COMPLIANCE MONITORING REPORT

FOR

U.S. POSTAL SERVICE
GENERAL MAIL FACILITY
2445 THIRD AVENUE SOUTH
SEATTLE, WASHINGTON

Prepared For:

Mr. Sydney C. Randell, CHMM
District Environmental Coordinator
Seattle District
United States Postal Service
PO Box 90308
Seattle, WA 98109-8871

Prepared By:

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April 2001

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1.0 INTRODUCTION

The purpose of this report is to summarize the results of the second compliance monitoring investigation for the U.S. Postal Service (USPS) General Mail Facility (GMF) in Seattle, Washington. The south Seattle GMF property is located at 2445 Third Avenue South near the intersection of South Lander Street in Seattle, WA. Columbia Environmental Sciences, Inc. (CESI) conducted the investigation under contract to the Seattle District of the U.S. Postal Service.

Compliance monitoring of five (5) groundwater monitoring wells is a required part of a No Further Action (NFA) and Restrictive Covenant issued for the GMF property (the site) by the Washington State Department of Ecology (WDOE). The site had been previously investigated as an independent remedial action under Washington's Model Toxics Control Act (MTCA) (ICF Kaiser, 1997, 1998, 1999 and Dames & Moore, 1998). WDOE made the determination that, at the time the NFA letter was issued (April 5, 1999), releases of petroleum hydrocarbons and carcinogenic polynuclear aromatic hydrocarbons (cPAHs) did not pose a threat to human health or the environment.

A condition of the NFA letter was that groundwater from wells near the Vehicle Maintenance Facility (VMF) be sampled and analyzed annually during the wet season using EPA Method 8270 until cPAH concentrations in selected monitoring wells fall below MTCA Method B cleanup levels for four consecutive sampling events. This report summarizes the activities and analytical results for the second sampling event that took place on February 1, 2001. The results of the first sampling event (12/17/1999) were summarized in an earlier report (CESI, 2000).

1.1 Summary

CESI gained access to the site from the The Seattle Public Schools District on February 1, 2001. The five (5) wells to be sampled included the same set of monitoring wells (MW-7, MW-8, MW-9, MW-3, and MW-6A) that were previously sampled in the first compliance monitoring event in 1999 (CESI, 2000). The wells were in good condition prior to the sampling event; all wells were found locked and in good condition. The weather at the time of the groundwater sampling was partly cloudy and the area around the wells was dry.

Water level measurements were recorded prior to purging each well. A minimum of three column volumes was purged using a bailer and the purge water was contained on the site for later disposal. Water was collected in 1-L amber bottles and the samples were delivered to the analytical laboratory (Friedman & Bruya, Inc.) under chain-of-custody procedures on the same day. Each water sample was analyzed for semi-volatile organic compounds including cPAHs using EPA Method 8270C.

cPAHs were present in three of five well samples above the detection limit and cPAHs were also detected in two of the wells. Well MW-3 continues to have the highest levels of cPAHs in groundwater. The cPAHs are the only organic constituents exceeding the MTCA Method B Cleanup Levels for groundwater or surface water.

The levels of PAHs found in groundwater have not significantly declined over the past year. The levels of PAHs in groundwater may remain elevated at the GMF facility for a long period of time because of the recalcitrant nature of these compounds. Based on the results from both sampling events, the goal of the compliance monitoring program (decline of the cPAHs to below cleanup levels for 4 consecutive sampling events) may not be attainable and should be re-evaluated.

2.0 GROUNDWATER SAMPLING

The site is the General Mail Facility (GMF) for the U.S. Postal Service located at 2445 Third Avenue South, Seattle, King County, Washington. The five (5) wells to be sampled included the same set of monitoring wells (MW-7, MW-8, MW-9, MW-3, and MW-6A) that were previously sampled in the first compliance monitoring event in 1999 (CESI, 2000). Figure 1 shows the locations of each of the monitoring wells. This section of the report summarizes the field observations and procedures used in the field.

3.1 Field Observations

All work on the second compliance monitoring sampling took place on February 1, 2001. CESI staff arrived on site at 11:30 am and the gate on 3rd Avenue South was found open allowing access to the site. A representative of the Seattle Public Schools district was present on the property and permission was granted to complete the compliance sampling. The temperature was about 45°F and was partly cloudy.

Each monitoring well was first located using the site map shown in Figure 1 and the condition of each well was noted. The wells were in good condition prior to the sampling event; all wells were found locked and in good condition. The well that was missing a well cover (MW-8) was still secure from CESIs last visit when a metal sign and cement block was placed on top of the locked well. With the exception of well MW-6A, all wells had standing surface water to the top of the monuments and flush with the asphalt pavement. The well monuments were bailed dry to below the top of the casing using a beaker until the well locks were exposed.

3.2 Field Procedures

The depth to water was first measured in each well using a Keck Model 800 electronic water level meter. A well volume equivalent to a purge volume was calculated from the difference of the current depth to water and the bottom hole depths measured in the December, 1999 sampling event (CESI, 2000). A minimum of three column volumes was purged using a bailer and the purge water was contained on the site in a DOT-approved drum for later disposal. Unfiltered water samples were collected in 1-L amber bottles supplied by the analytical laboratory and stored in a cooler at 4°C. The samples were delivered to the analytical laboratory (Friedman & Bruya, Inc.) under chain-of-custody procedures on the same day.

Each water sample was analyzed for semi-volatile organic compounds including the cPAHs using EPA Method 8270C. The practical quantitation limit for cPAHs using Method 8270C is 1 µg/L. In the December, 1999 sampling event we used the more sophisticated Method 8270 SIM (Selected Ion Mode) with a practical quantitation limit of 0.1 µg/L. Based on the results of the first sampling event, we found that Method 8270 SIM was not cost effective for this site. First, we found that 8270 SIM could not attain detection limits near the MTCA Method B Cleanup Levels (0.012 µg/L for cPAHs) in groundwaters at the site. Second, when groundwaters at the site do contain PAHs, they are typically present at concentrations well above 1 µg/L. Therefore using Method 8270C is a practical alternative for compliance monitoring at the GMF.

US Postal Service
General Mail Fac

O'Brien, Maura

SIT 5, 10

From: Jonathan Cannon [jonathanc@pharoscorp.com]
Sent: Thursday, March 04, 2004 10:11 AM
To: 'masaobrien@yahoo.com'
Cc: Wang, Ching-Pi; Wood, Neil J.; Andy Roderick
Subject: 230 S. Lander Street/Property Transaction


Restrictive_Covenant.pdf (380 ...


NFA_Letter.pdf (261 KB)

Ms. Maura O'Brien,

My name is Jonathan Cannon with PHAROS Corporation. I am an agent involved in the transaction to re-convey a small portion of that property previously owned by the United States Postal Service located at 230 South Lander Street in Seattle, Washington. It is currently owned by the Seattle School District. The Burlington Northern and Santa Fe Railway Company has negotiated to purchase a portion of this property (approximately 431 square feet) from the School District in order to widen their rail corridor. I am writing to you because there is a Restrictive Covenant still present on the title of the Seattle School District. This Restrictive Covenant requires 30 day notice to the Department of Ecology and acknowledgement of said notice.

* Whom do we notify with the required 30 day notice of intent to convey a portion of this property? Is it possible to get a letter of acknowledgement when we have provided the required notification (item 4)?
* Who can sign off on the appropriate documentation allowing the title company to remove this restrictive covenant (item 8)?

I have spoken at length with Jerome Cruz, Neil Wood, and Ching-Pi Wang regarding this issue. Ching-Pi has informed me that you are the only person authorized to grant such acknowledgement. Please find attached a copy, in its entirety, of the Restrictive Covenant document discussed above. Sections 4 and 5 are the only items in question. My sincere thanks for your attention to this matter. (Especially while out of the country). Jonathan Cannon Pharos Corporation Negotiations & Acquisitions 123 Second Ave South

<<Restrictive_Covenant.pdf>> <<NFA_Letter.pdf>>

Edmonds, Wa. 98020
(425) 921-1019, (206) 755-8208

Attachment A

LEGAL DESCRIPTION

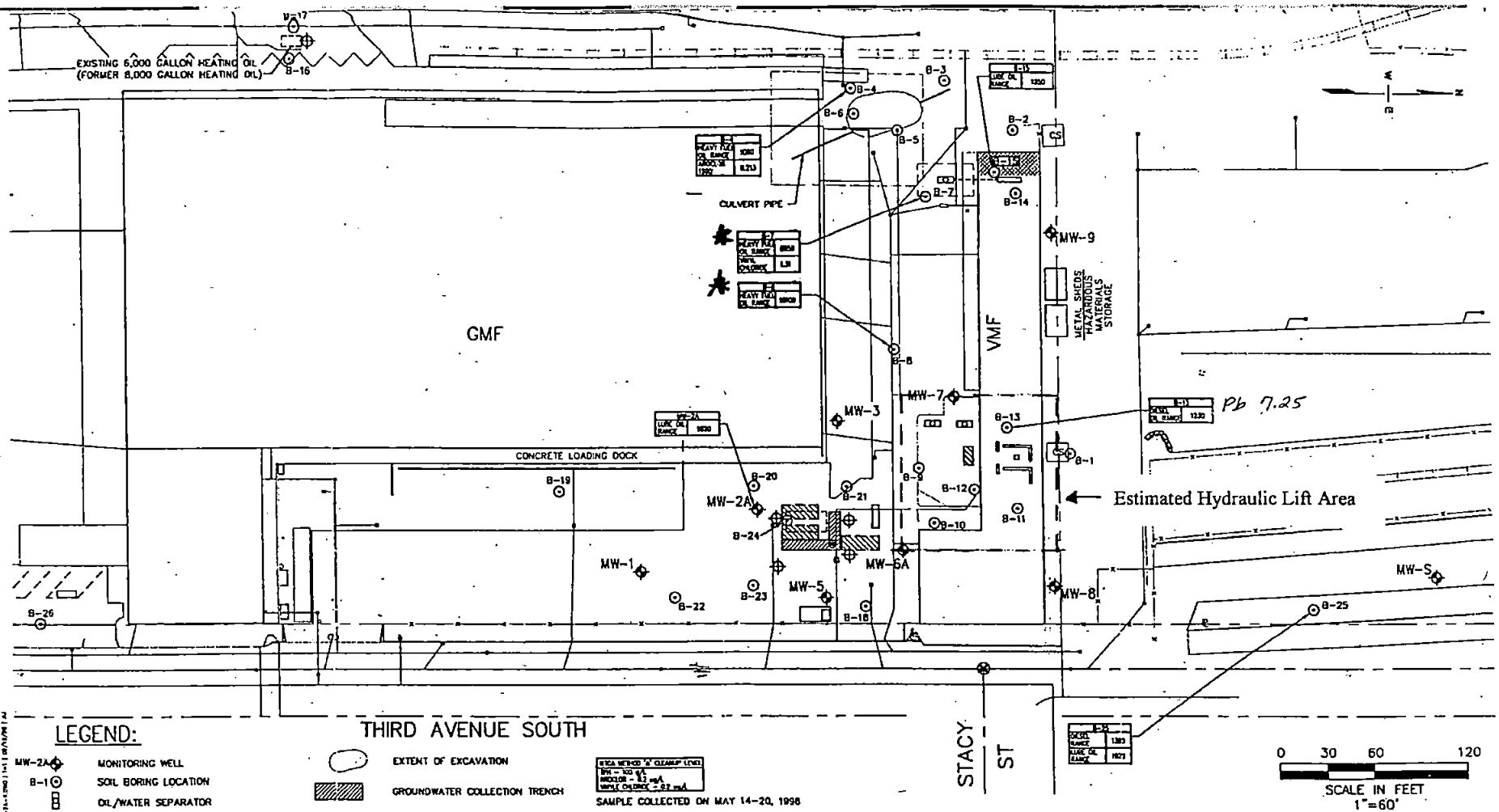
United States Postal Service, Former General Mail Facility,
2445 Third Avenue South Seattle, King County, Washington
also listed as 230 South Lander Street, Seattle, King County, Washington
Parcel # 766620-5235
Tax E# 0696876

(please attach)

Attachment B

SITE MAP

United States Postal Service, Former General Mail Facility,
2445 Third Avenue South Seattle, King County, Washington
also listed as 230 South Lander Street, Seattle, King County, Washington
from Dames & Moore 1998 figure 5.



LEGEND:

- MW-2A — MONITORING WELL
- B-1 — SOIL BORING LOCATION
- OIL/WATER SEPARATOR
- CATCH BASIN
- STORM DRAIN MANHOLE
- HOIST
- EXTENT OF EXCAVATION
- GROUNDWATER COLLECTION TRENCH
- FORMER UST
- GROUNDWATER CONCENTRATION IN ug/L

MTCA METHOD "A" CLEANUP LEVELS
TPH = 100 ug/L
BENZENE = 5.1 ug/L
VINYL CHLORIDE = 0.2 ug/L

SAMPLE COLLECTED ON MAY 14-20, 1998

DAMES & MOORE
A DAMES & MOORE GROUP COMPANY

Job No. 39529-001-193

FIGURE 5

GROUNDWATER CONTAMINANTS EXCEEDING
MTCA CLEANUP LEVELS
USPS GMF/VMF Property - Seattle, Washington
Lowe Enterprises Northwest, Inc.

RESTRICTIVE COVENANT

US Postal Service General Mail Facility
2445 Third Avenue South, Seattle, Washington

This declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030 (1)(f) and WAC 173-340-440 by Mr. David Eales, Manager, Asset Management and senior officer with signature authority, United States Postal Service – Facilities, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Restrictive Covenant. The Remedial Action conducted at the property is described in the following documents:

1. ICF Kaiser, 1999, Washington State Model Toxics Control Act, Method C Calculations for the General Mail Facility, Seattle, Washington, 6 pp., letter report dated January 21, 1999.
2. ICF Kaiser, 1998, Supplemental Soil and Groundwater Sampling at General Mail Facility, Seattle, Washington, 10 pp., October 5, 1998.
3. Dames & Moore, 1998, Report – Soil and Groundwater Investigation at USPS General Mail Facility, Seattle, Washington, 16 pp., July 27, 1998.
4. ICF Kaiser, 1997, Phase 1 Environmental Site Assessment at General Mail Facility, Seattle, Washington, 47 pp., October 15, 1997.

These documents and Ecology's No Further Action Letter are on file at Ecology's Northwest Regional Office in Bellevue, Washington.

This Restrictive Covenant is required because the Remedial Action resulted in residual concentrations of carcinogenic polynuclear aromatic hydrocarbons (cPAHs) in and around the soils of the hydraulic lift area (Restricted Area) and throughout the groundwater, exceeding the Model Toxics Control Act Method C cleanup levels for soil and ground water established under WAC 173-340-720 and WAC 173-340-745. A map depicting the Restricted Area is attached hereto as Attachment B.

The undersigned, Mr. David Eales, is a senior officer with the US Postal Service with signature authority for the real property (hereafter "Property") at 2445 Third Avenue South, also listed as 230 South Lander Street, Seattle, King County, State of Washington, parcel #766620-5235 and tax E# 0696876 dated November 18, 1982, that is subject to this Restrictive Covenant. The Property is legally described in Attachment A of this Restrictive Covenant and made a part hereof by reference.

Mr. David Eales, senior officer with signature authority for the real property, makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all

current and future owners of any portion of or interest in the Property (hereafter "Owner").
Section 1. The Property shall be used for commercial purposes including office and administrative uses, or industrial purposes only. It shall not be used for residential uses as defined in Seattle Municipal Code section 23.84.032 as of the date of this Restrictive Covenant. No ground water may be taken for any use from the Property.

Section 2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substances that remain in the Restricted Area or groundwater of the Property as part of the Remedial Action, or that may create a new exposure pathway for such hazardous substances, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the Property must give thirty (30) day advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action as set forth in the No Further Action Letter.

Section 5. The Owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action, to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

_____
David Eales, Manager, Asset Management and Senior Officer
US Postal Service – Facilities

_____
Print Name

_____
Date Signed

Subscribed and sworn to before me this ____ day of _____ 1999.

_____
Signature

_____
Name Printed or Stamped
Notary Public in and for the State of Washington
Residing at _____
My appointment expires_____

[NOTE: The Property Owner must have this Restrictive Covenant notarized.]

USPS - Gen Mail Facility
SIT 8.2

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (425) 649-7000

April 5, 1999

Mr. Randall Alder, Environmental Specialist
United States Postal Service
Denver Facilities Service Office
8055 Tufts Avenue, Suite 400
Denver, Colorado 80237-2881

Subject: No Further Action and Restrictive Covenant for Independent Remedial Action at US Postal Service General Mail Facility, 2445 Third Avenue South, Seattle, Washington

Dear Mr. Alder:

Thank you for submitting the results of your independent remedial action(s) to the Voluntary Cleanup Program for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

This letter addresses the independent remedial actions at the US Postal Service General Mail Facility (the Site) located at 2445 Third Avenue South, also listed as 230 South Lander Street, Seattle, Washington, parcel # 766620-5235, and tax E#0696876 dated November 18, 1982.

Ecology's Toxics Cleanup Program has reviewed the following information regarding the Site:

1. ICF Kaiser, 1999, Washington State Model Toxics Control Act, Method C Calculations for the General Mail Facility, Seattle, Washington, 6 pp., letter report dated January 21, 1999.
2. ICF Kaiser, 1998, Supplemental Soil and Groundwater Sampling at General Mail Facility, Seattle, Washington, 10 pp., October 5, 1998.
3. Dames & Moore, 1998, Report – Soil and Groundwater Investigation at USPS General Mail Facility, Seattle, Washington, 16 pp., July 27, 1998.
4. ICF Kaiser, 1997, Phase 1 Environmental Site Assessment at General Mail Facility, Seattle, Washington, 47 pp., October 15, 1997.

The reports listed above will be kept in the Central Files of the Northwest Regional Office (NWRO) of Ecology for review by appointment. Appointments can be made by calling Ms. Sally Perkins at the NWRO at 425-649-7190.

Based upon the above information Ecology has determined that, at this time, releases of petroleum hydrocarbons and carcinogenic polynuclear aromatic hydrocarbons (cPAHs) into the soil and groundwater no longer pose a threat to human health or the environment

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this Site under MTCA, chapter 70.105D RCW. Please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D.030(1)(i) and does not constitute a settlement by the state under RCW 70.105D.040(4) and is not binding on Ecology. Furthermore, you must conduct the necessary monitoring and maintenance to assure that this Site does not pose a threat to human health or the environment. Groundwater at the hydraulic lift area of the Site must be sampled and analyzed for cPAHs annually using Method 8270 until cPAH concentrations in selected monitoring wells fall below the MTCA method B cleanup levels for four consecutive sampling events. Proposed monitoring is at MW-7, -8, -9, -3, and -6A for two sampling events during the wet season and then to re-evaluate. Failure to conduct this necessary monitoring and maintenance will result in the automatic withdrawal of Ecology's no further action determination. The monitoring and maintenance described in this paragraph are noted in Section 4 of the Restrictive Covenant.

Ecology's no further action determination is contingent upon filing the Restrictive Covenant appended hereto as Appendix A, with King County Department of Records and Elections. The Restrictive Covenant must be filed within thirty (30) days of the date of this letter. Within sixty (60) days of recording the Restrictive Covenant, must send a notarized copy of the recorded Restrictive Covenant to Ecology. Ecology's no further action determination automatically terminates and will have no force and effect if you fail to record this restrictive covenant or violate any portions of the restrictive covenant. WAC 173-340-440(6) requires you to notify and seek comment from the City of Seattle Department of Construction and Land Use with land use planning authority for real property subject to the restrictive covenant.

The restrictive covenant is specifically for soils at and around the hydraulic lift area and ground water underlying the site. The hydraulic lift area (Restricted Area) is located in the NE area of the Vehicle Maintenance Building and is shown in Figure 5, included as Attachment B, from the 1998 Dames & Moore report. The restrictive covenant also restricts any future use or extraction of ground water at the site.

Ecology's no further action determination is made only with respect to the releases identified in the independent remedial action reports listed above. This no further action determination applies only to the area of the property affected by the releases identified in the reports for the USPS General Mail Facility, at 2445 Third Avenue South, in Seattle, Washington. It does not apply to any other release or potential release at the property, any other areas on the property nor any other properties owned or operated by the US Postal Service.

Ecology will update its Leaking Underground Storage Tank database to reflect this "No Further Action" determination after we have received a copy of the recorded restrictive covenant. Your site will not appear in future publications of the LUST database.

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

Thank you for the opportunity to work with you on the independent cleanup of this Site. If you have any questions, please contact me at the Northwest Regional Office at 425-649-7249 or by email at <mobr461@ecy.wa.gov>.

Sincerely,

Maura S. O'Brien,
Toxics Cleanup Program

Attachments

Cc Brian Knox, Attorney, Preston, Gates & Ellis
Ric Anderson, Lowe Enterprises
Craig Wrench, Lowe Enterprises

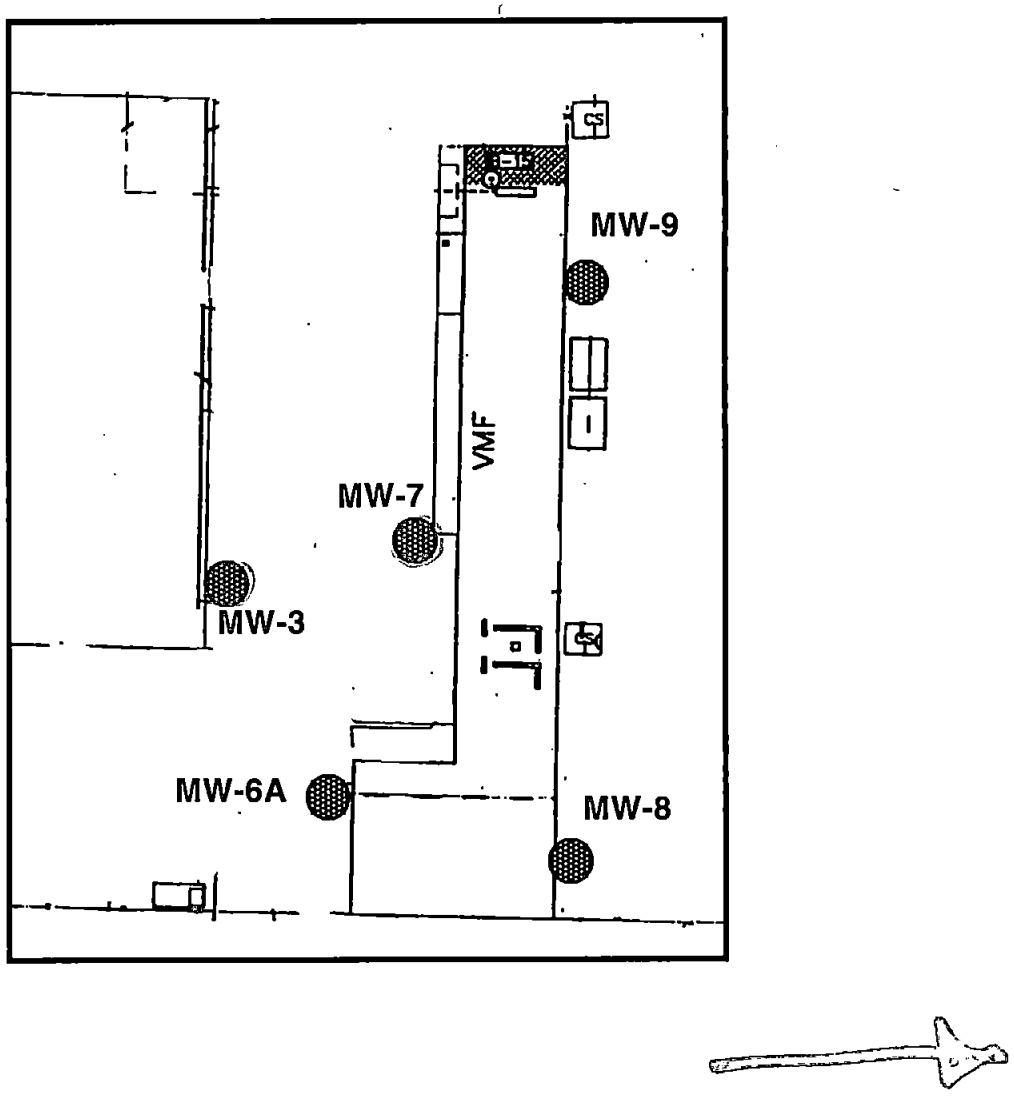


FIGURE 1. Site Map Showing the Locations of the Monitoring Wells Used for Compliance Monitoring at the US Postal Service Seattle General Mail Facility (GMF). North is to the right. Site map is from Dames & Moore (1998).

3.0 GROUNDWATER ANALYSES

A comparison of the current water levels with the previous sampling event (12/17/99) are listed in Table 1 below. The water levels in all but one of the wells were lower than they were in the previous year. The southern-most well (MW-3) had a water table elevation 0.07 feet higher than the level measured in December, 1999. The other south well (MW-6A) had a water level 0.08 feet lower than in December, 1999. The wells to the north (MW-7, 8, & 9) had water levels significantly (about 0.5 feet) higher than measured previously. The wells with the highest water table elevations are the southern-most wells (MW-3 & 6A) and the gradient appears to be to the northeast. The current groundwater gradient appears to be in opposition to the gradient measured in 12/99 which was to the southwest. The temporal differences in water table elevations suggests there may be occasional reversals in groundwater flow direction beneath the property.

Table 1 also compares the current levels of PAHs in groundwater relative to the levels measured 13 months ago. Those PAHs denoted with a "(c)" are the cPAHs that are part of the compliance monitoring protocol. The full analytical report is attached as Appendix A. The quality assurance for the 2001 sample delivery group (Appendix A) was excellent. The accuracy as indicated by the surrogate recovery and recovery of the laboratory control sample (LCS) were all within the acceptance criteria. Comparison of the analytical results for the LCS and LCS duplicate sample indicates a precision based on an RPD (relative percent difference) of better than 10%.

Based on the past two sampling events, the levels of cPAHs at the site do not appear to be declining. Although different analytical methods were used and the detection limits are different for the two sampling events, the PAH concentrations are about the same as they were late in 1999. PAHs were present in all groundwater samples above the detection limit and cPAHs were also detected in the same wells in 2001. Carcinogenic PAHs still were not detected in wells MW-6A and MW-9 in either sampling event. The highest PAH concentrations in groundwater were found in MW-3 in both sampling events.

The compliance monitoring program requires comparison of cPAHs in groundwater to MTCA Method B cleanup levels in groundwater and surface water. The MTCA Method B cleanup levels are listed on the far right-hand-side of Table 1. All cPAH concentrations exceed the MTCA Method B cleanup levels, however, neither analytical method is sensitive enough to obtain a detection limit close to the applicable cleanup levels (0.01 - 0.03 µg/L).

TABLE 1. Comparison of Analytical Results For Groundwater Samples And Depth To Water At The USPS Seattle GMF Facility . All PAH concentrations are in µg/L.

											MTCA Method B Values	
WELL ID	MW-3	MW-3	MW-6A	MW-6A	MW-7	MW-7	MW-8	MW-8	MW-9	MW-9	Ground Water	Surface Water
Date Sampled	12/99	02/01	12/99	02/01	12/99	02/01	12/99	02/01	12/99	02/01		
DTW (Feet BGS)*	5.07	5.00	6.68	6.76	6.45	7.08	6.43	7.10	6.36	6.85		
BHD (Feet BGS)*	14.05	14.05	12.20	12.20	12.95	12.95	11.35	11.35	12.95	12.95		
TOC EL (Feet AMSL)**	14.73	14.73	16.48	16.48	16.22	16.22	16.66	16.66	16.25	16.25		
GW EL (Feet AMSL)***	9.66	9.73	9.80	9.72	9.77	9.14	10.23	9.56	9.89	9.40		
Acenapthalene	0.3	1U	0.1U	1U	0.1U	1U	0.1U	1U	0.1U	1U	-----	-----
Acenapthene	15	20	1.7	4	0.8	1	0.1U	1U	0.6	1U	960	643
Anthracene	2.5	4	0.1U	1U	0.1U	1U	0.1U	1U	0.1U	1U	4800	25900
Benz(a)anthracene (c)	0.10	2	0.1U	1U	0.1	2	0.1	1U	0.1U	1U	0.012	0.0296
Benzo(b)fluoranthene	0.18	1	0.1U	1U	0.1	1	0.2	1U	0.1U	1U	0.012	0.0296
Benzo(k)fluoranthene (c)	0.19	2	0.1U	1U	0.2	1	0.2	1U	0.1U	1U	0.012	0.0296
Benzo(g,h,i)perylene	0.16	2	0.1U	1U	0.1	1	0.1	1U	0.1U	1U	-----	-----
Benzo(a)pyrene (c)	1.1	2	0.1U	1U	0.2	2	0.2	1U	0.1U	1U	0.012	0.0296
Chrysene (c)	1.4	3	0.1U	1U	0.2	2	0.2	1U	0.1U	1U	0.012	0.0296
Dibenzo(a,h)anthracene (c)	0.2	1U	0.1U	1U	0.1U	1U	0.1U	1U	0.1U	1U	0.012	0.0296
Fluoranthene	11	19	0.1U	1U	0.2	3	0.2	1U	0.1U	1U	640	90.2
Fluorene	8.2	10	0.1U	1U	0.1U	1U	0.1U	1U	0.1U	1U	640	3460
Indeno(1,2,3 cd)pyrene (c)	0.13	1	0.1U	1U	0.1U	1	0.1	1U	0.1U	1U	0.012	0.0296
Naphthalene	2.5	2	0.1U	1U	0.1U	1U	0.1U	1U	0.1U	1U	320	9880
Phenanthrene	9.4	15	0.1U	1U	0.1	2	0.1	1U	0.1U	1U	-----	-----
Pyrene	9.8	18	0.1U	1U	0.4	4	0.3	1U	0.1U	1U	480	2590

(c) signifies a carcinogenic PAH (cPAH).

U signifies a non-detect value. The value listed is the reporting limit.

* DTW = Depth To Water Below Ground Surface. BHD = Bottom Hole Depth Below Ground Surface. Bottom hole depths recorded on 12/17/99.

** TOC EL = Top-of-Casing Elevation in Feet Above Mean Sea Level. Data are from Dames & Moore (1998).

*** GW EL = Groundwater Elevation in Feet Above Mean Sea Level Recorded on days indicated (12/17/99 & 02/01/01).

CESI

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Kennewick, Washington 99336
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(509) 783-7938 Fax
colenvsci@worldnet.att.net

Robert L. Erikson, M.S.
Principal

Date: August 17, 2001
To: Maura O'Brien, WDOE
From: Bob Erikson, CESI
Subject: Compliance Monitoring Reports
for the South Seattle Post Office

Columbia Environmental Sciences, Inc. (CESI) is under contract to Mr. Sydney Randell of the USPS to perform the compliance monitoring for the South Seattle Post Office VMF Facility at 2445 3rd Avenue South. Mr. Randell requested that I drop off the attached copies of the Compliance Monitoring Reports for the VMF Facility for your review. As you are aware, compliance monitoring at the site was required per the NFA and Restrictive Covenant letter you wrote to the Denver Facilities Service Office dated April 5, 1999. I would appreciate the opportunity to discuss the current results with you at your convenience.

The issues that I see related to site closure are two-fold:

o The most sensitive analytical method available (EPA Method 8270C SIM used in the first sampling event) is not sensitive enough to obtain the Method B Clean-up Levels. It is not possible to demonstrate Method B compliance in a series of sampling events using this approach.

o Demonstration of compliance is further complicated by the low concentrations of PAHs present in several of the wells and variable turbidity of the water samples. The PAH levels are near the PQL (regardless of the analytical method) therefore it may not be possible to reliably demonstrate declines in concentrations with time.

I look forward to hearing from you to discuss modifications to the analytical protocol or alternative approaches to site closure.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The second compliance monitoring sampling event for U.S. Postal Service (USPS) General Mail Facility (GMF) accomplished the following:

- the required monitoring wells (MW-3, 6A, 7, 8, & 9) were sampled for the second time during the wet season and tested for the presence of cPAHs according to the requirements of the Department of Ecology No Further Action (NFA) letter.
- PAHs were found above the 1 µg/L detection limit in three of the five wells wells and cPAHs were detected in two of the five monitoring wells.
- The cPAHs are the only organic constituents above the MTCA Method B Cleanup Levels for groundwater and surface water.

The levels of PAHs found in groundwater have not significantly declined over the past year. Because the PAHs are recalcitrant organic compounds with very low water solubilities, the levels of PAHs in groundwater may remain elevated at the GMF facility for a long period of time. Based on the results from both sampling events, the goal of the compliance monitoring program (decline of the cPAHs to below cleanup levels for 4 consecutive sampling events) may not be attainable and should be re-evaluated.

7.0 REFERENCES

CESI. 2000. Compliance Monitoring Report for the U.S. Postal Service General Mail Facility, 2445 Third Avenue South, Seattle, WA., 9 pp., January 2000.

Dames & Moore, 1998. Report - Soil and Groundwater Investigation at USPS General Mail Facility, Seattle, WA, 16 pp., July 27, 1998.

ICF Kaiser, 1997. Phase I Environmental Site Assessment at General Mail Facility, Seattle, WA, 47pp., October 15, 1997.

ICF Kaiser, 1998. Supplemental Soil and Groundwater Sampling at General Mail Facility, Seattle, WA, 10 pp., October 5, 1998.

ICF Kaiser, 1999. Washington State Model Toxics Control Act, Method C Calculations for the General Mail Facility, Seattle, WA, 6 pp., letter report dated January 21, 1999.

APPENDIX A

Laboratory Analytical Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
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February 7, 2001

Bob Erickson, Project Manager
Columbia Environmental Services, Inc.
8428 West Gage Boulevard, #104
Kennewick, WA 99336

Dear Mr. Erickson:

Included are the results from the testing of material submitted on February 1, 2001 from your SSPO, PO# 239-01 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Jensen

Charlene Jensen
Chemist

Enclosures
COL0207R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	MW-64	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-01
Date Analyzed:	02/06/01	Data File:	020610.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	55	28	119
Phenol-d6	35	10	112
Nitrobenzene-d5	94	61	108
2-Fluorobiphenyl	87	49	121
2,4,6-Tribromophenol	100	46	134
Terphenyl-d14	96	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	4
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	MW-3	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-02
Date Analyzed:	02/06/01	Data File:	020611.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	39	28	119
Phenol-d6	26	10	112
Nitrobenzene-d5	89	61	108
2-Fluorobiphenyl	84	49	121
2,4,6-Tribromophenol	81	46	134
Terphenyl-d14	90	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	20
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	10
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	15
Benzoic acid	<1	Anthracene	4
bis(2-Chloroethoxy)methane	<1	Carbazole	3
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	19
Naphthalene	2	Pyrene	18
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	2
2-Methylnaphthalene	1	Chrysene	3
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	2
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	1
2-Nitroaniline	<1	Benzo(k)fluoranthene	2
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	MW-7	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-03
Date Analyzed:	02/06/01	Data File:	020612.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	33	28	119
Phenol-d6	24	10	112
Nitrobenzene-d5	85	61	108
2-Fluorobiphenyl	78	49	121
2,4,6-Tribromophenol	63	46	134
Terphenyl-d14	84	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	2
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	3
Naphthalene	<1	Pyrene	4
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	2
2-Methylnaphthalene	<1	Chrysene	2
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	2
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	1
2-Nitroaniline	<1	Benzo(k)fluoranthene	1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	MW-9	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-04
Date Analyzed:	02/06/01	Data File:	020613.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	64	28	119
Phenol-d6	41	10	112
Nitrobenzene-d5	91	61	108
2-Fluorobiphenyl	84	49	121
2,4,6-Tribromophenol	90	46	134
Terphenyl-d14	91	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	MW-8	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-05
Date Analyzed:	02/06/01	Data File:	020614.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	63	28	119
Phenol-d6	45	10	112
Nitrobenzene-d5	88	61	108
2-Fluorobiphenyl	82	49	121
2,4,6-Tribromophenol	80	46	134
Terphenyl-d14	86	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Trip Blank	Client:	Columbia Environmental Services
Date Received:	02/01/01	Project:	SSPO, PO# 239-01
Date Extracted:	02/01/01	Lab ID:	102005-06
Date Analyzed:	02/06/01	Data File:	020615.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	52	28	119
Phenol-d6	30	10	112
Nitrobenzene-d5	85	61	108
2-Fluorobiphenyl	81	49	121
2,4,6-Tribromophenol	89	46	134
Terphenyl-d14	88	63	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	Columbia Environmental Services
Date Received:	Not Applicable	Project:	SSPO, PO# 239-01
Date Extracted:	02/02/01	Lab ID:	01-135b2
Date Analyzed:	02/06/01	Data File:	020609.D
Matrix:	Water	Instrument:	YA
Units:	ug/L (ppb)	Operator:	GCMS3

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	52	28	119
Phenol-d6	33	10	112
Nitrobenzene-d5	95	61	108
2-Fluorobiphenyl	90	49	121
2,4,6-Tribromophenol	100	46	134
Terphenyl-d14	99	68	115

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
bis(2-Chloroethyl)ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethylphthalate	<1
Bis(2-chloroisopropyl)ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl-phenylether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl-phenylether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<1	Anthracene	<1
bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butylphthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Butylbenzylphthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	bis(2-Ethylhexyl)phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octylphthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethylphthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/07/01
Date Received: 02/01/01
Project: SSPO, PO# 239-01

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	Relative Percent Difference (Limit 20)
Phenol	µg/L (ppb)	75	31	34	18-135	9
2-Chlorophenol	µg/L (ppb)	75	74	76	24-132	3
1,4-Dichlorobenzene	µg/L (ppb)	50	75	77	33-125	3
N-Nitroso-di-n-propylamine	µg/L (ppb)	50	35	37	27-133	5
1,2,4-Trichlorobenzene	µg/L (ppb)	50	79	81	34-133	3
4-Chloro-3-methylphenol	µg/L (ppb)	75	77	79	21-136	2
Acenaphthene	µg/L (ppb)	50	76	77	35-129	1
2,4-Dinitrotoluene	µg/L (ppb)	50	68	69	20-141	1
4-Nitrophenol	µg/L (ppb)	75	17	19	6-135	9
Pentachlorophenol	µg/L (ppb)	75	59	60	8-151	2
Pyrene	µg/L (ppb)	50	82	83	39-143	0

102095

SAMPLE CHAIN OF CUSTODY

CJ 2-1-01 COS

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Send Report To Bob
Company CESI
Address 8428 W. Gage #104
City, State, ZIP Kennewick, WA 99336
Phone # 509-783-5571 Fax # 509-783-7938

SAMPLERS (signature) Robert L Erikson
PROJECT NAME/NO. SSPO
PO # 239-01
REMARKS

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS							Notes
MW-64	-01	2/1/01	1404	water	2					✓								
MW-3	-02		1410							✓								
MW-7	-03		1415							✓								
MW-9	-04		1419							✓								
MW-8	-05		1425							✓								
TRIP BLANK	-06									✓								

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Robert L Erikson	Robert L. Erikson	CESI	2/1/01	1505
Received by: Eric Young	Eric Young	FedEx	2/1/01	15:07
Relinquished by:				
Received by:				

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