REPORT

July 21, 2021

Succeed Environmental Consulting

Sample Delivery Group:	L1374304
Samples Received:	07/03/2021
Project Number:	CP-26
Description:	

Report To: Andrew Blake
5217 NE 35th Ave.
Portland, OR 97211

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

MW-5 L1374304-01 GW

Collected by: Andrew Blake | Collected date/time: 06/30/21 16:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1706318	1	07/19/21 14:21	07/19/21 18:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703565	1	07/12/21 15:29	07/12/21 15:29	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705118	1	07/14/21 13:15	07/14/21 13:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702194	1	07/08/21 15:36	07/13/21 11:36	WCR	Mt. Juliet, TN

KMW-7 L1374304-02 GW

Collected by: Andrew Blake | Collected date/time: 06/30/21 17:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1706318	1	07/19/21 14:21	07/19/21 18:56	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703565	25	07/13/21 00:52	07/13/21 00:52	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705118	25	07/14/21 16:46	07/14/21 16:46	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705491	250	07/14/21 21:33	07/14/21 21:33	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702194	1	07/08/21 15:36	07/18/21 11:08	AEG	Mt. Juliet, TN

KMW-15 L1374304-03 GW

Collected by: Andrew Blake | Collected date/time: 06/30/21 18:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1706318	1	07/19/21 14:21	07/19/21 19:00	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1704061	10	07/13/21 03:28	07/13/21 03:28	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705118	1	07/14/21 13:34	07/14/21 13:34	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705491	20	07/14/21 21:52	07/14/21 21:52	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702194	1	07/08/21 15:36	07/18/21 11:31	AEG	Mt. Juliet, TN

BBA 510 L1374304-04 GW

Collected by: Andrew Blake | Collected date/time: 06/30/21 19:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG1706318	1	07/19/21 14:21	07/19/21 19:03	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703565	1	07/12/21 16:39	07/12/21 16:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705118	1	07/14/21 13:53	07/14/21 13:53	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1705491	1	07/14/21 21:14	07/14/21 21:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702194	1	07/08/21 15:36	07/13/21 12:53	WCR	Mt. Juliet, TN

HA-1(4.0-5.0) L1374304-05 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 08:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	25	07/01/21 08:30	07/12/21 22:17	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 15:21	CAG	Mt. Juliet, TN

HA-2(3.0-4.0) L1374304-06 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 10:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1702125	1	07/08/21 13:59	07/09/21 09:48	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:36	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	25	07/01/21 10:30	07/12/21 22:52	JAH	Mt. Juliet, TN

HA-2(3.0-4.0) L1374304-06 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 10:30 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	1	07/01/21 10:30	07/09/21 23:04	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 17:05	CAG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1701730	1	07/08/21 07:45	07/08/21 19:15	SSH	Mt. Juliet, TN

HA-3(8.0-9.0) L1374304-07 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 11:15 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:40	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	25	07/01/21 11:15	07/12/21 23:27	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	1	07/01/21 11:15	07/09/21 23:24	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 17:56	CAG	Mt. Juliet, TN

HA-4(6.0-7.0) L1374304-08 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 11:45 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:50	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	25	07/01/21 11:45	07/12/21 23:50	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 15:34	CAG	Mt. Juliet, TN

HA-5(8.0-9.0) L1374304-09 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 12:55 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	48	07/01/21 12:55	07/13/21 00:14	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 13:36	CAG	Mt. Juliet, TN

HA-6(2.0-3.0) L1374304-10 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 13:20 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1702125	1	07/08/21 13:59	07/09/21 10:08	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:54	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1703584	25	07/01/21 13:20	07/13/21 00:38	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	1	07/01/21 13:20	07/09/21 23:43	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 18:08	CAG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1701730	1	07/08/21 07:45	07/08/21 19:24	SSH	Mt. Juliet, TN

HA-7(1.0-2.0) L1374304-11 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 13:40 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1702125	1	07/08/21 13:59	07/09/21 10:10	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:57	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1705822	250	07/01/21 13:40	07/15/21 11:50	JAH	Mt. Juliet, TN

HA-7(1.0-2.0) L1374304-11 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 13:40 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	40	07/01/21 13:40	07/10/21 00:02	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 13:49	CAG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1701730	1	07/08/21 07:45	07/08/21 19:32	SSH	Mt. Juliet, TN

HA-8(3.0-4.0) L1374304-12 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 13:50 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1702125	1	07/08/21 13:59	07/09/21 10:13	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 11:16	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1705822	25	07/01/21 13:50	07/15/21 10:44	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	1	07/01/21 13:50	07/10/21 02:21	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/12/21 03:39	CAG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1701730	1	07/08/21 07:45	07/08/21 19:41	SSH	Mt. Juliet, TN

HA-9(2.0-3.0) L1374304-13 Solid

Collected by: Andrew Blake | Collected date/time: 07/01/21 14:10 | Received date/time: 07/03/21 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1701784	1	07/08/21 11:09	07/08/21 11:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1702125	1	07/08/21 13:59	07/09/21 10:16	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1701993	5	07/10/21 08:49	07/12/21 12:01	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1705822	25	07/01/21 14:10	07/15/21 11:06	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1702305	1	07/01/21 14:10	07/10/21 02:40	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG1702464	1	07/09/21 20:00	07/10/21 15:47	CAG	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1701730	1	07/08/21 07:45	07/08/21 19:50	SSH	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1374304-02	KMW-7	NWTPHDX-SGT
L1374304-04	BBA 510	NWTPHDX-SGT

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/19/2021 18:52	WG1706318

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	48.6	J	31.6	100	1	07/12/2021 15:29	WG1703565
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*07/12/2021 15:29*	WG1703565

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	0.548	1.00	1	07/14/2021 13:15	WG1705118
Acrylonitrile	U		0.0760	0.500	1	07/14/2021 13:15	WG1705118
Benzene	U		0.0160	0.0400	1	07/14/2021 13:15	WG1705118
Bromobenzene	U		0.0420	0.500	1	07/14/2021 13:15	WG1705118
Bromochloromethane	U		0.0452	0.200	1	07/14/2021 13:15	WG1705118
Bromodichloromethane	U		0.0315	0.100	1	07/14/2021 13:15	WG1705118
Bromoform	U		0.239	1.00	1	07/14/2021 13:15	WG1705118
Bromomethane	U		0.148	0.500	1	07/14/2021 13:15	WG1705118
n-Butylbenzene	U		0.153	0.500	1	07/14/2021 13:15	WG1705118
sec-Butylbenzene	0.194	J	0.101	0.500	1	07/14/2021 13:15	WG1705118
tert-Butylbenzene	U		0.0620	0.200	1	07/14/2021 13:15	WG1705118
Carbon disulfide	U		0.162	0.500	1	07/14/2021 13:15	WG1705118
Carbon tetrachloride	U		0.0432	0.200	1	07/14/2021 13:15	WG1705118
Chlorobenzene	U		0.0229	0.100	1	07/14/2021 13:15	WG1705118
Chlorodibromomethane	U		0.0180	0.100	1	07/14/2021 13:15	WG1705118
Chloroethane	U		0.0432	0.200	1	07/14/2021 13:15	WG1705118
Chloroform	U		0.0166	0.100	1	07/14/2021 13:15	WG1705118
Chloromethane	U	C3	0.0556	0.500	1	07/14/2021 13:15	WG1705118
2-Chlorotoluene	U		0.0368	0.100	1	07/14/2021 13:15	WG1705118
4-Chlorotoluene	U		0.0452	0.200	1	07/14/2021 13:15	WG1705118
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	07/14/2021 13:15	WG1705118
1,2-Dibromoethane	U		0.0210	0.100	1	07/14/2021 13:15	WG1705118
Dibromomethane	U		0.0400	0.200	1	07/14/2021 13:15	WG1705118
1,2-Dichlorobenzene	U		0.0580	0.200	1	07/14/2021 13:15	WG1705118
1,3-Dichlorobenzene	U		0.0680	0.200	1	07/14/2021 13:15	WG1705118
1,4-Dichlorobenzene	U		0.0788	0.200	1	07/14/2021 13:15	WG1705118
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	07/14/2021 13:15	WG1705118
Dichlorodifluoromethane	U	C3	0.0327	0.100	1	07/14/2021 13:15	WG1705118
1,1-Dichloroethane	U		0.0230	0.100	1	07/14/2021 13:15	WG1705118
1,2-Dichloroethane	U		0.0190	0.100	1	07/14/2021 13:15	WG1705118
1,1-Dichloroethene	U		0.0200	0.100	1	07/14/2021 13:15	WG1705118
cis-1,2-Dichloroethene	U		0.0276	0.100	1	07/14/2021 13:15	WG1705118
trans-1,2-Dichloroethene	U		0.0572	0.200	1	07/14/2021 13:15	WG1705118
1,2-Dichloropropane	U		0.0508	0.200	1	07/14/2021 13:15	WG1705118
1,1-Dichloropropene	U		0.0280	0.100	1	07/14/2021 13:15	WG1705118
1,3-Dichloropropane	U		0.0700	0.200	1	07/14/2021 13:15	WG1705118
cis-1,3-Dichloropropene	U		0.0271	0.100	1	07/14/2021 13:15	WG1705118
trans-1,3-Dichloropropene	U		0.0612	0.200	1	07/14/2021 13:15	WG1705118
2,2-Dichloropropane	U		0.0317	0.100	1	07/14/2021 13:15	WG1705118
Di-isopropyl ether	U		0.0140	0.0400	1	07/14/2021 13:15	WG1705118
Ethylbenzene	U		0.0212	0.100	1	07/14/2021 13:15	WG1705118
Hexachloro-1,3-butadiene	U		0.508	1.00	1	07/14/2021 13:15	WG1705118
2-Hexanone	U		0.400	1.00	1	07/14/2021 13:15	WG1705118

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.0424	0.200	1	07/14/2021 13:15	WG1705118
Iodomethane	U		0.242	0.500	1	07/14/2021 13:15	WG1705118
Isopropylbenzene	0.243		0.0345	0.100	1	07/14/2021 13:15	WG1705118
p-Isopropyltoluene	U		0.0932	0.200	1	07/14/2021 13:15	WG1705118
2-Butanone (MEK)	U		0.500	1.00	1	07/14/2021 13:15	WG1705118
Methylene Chloride	U		0.265	1.00	1	07/14/2021 13:15	WG1705118
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	07/14/2021 13:15	WG1705118
Methyl tert-butyl ether	U		0.0118	0.0400	1	07/14/2021 13:15	WG1705118
Naphthalene	U		0.124	0.500	1	07/14/2021 13:15	WG1705118
n-Propylbenzene	0.210		0.0472	0.200	1	07/14/2021 13:15	WG1705118
Styrene	U		0.109	0.500	1	07/14/2021 13:15	WG1705118
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	07/14/2021 13:15	WG1705118
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	07/14/2021 13:15	WG1705118
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	07/14/2021 13:15	WG1705118
Tetrachloroethene	U		0.0280	0.100	1	07/14/2021 13:15	WG1705118
Toluene	U		0.0500	0.200	1	07/14/2021 13:15	WG1705118
1,2,3-Trichlorobenzene	U		0.0250	0.500	1	07/14/2021 13:15	WG1705118
1,2,4-Trichlorobenzene	U		0.193	0.500	1	07/14/2021 13:15	WG1705118
1,1,1-Trichloroethane	U		0.0110	0.100	1	07/14/2021 13:15	WG1705118
1,1,2-Trichloroethane	U		0.0353	0.100	1	07/14/2021 13:15	WG1705118
Trichloroethene	U		0.0160	0.0400	1	07/14/2021 13:15	WG1705118
Trichlorofluoromethane	U	C3	0.0200	0.100	1	07/14/2021 13:15	WG1705118
1,2,3-Trichloropropane	U		0.204	0.500	1	07/14/2021 13:15	WG1705118
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	07/14/2021 13:15	WG1705118
1,2,3-Trimethylbenzene	0.742		0.0460	0.200	1	07/14/2021 13:15	WG1705118
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	07/14/2021 13:15	WG1705118
Vinyl acetate	U		0.141	0.500	1	07/14/2021 13:15	WG1705118
Vinyl chloride	U		0.0273	0.100	1	07/14/2021 13:15	WG1705118
Xylenes, Total	U		0.191	0.260	1	07/14/2021 13:15	WG1705118
(S) Toluene-d8	*106*			*75.0-131*		*07/14/2021 13:15*	WG1705118
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/14/2021 13:15*	WG1705118
(S) 1,2-Dichloroethane-d4	*79.1*			*70.0-130*		*07/14/2021 13:15*	WG1705118

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U	J3	33.3	100	1	07/13/2021 11:36	WG1702194
Residual Range Organics (RRO)	U		83.3	250	1	07/13/2021 11:36	WG1702194
(S) o-Terphenyl	*80.0*			*31.0-160*		*07/13/2021 11:36*	WG1702194

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/19/2021 18:56	WG1706318

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	70900		790	2500	25	07/13/2021 00:52	WG1703565
(S) a,a,a-Trifluorotoluene(FID)	*101*			*78.0-120*		*07/13/2021 00:52*	WG1703565

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	13.7	25.0	25	07/14/2021 16:46	WG1705118
Acrylonitrile	U		1.90	12.5	25	07/14/2021 16:46	WG1705118
Benzene	51.0		0.400	1.00	25	07/14/2021 16:46	WG1705118
Bromobenzene	U		1.05	12.5	25	07/14/2021 16:46	WG1705118
Bromochloromethane	U		1.13	5.00	25	07/14/2021 16:46	WG1705118
Bromodichloromethane	U		0.788	2.50	25	07/14/2021 16:46	WG1705118
Bromoform	U		5.98	25.0	25	07/14/2021 16:46	WG1705118
Bromomethane	U		3.70	12.5	25	07/14/2021 16:46	WG1705118
n-Butylbenzene	30.6		3.83	12.5	25	07/14/2021 16:46	WG1705118
sec-Butylbenzene	23.6		2.53	12.5	25	07/14/2021 16:46	WG1705118
tert-Butylbenzene	U		1.55	5.00	25	07/14/2021 16:46	WG1705118
Carbon disulfide	U		4.05	12.5	25	07/14/2021 16:46	WG1705118
Carbon tetrachloride	U		1.08	5.00	25	07/14/2021 16:46	WG1705118
Chlorobenzene	U		0.573	2.50	25	07/14/2021 16:46	WG1705118
Chlorodibromomethane	U		0.450	2.50	25	07/14/2021 16:46	WG1705118
Chloroethane	U		1.08	5.00	25	07/14/2021 16:46	WG1705118
Chloroform	U		0.415	2.50	25	07/14/2021 16:46	WG1705118
Chloromethane	U	C3	1.39	12.5	25	07/14/2021 16:46	WG1705118
2-Chlorotoluene	U		0.920	2.50	25	07/14/2021 16:46	WG1705118
4-Chlorotoluene	U		1.13	5.00	25	07/14/2021 16:46	WG1705118
1,2-Dibromo-3-Chloropropane	U		5.10	25.0	25	07/14/2021 16:46	WG1705118
1,2-Dibromoethane	U		0.525	2.50	25	07/14/2021 16:46	WG1705118
Dibromomethane	U		1.00	5.00	25	07/14/2021 16:46	WG1705118
1,2-Dichlorobenzene	U		1.45	5.00	25	07/14/2021 16:46	WG1705118
1,3-Dichlorobenzene	U		1.70	5.00	25	07/14/2021 16:46	WG1705118
1,4-Dichlorobenzene	U		1.97	5.00	25	07/14/2021 16:46	WG1705118
trans-1,4-Dichloro-2-butene	160		1.40	5.00	25	07/14/2021 16:46	WG1705118
Dichlorodifluoromethane	U	C3	0.818	2.50	25	07/14/2021 16:46	WG1705118
1,1-Dichloroethane	U		0.575	2.50	25	07/14/2021 16:46	WG1705118
1,2-Dichloroethane	U		0.475	2.50	25	07/14/2021 16:46	WG1705118
1,1-Dichloroethene	U		0.500	2.50	25	07/14/2021 16:46	WG1705118
cis-1,2-Dichloroethene	U		0.690	2.50	25	07/14/2021 16:46	WG1705118
trans-1,2-Dichloroethene	U		1.43	5.00	25	07/14/2021 16:46	WG1705118
1,2-Dichloropropane	U		1.27	5.00	25	07/14/2021 16:46	WG1705118
1,1-Dichloropropene	U		0.700	2.50	25	07/14/2021 16:46	WG1705118
1,3-Dichloropropane	U		1.75	5.00	25	07/14/2021 16:46	WG1705118
cis-1,3-Dichloropropene	U		0.678	2.50	25	07/14/2021 16:46	WG1705118
trans-1,3-Dichloropropene	U		1.53	5.00	25	07/14/2021 16:46	WG1705118
2,2-Dichloropropane	U		0.793	2.50	25	07/14/2021 16:46	WG1705118
Di-isopropyl ether	U		0.350	1.00	25	07/14/2021 16:46	WG1705118
Ethylbenzene	4180		5.30	25.0	250	07/14/2021 21:33	WG1705491
Hexachloro-1,3-butadiene	U		12.7	25.0	25	07/14/2021 16:46	WG1705118
2-Hexanone	U		10.0	25.0	25	07/14/2021 16:46	WG1705118

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
n-Hexane	240		1.06	5.00	25	07/14/2021 16:46	WG1705118
Iodomethane	U		6.05	12.5	25	07/14/2021 16:46	WG1705118
Isopropylbenzene	187		0.863	2.50	25	07/14/2021 16:46	WG1705118
p-Isopropyltoluene	13.1		2.33	5.00	25	07/14/2021 16:46	WG1705118
2-Butanone (MEK)	U		12.5	25.0	25	07/14/2021 16:46	WG1705118
Methylene Chloride	U		6.63	25.0	25	07/14/2021 16:46	WG1705118
4-Methyl-2-pentanone (MIBK)	U		10.0	25.0	25	07/14/2021 16:46	WG1705118
Methyl tert-butyl ether	U		0.295	1.00	25	07/14/2021 16:46	WG1705118
Naphthalene	674		3.10	12.5	25	07/14/2021 16:46	WG1705118
n-Propylbenzene	492		1.18	5.00	25	07/14/2021 16:46	WG1705118
Styrene	U		2.73	12.5	25	07/14/2021 16:46	WG1705118
1,1,1,2-Tetrachloroethane	U		0.500	2.50	25	07/14/2021 16:46	WG1705118
1,1,2,2-Tetrachloroethane	U		0.390	2.50	25	07/14/2021 16:46	WG1705118
1,1,2-Trichlorotrifluoroethane	U		0.675	2.50	25	07/14/2021 16:46	WG1705118
Tetrachloroethene	U		0.700	2.50	25	07/14/2021 16:46	WG1705118
Toluene	136		1.25	5.00	25	07/14/2021 16:46	WG1705118
1,2,3-Trichlorobenzene	U		0.625	12.5	25	07/14/2021 16:46	WG1705118
1,2,4-Trichlorobenzene	U		4.83	12.5	25	07/14/2021 16:46	WG1705118
1,1,1-Trichloroethane	U		0.275	2.50	25	07/14/2021 16:46	WG1705118
1,1,2-Trichloroethane	U		0.883	2.50	25	07/14/2021 16:46	WG1705118
Trichloroethene	U		0.400	1.00	25	07/14/2021 16:46	WG1705118
Trichlorofluoromethane	U	C3	0.500	2.50	25	07/14/2021 16:46	WG1705118
1,2,3-Trichloropropane	U		5.10	12.5	25	07/14/2021 16:46	WG1705118
1,2,4-Trimethylbenzene	3280		11.6	50.0	250	07/14/2021 21:33	WG1705491
1,2,3-Trimethylbenzene	879		1.15	5.00	25	07/14/2021 16:46	WG1705118
1,3,5-Trimethylbenzene	776		1.08	5.00	25	07/14/2021 16:46	WG1705118
Vinyl acetate	85.2		3.53	12.5	25	07/14/2021 16:46	WG1705118
Vinyl chloride	U		0.682	2.50	25	07/14/2021 16:46	WG1705118
Xylenes, Total	13900		47.8	65.0	250	07/14/2021 21:33	WG1705491
(S) Toluene-d8	*110*			*75.0-131*		*07/14/2021 16:46*	WG1705118
(S) Toluene-d8	*106*			*75.0-131*		*07/14/2021 21:33*	WG1705491
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*07/14/2021 16:46*	WG1705118
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/14/2021 21:33*	WG1705491
(S) 1,2-Dichloroethane-d4	*80.4*			*70.0-130*		*07/14/2021 16:46*	WG1705118
(S) 1,2-Dichloroethane-d4	*79.9*			*70.0-130*		*07/14/2021 21:33*	WG1705491

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1350	J3	33.3	100	1	07/18/2021 11:08	WG1702194
Residual Range Organics (RRO)	235	J	83.3	250	1	07/18/2021 11:08	WG1702194
(S) o-Terphenyl	*38.9*			*31.0-160*		*07/18/2021 11:08*	WG1702194

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	2.06		0.849	2.00	1	07/19/2021 19:00	WG1706318

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	11100		316	1000	10	07/13/2021 03:28	WG1704061
(S) a,a,a-Trifluorotoluene(FID)	*99.1*			*78.0-120*		*07/13/2021 03:28*	WG1704061

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	0.548	1.00	1	07/14/2021 13:34	WG1705118
Acrylonitrile	U		0.0760	0.500	1	07/14/2021 13:34	WG1705118
Benzene	91.4		0.0160	0.0400	1	07/14/2021 13:34	WG1705118
Bromobenzene	U		0.0420	0.500	1	07/14/2021 13:34	WG1705118
Bromochloromethane	U		0.0452	0.200	1	07/14/2021 13:34	WG1705118
Bromodichloromethane	U		0.0315	0.100	1	07/14/2021 13:34	WG1705118
Bromoform	U		0.239	1.00	1	07/14/2021 13:34	WG1705118
Bromomethane	U		0.148	0.500	1	07/14/2021 13:34	WG1705118
n-Butylbenzene	8.98		0.153	0.500	1	07/14/2021 13:34	WG1705118
sec-Butylbenzene	9.39		0.101	0.500	1	07/14/2021 13:34	WG1705118
tert-Butylbenzene	0.0630	J	0.0620	0.200	1	07/14/2021 13:34	WG1705118
Carbon disulfide	U		0.162	0.500	1	07/14/2021 13:34	WG1705118
Carbon tetrachloride	U		0.0432	0.200	1	07/14/2021 13:34	WG1705118
Chlorobenzene	U		0.0229	0.100	1	07/14/2021 13:34	WG1705118
Chlorodibromomethane	U		0.0180	0.100	1	07/14/2021 13:34	WG1705118
Chloroethane	U		0.0432	0.200	1	07/14/2021 13:34	WG1705118
Chloroform	U		0.0166	0.100	1	07/14/2021 13:34	WG1705118
Chloromethane	U	C3	0.0556	0.500	1	07/14/2021 13:34	WG1705118
2-Chlorotoluene	U		0.0368	0.100	1	07/14/2021 13:34	WG1705118
4-Chlorotoluene	U		0.0452	0.200	1	07/14/2021 13:34	WG1705118
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	07/14/2021 13:34	WG1705118
1,2-Dibromoethane	U		0.0210	0.100	1	07/14/2021 13:34	WG1705118
Dibromomethane	U		0.0400	0.200	1	07/14/2021 13:34	WG1705118
1,2-Dichlorobenzene	U		0.0580	0.200	1	07/14/2021 13:34	WG1705118
1,3-Dichlorobenzene	U		0.0680	0.200	1	07/14/2021 13:34	WG1705118
1,4-Dichlorobenzene	U		0.0788	0.200	1	07/14/2021 13:34	WG1705118
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	07/14/2021 13:34	WG1705118
Dichlorodifluoromethane	U	C3	0.0327	0.100	1	07/14/2021 13:34	WG1705118
1,1-Dichloroethane	U		0.0230	0.100	1	07/14/2021 13:34	WG1705118
1,2-Dichloroethane	U		0.0190	0.100	1	07/14/2021 13:34	WG1705118
1,1-Dichloroethene	U		0.0200	0.100	1	07/14/2021 13:34	WG1705118
cis-1,2-Dichloroethene	U		0.0276	0.100	1	07/14/2021 13:34	WG1705118
trans-1,2-Dichloroethene	U		0.0572	0.200	1	07/14/2021 13:34	WG1705118
1,2-Dichloropropane	U		0.0508	0.200	1	07/14/2021 13:34	WG1705118
1,1-Dichloropropene	U		0.0280	0.100	1	07/14/2021 13:34	WG1705118
1,3-Dichloropropane	U		0.0700	0.200	1	07/14/2021 13:34	WG1705118
cis-1,3-Dichloropropene	U		0.0271	0.100	1	07/14/2021 13:34	WG1705118
trans-1,3-Dichloropropene	U		0.0612	0.200	1	07/14/2021 13:34	WG1705118
2,2-Dichloropropane	U		0.0317	0.100	1	07/14/2021 13:34	WG1705118
Di-isopropyl ether	U		0.0140	0.0400	1	07/14/2021 13:34	WG1705118
Ethylbenzene	1480		0.424	2.00	20	07/14/2021 21:52	WG1705491
Hexachloro-1,3-butadiene	U		0.508	1.00	1	07/14/2021 13:34	WG1705118
2-Hexanone	U		0.400	1.00	1	07/14/2021 13:34	WG1705118

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
n-Hexane	85.4		0.848	4.00	20	07/14/2021 21:52	WG1705491
Iodomethane	U		0.242	0.500	1	07/14/2021 13:34	WG1705118
Isopropylbenzene	89.6		0.0345	0.100	1	07/14/2021 13:34	WG1705118
p-Isopropyltoluene	2.89		0.0932	0.200	1	07/14/2021 13:34	WG1705118
2-Butanone (MEK)	U		0.500	1.00	1	07/14/2021 13:34	WG1705118
Methylene Chloride	U		0.265	1.00	1	07/14/2021 13:34	WG1705118
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	07/14/2021 13:34	WG1705118
Methyl tert-butyl ether	U		0.0118	0.0400	1	07/14/2021 13:34	WG1705118
Naphthalene	98.8		0.124	0.500	1	07/14/2021 13:34	WG1705118
n-Propylbenzene	194		0.944	4.00	20	07/14/2021 21:52	WG1705491
Styrene	U		0.109	0.500	1	07/14/2021 13:34	WG1705118
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	07/14/2021 13:34	WG1705118
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	07/14/2021 13:34	WG1705118
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	07/14/2021 13:34	WG1705118
Tetrachloroethene	U		0.0280	0.100	1	07/14/2021 13:34	WG1705118
Toluene	17.1		0.0500	0.200	1	07/14/2021 13:34	WG1705118
1,2,3-Trichlorobenzene	U		0.0250	0.500	1	07/14/2021 13:34	WG1705118
1,2,4-Trichlorobenzene	U		0.193	0.500	1	07/14/2021 13:34	WG1705118
1,1,1-Trichloroethane	U		0.0110	0.100	1	07/14/2021 13:34	WG1705118
1,1,2-Trichloroethane	U		0.0353	0.100	1	07/14/2021 13:34	WG1705118
Trichloroethene	U		0.0160	0.0400	1	07/14/2021 13:34	WG1705118
Trichlorofluoromethane	U	C3	0.0200	0.100	1	07/14/2021 13:34	WG1705118
1,2,3-Trichloropropane	U		0.204	0.500	1	07/14/2021 13:34	WG1705118
1,2,4-Trimethylbenzene	73.8		0.0464	0.200	1	07/14/2021 13:34	WG1705118
1,2,3-Trimethylbenzene	138		0.920	4.00	20	07/14/2021 21:52	WG1705491
1,3,5-Trimethylbenzene	1.67		0.0432	0.200	1	07/14/2021 13:34	WG1705118
Vinyl acetate	41.4		0.141	0.500	1	07/14/2021 13:34	WG1705118
Vinyl chloride	U		0.0273	0.100	1	07/14/2021 13:34	WG1705118
Xylenes, Total	510		3.82	5.20	20	07/14/2021 21:52	WG1705491
(S) Toluene-d8	*128*			*75.0-131*		*07/14/2021 13:34*	WG1705118
(S) Toluene-d8	*110*			*75.0-131*		*07/14/2021 21:52*	WG1705491
(S) 4-Bromofluorobenzene	*119*			*67.0-138*		*07/14/2021 13:34*	WG1705118
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*07/14/2021 21:52*	WG1705491
(S) 1,2-Dichloroethane-d4	*77.3*			*70.0-130*		*07/14/2021 13:34*	WG1705118
(S) 1,2-Dichloroethane-d4	*79.1*			*70.0-130*		*07/14/2021 21:52*	WG1705491

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	445	J3	33.3	100	1	07/18/2021 11:31	WG1702194
Residual Range Organics (RRO)	174	J	83.3	250	1	07/18/2021 11:31	WG1702194
(S) o-Terphenyl	*43.1*			*31.0-160*		*07/18/2021 11:31*	WG1702194

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	U		0.849	2.00	1	07/19/2021 19:03	WG1706318

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		31.6	100	1	07/12/2021 16:39	WG1703565
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*07/12/2021 16:39*	WG1703565

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	0.548	1.00	1	07/14/2021 13:53	WG1705118
Acrylonitrile	U		0.0760	0.500	1	07/14/2021 13:53	WG1705118
Benzene	U		0.0160	0.0400	1	07/14/2021 21:14	WG1705491
Bromobenzene	U		0.0420	0.500	1	07/14/2021 13:53	WG1705118
Bromochloromethane	U		0.0452	0.200	1	07/14/2021 13:53	WG1705118
Bromodichloromethane	U		0.0315	0.100	1	07/14/2021 13:53	WG1705118
Bromoform	U		0.239	1.00	1	07/14/2021 13:53	WG1705118
Bromomethane	U		0.148	0.500	1	07/14/2021 13:53	WG1705118
n-Butylbenzene	U		0.153	0.500	1	07/14/2021 21:14	WG1705491
sec-Butylbenzene	U		0.101	0.500	1	07/14/2021 21:14	WG1705491
tert-Butylbenzene	U		0.0620	0.200	1	07/14/2021 13:53	WG1705118
Carbon disulfide	U		0.162	0.500	1	07/14/2021 13:53	WG1705118
Carbon tetrachloride	U		0.0432	0.200	1	07/14/2021 13:53	WG1705118
Chlorobenzene	U		0.0229	0.100	1	07/14/2021 13:53	WG1705118
Chlorodibromomethane	U		0.0180	0.100	1	07/14/2021 13:53	WG1705118
Chloroethane	U		0.0432	0.200	1	07/14/2021 13:53	WG1705118
Chloroform	U		0.0166	0.100	1	07/14/2021 13:53	WG1705118
Chloromethane	U	C3	0.0556	0.500	1	07/14/2021 13:53	WG1705118
2-Chlorotoluene	U		0.0368	0.100	1	07/14/2021 13:53	WG1705118
4-Chlorotoluene	U		0.0452	0.200	1	07/14/2021 13:53	WG1705118
1,2-Dibromo-3-Chloropropane	U		0.204	1.00	1	07/14/2021 13:53	WG1705118
1,2-Dibromoethane	U		0.0210	0.100	1	07/14/2021 13:53	WG1705118
Dibromomethane	U		0.0400	0.200	1	07/14/2021 13:53	WG1705118
1,2-Dichlorobenzene	U		0.0580	0.200	1	07/14/2021 13:53	WG1705118
1,3-Dichlorobenzene	U		0.0680	0.200	1	07/14/2021 13:53	WG1705118
1,4-Dichlorobenzene	U		0.0788	0.200	1	07/14/2021 13:53	WG1705118
trans-1,4-Dichloro-2-butene	U		0.0560	0.200	1	07/14/2021 13:53	WG1705118
Dichlorodifluoromethane	U	C3	0.0327	0.100	1	07/14/2021 13:53	WG1705118
1,1-Dichloroethane	U		0.0230	0.100	1	07/14/2021 13:53	WG1705118
1,2-Dichloroethane	U		0.0190	0.100	1	07/14/2021 13:53	WG1705118
1,1-Dichloroethene	U		0.0200	0.100	1	07/14/2021 13:53	WG1705118
cis-1,2-Dichloroethene	U		0.0276	0.100	1	07/14/2021 13:53	WG1705118
trans-1,2-Dichloroethene	U		0.0572	0.200	1	07/14/2021 13:53	WG1705118
1,2-Dichloropropane	U		0.0508	0.200	1	07/14/2021 13:53	WG1705118
1,1-Dichloropropene	U		0.0280	0.100	1	07/14/2021 13:53	WG1705118
1,3-Dichloropropane	U		0.0700	0.200	1	07/14/2021 13:53	WG1705118
cis-1,3-Dichloropropene	U		0.0271	0.100	1	07/14/2021 13:53	WG1705118
trans-1,3-Dichloropropene	U		0.0612	0.200	1	07/14/2021 13:53	WG1705118
2,2-Dichloropropane	U		0.0317	0.100	1	07/14/2021 13:53	WG1705118
Di-isopropyl ether	U		0.0140	0.0400	1	07/14/2021 13:53	WG1705118
Ethylbenzene	U		0.0212	0.100	1	07/14/2021 21:14	WG1705491
Hexachloro-1,3-butadiene	U		0.508	1.00	1	07/14/2021 13:53	WG1705118
2-Hexanone	U		0.400	1.00	1	07/14/2021 13:53	WG1705118

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Hexane	U		0.0424	0.200	1	07/14/2021 21:14	WG1705491
Iodomethane	U		0.242	0.500	1	07/14/2021 13:53	WG1705118
Isopropylbenzene	U		0.0345	0.100	1	07/14/2021 21:14	WG1705491
p-Isopropyltoluene	U		0.0932	0.200	1	07/14/2021 13:53	WG1705118
2-Butanone (MEK)	U		0.500	1.00	1	07/14/2021 13:53	WG1705118
Methylene Chloride	U		0.265	1.00	1	07/14/2021 13:53	WG1705118
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00	1	07/14/2021 13:53	WG1705118
Methyl tert-butyl ether	U		0.0118	0.0400	1	07/14/2021 13:53	WG1705118
Naphthalene	U		0.124	0.500	1	07/14/2021 21:14	WG1705491
n-Propylbenzene	U		0.0472	0.200	1	07/14/2021 21:14	WG1705491
Styrene	U		0.109	0.500	1	07/14/2021 13:53	WG1705118
1,1,1,2-Tetrachloroethane	U		0.0200	0.100	1	07/14/2021 13:53	WG1705118
1,1,2,2-Tetrachloroethane	U		0.0156	0.100	1	07/14/2021 13:53	WG1705118
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100	1	07/14/2021 13:53	WG1705118
Tetrachloroethene	0.0610	J	0.0280	0.100	1	07/14/2021 13:53	WG1705118
Toluene	U		0.0500	0.200	1	07/14/2021 13:53	WG1705118
1,2,3-Trichlorobenzene	U		0.0250	0.500	1	07/14/2021 13:53	WG1705118
1,2,4-Trichlorobenzene	U		0.193	0.500	1	07/14/2021 13:53	WG1705118
1,1,1-Trichloroethane	U		0.0110	0.100	1	07/14/2021 13:53	WG1705118
1,1,2-Trichloroethane	U		0.0353	0.100	1	07/14/2021 13:53	WG1705118
Trichloroethene	U		0.0160	0.0400	1	07/14/2021 13:53	WG1705118
Trichlorofluoromethane	U	C3	0.0200	0.100	1	07/14/2021 13:53	WG1705118
1,2,3-Trichloropropane	U		0.204	0.500	1	07/14/2021 13:53	WG1705118
1,2,4-Trimethylbenzene	U		0.0464	0.200	1	07/14/2021 21:14	WG1705491
1,2,3-Trimethylbenzene	U		0.0460	0.200	1	07/14/2021 21:14	WG1705491
1,3,5-Trimethylbenzene	U		0.0432	0.200	1	07/14/2021 13:53	WG1705118
Vinyl acetate	U		0.141	0.500	1	07/14/2021 13:53	WG1705118
Vinyl chloride	U		0.0273	0.100	1	07/14/2021 13:53	WG1705118
Xylenes, Total	U		0.191	0.260	1	07/14/2021 21:14	WG1705491
(S) Toluene-d8	*107*			*75.0-131*		*07/14/2021 13:53*	WG1705118
(S) Toluene-d8	*109*			*75.0-131*		*07/14/2021 21:14*	WG1705491
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*07/14/2021 13:53*	WG1705118
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*07/14/2021 21:14*	WG1705491
(S) 1,2-Dichloroethane-d4	*79.7*			*70.0-130*		*07/14/2021 13:53*	WG1705118
(S) 1,2-Dichloroethane-d4	*78.8*			*70.0-130*		*07/14/2021 21:14*	WG1705491

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U	J3	33.3	100	1	07/13/2021 12:53	WG1702194
Residual Range Organics (RRO)	U		83.3	250	1	07/13/2021 12:53	WG1702194
(S) o-Terphenyl	*79.0*			*31.0-160*		*07/13/2021 12:53*	WG1702194

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.5		1	07/08/2021 11:17	WG1701784

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.32	3.90	25	07/12/2021 22:17	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*07/12/2021 22:17*	WG1703584

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	2.41	J	1.63	4.91	1	07/10/2021 15:21	WG1702464
Residual Range Organics (RRO)	6.66	J	4.09	12.3	1	07/10/2021 15:21	WG1702464
(S) o-Terphenyl	*69.6*			*18.0-148*		*07/10/2021 15:21*	WG1702464

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.2		1	07/08/2021 11:17	WG1701784

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0571		0.0227	0.0505	1	07/09/2021 09:48	WG1702125

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	5.22		0.126	1.26	5	07/12/2021 11:36	WG1701993
Barium	59.2		0.192	3.16	5	07/12/2021 11:36	WG1701993
Cadmium	0.344	J	0.108	1.26	5	07/12/2021 11:36	WG1701993
Chromium	27.5		0.374	6.31	5	07/12/2021 11:36	WG1701993
Lead	29.3		0.125	2.52	5	07/12/2021 11:36	WG1701993
Selenium	0.291	J	0.227	3.16	5	07/12/2021 11:36	WG1701993
Silver	0.138	J	0.109	0.631	5	07/12/2021 11:36	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	18.5	B	1.32	3.89	25	07/12/2021 22:52	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*108*			*77.0-120*		*07/12/2021 22:52*	WG1703584

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0569	0.0779	1	07/09/2021 23:04	WG1702305
Acrylonitrile	U		0.00562	0.0195	1	07/09/2021 23:04	WG1702305
Benzene	0.0308		0.000727	0.00156	1	07/09/2021 23:04	WG1702305
Bromobenzene	U		0.00140	0.0195	1	07/09/2021 23:04	WG1702305
Bromodichloromethane	U		0.00113	0.00389	1	07/09/2021 23:04	WG1702305
Bromoform	U		0.00182	0.0389	1	07/09/2021 23:04	WG1702305
Bromomethane	U		0.00307	0.0195	1	07/09/2021 23:04	WG1702305
n-Butylbenzene	0.0145	J	0.00818	0.0195	1	07/09/2021 23:04	WG1702305
sec-Butylbenzene	0.00942	J	0.00449	0.0195	1	07/09/2021 23:04	WG1702305
tert-Butylbenzene	U		0.00304	0.00779	1	07/09/2021 23:04	WG1702305
Carbon tetrachloride	U		0.00140	0.00779	1	07/09/2021 23:04	WG1702305
Chlorobenzene	U		0.000327	0.00389	1	07/09/2021 23:04	WG1702305
Chlorodibromomethane	U		0.000953	0.00389	1	07/09/2021 23:04	WG1702305
Chloroethane	U		0.00265	0.00779	1	07/09/2021 23:04	WG1702305
Chloroform	U		0.00160	0.00389	1	07/09/2021 23:04	WG1702305
Chloromethane	U		0.00678	0.0195	1	07/09/2021 23:04	WG1702305
2-Chlorotoluene	U		0.00135	0.00389	1	07/09/2021 23:04	WG1702305
4-Chlorotoluene	U		0.000701	0.00779	1	07/09/2021 23:04	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.00608	0.0389	1	07/09/2021 23:04	WG1702305
1,2-Dibromoethane	U		0.00101	0.00389	1	07/09/2021 23:04	WG1702305
Dibromomethane	U		0.00117	0.00779	1	07/09/2021 23:04	WG1702305
1,2-Dichlorobenzene	U		0.000662	0.00779	1	07/09/2021 23:04	WG1702305
1,3-Dichlorobenzene	U		0.000935	0.00779	1	07/09/2021 23:04	WG1702305
1,4-Dichlorobenzene	U		0.00109	0.00779	1	07/09/2021 23:04	WG1702305
Dichlorodifluoromethane	U		0.00251	0.00389	1	07/09/2021 23:04	WG1702305
1,1-Dichloroethane	U		0.000765	0.00389	1	07/09/2021 23:04	WG1702305
1,2-Dichloroethane	U		0.00101	0.00389	1	07/09/2021 23:04	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000944	0.00389	1	07/09/2021 23:04	WG1702305
cis-1,2-Dichloroethene	U		0.00114	0.00389	1	07/09/2021 23:04	WG1702305
trans-1,2-Dichloroethene	U		0.00162	0.00779	1	07/09/2021 23:04	WG1702305
1,2-Dichloropropane	U		0.00221	0.00779	1	07/09/2021 23:04	WG1702305
1,1-Dichloropropene	U		0.00126	0.00389	1	07/09/2021 23:04	WG1702305
1,3-Dichloropropane	U		0.000780	0.00779	1	07/09/2021 23:04	WG1702305
cis-1,3-Dichloropropene	U		0.00118	0.00389	1	07/09/2021 23:04	WG1702305
trans-1,3-Dichloropropene	U		0.00178	0.00779	1	07/09/2021 23:04	WG1702305
2,2-Dichloropropane	U		0.00215	0.00389	1	07/09/2021 23:04	WG1702305
Di-isopropyl ether	U		0.000639	0.00156	1	07/09/2021 23:04	WG1702305
Ethylbenzene	0.0115		0.00115	0.00389	1	07/09/2021 23:04	WG1702305
Hexachloro-1,3-butadiene	U		0.00935	0.0389	1	07/09/2021 23:04	WG1702305
Isopropylbenzene	0.0352		0.000662	0.00389	1	07/09/2021 23:04	WG1702305
p-Isopropyltoluene	0.00467	J	0.00397	0.00779	1	07/09/2021 23:04	WG1702305
2-Butanone (MEK)	U		0.0989	0.156	1	07/09/2021 23:04	WG1702305
Methylene Chloride	U		0.0103	0.0389	1	07/09/2021 23:04	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.00355	0.0389	1	07/09/2021 23:04	WG1702305
Methyl tert-butyl ether	U		0.000545	0.00156	1	07/09/2021 23:04	WG1702305
Naphthalene	U		0.00760	0.0195	1	07/09/2021 23:04	WG1702305
n-Propylbenzene	0.0449		0.00148	0.00779	1	07/09/2021 23:04	WG1702305
Styrene	U		0.000357	0.0195	1	07/09/2021 23:04	WG1702305
1,1,1,2-Tetrachloroethane	U		0.00148	0.00389	1	07/09/2021 23:04	WG1702305
1,1,2,2-Tetrachloroethane	U		0.00108	0.00389	1	07/09/2021 23:04	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.00117	0.00389	1	07/09/2021 23:04	WG1702305
Tetrachloroethene	U		0.00140	0.00389	1	07/09/2021 23:04	WG1702305
Toluene	0.0541		0.00203	0.00779	1	07/09/2021 23:04	WG1702305
1,2,3-Trichlorobenzene	U		0.0114	0.0195	1	07/09/2021 23:04	WG1702305
1,2,4-Trichlorobenzene	U		0.00685	0.0195	1	07/09/2021 23:04	WG1702305
1,1,1-Trichloroethane	U		0.00144	0.00389	1	07/09/2021 23:04	WG1702305
1,1,2-Trichloroethane	U		0.000930	0.00389	1	07/09/2021 23:04	WG1702305
Trichloroethene	U		0.000910	0.00156	1	07/09/2021 23:04	WG1702305
Trichlorofluoromethane	U		0.00129	0.00389	1	07/09/2021 23:04	WG1702305
1,2,3-Trichloropropane	U		0.00252	0.0195	1	07/09/2021 23:04	WG1702305
1,2,4-Trimethylbenzene	0.00953		0.00246	0.00779	1	07/09/2021 23:04	WG1702305
1,2,3-Trimethylbenzene	0.0463		0.00246	0.00779	1	07/09/2021 23:04	WG1702305
1,3,5-Trimethylbenzene	0.0100		0.00312	0.00779	1	07/09/2021 23:04	WG1702305
Vinyl chloride	U		0.00181	0.00389	1	07/09/2021 23:04	WG1702305
Xylenes, Total	0.187		0.00137	0.0101	1	07/09/2021 23:04	WG1702305
(S) Toluene-d8	*107*			*75.0-131*		*07/09/2021 23:04*	WG1702305
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*07/09/2021 23:04*	WG1702305
(S) 1,2-Dichloroethane-d4	*79.8*			*70.0-130*		*07/09/2021 23:04*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	14.3		1.68	5.05	1	07/10/2021 17:05	WG1702464
Residual Range Organics (RRO)	36.7		4.20	12.6	1	07/10/2021 17:05	WG1702464
(S) o-Terphenyl	*65.1*			*18.0-148*		*07/10/2021 17:05*	WG1702464

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0149	0.0429	1	07/08/2021 19:15	WG1701730
PCB 1221	U		0.0149	0.0429	1	07/08/2021 19:15	WG1701730
PCB 1232	U		0.0149	0.0429	1	07/08/2021 19:15	WG1701730
PCB 1242	U		0.0149	0.0429	1	07/08/2021 19:15	WG1701730
PCB 1248	U		0.00932	0.0215	1	07/08/2021 19:15	WG1701730
PCB 1254	U		0.00932	0.0215	1	07/08/2021 19:15	WG1701730
PCB 1260	U		0.00932	0.0215	1	07/08/2021 19:15	WG1701730
(S) Decachlorobiphenyl	*97.0*			*10.0-135*		*07/08/2021 19:15*	WG1701730
(S) Tetrachloro-m-xylene	*98.3*			*10.0-139*		*07/08/2021 19:15*	WG1701730

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.0		1	07/08/2021 11:17	WG1701784

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	50.7		0.119	2.41	5	07/12/2021 11:40	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	14.5	B	1.27	3.73	25	07/12/2021 23:27	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*07/12/2021 23:27*	WG1703584

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0545	0.0746	1	07/09/2021 23:24	WG1702305
Acrylonitrile	U		0.00539	0.0187	1	07/09/2021 23:24	WG1702305
Benzene	U		0.000697	0.00149	1	07/09/2021 23:24	WG1702305
Bromobenzene	U		0.00134	0.0187	1	07/09/2021 23:24	WG1702305
Bromodichloromethane	U		0.00108	0.00373	1	07/09/2021 23:24	WG1702305
Bromoform	U		0.00175	0.0373	1	07/09/2021 23:24	WG1702305
Bromomethane	U		0.00294	0.0187	1	07/09/2021 23:24	WG1702305
n-Butylbenzene	U		0.00783	0.0187	1	07/09/2021 23:24	WG1702305
sec-Butylbenzene	U		0.00430	0.0187	1	07/09/2021 23:24	WG1702305
tert-Butylbenzene	U		0.00291	0.00746	1	07/09/2021 23:24	WG1702305
Carbon tetrachloride	U		0.00134	0.00746	1	07/09/2021 23:24	WG1702305
Chlorobenzene	U		0.000313	0.00373	1	07/09/2021 23:24	WG1702305
Chlorodibromomethane	U		0.000913	0.00373	1	07/09/2021 23:24	WG1702305
Chloroethane	U		0.00254	0.00746	1	07/09/2021 23:24	WG1702305
Chloroform	U		0.00154	0.00373	1	07/09/2021 23:24	WG1702305
Chloromethane	U		0.00649	0.0187	1	07/09/2021 23:24	WG1702305
2-Chlorotoluene	U		0.00129	0.00373	1	07/09/2021 23:24	WG1702305
4-Chlorotoluene	U		0.000672	0.00746	1	07/09/2021 23:24	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.00582	0.0373	1	07/09/2021 23:24	WG1702305
1,2-Dibromoethane	U		0.000967	0.00373	1	07/09/2021 23:24	WG1702305
Dibromomethane	U		0.00112	0.00746	1	07/09/2021 23:24	WG1702305
1,2-Dichlorobenzene	U		0.000634	0.00746	1	07/09/2021 23:24	WG1702305
1,3-Dichlorobenzene	U		0.000895	0.00746	1	07/09/2021 23:24	WG1702305
1,4-Dichlorobenzene	U		0.00104	0.00746	1	07/09/2021 23:24	WG1702305
Dichlorodifluoromethane	U		0.00240	0.00373	1	07/09/2021 23:24	WG1702305
1,1-Dichloroethane	U		0.000733	0.00373	1	07/09/2021 23:24	WG1702305
1,2-Dichloroethane	U		0.000968	0.00373	1	07/09/2021 23:24	WG1702305
1,1-Dichloroethene	U		0.000904	0.00373	1	07/09/2021 23:24	WG1702305
cis-1,2-Dichloroethene	U		0.00110	0.00373	1	07/09/2021 23:24	WG1702305
trans-1,2-Dichloroethene	U		0.00155	0.00746	1	07/09/2021 23:24	WG1702305
1,2-Dichloropropane	U		0.00212	0.00746	1	07/09/2021 23:24	WG1702305
1,1-Dichloropropene	U		0.00121	0.00373	1	07/09/2021 23:24	WG1702305
1,3-Dichloropropane	U		0.000748	0.00746	1	07/09/2021 23:24	WG1702305
cis-1,3-Dichloropropene	U		0.00113	0.00373	1	07/09/2021 23:24	WG1702305
trans-1,3-Dichloropropene	U		0.00170	0.00746	1	07/09/2021 23:24	WG1702305
2,2-Dichloropropane	U		0.00206	0.00373	1	07/09/2021 23:24	WG1702305
Di-isopropyl ether	U		0.000612	0.00149	1	07/09/2021 23:24	WG1702305
Ethylbenzene	U		0.00110	0.00373	1	07/09/2021 23:24	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	U		0.00895	0.0373	1	07/09/2021 23:24	WG1702305
Isopropylbenzene	U		0.000634	0.00373	1	07/09/2021 23:24	WG1702305
p-Isopropyltoluene	U		0.00381	0.00746	1	07/09/2021 23:24	WG1702305
2-Butanone (MEK)	0.104	J	0.0948	0.149	1	07/09/2021 23:24	WG1702305
Methylene Chloride	U		0.00991	0.0373	1	07/09/2021 23:24	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.00340	0.0373	1	07/09/2021 23:24	WG1702305
Methyl tert-butyl ether	U		0.000522	0.00149	1	07/09/2021 23:24	WG1702305
Naphthalene	U		0.00728	0.0187	1	07/09/2021 23:24	WG1702305
n-Propylbenzene	U		0.00142	0.00746	1	07/09/2021 23:24	WG1702305
Styrene	U		0.000342	0.0187	1	07/09/2021 23:24	WG1702305
1,1,1,2-Tetrachloroethane	U		0.00141	0.00373	1	07/09/2021 23:24	WG1702305
1,1,2,2-Tetrachloroethane	U		0.00104	0.00373	1	07/09/2021 23:24	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.00113	0.00373	1	07/09/2021 23:24	WG1702305
Tetrachloroethene	U		0.00134	0.00373	1	07/09/2021 23:24	WG1702305
Toluene	U		0.00194	0.00746	1	07/09/2021 23:24	WG1702305
1,2,3-Trichlorobenzene	U		0.0109	0.0187	1	07/09/2021 23:24	WG1702305
1,2,4-Trichlorobenzene	U		0.00657	0.0187	1	07/09/2021 23:24	WG1702305
1,1,1-Trichloroethane	U		0.00138	0.00373	1	07/09/2021 23:24	WG1702305
1,1,2-Trichloroethane	U		0.000891	0.00373	1	07/09/2021 23:24	WG1702305
Trichloroethene	U		0.000871	0.00149	1	07/09/2021 23:24	WG1702305
Trichlorofluoromethane	U		0.00123	0.00373	1	07/09/2021 23:24	WG1702305
1,2,3-Trichloropropane	U		0.00242	0.0187	1	07/09/2021 23:24	WG1702305
1,2,4-Trimethylbenzene	U		0.00236	0.00746	1	07/09/2021 23:24	WG1702305
1,2,3-Trimethylbenzene	U		0.00236	0.00746	1	07/09/2021 23:24	WG1702305
1,3,5-Trimethylbenzene	U		0.00298	0.00746	1	07/09/2021 23:24	WG1702305
Vinyl chloride	U		0.00173	0.00373	1	07/09/2021 23:24	WG1702305
Xylenes, Total	0.00191	J	0.00131	0.00970	1	07/09/2021 23:24	WG1702305
(S) Toluene-d8	*107*			*75.0-131*		*07/09/2021 23:24*	WG1702305
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*07/09/2021 23:24*	WG1702305
(S) 1,2-Dichloroethane-d4	*79.8*			*70.0-130*		*07/09/2021 23:24*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	11.5		1.60	4.82	1	07/10/2021 17:56	WG1702464
Residual Range Organics (RRO)	24.0		4.01	12.0	1	07/10/2021 17:56	WG1702464
(S) o-Terphenyl	*71.8*			*18.0-148*		*07/10/2021 17:56*	WG1702464

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.6		1	07/08/2021 11:17	WG1701784

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	31.2		0.116	2.34	5	07/12/2021 11:50	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.00	B	1.13	3.34	25	07/12/2021 23:50	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*07/12/2021 23:50*	WG1703584

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	2.24	J	1.55	4.67	1	07/10/2021 15:34	WG1702464
Residual Range Organics (RRO)	10.2	J	3.89	11.7	1	07/10/2021 15:34	WG1702464
(S) o-Terphenyl	*58.4*			*18.0-148*		*07/10/2021 15:34*	WG1702464

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.1		1	07/08/2021 11:17	WG1701784

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.66	B J	2.29	6.73	48	07/13/2021 00:14	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*111*			*77.0-120*		*07/13/2021 00:14*	WG1703584

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.68	5.06	1	07/10/2021 13:36	WG1702464
Residual Range Organics (RRO)	U		4.21	12.6	1	07/10/2021 13:36	WG1702464
(S) o-Terphenyl	*63.4*			*18.0-148*		*07/10/2021 13:36*	WG1702464

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.7		1	07/08/2021 11:17	WG1701784

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0635		0.0226	0.0502	1	07/09/2021 10:08	WG1702125

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.68		0.125	1.25	5	07/12/2021 11:54	WG1701993
Barium	85.6		0.191	3.13	5	07/12/2021 11:54	WG1701993
Cadmium	0.504	J	0.107	1.25	5	07/12/2021 11:54	WG1701993
Chromium	35.6		0.371	6.27	5	07/12/2021 11:54	WG1701993
Lead	78.2		0.124	2.51	5	07/12/2021 11:54	WG1701993
Selenium	0.416	J	0.226	3.13	5	07/12/2021 11:54	WG1701993
Silver	U		0.108	0.627	5	07/12/2021 11:54	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	9.44	B	1.32	3.89	25	07/13/2021 00:38	WG1703584
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*		*07/13/2021 00:38*	WG1703584

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0568	0.0778	1	07/09/2021 23:43	WG1702305
Acrylonitrile	U		0.00562	0.0194	1	07/09/2021 23:43	WG1702305
Benzene	0.00160		0.000727	0.00156	1	07/09/2021 23:43	WG1702305
Bromobenzene	U		0.00140	0.0194	1	07/09/2021 23:43	WG1702305
Bromodichloromethane	U		0.00113	0.00389	1	07/09/2021 23:43	WG1702305
Bromoform	U		0.00182	0.0389	1	07/09/2021 23:43	WG1702305
Bromomethane	U		0.00307	0.0194	1	07/09/2021 23:43	WG1702305
n-Butylbenzene	0.00927	J	0.00817	0.0194	1	07/09/2021 23:43	WG1702305
sec-Butylbenzene	0.0173	J	0.00448	0.0194	1	07/09/2021 23:43	WG1702305
tert-Butylbenzene	U		0.00303	0.00778	1	07/09/2021 23:43	WG1702305
Carbon tetrachloride	U		0.00140	0.00778	1	07/09/2021 23:43	WG1702305
Chlorobenzene	U		0.000327	0.00389	1	07/09/2021 23:43	WG1702305
Chlorodibromomethane	U		0.000952	0.00389	1	07/09/2021 23:43	WG1702305
Chloroethane	U		0.00264	0.00778	1	07/09/2021 23:43	WG1702305
Chloroform	U		0.00160	0.00389	1	07/09/2021 23:43	WG1702305
Chloromethane	U		0.00677	0.0194	1	07/09/2021 23:43	WG1702305
2-Chlorotoluene	U		0.00135	0.00389	1	07/09/2021 23:43	WG1702305
4-Chlorotoluene	U		0.000700	0.00778	1	07/09/2021 23:43	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.00607	0.0389	1	07/09/2021 23:43	WG1702305
1,2-Dibromoethane	U		0.00101	0.00389	1	07/09/2021 23:43	WG1702305
Dibromomethane	U		0.00117	0.00778	1	07/09/2021 23:43	WG1702305
1,2-Dichlorobenzene	U		0.000661	0.00778	1	07/09/2021 23:43	WG1702305
1,3-Dichlorobenzene	U		0.000934	0.00778	1	07/09/2021 23:43	WG1702305
1,4-Dichlorobenzene	U		0.00109	0.00778	1	07/09/2021 23:43	WG1702305
Dichlorodifluoromethane	U		0.00250	0.00389	1	07/09/2021 23:43	WG1702305
1,1-Dichloroethane	U		0.000764	0.00389	1	07/09/2021 23:43	WG1702305
1,2-Dichloroethane	U		0.00101	0.00389	1	07/09/2021 23:43	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000943	0.00389	1	07/09/2021 23:43	WG1702305
cis-1,2-Dichloroethene	U		0.00114	0.00389	1	07/09/2021 23:43	WG1702305
trans-1,2-Dichloroethene	U		0.00162	0.00778	1	07/09/2021 23:43	WG1702305
1,2-Dichloropropane	U		0.00221	0.00778	1	07/09/2021 23:43	WG1702305
1,1-Dichloropropene	U		0.00126	0.00389	1	07/09/2021 23:43	WG1702305
1,3-Dichloropropane	U		0.000779	0.00778	1	07/09/2021 23:43	WG1702305
cis-1,3-Dichloropropene	U		0.00118	0.00389	1	07/09/2021 23:43	WG1702305
trans-1,3-Dichloropropene	U		0.00177	0.00778	1	07/09/2021 23:43	WG1702305
2,2-Dichloropropane	U		0.00215	0.00389	1	07/09/2021 23:43	WG1702305
Di-isopropyl ether	0.00764		0.000638	0.00156	1	07/09/2021 23:43	WG1702305
Ethylbenzene	0.00363	J	0.00115	0.00389	1	07/09/2021 23:43	WG1702305
Hexachloro-1,3-butadiene	U		0.00934	0.0389	1	07/09/2021 23:43	WG1702305
Isopropylbenzene	0.0703		0.000661	0.00389	1	07/09/2021 23:43	WG1702305
p-Isopropyltoluene	0.0109		0.00397	0.00778	1	07/09/2021 23:43	WG1702305
2-Butanone (MEK)	U		0.0988	0.156	1	07/09/2021 23:43	WG1702305
Methylene Chloride	U		0.0103	0.0389	1	07/09/2021 23:43	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.00355	0.0389	1	07/09/2021 23:43	WG1702305
Methyl tert-butyl ether	U		0.000545	0.00156	1	07/09/2021 23:43	WG1702305
Naphthalene	0.0107	J	0.00759	0.0194	1	07/09/2021 23:43	WG1702305
n-Propylbenzene	0.102		0.00148	0.00778	1	07/09/2021 23:43	WG1702305
Styrene	U		0.000356	0.0194	1	07/09/2021 23:43	WG1702305
1,1,1,2-Tetrachloroethane	U		0.00147	0.00389	1	07/09/2021 23:43	WG1702305
1,1,2,2-Tetrachloroethane	U		0.00108	0.00389	1	07/09/2021 23:43	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.00117	0.00389	1	07/09/2021 23:43	WG1702305
Tetrachloroethene	U		0.00139	0.00389	1	07/09/2021 23:43	WG1702305
Toluene	0.0143		0.00202	0.00778	1	07/09/2021 23:43	WG1702305
1,2,3-Trichlorobenzene	U		0.0114	0.0194	1	07/09/2021 23:43	WG1702305
1,2,4-Trichlorobenzene	U		0.00685	0.0194	1	07/09/2021 23:43	WG1702305
1,1,1-Trichloroethane	U		0.00144	0.00389	1	07/09/2021 23:43	WG1702305
1,1,2-Trichloroethane	U		0.000929	0.00389	1	07/09/2021 23:43	WG1702305
Trichloroethene	U		0.000909	0.00156	1	07/09/2021 23:43	WG1702305
Trichlorofluoromethane	U		0.00129	0.00389	1	07/09/2021 23:43	WG1702305
1,2,3-Trichloropropane	U		0.00252	0.0194	1	07/09/2021 23:43	WG1702305
1,2,4-Trimethylbenzene	0.0591		0.00246	0.00778	1	07/09/2021 23:43	WG1702305
1,2,3-Trimethylbenzene	0.0734		0.00246	0.00778	1	07/09/2021 23:43	WG1702305
1,3,5-Trimethylbenzene	0.0316		0.00311	0.00778	1	07/09/2021 23:43	WG1702305
Vinyl chloride	U		0.00180	0.00389	1	07/09/2021 23:43	WG1702305
Xylenes, Total	0.118		0.00137	0.0101	1	07/09/2021 23:43	WG1702305
(S) Toluene-d8	*105*			*75.0-131*		*07/09/2021 23:43*	WG1702305
(S) 4-Bromofluorobenzene	*98.6*			*67.0-138*		*07/09/2021 23:43*	WG1702305
(S) 1,2-Dichloroethane-d4	*78.5*			*70.0-130*		*07/09/2021 23:43*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	226		1.67	5.02	1	07/10/2021 18:08	WG1702464
Residual Range Organics (RRO)	103		4.18	12.5	1	07/10/2021 18:08	WG1702464
(S) o-Terphenyl	*56.4*			*18.0-148*		*07/10/2021 18:08*	WG1702464

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0148	0.0426	1	07/08/2021 19:24	WG1701730
PCB 1221	U		0.0148	0.0426	1	07/08/2021 19:24	WG1701730
PCB 1232	U		0.0148	0.0426	1	07/08/2021 19:24	WG1701730
PCB 1242	U		0.0148	0.0426	1	07/08/2021 19:24	WG1701730
PCB 1248	U		0.00925	0.0213	1	07/08/2021 19:24	WG1701730
PCB 1254	U		0.00925	0.0213	1	07/08/2021 19:24	WG1701730
PCB 1260	U		0.00925	0.0213	1	07/08/2021 19:24	WG1701730
(S) Decachlorobiphenyl	*79.2*			*10.0-135*		*07/08/2021 19:24*	WG1701730
(S) Tetrachloro-m-xylene	*74.0*			*10.0-139*		*07/08/2021 19:24*	WG1701730

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.2		1	07/08/2021 11:17	WG1701784

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0543		0.0227	0.0505	1	07/09/2021 10:10	WG1702125

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	2.68		0.126	1.26	5	07/12/2021 11:57	WG1701993
Barium	89.3		0.192	3.16	5	07/12/2021 11:57	WG1701993
Cadmium	0.139	J	0.108	1.26	5	07/12/2021 11:57	WG1701993
Chromium	35.4		0.374	6.31	5	07/12/2021 11:57	WG1701993
Lead	54.8		0.125	2.52	5	07/12/2021 11:57	WG1701993
Selenium	0.326	J	0.227	3.16	5	07/12/2021 11:57	WG1701993
Silver	U		0.109	0.631	5	07/12/2021 11:57	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	209		13.5	39.8	250	07/15/2021 11:50	WG1705822
(S) a,a,a-Trifluorotoluene(FID)	*88.7*			*77.0-120*		*07/15/2021 11:50*	WG1705822

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		2.33	3.19	40	07/10/2021 00:02	WG1702305
Acrylonitrile	U		0.229	0.797	40	07/10/2021 00:02	WG1702305
Benzene	1.74		0.0298	0.0637	40	07/10/2021 00:02	WG1702305
Bromobenzene	U		0.0574	0.797	40	07/10/2021 00:02	WG1702305
Bromodichloromethane	U		0.0462	0.159	40	07/10/2021 00:02	WG1702305
Bromoform	U		0.0746	1.59	40	07/10/2021 00:02	WG1702305
Bromomethane	U		0.126	0.797	40	07/10/2021 00:02	WG1702305
n-Butylbenzene	1.96		0.335	0.797	40	07/10/2021 00:02	WG1702305
sec-Butylbenzene	0.754	J	0.183	0.797	40	07/10/2021 00:02	WG1702305
tert-Butylbenzene	U		0.124	0.319	40	07/10/2021 00:02	WG1702305
Carbon tetrachloride	U		0.0572	0.319	40	07/10/2021 00:02	WG1702305
Chlorobenzene	U		0.0134	0.159	40	07/10/2021 00:02	WG1702305
Chlorodibromomethane	U		0.0390	0.159	40	07/10/2021 00:02	WG1702305
Chloroethane	U		0.108	0.319	40	07/10/2021 00:02	WG1702305
Chloroform	U		0.0657	0.159	40	07/10/2021 00:02	WG1702305
Chloromethane	U		0.277	0.797	40	07/10/2021 00:02	WG1702305
2-Chlorotoluene	U		0.0551	0.159	40	07/10/2021 00:02	WG1702305
4-Chlorotoluene	U		0.0287	0.319	40	07/10/2021 00:02	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.249	1.59	40	07/10/2021 00:02	WG1702305
1,2-Dibromoethane	U		0.0413	0.159	40	07/10/2021 00:02	WG1702305
Dibromomethane	U		0.0478	0.319	40	07/10/2021 00:02	WG1702305
1,2-Dichlorobenzene	U		0.0271	0.319	40	07/10/2021 00:02	WG1702305
1,3-Dichlorobenzene	U		0.0382	0.319	40	07/10/2021 00:02	WG1702305
1,4-Dichlorobenzene	U		0.0446	0.319	40	07/10/2021 00:02	WG1702305
Dichlorodifluoromethane	U		0.103	0.159	40	07/10/2021 00:02	WG1702305
1,1-Dichloroethane	U		0.0312	0.159	40	07/10/2021 00:02	WG1702305
1,2-Dichloroethane	U		0.0414	0.159	40	07/10/2021 00:02	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.0386	0.159	40	07/10/2021 00:02	WG1702305
cis-1,2-Dichloroethene	U		0.0468	0.159	40	07/10/2021 00:02	WG1702305
trans-1,2-Dichloroethene	U		0.0663	0.319	40	07/10/2021 00:02	WG1702305
1,2-Dichloropropane	U		0.0905	0.319	40	07/10/2021 00:02	WG1702305
1,1-Dichloropropene	U		0.0516	0.159	40	07/10/2021 00:02	WG1702305
1,3-Dichloropropane	U		0.0319	0.319	40	07/10/2021 00:02	WG1702305
cis-1,3-Dichloropropene	U		0.0483	0.159	40	07/10/2021 00:02	WG1702305
trans-1,3-Dichloropropene	U		0.0727	0.319	40	07/10/2021 00:02	WG1702305
2,2-Dichloropropane	U		0.0880	0.159	40	07/10/2021 00:02	WG1702305
Di-isopropyl ether	U		0.0261	0.0637	40	07/10/2021 00:02	WG1702305
Ethylbenzene	11.0		0.0470	0.159	40	07/10/2021 00:02	WG1702305
Hexachloro-1,3-butadiene	U		0.382	1.59	40	07/10/2021 00:02	WG1702305
Isopropylbenzene	1.38		0.0271	0.159	40	07/10/2021 00:02	WG1702305
p-Isopropyltoluene	0.354		0.163	0.319	40	07/10/2021 00:02	WG1702305
2-Butanone (MEK)	U		4.05	6.37	40	07/10/2021 00:02	WG1702305
Methylene Chloride	U		0.424	1.59	40	07/10/2021 00:02	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.145	1.59	40	07/10/2021 00:02	WG1702305
Methyl tert-butyl ether	U		0.0223	0.0637	40	07/10/2021 00:02	WG1702305
Naphthalene	7.36		0.311	0.797	40	07/10/2021 00:02	WG1702305
n-Propylbenzene	5.96		0.0606	0.319	40	07/10/2021 00:02	WG1702305
Styrene	U		0.0146	0.797	40	07/10/2021 00:02	WG1702305
1,1,1,2-Tetrachloroethane	U		0.0604	0.159	40	07/10/2021 00:02	WG1702305
1,1,2,2-Tetrachloroethane	U		0.0443	0.159	40	07/10/2021 00:02	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.0481	0.159	40	07/10/2021 00:02	WG1702305
Tetrachloroethene	U		0.0570	0.159	40	07/10/2021 00:02	WG1702305
Toluene	0.177	J	0.0829	0.319	40	07/10/2021 00:02	WG1702305
1,2,3-Trichlorobenzene	U		0.467	0.797	40	07/10/2021 00:02	WG1702305
1,2,4-Trichlorobenzene	U		0.280	0.797	40	07/10/2021 00:02	WG1702305
1,1,1-Trichloroethane	U		0.0588	0.159	40	07/10/2021 00:02	WG1702305
1,1,2-Trichloroethane	U		0.0381	0.159	40	07/10/2021 00:02	WG1702305
Trichloroethene	U		0.0373	0.0637	40	07/10/2021 00:02	WG1702305
Trichlorofluoromethane	U		0.0527	0.159	40	07/10/2021 00:02	WG1702305
1,2,3-Trichloropropane	U		0.103	0.797	40	07/10/2021 00:02	WG1702305
1,2,4-Trimethylbenzene	26.8		0.101	0.319	40	07/10/2021 00:02	WG1702305
1,2,3-Trimethylbenzene	6.29		0.101	0.319	40	07/10/2021 00:02	WG1702305
1,3,5-Trimethylbenzene	7.04		0.127	0.319	40	07/10/2021 00:02	WG1702305
Vinyl chloride	U		0.0739	0.159	40	07/10/2021 00:02	WG1702305
Xylenes, Total	27.9		0.0561	0.414	40	07/10/2021 00:02	WG1702305
(S) Toluene-d8	*105*			*75.0-131*		*07/10/2021 00:02*	WG1702305
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*07/10/2021 00:02*	WG1702305
(S) 1,2-Dichloroethane-d4	*83.2*			*70.0-130*		*07/10/2021 00:02*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.05		1.68	5.05	1	07/10/2021 13:49	WG1702464
Residual Range Organics (RRO)	U		4.20	12.6	1	07/10/2021 13:49	WG1702464
(S) o-Terphenyl	*42.6*			*18.0-148*		*07/10/2021 13:49*	WG1702464

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0149	0.0429	1	07/08/2021 19:32	WG1701730
PCB 1221	U		0.0149	0.0429	1	07/08/2021 19:32	WG1701730
PCB 1232	U		0.0149	0.0429	1	07/08/2021 19:32	WG1701730
PCB 1242	U		0.0149	0.0429	1	07/08/2021 19:32	WG1701730
PCB 1248	U		0.00932	0.0215	1	07/08/2021 19:32	WG1701730
PCB 1254	U		0.00932	0.0215	1	07/08/2021 19:32	WG1701730
PCB 1260	U		0.00932	0.0215	1	07/08/2021 19:32	WG1701730
(S) Decachlorobiphenyl	*92.0*			*10.0-135*		*07/08/2021 19:32*	WG1701730
(S) Tetrachloro-m-xylene	*92.0*			*10.0-139*		*07/08/2021 19:32*	WG1701730

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.4		1	07/08/2021 11:17	WG1701784

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0632		0.0239	0.0530	1	07/09/2021 10:13	WG1702125

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.95	O1	0.133	1.33	5	07/12/2021 11:16	WG1701993
Barium	102	O1	0.202	3.32	5	07/12/2021 11:16	WG1701993
Cadmium	0.513	J	0.113	1.33	5	07/12/2021 11:16	WG1701993
Chromium	36.6	O1	0.393	6.63	5	07/12/2021 11:16	WG1701993
Lead	54.3	J5 O1	0.131	2.65	5	07/12/2021 11:16	WG1701993
Selenium	0.855	J	0.239	3.32	5	07/12/2021 11:16	WG1701993
Silver	U		0.115	0.663	5	07/12/2021 11:16	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.49	4.39	25	07/15/2021 10:44	WG1705822
(S) a,a,a-Trifluorotoluene(FID)	*95.8*			*77.0-120*		*07/15/2021 10:44*	WG1705822

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0641	0.0878	1	07/10/2021 02:21	WG1702305
Acrylonitrile	U		0.00634	0.0220	1	07/10/2021 02:21	WG1702305
Benzene	0.00908		0.000820	0.00176	1	07/10/2021 02:21	WG1702305
Bromobenzene	U		0.00158	0.0220	1	07/10/2021 02:21	WG1702305
Bromodichloromethane	U		0.00127	0.00439	1	07/10/2021 02:21	WG1702305
Bromoform	U		0.00205	0.0439	1	07/10/2021 02:21	WG1702305
Bromomethane	U		0.00346	0.0220	1	07/10/2021 02:21	WG1702305
n-Butylbenzene	U		0.00922	0.0220	1	07/10/2021 02:21	WG1702305
sec-Butylbenzene	U		0.00506	0.0220	1	07/10/2021 02:21	WG1702305
tert-Butylbenzene	U		0.00342	0.00878	1	07/10/2021 02:21	WG1702305
Carbon tetrachloride	U		0.00158	0.00878	1	07/10/2021 02:21	WG1702305
Chlorobenzene	U		0.000369	0.00439	1	07/10/2021 02:21	WG1702305
Chlorodibromomethane	U		0.00107	0.00439	1	07/10/2021 02:21	WG1702305
Chloroethane	U		0.00299	0.00878	1	07/10/2021 02:21	WG1702305
Chloroform	U		0.00181	0.00439	1	07/10/2021 02:21	WG1702305
Chloromethane	U		0.00764	0.0220	1	07/10/2021 02:21	WG1702305
2-Chlorotoluene	U		0.00152	0.00439	1	07/10/2021 02:21	WG1702305
4-Chlorotoluene	U		0.000790	0.00878	1	07/10/2021 02:21	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.00685	0.0439	1	07/10/2021 02:21	WG1702305
1,2-Dibromoethane	U		0.00114	0.00439	1	07/10/2021 02:21	WG1702305
Dibromomethane	U		0.00132	0.00878	1	07/10/2021 02:21	WG1702305
1,2-Dichlorobenzene	U		0.000746	0.00878	1	07/10/2021 02:21	WG1702305
1,3-Dichlorobenzene	U		0.00105	0.00878	1	07/10/2021 02:21	WG1702305
1,4-Dichlorobenzene	U		0.00123	0.00878	1	07/10/2021 02:21	WG1702305
Dichlorodifluoromethane	U		0.00283	0.00439	1	07/10/2021 02:21	WG1702305
1,1-Dichloroethane	U		0.000862	0.00439	1	07/10/2021 02:21	WG1702305
1,2-Dichloroethane	U		0.00114	0.00439	1	07/10/2021 02:21	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.00106	0.00439	1	07/10/2021 02:21	WG1702305
cis-1,2-Dichloroethene	U		0.00129	0.00439	1	07/10/2021 02:21	WG1702305
trans-1,2-Dichloroethene	U		0.00183	0.00878	1	07/10/2021 02:21	WG1702305
1,2-Dichloropropane	U		0.00249	0.00878	1	07/10/2021 02:21	WG1702305
1,1-Dichloropropene	U		0.00142	0.00439	1	07/10/2021 02:21	WG1702305
1,3-Dichloropropane	U		0.000880	0.00878	1	07/10/2021 02:21	WG1702305
cis-1,3-Dichloropropene	U		0.00133	0.00439	1	07/10/2021 02:21	WG1702305
trans-1,3-Dichloropropene	U		0.00200	0.00878	1	07/10/2021 02:21	WG1702305
2,2-Dichloropropane	U		0.00242	0.00439	1	07/10/2021 02:21	WG1702305
Di-isopropyl ether	U		0.000720	0.00176	1	07/10/2021 02:21	WG1702305
Ethylbenzene	0.00467		0.00129	0.00439	1	07/10/2021 02:21	WG1702305
Hexachloro-1,3-butadiene	U		0.0105	0.0439	1	07/10/2021 02:21	WG1702305
Isopropylbenzene	U		0.000746	0.00439	1	07/10/2021 02:21	WG1702305
p-Isopropyltoluene	U		0.00448	0.00878	1	07/10/2021 02:21	WG1702305
2-Butanone (MEK)	0.153	J	0.112	0.176	1	07/10/2021 02:21	WG1702305
Methylene Chloride	U		0.0117	0.0439	1	07/10/2021 02:21	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.00400	0.0439	1	07/10/2021 02:21	WG1702305
Methyl tert-butyl ether	U		0.000615	0.00176	1	07/10/2021 02:21	WG1702305
Naphthalene	U		0.00857	0.0220	1	07/10/2021 02:21	WG1702305
n-Propylbenzene	0.00263	J	0.00167	0.00878	1	07/10/2021 02:21	WG1702305
Styrene	U		0.000402	0.0220	1	07/10/2021 02:21	WG1702305
1,1,1,2-Tetrachloroethane	U		0.00166	0.00439	1	07/10/2021 02:21	WG1702305
1,1,2,2-Tetrachloroethane	U		0.00122	0.00439	1	07/10/2021 02:21	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.00132	0.00439	1	07/10/2021 02:21	WG1702305
Tetrachloroethene	U		0.00157	0.00439	1	07/10/2021 02:21	WG1702305
Toluene	0.0164		0.00228	0.00878	1	07/10/2021 02:21	WG1702305
1,2,3-Trichlorobenzene	U		0.0129	0.0220	1	07/10/2021 02:21	WG1702305
1,2,4-Trichlorobenzene	U		0.00773	0.0220	1	07/10/2021 02:21	WG1702305
1,1,1-Trichloroethane	U		0.00162	0.00439	1	07/10/2021 02:21	WG1702305
1,1,2-Trichloroethane	U		0.00105	0.00439	1	07/10/2021 02:21	WG1702305
Trichloroethene	U		0.00103	0.00176	1	07/10/2021 02:21	WG1702305
Trichlorofluoromethane	U		0.00145	0.00439	1	07/10/2021 02:21	WG1702305
1,2,3-Trichloropropane	U		0.00285	0.0220	1	07/10/2021 02:21	WG1702305
1,2,4-Trimethylbenzene	0.00901		0.00277	0.00878	1	07/10/2021 02:21	WG1702305
1,2,3-Trimethylbenzene	0.00511	J	0.00277	0.00878	1	07/10/2021 02:21	WG1702305
1,3,5-Trimethylbenzene	U		0.00351	0.00878	1	07/10/2021 02:21	WG1702305
Vinyl chloride	U		0.00204	0.00439	1	07/10/2021 02:21	WG1702305
Xylenes, Total	0.0204		0.00155	0.0114	1	07/10/2021 02:21	WG1702305
(S) Toluene-d8	*107*			*75.0-131*		*07/10/2021 02:21*	WG1702305
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*07/10/2021 02:21*	WG1702305
(S) 1,2-Dichloroethane-d4	*80.4*			*70.0-130*		*07/10/2021 02:21*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	8.65		1.76	5.30	1	07/12/2021 03:39	WG1702464
Residual Range Organics (RRO)	29.3		4.42	13.3	1	07/12/2021 03:39	WG1702464
(S) o-Terphenyl	*62.6*			*18.0-148*		*07/12/2021 03:39*	WG1702464

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0156	0.0451	1	07/08/2021 19:41	WG1701730
PCB 1221	U		0.0156	0.0451	1	07/08/2021 19:41	WG1701730
PCB 1232	U		0.0156	0.0451	1	07/08/2021 19:41	WG1701730
PCB 1242	U		0.0156	0.0451	1	07/08/2021 19:41	WG1701730
PCB 1248	U		0.00979	0.0225	1	07/08/2021 19:41	WG1701730
PCB 1254	U		0.00979	0.0225	1	07/08/2021 19:41	WG1701730
PCB 1260	U		0.00979	0.0225	1	07/08/2021 19:41	WG1701730
(S) Decachlorobiphenyl	*96.6*			*10.0-135*		*07/08/2021 19:41*	WG1701730
(S) Tetrachloro-m-xylene	*97.9*			*10.0-139*		*07/08/2021 19:41*	WG1701730

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.7		1	07/08/2021 11:17	WG1701784

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0485	J	0.0220	0.0490	1	07/09/2021 10:16	WG1702125

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.60		0.122	1.22	5	07/12/2021 12:01	WG1701993
Barium	91.5		0.186	3.06	5	07/12/2021 12:01	WG1701993
Cadmium	0.173	J	0.105	1.22	5	07/12/2021 12:01	WG1701993
Chromium	39.0		0.362	6.12	5	07/12/2021 12:01	WG1701993
Lead	55.1		0.121	2.45	5	07/12/2021 12:01	WG1701993
Selenium	0.395	J	0.220	3.06	5	07/12/2021 12:01	WG1701993
Silver	U		0.106	0.612	5	07/12/2021 12:01	WG1701993

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.32	3.90	25	07/15/2021 11:06	WG1705822
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*77.0-120*		*07/15/2021 11:06*	WG1705822

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0569	0.0780	1	07/10/2021 02:40	WG1702305
Acrylonitrile	U		0.00563	0.0195	1	07/10/2021 02:40	WG1702305
Benzene	U		0.000729	0.00156	1	07/10/2021 02:40	WG1702305
Bromobenzene	U		0.00140	0.0195	1	07/10/2021 02:40	WG1702305
Bromodichloromethane	U		0.00113	0.00390	1	07/10/2021 02:40	WG1702305
Bromoform	U		0.00183	0.0390	1	07/10/2021 02:40	WG1702305
Bromomethane	U		0.00307	0.0195	1	07/10/2021 02:40	WG1702305
n-Butylbenzene	U		0.00819	0.0195	1	07/10/2021 02:40	WG1702305
sec-Butylbenzene	U		0.00449	0.0195	1	07/10/2021 02:40	WG1702305
tert-Butylbenzene	U		0.00304	0.00780	1	07/10/2021 02:40	WG1702305
Carbon tetrachloride	U		0.00140	0.00780	1	07/10/2021 02:40	WG1702305
Chlorobenzene	U		0.000328	0.00390	1	07/10/2021 02:40	WG1702305
Chlorodibromomethane	U		0.000955	0.00390	1	07/10/2021 02:40	WG1702305
Chloroethane	U		0.00265	0.00780	1	07/10/2021 02:40	WG1702305
Chloroform	U		0.00161	0.00390	1	07/10/2021 02:40	WG1702305
Chloromethane	U		0.00679	0.0195	1	07/10/2021 02:40	WG1702305
2-Chlorotoluene	U		0.00135	0.00390	1	07/10/2021 02:40	WG1702305
4-Chlorotoluene	U		0.000702	0.00780	1	07/10/2021 02:40	WG1702305
1,2-Dibromo-3-Chloropropane	U		0.00608	0.0390	1	07/10/2021 02:40	WG1702305
1,2-Dibromoethane	U		0.00101	0.00390	1	07/10/2021 02:40	WG1702305
Dibromomethane	U		0.00117	0.00780	1	07/10/2021 02:40	WG1702305
1,2-Dichlorobenzene	U		0.000663	0.00780	1	07/10/2021 02:40	WG1702305
1,3-Dichlorobenzene	U		0.000936	0.00780	1	07/10/2021 02:40	WG1702305
1,4-Dichlorobenzene	U		0.00109	0.00780	1	07/10/2021 02:40	WG1702305
Dichlorodifluoromethane	U		0.00251	0.00390	1	07/10/2021 02:40	WG1702305
1,1-Dichloroethane	U		0.000766	0.00390	1	07/10/2021 02:40	WG1702305
1,2-Dichloroethane	U		0.00101	0.00390	1	07/10/2021 02:40	WG1702305

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	U		0.000945	0.00390	1	07/10/2021 02:40	WG1702305
cis-1,2-Dichloroethene	U		0.00115	0.00390	1	07/10/2021 02:40	WG1702305
trans-1,2-Dichloroethene	U		0.00162	0.00780	1	07/10/2021 02:40	WG1702305
1,2-Dichloropropane	U		0.00222	0.00780	1	07/10/2021 02:40	WG1702305
1,1-Dichloropropene	U		0.00126	0.00390	1	07/10/2021 02:40	WG1702305
1,3-Dichloropropane	U		0.000782	0.00780	1	07/10/2021 02:40	WG1702305
cis-1,3-Dichloropropene	U		0.00118	0.00390	1	07/10/2021 02:40	WG1702305
trans-1,3-Dichloropropene	U		0.00178	0.00780	1	07/10/2021 02:40	WG1702305
2,2-Dichloropropane	U		0.00215	0.00390	1	07/10/2021 02:40	WG1702305
Di-isopropyl ether	U		0.000640	0.00156	1	07/10/2021 02:40	WG1702305
Ethylbenzene	U		0.00115	0.00390	1	07/10/2021 02:40	WG1702305
Hexachloro-1,3-butadiene	U		0.00936	0.0390	1	07/10/2021 02:40	WG1702305
Isopropylbenzene	U		0.000663	0.00390	1	07/10/2021 02:40	WG1702305
p-Isopropyltoluene	U		0.00398	0.00780	1	07/10/2021 02:40	WG1702305
2-Butanone (MEK)	U		0.0991	0.156	1	07/10/2021 02:40	WG1702305
Methylene Chloride	U		0.0104	0.0390	1	07/10/2021 02:40	WG1702305
4-Methyl-2-pentanone (MIBK)	U		0.00356	0.0390	1	07/10/2021 02:40	WG1702305
Methyl tert-butyl ether	U		0.000546	0.00156	1	07/10/2021 02:40	WG1702305
Naphthalene	U		0.00761	0.0195	1	07/10/2021 02:40	WG1702305
n-Propylbenzene	U		0.00148	0.00780	1	07/10/2021 02:40	WG1702305
Styrene	U		0.000357	0.0195	1	07/10/2021 02:40	WG1702305
1,1,1,2-Tetrachloroethane	U		0.00148	0.00390	1	07/10/2021 02:40	WG1702305
1,1,2,2-Tetrachloroethane	U		0.00108	0.00390	1	07/10/2021 02:40	WG1702305
1,1,2-Trichlorotrifluoroethane	U		0.00118	0.00390	1	07/10/2021 02:40	WG1702305
Tetrachloroethene	U		0.00140	0.00390	1	07/10/2021 02:40	WG1702305
Toluene	U		0.00203	0.00780	1	07/10/2021 02:40	WG1702305
1,2,3-Trichlorobenzene	U		0.0114	0.0195	1	07/10/2021 02:40	WG1702305
1,2,4-Trichlorobenzene	U		0.00686	0.0195	1	07/10/2021 02:40	WG1702305
1,1,1-Trichloroethane	U		0.00144	0.00390	1	07/10/2021 02:40	WG1702305
1,1,2-Trichloroethane	U		0.000931	0.00390	1	07/10/2021 02:40	WG1702305
Trichloroethene	U		0.000911	0.00156	1	07/10/2021 02:40	WG1702305
Trichlorofluoromethane	U		0.00129	0.00390	1	07/10/2021 02:40	WG1702305
1,2,3-Trichloropropane	U		0.00253	0.0195	1	07/10/2021 02:40	WG1702305
1,2,4-Trimethylbenzene	U		0.00247	0.00780	1	07/10/2021 02:40	WG1702305
1,2,3-Trimethylbenzene	U		0.00247	0.00780	1	07/10/2021 02:40	WG1702305
1,3,5-Trimethylbenzene	U		0.00312	0.00780	1	07/10/2021 02:40	WG1702305
Vinyl chloride	U		0.00181	0.00390	1	07/10/2021 02:40	WG1702305
Xylenes, Total	U		0.00137	0.0101	1	07/10/2021 02:40	WG1702305
(S) Toluene-d8	*107*			*75.0-131*		*07/10/2021 02:40*	WG1702305
(S) 4-Bromofluorobenzene	*101*			*67.0-138*		*07/10/2021 02:40*	WG1702305
(S) 1,2-Dichloroethane-d4	*78.4*			*70.0-130*		*07/10/2021 02:40*	WG1702305

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1.69	J J3	1.63	4.90	1	07/10/2021 15:47	WG1702464
Residual Range Organics (RRO)	5.61	J	4.08	12.2	1	07/10/2021 15:47	WG1702464
(S) o-Terphenyl	*70.7*			*18.0-148*		*07/10/2021 15:47*	WG1702464

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0144	0.0416	1	07/08/2021 19:50	WG1701730
PCB 1221	U		0.0144	0.0416	1	07/08/2021 19:50	WG1701730
PCB 1232	U		0.0144	0.0416	1	07/08/2021 19:50	WG1701730
PCB 1242	U		0.0144	0.0416	1	07/08/2021 19:50	WG1701730
PCB 1248	U		0.00904	0.0208	1	07/08/2021 19:50	WG1701730
PCB 1254	U		0.00904	0.0208	1	07/08/2021 19:50	WG1701730
PCB 1260	U		0.00904	0.0208	1	07/08/2021 19:50	WG1701730
(S) Decachlorobiphenyl	*93.7*			*10.0-135*		*07/08/2021 19:50*	WG1701730
(S) Tetrachloro-m-xylene	*95.4*			*10.0-139*		*07/08/2021 19:50*	WG1701730

Method Blank (MB)

(MB) R3677365-1 07/08/21 11:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1374304-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1374304-05 07/08/21 11:17 • (DUP) R3677365-3 07/08/21 11:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.5	81.0	1	0.603		10

Laboratory Control Sample (LCS)

(LCS) R3677365-2 07/08/21 11:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3677467-1 07/09/21 08:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3677467-2 07/09/21 08:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.458	91.7	80.0-120	

L1374283-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374283-08 07/09/21 09:00 • (MS) R3677467-3 07/09/21 09:02 • (MSD) R3677467-4 07/09/21 09:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.519	0.0564	0.583	0.552	101	95.4	1	75.0-125			5.50	20

Method Blank (MB)

(MB) R3678275-1 07/12/21 11:09

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500

Laboratory Control Sample (LCS)

(LCS) R3678275-2 07/12/21 11:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	102	102	80.0-120	
Barium	100	103	103	80.0-120	
Cadmium	100	108	108	80.0-120	
Chromium	100	102	102	80.0-120	
Lead	100	103	103	80.0-120	
Selenium	100	111	111	80.0-120	
Silver	20.0	21.9	110	80.0-120	

L1374304-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374304-12 07/12/21 11:16 • (MS) R3678275-5 07/12/21 11:26 • (MSD) R3678275-6 07/12/21 11:30

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	133	3.95	135	136	98.7	99.2	5	75.0-125			0.558	20
Barium	133	102	258	235	117	100	5	75.0-125			9.11	20
Cadmium	133	0.513	142	138	107	104	5	75.0-125			3.16	20
Chromium	133	36.6	168	170	98.8	100	5	75.0-125			1.32	20
Lead	133	54.3	243	202	142	111	5	75.0-125	J5		18.6	20
Selenium	133	0.855	147	142	111	106	5	75.0-125			3.96	20
Silver	26.5	U	29.1	28.5	110	107	5	75.0-125			2.18	20

Method Blank (MB)

(MB) R3681274-1 07/19/21 17:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R3681274-2 07/19/21 17:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	47.1	94.3	80.0-120	

Method Blank (MB)

(MB) R3678437-2 07/12/21 14:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3678437-1 07/12/21 13:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5900	107	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*78.0-120*	

Method Blank (MB)

(MB) R3679566-2 07/13/21 03:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3679566-1 07/13/21 01:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	6040	110	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*78.0-120*	

Method Blank (MB)

(MB) R3679735-2 07/12/21 19:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	0.0480	J	0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	*112*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3679735-1 07/12/21 18:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.97	109	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*113*	*77.0-120*	

L1374304-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374304-05 07/12/21 22:17 • (MS) R3679735-3 07/13/21 05:53 • (MSD) R3679735-4 07/13/21 06:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	146	U	171	162	118	111	25	10.0-149			5.61	27
(S) a,a,a-Trifluorotoluene(FID)					*113*	*113*		*77.0-120*				

Method Blank (MB)

(MB) R3679938-2 07/15/21 04:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	*93.0*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3679938-1 07/15/21 03:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	6.52	119	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*119*	*77.0-120*	

Method Blank (MB)

(MB) R3679012-3 07/09/21 20:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3679012-3 07/09/21 20:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*80.2*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3679012-1 07/09/21 19:34 • (LCSD) R3679012-2 07/09/21 19:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.508	0.488	81.3	78.1	10.0-160			4.02	31
Acrylonitrile	0.625	0.648	0.673	104	108	45.0-153			3.79	22
Benzene	0.125	0.126	0.124	101	99.2	70.0-123			1.60	20
Bromobenzene	0.125	0.133	0.134	106	107	73.0-121			0.749	20
Bromodichloromethane	0.125	0.125	0.126	100	101	73.0-121			0.797	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3679012-1 07/09/21 19:34 • (LCSD) R3679012-2 07/09/21 19:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.125	0.127	0.128	102	102	64.0-132			0.784	20
Bromomethane	0.125	0.119	0.116	95.2	92.8	56.0-147			2.55	20
n-Butylbenzene	0.125	0.121	0.119	96.8	95.2	68.0-135			1.67	20
sec-Butylbenzene	0.125	0.124	0.123	99.2	98.4	74.0-130			0.810	20
tert-Butylbenzene	0.125	0.125	0.123	100	98.4	75.0-127			1.61	20
Carbon tetrachloride	0.125	0.114	0.113	91.2	90.4	66.0-128			0.881	20
Chlorobenzene	0.125	0.140	0.135	112	108	76.0-128			3.64	20
Chlorodibromomethane	0.125	0.138	0.134	110	107	74.0-127			2.94	20
Chloroethane	0.125	0.118	0.120	94.4	96.0	61.0-134			1.68	20
Chloroform	0.125	0.117	0.119	93.6	95.2	72.0-123			1.69	20
Chloromethane	0.125	0.111	0.109	88.8	87.2	51.0-138			1.82	20
2-Chlorotoluene	0.125	0.132	0.128	106	102	75.0-124			3.08	20
4-Chlorotoluene	0.125	0.128	0.122	102	97.6	75.0-124			4.80	20
1,2-Dibromo-3-Chloropropane	0.125	0.124	0.126	99.2	101	59.0-130			1.60	20
1,2-Dibromoethane	0.125	0.140	0.142	112	114	74.0-128			1.42	20
Dibromomethane	0.125	0.127	0.124	102	99.2	75.0-122			2.39	20
1,2-Dichlorobenzene	0.125	0.125	0.122	100	97.6	76.0-124			2.43	20
1,3-Dichlorobenzene	0.125	0.134	0.132	107	106	76.0-125			1.50	20
1,4-Dichlorobenzene	0.125	0.133	0.128	106	102	77.0-121			3.83	20
Dichlorodifluoromethane	0.125	0.105	0.105	84.0	84.0	43.0-156			0.000	20
1,1-Dichloroethane	0.125	0.123	0.124	98.4	99.2	70.0-127			0.810	20
1,2-Dichloroethane	0.125	0.110	0.117	88.0	93.6	65.0-131			6.17	20
1,1-Dichloroethene	0.125	0.117	0.118	93.6	94.4	65.0-131			0.851	20
cis-1,2-Dichloroethene	0.125	0.131	0.134	105	107	73.0-125			2.26	20
trans-1,2-Dichloroethene	0.125	0.122	0.127	97.6	102	71.0-125			4.02	20
1,2-Dichloropropane	0.125	0.138	0.136	110	109	74.0-125			1.46	20
1,1-Dichloropropene	0.125	0.125	0.123	100	98.4	73.0-125			1.61	20
1,3-Dichloropropane	0.125	0.135	0.133	108	106	80.0-125			1.49	20
cis-1,3-Dichloropropene	0.125	0.123	0.120	98.4	96.0	76.0-127			2.47	20
trans-1,3-Dichloropropene	0.125	0.127	0.126	102	101	73.0-127			0.791	20
2,2-Dichloropropane	0.125	0.101	0.0975	80.8	78.0	59.0-135			3.53	20
Di-isopropyl ether	0.125	0.121	0.120	96.8	96.0	60.0-136			0.830	20
Ethylbenzene	0.125	0.137	0.133	110	106	74.0-126			2.96	20
Hexachloro-1,3-butadiene	0.125	0.116	0.117	92.8	93.6	57.0-150			0.858	20
Isopropylbenzene	0.125	0.136	0.135	109	108	72.0-127			0.738	20
p-Isopropyltoluene	0.125	0.127	0.126	102	101	72.0-133			0.791	20
2-Butanone (MEK)	0.625	0.592	0.565	94.7	90.4	30.0-160			4.67	24
Methylene Chloride	0.125	0.136	0.139	109	111	68.0-123			2.18	20
4-Methyl-2-pentanone (MIBK)	0.625	0.651	0.623	104	99.7	56.0-143			4.40	20
Methyl tert-butyl ether	0.125	0.116	0.123	92.8	98.4	66.0-132			5.86	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3679012-1 07/09/21 19:34 • (LCSD) R3679012-2 07/09/21 19:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.127	0.130	102	104	59.0-130			2.33	20
n-Propylbenzene	0.125	0.125	0.121	100	96.8	74.0-126			3.25	20
Styrene	0.125	0.140	0.139	112	111	72.0-127			0.717	20
1,1,1,2-Tetrachloroethane	0.125	0.134	0.130	107	104	74.0-129			3.03	20
1,1,2,2-Tetrachloroethane	0.125	0.133	0.127	106	102	68.0-128			4.62	20
Tetrachloroethene	0.125	0.141	0.137	113	110	70.0-136			2.88	20
Toluene	0.125	0.134	0.131	107	105	75.0-121			2.26	20
1,1,2-Trichlorotrifluoroethane	0.125	0.115	0.115	92.0	92.0	61.0-139			0.000	20
1,2,3-Trichlorobenzene	0.125	0.123	0.135	98.4	108	59.0-139			9.30	20
1,2,4-Trichlorobenzene	0.125	0.135	0.143	108	114	62.0-137			5.76	20
1,1,1-Trichloroethane	0.125	0.112	0.113	89.6	90.4	69.0-126			0.889	20
1,1,2-Trichloroethane	0.125	0.139	0.138	111	110	78.0-123			0.722	20
Trichloroethene	0.125	0.129	0.124	103	99.2	76.0-126			3.95	20
Trichlorofluoromethane	0.125	0.103	0.104	82.4	83.2	61.0-142			0.966	20
1,2,3-Trichloropropane	0.125	0.125	0.119	100	95.2	67.0-129			4.92	20
1,2,3-Trimethylbenzene	0.125	0.122	0.121	97.6	96.8	74.0-124			0.823	20
1,2,4-Trimethylbenzene	0.125	0.125	0.123	100	98.4	70.0-126			1.61	20
1,3,5-Trimethylbenzene	0.125	0.125	0.122	100	97.6	73.0-127			2.43	20
Vinyl chloride	0.125	0.123	0.125	98.4	100	63.0-134			1.61	20
Xylenes, Total	0.375	0.370	0.408	98.7	109	72.0-127			9.77	20
(S) Toluene-d8				*106*	*106*	*75.0-131*				
(S) 4-Bromofluorobenzene				*103*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*86.6*	*85.8*	*70.0-130*				

Method Blank (MB)

(MB) R3679456-3 07/14/21 09:44

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		0.548	1.00
Acrylonitrile	U		0.0760	0.500
Benzene	U		0.0160	0.0400
Bromobenzene	U		0.0420	0.500
Bromodichloromethane	U		0.0315	0.100
Bromochloromethane	U		0.0452	0.200
Bromoform	U		0.239	1.00
Bromomethane	U		0.148	0.500
n-Butylbenzene	U		0.153	0.500
sec-Butylbenzene	U		0.101	0.500
tert-Butylbenzene	U		0.0620	0.200
Carbon disulfide	U		0.162	0.500
Carbon tetrachloride	U		0.0432	0.200
Chlorobenzene	U		0.0229	0.100
Chlorodibromomethane	U		0.0180	0.100
Chloroethane	U		0.0432	0.200
Chloroform	U		0.0166	0.100
Chloromethane	U		0.0556	0.500
2-Chlorotoluene	U		0.0368	0.100
4-Chlorotoluene	U		0.0452	0.200
1,2-Dibromo-3-Chloropropane	U		0.204	1.00
1,2-Dibromoethane	U		0.0210	0.100
Dibromomethane	U		0.0400	0.200
1,2-Dichlorobenzene	U		0.0580	0.200
1,3-Dichlorobenzene	U		0.0680	0.200
1,4-Dichlorobenzene	U		0.0788	0.200
trans-1,4-Dichloro-2-butene	U		0.0560	0.200
Dichlorodifluoromethane	U		0.0327	0.100
1,1-Dichloroethane	U		0.0230	0.100
1,2-Dichloroethane	U		0.0190	0.100
1,1-Dichloroethene	U		0.0200	0.100
cis-1,2-Dichloroethene	U		0.0276	0.100
trans-1,2-Dichloroethene	U		0.0572	0.200
1,2-Dichloropropane	U		0.0508	0.200
1,1-Dichloropropene	U		0.0280	0.100
1,3-Dichloropropane	U		0.0700	0.200
cis-1,3-Dichloropropene	U		0.0271	0.100
trans-1,3-Dichloropropene	U		0.0612	0.200
2,2-Dichloropropane	U		0.0317	0.100
Di-isopropyl ether	U		0.0140	0.0400

Method Blank (MB)

(MB) R3679456-3 07/14/21 09:44

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.0212	0.100
Hexachloro-1,3-butadiene	U		0.508	1.00
n-Hexane	U		0.0424	0.200
2-Hexanone	U		0.400	1.00
Iodomethane	U		0.242	0.500
Isopropylbenzene	U		0.0345	0.100
p-Isopropyltoluene	U		0.0932	0.200
2-Butanone (MEK)	U		0.500	1.00
Methylene Chloride	U		0.265	1.00
4-Methyl-2-pentanone (MIBK)	U		0.400	1.00
Methyl tert-butyl ether	U		0.0118	0.0400
Naphthalene	U		0.124	0.500
n-Propylbenzene	U		0.0472	0.200
Styrene	U		0.109	0.500
1,1,1,2-Tetrachloroethane	U		0.0200	0.100
1,1,2,2-Tetrachloroethane	U		0.0156	0.100
Tetrachloroethene	U		0.0280	0.100
Toluene	U		0.0500	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0270	0.100
1,2,3-Trichlorobenzene	0.0420	J	0.0250	0.500
1,2,4-Trichlorobenzene	U		0.193	0.500
1,1,1-Trichloroethane	U		0.0110	0.100
1,1,2-Trichloroethane	U		0.0353	0.100
Trichloroethene	U		0.0160	0.0400
Trichlorofluoromethane	U		0.0200	0.100
1,2,3-Trichloropropane	U		0.204	0.500
1,2,3-Trimethylbenzene	U		0.0460	0.200
1,2,4-Trimethylbenzene	U		0.0464	0.200
1,3,5-Trimethylbenzene	U		0.0432	0.200
Vinyl acetate	U		0.141	0.500
Vinyl chloride	U		0.0273	0.100
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*79.6*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3679456-1 07/14/21 08:46 • (LCSD) R3679456-2 07/14/21 09:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	15.7	12.3	62.8	49.2	10.0-160			24.3	31
Acrylonitrile	25.0	23.7	21.6	94.8	86.4	45.0-153			9.27	22
Benzene	5.00	4.83	4.82	96.6	96.4	70.0-123			0.207	20
Bromobenzene	5.00	4.81	4.95	96.2	99.0	73.0-121			2.87	20
Bromodichloromethane	5.00	4.66	4.77	93.2	95.4	73.0-121			2.33	20
Bromochloromethane	5.00	5.55	5.55	111	111	77.0-128			0.000	20
Bromoform	5.00	4.77	5.08	95.4	102	64.0-132			6.29	20
Bromomethane	5.00	4.13	4.17	82.6	83.4	56.0-147			0.964	20
n-Butylbenzene	5.00	4.68	4.49	93.6	89.8	68.0-135			4.14	20
sec-Butylbenzene	5.00	5.03	5.12	101	102	74.0-130			1.77	20
tert-Butylbenzene	5.00	4.80	4.88	96.0	97.6	75.0-127			1.65	20
Carbon disulfide	5.00	5.49	5.35	110	107	56.0-133			2.58	20
Carbon tetrachloride	5.00	4.91	4.88	98.2	97.6	66.0-128			0.613	20
Chlorobenzene	5.00	5.30	5.34	106	107	76.0-128			0.752	20
Chlorodibromomethane	5.00	5.08	5.35	102	107	74.0-127			5.18	20
Chloroethane	5.00	4.41	4.41	88.2	88.2	61.0-134			0.000	20
Chloroform	5.00	4.59	4.85	91.8	97.0	72.0-123			5.51	20
Chloromethane	5.00	3.81	3.64	76.2	72.8	51.0-138			4.56	20
2-Chlorotoluene	5.00	4.90	5.06	98.0	101	75.0-124			3.21	20
4-Chlorotoluene	5.00	4.56	4.58	91.2	91.6	75.0-124			0.438	20
1,2-Dibromo-3-Chloropropane	5.00	4.43	4.42	88.6	88.4	59.0-130			0.226	20
1,2-Dibromoethane	5.00	5.13	5.24	103	105	74.0-128			2.12	20
Dibromomethane	5.00	4.60	4.54	92.0	90.8	75.0-122			1.31	20
1,2-Dichlorobenzene	5.00	4.53	4.66	90.6	93.2	76.0-124			2.83	20
1,3-Dichlorobenzene	5.00	4.86	4.93	97.2	98.6	76.0-125			1.43	20
1,4-Dichlorobenzene	5.00	4.71	4.90	94.2	98.0	77.0-121			3.95	20
trans-1,4-Dichloro-2-butene	5.00	5.13	4.73	103	94.6	45.0-143			8.11	20
Dichlorodifluoromethane	5.00	3.29	3.12	65.8	62.4	43.0-156			5.30	20
1,1-Dichloroethane	5.00	4.70	4.72	94.0	94.4	70.0-127			0.425	20
1,2-Dichloroethane	5.00	4.22	4.34	84.4	86.8	65.0-131			2.80	20
1,1-Dichloroethene	5.00	4.96	4.83	99.2	96.6	65.0-131			2.66	20
cis-1,2-Dichloroethene	5.00	5.04	5.04	101	101	73.0-125			0.000	20
trans-1,2-Dichloroethene	5.00	5.05	5.00	101	100	71.0-125			0.995	20
1,2-Dichloropropane	5.00	5.11	5.13	102	103	74.0-125			0.391	20
1,1-Dichloropropene	5.00	4.94	4.75	98.8	95.0	73.0-125			3.92	20
1,3-Dichloropropane	5.00	4.83	4.95	96.6	99.0	80.0-125			2.45	20
cis-1,3-Dichloropropene	5.00	4.62	4.83	92.4	96.6	76.0-127			4.44	20
trans-1,3-Dichloropropene	5.00	4.80	4.99	96.0	99.8	73.0-127			3.88	20
2,2-Dichloropropane	5.00	4.75	4.96	95.0	99.2	59.0-135			4.33	20
Di-isopropyl ether	5.00	4.21	4.30	84.2	86.0	60.0-136			2.12	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3679456-1 07/14/21 08:46 • (LCSD) R3679456-2 07/14/21 09:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	5.11	5.27	102	105	74.0-126			3.08	20
Hexachloro-1,3-butadiene	5.00	4.52	4.27	90.4	85.4	57.0-150			5.69	20
n-Hexane	5.00	5.67	5.64	113	113	55.0-137			0.530	20
2-Hexanone	25.0	21.6	22.2	86.4	88.8	54.0-147			2.74	20
Iodomethane	25.0	22.5	23.1	90.0	92.4	74.0-134			2.63	20
Isopropylbenzene	5.00	5.37	5.56	107	111	72.0-127			3.48	20
p-Isopropyltoluene	5.00	5.07	5.09	101	102	72.0-133			0.394	20
2-Butanone (MEK)	25.0	22.8	21.5	91.2	86.0	30.0-160			5.87	24
Methylene Chloride	5.00	5.15	5.27	103	105	68.0-123			2.30	20
4-Methyl-2-pentanone (MIBK)	25.0	21.6	22.2	86.4	88.8	56.0-143			2.74	20
Methyl tert-butyl ether	5.00	4.28	4.15	85.6	83.0	66.0-132			3.08	20
Naphthalene	5.00	4.08	4.31	81.6	86.2	59.0-130			5.48	20
n-Propylbenzene	5.00	4.80	4.87	96.0	97.4	74.0-126			1.45	20
Styrene	5.00	5.05	5.23	101	105	72.0-127			3.50	20
1,1,1,2-Tetrachloroethane	5.00	5.03	5.21	101	104	74.0-129			3.52	20
1,1,2,2-Tetrachloroethane	5.00	4.70	4.85	94.0	97.0	68.0-128			3.14	20
Tetrachloroethene	5.00	5.62	5.91	112	118	70.0-136			5.03	20
Toluene	5.00	5.08	5.17	102	103	75.0-121			1.76	20
1,1,2-Trichlorotrifluoroethane	5.00	4.61	4.77	92.2	95.4	61.0-139			3.41	20
1,2,3-Trichlorobenzene	5.00	4.37	4.48	87.4	89.6	59.0-139			2.49	20
1,2,4-Trichlorobenzene	5.00	4.60	4.70	92.0	94.0	62.0-137			2.15	20
1,1,1-Trichloroethane	5.00	4.75	4.77	95.0	95.4	69.0-126			0.420	20
1,1,2-Trichloroethane	5.00	5.25	5.36	105	107	78.0-123			2.07	20
Trichloroethene	5.00	5.19	5.21	104	104	76.0-126			0.385	20
Trichlorofluoromethane	5.00	3.79	3.86	75.8	77.2	61.0-142			1.83	20
1,2,3-Trichloropropane	5.00	4.38	4.46	87.6	89.2	67.0-129			1.81	20
1,2,3-Trimethylbenzene	5.00	5.86	5.98	117	120	74.0-124			2.03	20
1,2,4-Trimethylbenzene	5.00	4.75	4.80	95.0	96.0	70.0-126			1.05	20
1,3,5-Trimethylbenzene	5.00	4.67	4.89	93.4	97.8	73.0-127			4.60	20
Vinyl acetate	25.0	26.6	26.4	106	106	43.0-159			0.755	20
Vinyl chloride	5.00	4.83	4.88	96.6	97.6	63.0-134			1.03	20
Xylenes, Total	15.0	15.7	15.2	105	101	72.0-127			3.24	20
(S) Toluene-d8				*107*	*109*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*81.5*	*80.7*	*70.0-130*				

Method Blank (MB)

(MB) R3680398-3 07/14/21 20:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0160	0.0400
n-Butylbenzene	U		0.153	0.500
sec-Butylbenzene	U		0.101	0.500
Ethylbenzene	U		0.0212	0.100
n-Hexane	U		0.0424	0.200
Isopropylbenzene	U		0.0345	0.100
Naphthalene	U		0.124	0.500
n-Propylbenzene	U		0.0472	0.200
1,2,3-Trimethylbenzene	U		0.0460	0.200
1,2,4-Trimethylbenzene	U		0.0464	0.200
Xylenes, Total	U		0.191	0.260
(S) Toluene-d8	*108*			*75.0-131*
(S) 4-Bromofluorobenzene	*102*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*74.2*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3680398-1 07/14/21 19:19 • (LCSD) R3680398-2 07/14/21 19:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.53	4.09	90.6	81.8	70.0-123			10.2	20
n-Butylbenzene	5.00	4.33	4.18	86.6	83.6	68.0-135			3.53	20
sec-Butylbenzene	5.00	4.84	4.53	96.8	90.6	74.0-130			6.62	20
Ethylbenzene	5.00	5.19	4.63	104	92.6	74.0-126			11.4	20
n-Hexane	5.00	5.08	4.71	102	94.2	55.0-137			7.56	20
Isopropylbenzene	5.00	5.19	4.82	104	96.4	72.0-127			7.39	20
Naphthalene	5.00	4.02	4.34	80.4	86.8	59.0-130			7.66	20
n-Propylbenzene	5.00	4.59	4.22	91.8	84.4	74.0-126			8.40	20
1,2,3-Trimethylbenzene	5.00	5.81	5.44	116	109	74.0-124			6.58	20
1,2,4-Trimethylbenzene	5.00	4.57	4.29	91.4	85.8	70.0-126			6.32	20
Xylenes, Total	15.0	14.4	14.2	96.0	94.7	72.0-127			1.40	20
(S) Toluene-d8				*107*	*107*	*75.0-131*				
(S) 4-Bromofluorobenzene				*101*	*102*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*79.6*	*80.7*	*70.0-130*				

Method Blank (MB)

(MB) R3677427-1 07/09/21 04:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*59.0*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3677427-2 07/09/21 04:41 • (LCSD) R3677427-3 07/09/21 05:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	804	1190	53.6	79.3	50.0-150		J3	38.7	20
(S) o-Terphenyl				*63.5*	*83.0*	*31.0-160*				

Method Blank (MB)

(MB) R3678032-1 07/10/21 12:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*90.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3678032-2 07/10/21 12:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	39.3	78.6	50.0-150	
(S) o-Terphenyl			*77.3*	*18.0-148*	

L1374304-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374304-13 07/10/21 15:47 • (MS) R3678032-3 07/10/21 16:01 • (MSD) R3678032-4 07/10/21 16:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	58.8	U	36.6	46.4	59.4	75.6	1	50.0-150		J3	23.6	20
(S) o-Terphenyl					*54.2*	*66.0*		*18.0-148*				

Method Blank (MB)

(MB) R3677516-1 07/08/21 17:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.0118	0.0340
PCB 1221	U		0.0118	0.0340
PCB 1232	U		0.0118	0.0340
PCB 1242	U		0.0118	0.0340
PCB 1248	U		0.00738	0.0170
PCB 1254	U		0.00738	0.0170
PCB 1260	U		0.00738	0.0170
(S) Decachlorobiphenyl	*96.5*			*10.0-135*
(S) Tetrachloro-m-xylene	*89.5*			*10.0-139*

Laboratory Control Sample (LCS)

(LCS) R3677516-2 07/08/21 17:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	0.167	0.147	88.0	37.0-145	
PCB 1016	0.167	0.154	92.2	36.0-141	
(S) Decachlorobiphenyl			*101*	*10.0-135*	
(S) Tetrachloro-m-xylene			*97.0*	*10.0-139*	

L1374183-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1374183-01 07/08/21 18:13 • (MS) R3677516-3 07/08/21 18:22 • (MSD) R3677516-4 07/08/21 18:31

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.163	U	0.152	0.126	74.8	63.9	1	10.0-160			18.8	38
PCB 1016	0.163	U	0.166	0.138	81.6	70.3	1	10.0-160			18.0	37
(S) Decachlorobiphenyl					*91.7*	*74.2*		*10.0-135*				
(S) Tetrachloro-m-xylene					*92.3*	*74.7*		*10.0-139*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Succeed Environmental Consulting
5217 NE 35th Ave.
Portland, OR 97211

Billing Information:
Andrew Blake
5217 NE 35th Ave.
Portland, OR 97211

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Report to: Andrew Blake

Email To: ablake@succeed-env.com

Project Description: —

City/State Collected: Port Angeles, WA

Please Circle: PT MT CT ET

Phone: 971-371-0404

Client Project #: CP-26

Lab Project #: SUCENVPOR-BLAKE

SDG # L1379304

H134

Collected by (print): Andrew Blake

Site/Facility ID #: —

P.O. #: —

Acctnum: SUCENVPOR

Template: T190531

Prelogin: P858394

PM: 110 - Brian Ford

PB:

Shipped Via:

Collected by (signature): [signature]

Immediately Packed on Ice N___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #: —

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX w/ silica 100ml Amb-HCl	NWTPHGX 40mlAmb HCl ~~BTEX~~	PAHs 8270ESIM 40mlAmb-NoPres-WT	PCBs 8082 100ml Amb-NoPres	Total RCRA8 Metals 250mlHDPE-HNO3	VOCs 8260D 40mlAmb-HCl	BTEX (Added to 6x)	Total Lead			Remarks	Sample # (lab only)
MW-5	—	GW	—	6/30/21	16:30	13	X	X				X		X				-01
KMW-7	—	GW	—	"	17:30	13	X	X				X		X				-02
KMW-15	—	GW	—	"	18:30	13	X	X				X		X				-03
BBA 510	—	GW	—	"	19:30	13	X	X				X		X				-04
HA-1 (4.0-5.0)	—	SS	—	7/1/21	8:30	3	X	X										-05
HA-2 (3.0-4.0)	—	SS	—	7/1/21	10:30	3	X	X		X	X	X						-06
HA-3 (8.0-9.0)	—	SS	—	7/1/21	11:15	3	X	X				X		X				-07
HA-4 (6.0-7.0)	—	SS	—	7/1/21	11:45	3	X	X						X				-08
HA-5 (8.0-9.0)	—	SS	—	7/1/21	12:55	3	X	X										-09
HA-6 (2.0-3.0)	—	SS	—	7/1/21	13:20	3	X	X		X	X	X						-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other___

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx X Courier ______

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: ✓NP __Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by: (Signature) [signature]	Date: 7/2/21	Time: FED EX	Received by: (Signature)	Trip Blank Received: Yes / No (HCL / MeoH, TBR)	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: ~~A201~~ 2 °C 1.4+1=2.2	Bottles Received: 70
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 7/3/21	Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
Succeed Environmental Consulting

5217 NE 35th Ave.
Portland, OR 97211

Billing Information:
Andrew Blake
5217 NE 35th Ave.
Portland, OR 97211

Pres Chk

Report to:
Andrew Blake

Email To: **ablake@succeed-env.com**

Project Description: —

City/State Collected: Port Angeles, WA

Please Circle: PT MT CT ET

Phone: **971-371-0404**

Client Project # CP-26

Lab Project # **SUCENVPOR-BLAKE**

Collected by (print): Andrew Blake

Site/Facility ID # —

P.O. # —

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # —

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
HA-7 (1.0-2.0)	—	SS	—	7/1/21	13:40	3	X	X		X	X	X		-11
HA-8 (3.0-4.0)	—	SS	—	7/1/21	13:50	3	X	X		X	X	X		-12
HA-9 (2.0-3.0)	—	SS	—	7/1/21	14:10	3	X	X		X	X	X		-13
		SS												
		SS												
		SS												
		SS												
		SS												
		SS												
		SS												

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

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SDG # 1374304

Table #

Acctnum: **SUCENVPOR**

Template: **T190530**

Prelogin: **P858391**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	7/2/21	FED EX			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.1+.1=1.2 °C Bottles Received: 79	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/3/21 Time: 8:45	Hold: Condition: NCF / OK

ANALYTICAL REPORT

July 12, 2021

Succeed Environmental Consulting

Sample Delivery Group:	L1374612
Samples Received:	07/06/2021
Project Number:	CP-26-02
Description:	

Report To: Andrew Blake
5217 NE 35th Ave.
Portland, OR 97211

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

TABLE OF CONTENTS

SAMPLE SUMMARY

SV-1 L1374612-01 Air

Collected by: Andrew Blake
Collected date/time: 06/30/21 17:00
Received date/time: 07/06/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1701210	1	07/07/21 16:52	07/07/21 16:52	FKG	Mt. Juliet, TN

SV-2 L1374612-02 Air

Collected by: Andrew Blake
Collected date/time: 07/01/21 10:00
Received date/time: 07/06/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1701210	1	07/07/21 17:35	07/07/21 17:35	FKG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	67.8	161		1	WG1701210
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1701210
Benzene	71-43-2	78.10	0.200	0.639	7.99	25.5		1	WG1701210
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1701210
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1701210
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1701210
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1701210
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1701210
Carbon disulfide	75-15-0	76.10	0.200	0.622	1.64	5.10		1	WG1701210
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1701210
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1701210
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1701210
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1701210
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1701210
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1701210
Cyclohexane	110-82-7	84.20	0.200	0.689	3.63	12.5		1	WG1701210
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1701210
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1701210
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1701210
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1701210
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1701210
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1701210
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1701210
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1701210
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1701210
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1701210
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1701210
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1701210
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1701210
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1701210
Ethanol	64-17-5	46.10	1.25	2.36	15.0	28.3		1	WG1701210
Ethylbenzene	100-41-4	106	0.200	0.867	0.413	1.79		1	WG1701210
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1701210
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.245	1.38		1	WG1701210
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.467	2.31		1	WG1701210
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1701210
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1701210
Heptane	142-82-5	100	0.200	0.818	0.822	3.36		1	WG1701210
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1701210
n-Hexane	110-54-3	86.20	0.630	2.22	0.991	3.49		1	WG1701210
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1701210
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1701210
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1701210
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	5.51	16.2		1	WG1701210
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1701210
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1701210
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1701210
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1701210
2-Propanol	67-63-0	60.10	1.25	3.07	58.6	144		1	WG1701210
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1701210
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1701210
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1701210
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.238	1.62		1	WG1701210
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1701210
Toluene	108-88-3	92.10	0.500	1.88	4.00	15.1		1	WG1701210
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1701210

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1701210
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1701210
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1701210
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.223	1.09		1	WG1701210
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1701210
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1701210
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1701210
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1701210
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1701210
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1701210
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1701210
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1701210
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*91.4*				WG1701210

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	3.17	7.53		1	WG1701210
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1701210
Benzene	71-43-2	78.10	0.200	0.639	2.36	7.54		1	WG1701210
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1701210
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1701210
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1701210
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1701210
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1701210
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1701210
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1701210
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1701210
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1701210
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1701210
Chloromethane	74-87-3	50.50	0.200	0.413	0.411	0.849		1	WG1701210
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1701210
Cyclohexane	110-82-7	84.20	0.200	0.689	0.902	3.11		1	WG1701210
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1701210
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1701210
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1701210
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1701210
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1701210
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1701210
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1701210
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1701210
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	2.36	9.35		1	WG1701210
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1701210
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1701210
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1701210
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1701210
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1701210
Ethanol	64-17-5	46.10	1.25	2.36	ND	ND		1	WG1701210
Ethylbenzene	100-41-4	106	0.200	0.867	0.338	1.47		1	WG1701210
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.231	1.13		1	WG1701210
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.222	1.25		1	WG1701210
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.466	2.30		1	WG1701210
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1701210
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1701210
Heptane	142-82-5	100	0.200	0.818	0.859	3.51		1	WG1701210
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1701210
n-Hexane	110-54-3	86.20	0.630	2.22	0.757	2.67		1	WG1701210
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1701210
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1701210
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1701210
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1701210
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1701210
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1701210
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1701210
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1701210
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1701210
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1701210
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1701210
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1701210
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1701210
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1701210
Toluene	108-88-3	92.10	0.500	1.88	3.96	14.9		1	WG1701210
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1701210

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1701210
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1701210
Trichloroethylene	79-01-6	131	0.200	1.07	1.53	8.20		1	WG1701210
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.265	1.30		1	WG1701210
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1701210
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1701210
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1701210
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1701210
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1701210
m&p-Xylene	1330-20-7	106	0.400	1.73	1.10	4.77		1	WG1701210
o-Xylene	95-47-6	106	0.200	0.867	0.349	1.51		1	WG1701210
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1701210
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.0*				WG1701210

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3676616-3 07/07/21 08:51

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630
Isopropylbenzene	U		0.0777	0.200

Method Blank (MB)

(MB) R3676616-3 07/07/21 08:51

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
Ethanol	U		0.265	1.25
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*90.9*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676616-1 07/07/21 07:32 • (LCSD) R3676616-2 07/07/21 08:12

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	4.14	4.12	110	110	55.0-148			0.484	25
Propene	3.75	4.27	4.31	114	115	64.0-144			0.932	25
Dichlorodifluoromethane	3.75	3.72	3.73	99.2	99.5	64.0-139			0.268	25
1,2-Dichlorotetrafluoroethane	3.75	3.93	3.93	105	105	70.0-130			0.000	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676616-1 07/07/21 07:32 • (LCSD) R3676616-2 07/07/21 08:12

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chloromethane	3.75	4.22	4.23	113	113	70.0-130			0.237	25
Vinyl chloride	3.75	3.94	3.98	105	106	70.0-130			1.01	25
1,3-Butadiene	3.75	3.59	3.57	95.7	95.2	70.0-130			0.559	25
Bromomethane	3.75	4.09	4.11	109	110	70.0-130			0.488	25
Chloroethane	3.75	3.84	3.88	102	103	70.0-130			1.04	25
Trichlorofluoromethane	3.75	3.72	3.73	99.2	99.5	70.0-130			0.268	25
1,1,2-Trichlorotrifluoroethane	3.75	4.01	4.01	107	107	70.0-130			0.000	25
1,1-Dichloroethene	3.75	3.94	3.90	105	104	70.0-130			1.02	25
1,1-Dichloroethane	3.75	4.02	4.03	107	107	70.0-130			0.248	25
Acetone	3.75	4.02	4.04	107	108	70.0-130			0.496	25
2-Propanol	3.75	4.33	4.33	115	115	70.0-139			0.000	25
Carbon disulfide	3.75	4.18	4.18	111	111	70.0-130			0.000	25
Methylene Chloride	3.75	4.10	4.11	109	110	70.0-130			0.244	25
MTBE	3.75	3.90	3.90	104	104	70.0-130			0.000	25
trans-1,2-Dichloroethene	3.75	4.04	4.03	108	107	70.0-130			0.248	25
n-Hexane	3.75	4.15	4.16	111	111	70.0-130			0.241	25
Vinyl acetate	3.75	3.90	3.83	104	102	70.0-130			1.81	25
Methyl Ethyl Ketone	3.75	4.11	4.03	110	107	70.0-130			1.97	25
cis-1,2-Dichloroethene	3.75	3.95	3.96	105	106	70.0-130			0.253	25
Chloroform	3.75	3.84	3.82	102	102	70.0-130			0.522	25
Cyclohexane	3.75	4.03	4.02	107	107	70.0-130			0.248	25
1,1,1-Trichloroethane	3.75	3.69	3.69	98.4	98.4	70.0-130			0.000	25
Carbon tetrachloride	3.75	3.71	3.71	98.9	98.9	70.0-130			0.000	25
Benzene	3.75	4.12	4.18	110	111	70.0-130			1.45	25
1,2-Dichloroethane	3.75	3.59	3.63	95.7	96.8	70.0-130			1.11	25
Heptane	3.75	4.38	4.42	117	118	70.0-130			0.909	25
Trichloroethylene	3.75	4.08	4.11	109	110	70.0-130			0.733	25
1,2-Dichloropropane	3.75	4.25	4.28	113	114	70.0-130			0.703	25
1,4-Dioxane	3.75	3.92	4.03	105	107	70.0-140			2.77	25
Bromodichloromethane	3.75	3.88	3.92	103	105	70.0-130			1.03	25
cis-1,3-Dichloropropene	3.75	3.99	4.04	106	108	70.0-130			1.25	25
4-Methyl-2-pentanone (MIBK)	3.75	4.17	4.23	111	113	70.0-139			1.43	25
Toluene	3.75	4.08	4.10	109	109	70.0-130			0.489	25
trans-1,3-Dichloropropene	3.75	3.87	3.90	103	104	70.0-130			0.772	25
1,1,2-Trichloroethane	3.75	4.16	4.15	111	111	70.0-130			0.241	25
Tetrachloroethylene	3.75	4.43	4.47	118	119	70.0-130			0.899	25
Methyl Butyl Ketone	3.75	3.97	3.99	106	106	70.0-149			0.503	25
Dibromochloromethane	3.75	4.11	4.13	110	110	70.0-130			0.485	25
1,2-Dibromoethane	3.75	4.15	4.19	111	112	70.0-130			0.959	25
Chlorobenzene	3.75	4.21	4.28	112	114	70.0-130			1.65	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3676616-1 07/07/21 07:32 • (LCSD) R3676616-2 07/07/21 08:12

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	3.75	4.05	4.08	108	109	70.0-130			0.738	25
m&p-Xylene	7.50	7.89	7.99	105	107	70.0-130			1.26	25
o-Xylene	3.75	3.95	3.97	105	106	70.0-130			0.505	25
Styrene	3.75	4.16	4.21	111	112	70.0-130			1.19	25
Bromoform	3.75	4.25	4.32	113	115	70.0-130			1.63	25
1,1,2,2-Tetrachloroethane	3.75	4.12	4.10	110	109	70.0-130			0.487	25
4-Ethyltoluene	3.75	4.05	4.10	108	109	70.0-130			1.23	25
1,3,5-Trimethylbenzene	3.75	4.07	4.12	109	110	70.0-130			1.22	25
1,2,4-Trimethylbenzene	3.75	4.01	4.05	107	108	70.0-130			0.993	25
1,3-Dichlorobenzene	3.75	4.23	4.27	113	114	70.0-130			0.941	25
1,4-Dichlorobenzene	3.75	4.27	4.30	114	115	70.0-130			0.700	25
Benzyl Chloride	3.75	3.61	3.66	96.3	97.6	70.0-152			1.38	25
1,2-Dichlorobenzene	3.75	4.25	4.27	113	114	70.0-130			0.469	25
1,2,4-Trichlorobenzene	3.75	4.22	4.24	113	113	70.0-160			0.473	25
Hexachloro-1,3-butadiene	3.75	4.45	4.51	119	120	70.0-151			1.34	25
Naphthalene	3.75	4.06	4.11	108	110	70.0-159			1.22	25
TPH (GC/MS) Low Fraction	203	227	230	112	113	70.0-130			1.31	25
Allyl Chloride	3.75	4.18	4.32	111	115	70.0-130			3.29	25
2-Chlorotoluene	3.75	3.98	4.04	106	108	70.0-130			1.50	25
Methyl Methacrylate	3.75	4.08	4.21	109	112	70.0-130			3.14	25
Tetrahydrofuran	3.75	4.18	4.22	111	113	70.0-137			0.952	25
2,2,4-Trimethylpentane	3.75	4.15	4.17	111	111	70.0-130			0.481	25
Vinyl Bromide	3.75	4.18	4.19	111	112	70.0-130			0.239	25
Isopropylbenzene	3.75	4.05	4.10	108	109	70.0-130			1.23	25
(S) 1,4-Bromofluorobenzene				*90.9*	*90.8*	*60.0-140*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier | Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Succeed Environmental Consulting

5217 NE 35th Ave.
Portland, OR 97211

Billing Information:
Andrew Blake
5217 NE 35th Ave.
Portland, OR 97211

Pres Chk

Report to:
Andrew Blake

Email To: **ablake@succeed-env.com**

Project Description: —

City/State Collected: Port Angeles, WA

Please Circle: PT MT CT ET

Phone: **971-371-0404**

Client Project # CP-26-02

Lab Project # **SUCENVPOR-BLAKE**

Collected by (print): Andrew Blake

Site/Facility ID # —

P.O. # —

Collected by (signature):

Quote # —

Immediately Packed on Ice N ☒ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ☒ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

VOCs TO-15 Summa

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs TO-15 Summa	Remarks	Sample # (lab only)
SV-1	—	Air	—	6/30/21	17:00	1	X		-01
SV-2	—	Air	—	7/1/21	10:00	1	X		-02
		Air							

Chain of Custody Page 1 of 1

Pace Analytical®

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # U374612

Table F068

Acctnum: **SUCENVPOR**
Template: **T190301**
Prelogin: **P856920**
PM: **110 - Brian Ford**
PB: CSL 06/24/21
Shipped Via: **FedEX 2nd Day**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ☒ FedEx __ Courier _____

Tracking # 9362 4953 3225

Sample Receipt Checklist
COC Seal Present/Intact: NP __ Y __ N
COC Signed/Accurate: ☒ Y __ N
Bottles arrive intact: ☒ Y __ N
Correct bottles used: ☒ Y __ N
Sufficient volume sent: ☒ Y __ N
If Applicable
VOA Zero Headspace: __ Y __ N
Preservation Correct/Checked: __ Y __ N
RAD Screen <0.5 mR/hr: ☒ Y __ N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
	7/2/21	FED EX		0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: Amb °C Bottles Received: 2	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/6/21 Time: 10:00	Hold: / Condition: NCF / OK

COMMON ACRONYMS AND ABBREVIATIONS

ACM	asbestos-containing material
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BGS	below ground surface
BS/BSD	blank spike/blank spike duplicate
BTEX	benzene, toluene, ethylbenzene, xylenes
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CFSL	Clean Fill Screening Level
CUL	Cleanup Level
DEQ	Oregon Department of Environmental Quality
Ecology	Washington Department of Ecology
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GC/MS	gas chromatography/mass spectrometer
HBMS	hazardous building materials survey
HOT	Heating Oil Tank
HVOC	halogenated volatile organic compound
I.D.	identification
IDW	investigation-derived waste
kg	kilogram
LBP	lead-based paint
LUST	Leaking Underground Storage Tank
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MS	matrix spike
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statute
PAHs	polynuclear aromatic hydrocarbons
PCB	polychlorinated biphenyl
PID	photoionization detector
ppm	parts per million
RBC	DEQ Risk-Based Concentrations
RCRA	Resource Conservation and Recovery Act
RDL	reported detection limit
ROW	right-of-way
SEC	Succeed Environmental Consulting LLC
USGS	U.S. Geological Survey
UST	underground storage tank
VCP	Voluntary Cleanup Program
VOCs	volatile organic compounds