Operating and Maintenance Plan

American Crossarm & Conduit
100 Chehalis Ave SW Chehalis, 98532
Lewis County, Washington
FSID 208

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Department of Ecology
Toxics Cleanup Program

May 2020

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LIST OF ABBREVIATIONS & ACRONYMS

ACC	American Crossarm & Conduit Co.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Contaminant of Concern
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbon
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FS	Feasibility Study
FYR	Five-Year Review
IC	Institutional Control
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
MTCA	Washington State Model Toxics Control Act
ng/kg	Nanograms per Kilogram
ng/L	Nanograms per Liter
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbon
PCP	Pentachlorophenol
PRP	Potentially Responsible Party
RAO	Remedial Action Objective
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
TCDD	2,3,7,8-Tetrachlorodibenzodioxin
UU/UE	Unlimited Use and Unrestricted Exposure
VOC	Volatile Organic Compound

Introduction

1. Project Overview

The purpose of this operating and maintenance (O&M) plan is to describe the long-term maintenance and monitoring activities subsequent to the remedial activities at the American Crossarm & Conduit (ACC) site to ensure that the remedial action remains protective of human health and the environment.

Ecology has responsibility for most of the O&M. Pursuant to an Administrative Order on Consent (AOC) with The U.S. Environmental Protection Agency (EPA), the landowner is responsible for maintenance of the cap, perimeter security, vegetation, and surface drainage systems. All notices of changes in condition, use, or ownership will be provided to Ecology. Ecology will oversee the actions of the landowner. The City of Chehalis is responsible for O&M of the stormwater impoundment. EPA is responsible for conducting the Five Year Reviews.

The original O&M plan was written in 1996 and this O&M plan modifies the previous O&M plan to include the current site condition.

This plan covers the following:

- Summary of the events leading to remedial actions.
- Summary of remedial actions conducted at the site.
- Current site condition.
- Current protective covenant (environmental deed restriction).
- Landfill inspection form.

A copy of this plan and any subsequent revisions to the plan will be provided to EPA and the land owners.

2. History

The ACC Site is located in Chehalis, Lewis County Washington. The former 14-acre inactive wood treating facility is located on the south edge of the City of Chehalis within the 100-year floodplain of the Chehalis and Newaukum rivers. The Site is east of the elevated Burlington Northern-Union Pacific (BN-UP) railroad tracks and was constructed on pilings and fill in a low-lying marsh. Figure 1 in Appendix A shows the location of the site.

EPA conducted environmental cleanup of this site pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

EPA completed the Site's remedial investigation and feasibility study (RI/FS) in 1992. The RI/FS defined the extent of soil, groundwater, and sediment contamination and conducted a feasibility study to evaluate various remedial actions. The RI/FS identified:

a. Pentachlorophenol (PCP), carcinogenic polycyclic aromatic hydrocarbon (cPAHs) and dioxins were identified in soil, surface water, and sediments at the site.

b. PCP floating product (at 1.2 percent – 12,000,000 micrograms per liter, or µg/L) was observed in one groundwater well MW-16. No groundwater contamination plume was identified.

c. Surface water and sediments in Dillenbaugh Creek and the stormwater lagoon exhibited evidence of contamination.

d. The risk assessment identified incidental ingestion of soil as the main contributor to risk. The majority of carcinogenic risk was contributed by dioxin and cPAHs.

A number of interim remedial (removal) actions were conducted from 1986 to 1992. EPA selected a remedy in a 1993 Record of Decision (ROD). The final remedial actions were completed by 1996. The selected remedy outlined in the ROD and implemented were:

a. Excavation of contaminated soil from the Chehalis Avenue commercial/residential area of contamination and consolidation of this material on the ACC facility. This includes the playfield adjacent to the facility. Conduct confirmatory sampling, backfill with clean soil and revegetate or cover as appropriate. Thus, no O&M is required in these areas. All contaminated soils were consolidated on the main ACC facility.

b. Demolition of the ACC facility (treatment works, mill, kilns, aboveground and belowground storage tanks, and all other structures).

c. Excavation of the ACC facility surface and subsurface soil from the most highly-contaminated areas.

d. Removal of floating oil from groundwater under the facility (treatment works) as a short-term source control activity.

e. Removal of contaminated sediment from the stormwater discharge lagoon and stormwater sewer for off-site disposal. Reline the sewer in a way that does not reduce flow capacity. Contour the lagoon to provide containment capacity for the city of Chehalis stormwater discharges.

f. Disposal of the most highly-contaminated excavated material at an approved off-site hazardous waste landfill. Solidify the material at the off-site landfill prior to disposal.

g. Covering the ACC facility with clean soil, sloping and contouring land, and planting grass.

h. Implementing fencing and deed restrictions at the ACC facility.

i. Maintenance of soil cover and other institutional controls.

j. Annual groundwater and surface water (Dillenbaugh Creek) monitoring and Five Year Review (FYRs).

Figure 2 in Appendix A shows the contaminated site defined in the RI/FS for the ACC wood treating operation and the area remediated as defined in the RI/FS.

3. O&M Objective

The original O&M plan was approved by EPA in June 1996. The purpose of updating the O&M plan is to ensure the institutional controls put in place as a part of the final remedy are intact and to ensure that the response action remains protective of human health and the environment. The annual inspection will cover:

- Detailed yearly monitoring/walk through of the landfill cap, fence, slopes, vegetated surface, stormwater lagoon, and Dillenbaugh Creek.
- Records keeping.
- General walk through of the two adjacent parcels to the landfill (Tax Parcels 5274-003-000 and 5274-004-001).

4. Points of Contacts

The contacts in Department of Ecology and Environmental Protection Agency, Region 10 are:

Department of Ecology
Mohsen Kourehdar, P.E.
300 Desmond Drive SE
Lacey, WA 98503
360-407-6256
360-999-9592, cell
mkou461@ecy.wa.gov

United State Protection Agency
Region 10
Ashley Grompe, P.E.
1200 6th Avenue #155
Seattle, WA 98101
EPA Remedial Project Manager
206-553-1284
Grompe.ashley@epa.gov

Current Site Condition

1. Former Wood Treating Facility and Landfill

The main focus of the remediation was conducted on commercial land formerly used for wood treating. Land immediately south of the facilities was used as an unpermitted landfill. Within these areas, low levels of contaminants exceeding cleanup standards are present at all depths, thus requiring annual inspections and institutional controls.

In 1997, the area was subdivided into the three parcels highlighted in Figure 3 of Appendix A. Table 1 lists the current buildings and the landfill with the corresponding tax parcel numbers.

Table 1. Current buildings and landfill with the corresponding tax parcel no.

Building	Tax Parcel No.
Repair and machine shop	5274-003-000
Fitness center and a head start children's facility	5274-004-001
Landfill and wetland	5274-004-002

2. Groundwater and Surface Water Testing

After implementation of the remedy, groundwater and surface water was monitored semiannually from 1997 to 2001 by Ecology's Environmental Assessment Program (EAP) and these results were published in Ecology's Publication No. 01-03-022 in 2002, included in Appendix B.

The groundwater monitoring wells tested were MW-22, MW-23, MW24, MW-25, and MW-26 along with two surface water stations on the site. Various site conditions (ground subsidence, and site filling and grading) have rendered monitoring wells MW-22, MW-23, and MW-24 unusable. Therefore, MW-22, MW-23, and MW-24 were decommissioned in the fall of 1998 and 2000. In 2000 and 2001, MW-25 and MW-26, and two surface water stations were sampled and tested.

During 1997 to 2001 testing, semiannual groundwater and surface water was analyzed for polycyclic aromatic hydrocarbons (PAHs) and chlorinated phenolics. The majority of groundwater results were below the method reporting limits or any detections were below MTCA Method B groundwater cleanup levels for PAHs and chlorinated phenolics.

Also, analytical results of groundwater and surface water monitoring during 1997 to 2001 were below established cleanup levels for cPAH and PCP in EPA's 1993 ROD. Therefore, groundwater and surface water monitoring is no longer is required at the site.

Current Protective Covenant (Environmental Deed Restriction)

As a part of institutional controls on the former site, a protective covenant was filed and recorded in 1997 with Lewis County Auditor's Office (Administrative Order on Consent for Use and Maintenance for the Site, EPA Docket No. 10-97-1036 CERCLA). The 1997 Protective Covenant refers to an original parcel number, 5274-001-000. That parcel has since been subdivided into the three parcels highlighted in Figure 2 of Appendix A. In August 2019, EPA confirmed (as referenced in the fifth periodic review) with the Lewis County Auditor's Office that the Protective Covenant applies to all three parcels in Table 1.

The protective covenant was signed by Darrel and Judy Anderson in 1997. The 2020 Tax Assessor's information lists Darrel Anderson as an owner.

The protective covenant restriction on the site are:

1. Prohibition on Groundwater Wells. In order to prevent public exposure to potentially contaminated groundwater beneath the site, there shall be no groundwater wells installed or used on the above described real property.

2. Prohibition on Zoning Change to Residential or Agricultural Use. The cleanup of hazardous substances by EPA was performed in anticipation of the site being used solely for commercial or industrial purposes, and not for residential or agricultural use. Any change in use could result in an increased risk to the public and, therefore, the above described real property, nor any part thereof shall be re-zoned to either residential or agricultural use, nor shall such uses be allowed.

3. Prohibition on Intrusive Activities below Ground. As part of the cleanup undertaken by EPA, there has been placed upon the ground a layer of soil materials, or a "CAP," to help protection of the public from contact with any contaminants which may remain below the surface of the site. There shall be no intrusive activities beneath the surface of the cap, including any subsurface excavation/digging or maintenance and repair of utilities, without the prior express approval from the Department of Ecology. Ecology will review the request for the ground disturbance activities and approve or request more information or disapprove the request. Upon making a final decision on the "CAP" requested by the property owner, a copy of the final decision will be mailed to EPA, Region 10 for their file by Ecology.

4. The protective covenant run with the land, therefore, in case of a property transfer, the new owner will be responsible to comply with all the requirements of the protective covenant.

5. Before the property transfer, the current owner will inform Ecology of such a sale 30 days before the property transfer. Ecology will inform EPA of such a decision by email or a letter.

A copy of the protective covenant is in Appendix C.

Maintenance Requirements in Administrative Order on Consent (AOC)

An Administrative Order on Consent (AOC) (EPA Docket No. 10-970136-CERCLA) was signed by the property owner with EPA Region 10 in 1997. In order to maintain the integrity of the remedial actions performed at the ACC Site, the AOC has the following maintenance requirements:

1. If erosion, damage, or settlement occurs to the cap. The property owner shall replace and/or revegetate the cap as directed by Ecology or as required according to a work plan approved by Ecology.

2. If damage occurs to the perimeter security, including the fence, signs, locks, and/or gates established by Ecology, the property shall repair and/or replace the damaged security as directed by Ecology or as required according to a work plan approved by Ecology.

3. If erosion or damage occurs to vegetation planted at the ACC Site, including grass, trees, and shrubs, the property owner shall replace, remove, patch, and/or prune such vegetation as directed by Ecology or as required according to a work plan approved by Ecology.

4. If erosion occurs to the surface drainage system installed by EPA, the property owner shall regrade and/or fill the eroded area as directed by Ecology or as required according to a work plan by Ecology.

Per section V. B. of the AOC, the property owner shall notify Ecology immediately after becoming aware of any erosion, damage, or settlement to the cap, perimeter security, vegetation, or surface drainage system at the ACC Site. The cap may be especially prone to damage during development activity at the ACC Site, and the requirement to provide notification to Ecology is heightened during this stage of activity.

Per section V. C. of the AOC, from time to time, it may be necessary to relocate the security fencing at the ACC Site. The property owner must receive approval from Ecology prior to undertaking such activity. In addition, if relocation of security fencing will occur on property owned, possessed, or controlled by a person other than the property owner, including, but not limited to, on a right-of-way belonging to the City of Chehalis, the property owner must obtain approval from Ecology prior to relocation of the fencing.

During annual inspections, Ecology will identify whether deficiencies in the cap integrity, vegetation, fencing, or drainage exist. If inadequate, the owner will be given notice that repairs must be made, or a work plan be submitted, within 30 days to Ecology. Ecology will approve any correction made to the Site and notify EPA of the final decision.

Inspection of the Landfill and Surrounding Areas

As a part of remedial action, the contaminated soil was excavated from beneath Chehalis Avenue (commercial/residential area) and the adjacent playfield and consolidated on the ACC facility in a landfill cell. The landfill and surrounding areas were covered with clean soil, sloped, contoured, and revegetated. A fence was installed around the landfill and a deed restriction was recorded with Lewis County Auditor's Office. The approximate area of the landfill is shown in Figure 2 of Appendix A.

Annual inspections of the landfill and surrounding areas will be conducted to ensure that the remedial action implemented as the remedy remains protective of human health and the environment.

Annual Site Inspection

Annual inspections will be completed by Ecology. The inspection form to be completed is in Appendix D.

Prior to the inspection, the property owners should be contacted to identify any known and existing concerns as well as O&M activities conducted since the last inspection.

After completion of the inspection, a copy of the inspection report will be sent by Ecology to EPA Region 10, the owners of the properties, and the City of Chehalis as listed in Table B. In case of corrective action needed, the property owner will be asked in writing to submit a work plan to correct any issues that are discovered during inspection. The property owner will implement the work plan after Ecology's approval.

Table 2: Individual and organization who will get a copy of annual inspection report.

Name or	Relationship	Tax Parcel	Contact Information
Darrell M. Peterson	Landfill Owner[1]	3274-004-002	(360) 864-6271 148 Skyhawk Drive Toledo, WA 98591
Thorbeckes Fit Life Stephani Eang, General Manager	Property at the site[1]	5274-004-001	(360) 748-3744
Machine and Repair Shop R and MJ LC	Property at the site[1]	5274-003-000	2904 Ryan Street Gig Harbor, WA 98335
City Of Chehalis Russ Cox	30 inch Stormwater Line[2]	-	(360) 748-0238 rcox@ci.chehalis.wa.us

[1] *Current Protective Covenant applies.*
[2] *City of Chehalis stormwater line goes through the site.*

References

U.S. Environmental Protection Agency Region 10, Seattle, Washington, September 10, 2019. Fifth Five-Year Review Report for American Crossarm & Conduit CO. SUPERFUND Site Lewis County, Washington.

Ecology's Environmental Assessment Program, June 2001. American Crossarm and Conduit Groundwater Surface Water Monitoring Results from 1997 – 2001, Ecology's Publication No. 01-03-022.

Weston, June 1996. Maintenance & Monitoring Plan, American Crossarm & Conduit CO.

Ecology's File, 1990-2020

Appendices

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Appendix A – Site Figures

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Figure 1 – Location of the Site.

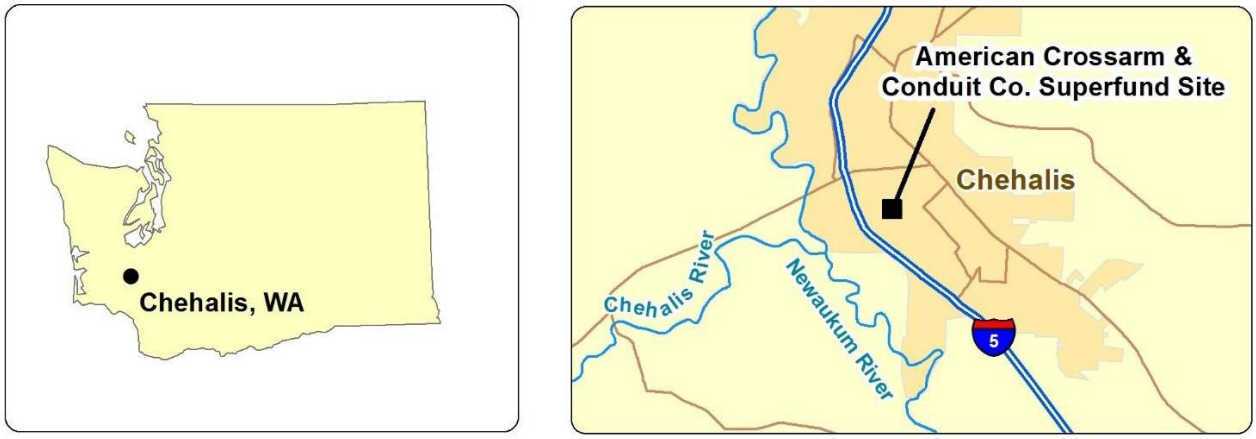

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Figure 2 – Site Boundary and Remediation Areas from ACC Operation.

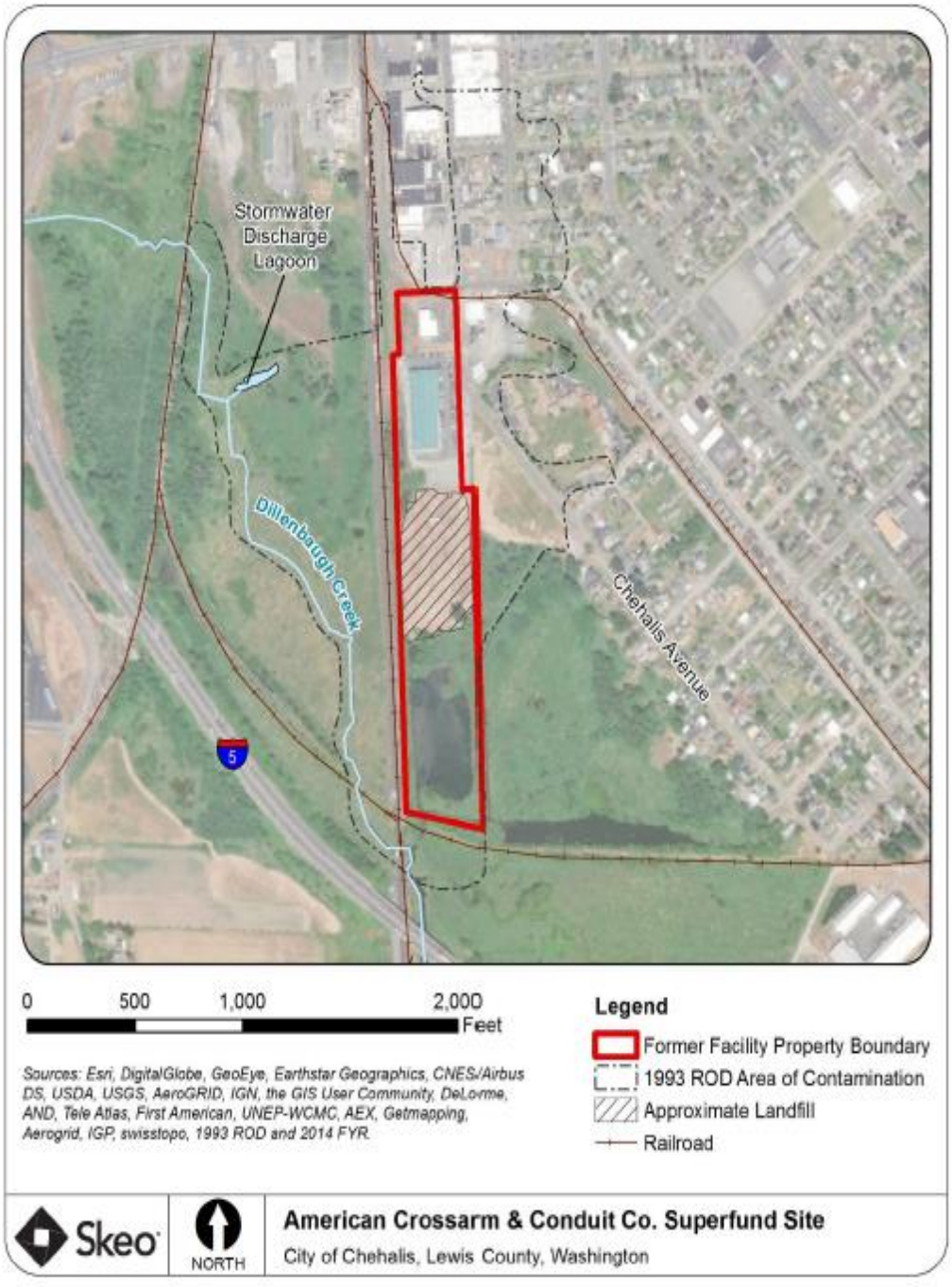

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Figure 3 – Current Site Condition Divided into Three Tax Parcels

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Appendix B – Groundwater and Surface Water Monitoring Report (1997-2001)

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A Department of Ecology Report

WASHINGTON STATE DEPARTMENT OF ECOLOGY

American Crossarm and Conduit Monitoring Results November 2000 and April 2001

Abstract

This document is one in a series describing the results of groundwater and surface water monitoring at the American Crossarm and Conduit site. Groundwater and surface water downgradient of the facility are being monitored to determine if the selected remedy of off-site disposal and containment of contaminated soil and sediment from the facility property has been an effective form of remediation. Ecology has conducted twice yearly monitoring at this site since 1997.

Results of samples collected in November 2000 and April 2001 from two downgradient wells (MW-25 and MW-26) and two on-site surface water stations (ACCSW1 and ACCSW2) are discussed. All samples collected were analyzed for polynuclear aromatic hydrocarbons (PAHs) and chlorinated phenolics.

In both sampling periods, naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene were the primary PAHs detected in the downgradient monitoring wells. Mean concentrations were 0.028 ug/L for naphthalene, 0.027 ug/L for 2-methylnaphthalene, and 0.017 ug/L for 1-methylnaphthalene. None of the PAH constituents exceeded applicable standards. Chlorinated phenolics were not detected in either of the wells during these two rounds of sampling.

Most of the PAHs analyzed for were detected at both surface water stations. Pentachlorophenol was tentatively identified at station ACCSW1 in September 1999 but has not been detected since. All detected analytes in the surface water samples were far below established water quality criteria for freshwater (EPA, 1992).

Waterbody Numbers: WA-1229829466607GW
WA-23-1027GW

by Pamela B. Marti

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Background

American Crossarm and Conduit (ACC) of Chehalis, Washington (Figure 1) conducted woodcutting, milling, and treatment of electrical utility poles from the early 1930s to 1985. In 1988 ACC was added to EPA's National Priorities List due to noncompliance of waste handling requirements, which resulted in the contamination of both on- and off-site soil, groundwater, and surface water. Pentachlorophenol (PCP), polynuclear aromatic hydrocarbons (PAHs), and dioxins/furans were the primary contaminants identified. Remedial action at the ACC site, conducted by the U. S. Environmental Protection Agency (EPA), consisted of the reduction of floating product on groundwater beneath the facility, off-site disposal of facility structures and the most contaminated soil, and containment of the remaining contaminated soil on the facility property.

After EPA's cleanup activities were completed in the mid-1990s, the operation and maintenance responsibilities for the site were transferred to the Washington State Department of Ecology (Ecology). In 1997 Ecology initiated semi-annual sampling of downgradient monitoring wells and surface water to assess the effectiveness of the remedial action. As of April 2001, five years of monitoring have been completed. The effectiveness of the remedial action will be reviewed by the project manager and staff and a decision will be made by the fall of 2001 if long-term monitoring should be continued or concluded.

Methods

Groundwater Sampling

On November 17, 2000 and again on April 27, 2001, groundwater and surface water samples were collected from two downgradient wells, MW-25 and MW-26, and two on-site surface water stations, ACCSW1 and ACCSW2 (Figure 2). Various site conditions (ground subsidence, and site filling and grading) have rendered monitoring wells MW-22, MW-23, and MW-24 unusable. MW-23 was decommissioned in the fall of 1998. MW-22 and MW-24 were decommissioned in the fall of 2000.

Sampling methods were consistent with those previously used on this project. Static water levels were recorded prior to well purging. All wells were purged and sampled using a stainless steel submersible pump with a pump rate of about 0.5-gpm. Samples were collected when pH, specific conductance, and temperature readings stabilized (changes of 10% or less between measurements).

Surface Water Sampling

Two surface water samples were collected to determine if adjacent wetlands are receiving contaminants from the ACC site. Samples were collected from two areas considered representative of the site. Surface water samples were collected using decontaminated stainless

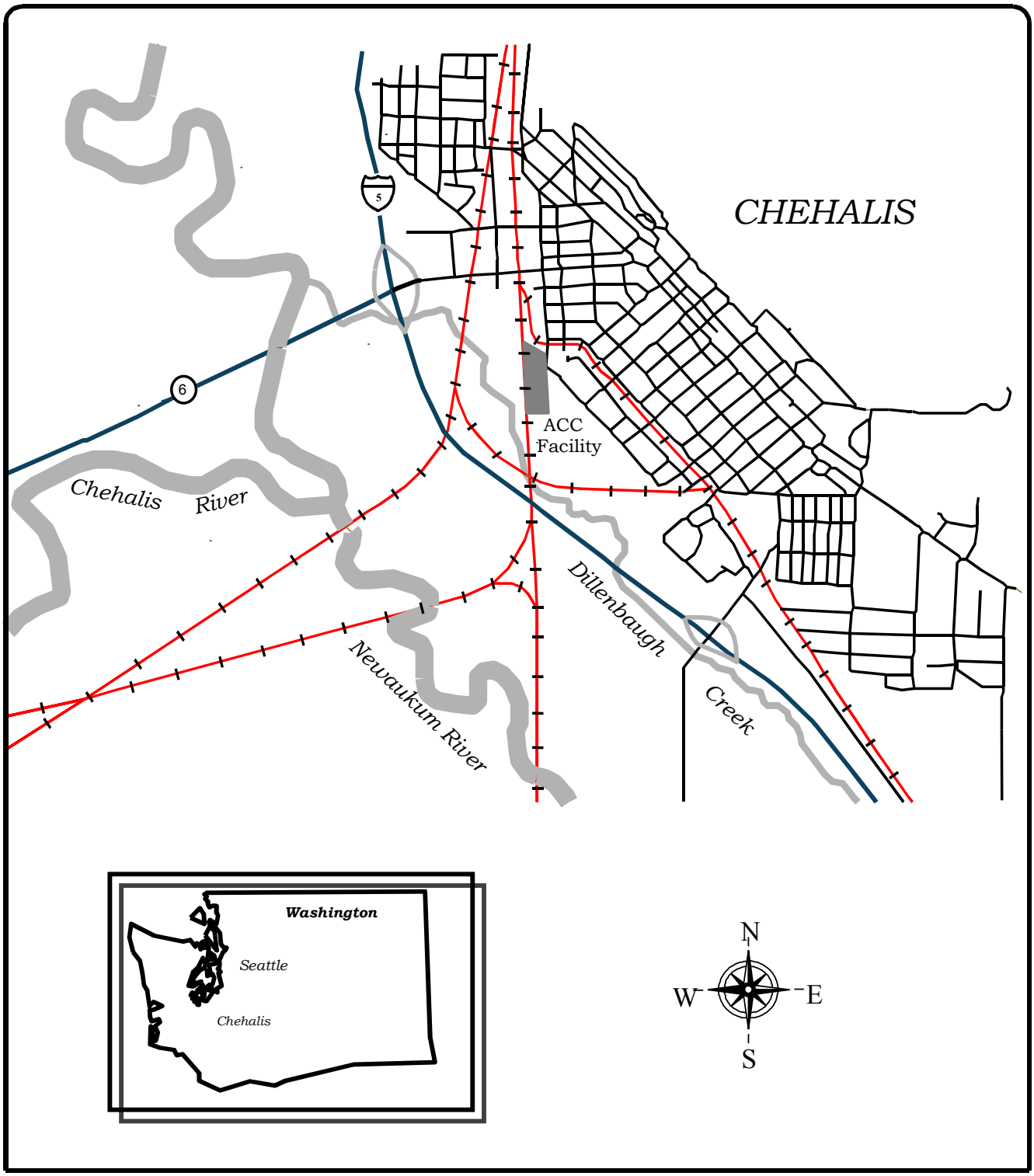

Figure 1: American Crossarm & Conduit Site Location

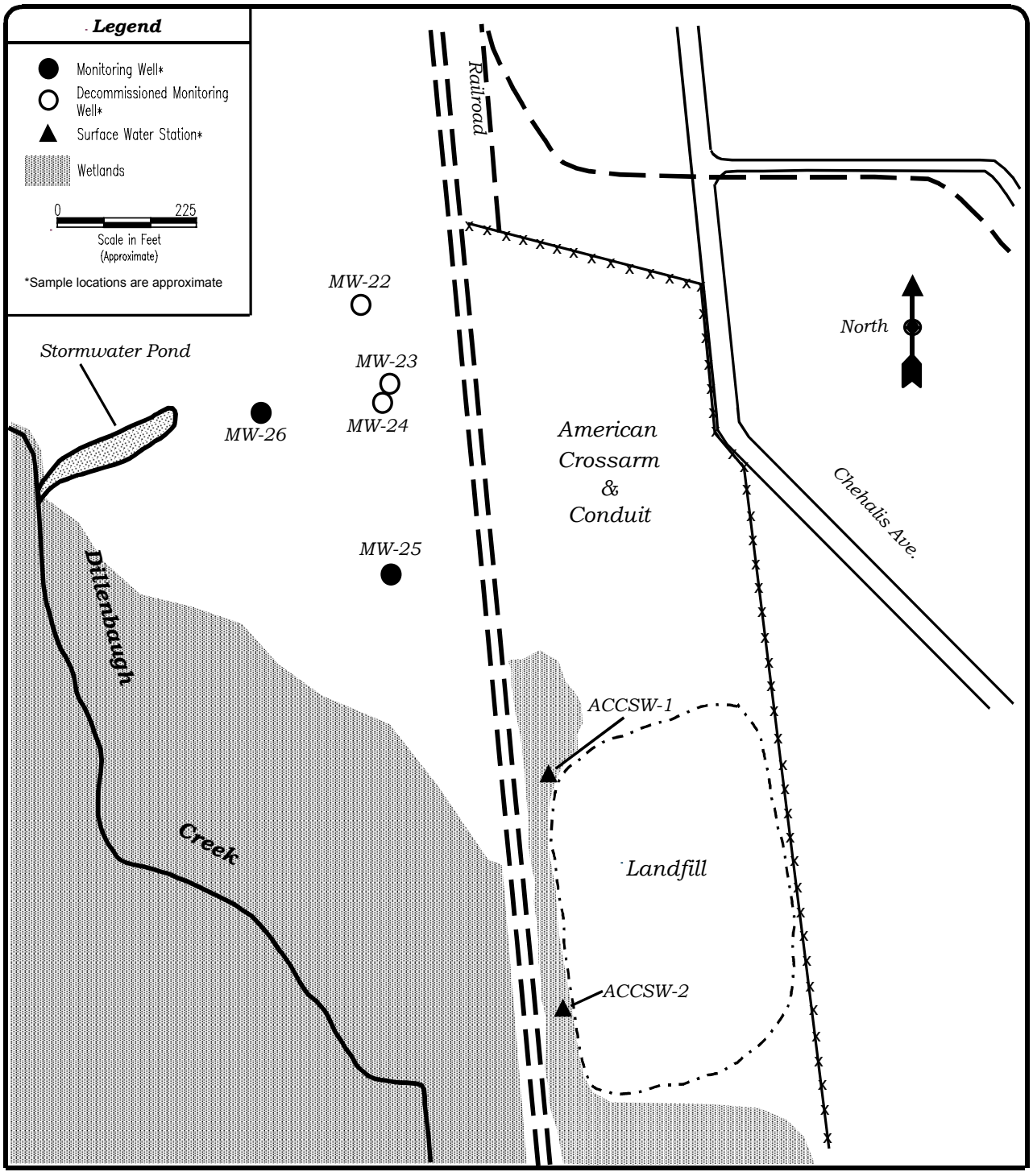

Figure 2: American Crossarm & Conduit Sample Locations

steel beakers, and transferred to one-gallon sample jars. The surface water was assumed to be fully mixed, and the sample was collected at mid-depth and as close to the center of flowing water as could be reached from the bank. Temperature, pH, and specific conductance were measured in the field.

Sampling procedures are discussed in greater detail in Appendix A.

Analysis

Target analytes, analytical method, and detection limits are listed in Table 1.

Table 1: Analytical Methods for November 2000 and April 2001 Samples

Analytes	Method	Reference	Target Detection Limit	Achieved Detection Limit
Field				
Water Level	Solinst Well Probe	NA	0.01 feet	0.01 feet
pH	Orion 25A Field Meter	NA	0.1 Std. Units	0.1 Std. Units
Temperature	Orion 25A Field Meter	NA	0.1°C	0.1°C
Specific Conductance	Beckman Conductivity Bridge	NA	10 umhos/cm	10 umhos/cm
Laboratory				
PAHs	SW-846 Method 8270 (SIM)	EPA 1984	0.1 ug/L	0.007-0.01 ug/L
Chlorinated Phenolics	SW-846 Method 8085 (Draft)	EPA 1999	0.01-1.0 ug/L	0.046-0.11 ug/L

The detection limits achieved for PAHs and chlorinated phenolics are generally lower than the stated method detection limit which is required for this project to meet cleanup standards.

In general, the quality of the data is acceptable. Quality control samples collected in the field consisted of blind field duplicate samples which were obtained from well MW-25. The numeric comparison of duplicate results is expressed as relative percent difference (RPD). The RPDs for PAH results were within 13% for November and within 10% for April. In addition to field quality control samples, laboratory blanks, duplicate matrix spikes, and surrogate compound recoveries were performed in the laboratory. Due to the low detection levels achieved with the SIM mode analysis for PAHs, low levels of some target compounds were detected in the laboratory blanks. Compounds that were found in the sample and in the blank were considered native to the sample if the area counts in the sample are greater than or equal to five times the area counts in the associated method blanks. Results for these samples are considered real and do not require qualification. Surrogate compound recoveries, as well as matrix spike results, were within acceptable limits. Further discussion of quality assurance is presented in Appendix B. Laboratory reporting sheets are available upon request.

Results

Field Observations

Depth-to-water measurements and purge volume, as well as pH, specific conductance, and temperature readings, at the time of sampling are listed in Table 2. All field parameters were within expected ranges.

Table 2: Summary of Field Parameters Results for November 17, 2000 and April 27, 2001

Monitoring Well	Total Depth (feet)[1]	Depth to Water (feet)[2]	pH (standard units)	Specific Conductance (umhos/cm)	Temperature (°C)	Purge Volume (gallons)
November						
MW-25	39.43	4.30	6.9	425	16.8	15
MW-26	45.85	6.78	7.1	435	15.3	13
ACCSW1	--	--	--	279	8.2	--
ACCSW2	--	--	--	296	6.3	--
April						
MW-25	39.43	4.14	7.0	405	16.4	13
MW-26	45.85	6.91	6.9	425	15.0	16
ACCSW1	--	--	6.6	348	17.1	--
ACCSW2	--	--	6.9	308	15.1	--

[1] As measured from top of the PVC casing.

[2] Measured from top of casing.

Since monitoring began in 1997, the condition of the monitoring well network (MW-22 to MW-25) has declined. These four wells were installed in 1991. The well logs describe the upper five to 12 feet of surface material as loose fill composed of wood chips and bark, with variable gravel content, which is very soft with limited bearing capacity. It appears that this layer is compressing and/or decomposing, causing the wells' protective outer casings and concrete pads to sink below the top of the well casings. The uneven subsidence of the protective casing and concrete pad for well MW-22 caused the well casing to bend. Since the well casing may have been cracked, this well was eliminated from the monitoring network in June 1999 since the reliability of the data collected was unknown. Well MW-24 was also eliminated from the monitoring program in June 2000 for similar reasons. Both wells were decommissioned in the fall of 2000. In addition, the property where the wells are located has been filled and graded. In 1998 well MW-23 was damaged while the property was cleared, and the well subsequently has been decommissioned.

Analytical Results

Analytical results of PAH and chlorinated phenolics analysis for November 2000 are summarized in Table 3.

Table 3: Summary of Analytical Results (ug/L) for November 17, 2000

	Groundwater				Surface Water			
Sample Station	MW-25		MW-26		ACCSW1		ACCSW2	
Polynuclear Aromatic Hydrocarbons								
Naphthalene	**0.014**		**0.018**		**0.028**		**0.012**	**J**
Acenaphthylene	0.01	U	0.01	U	0.02	U	0.01	U
Acenaphthene	0.01	U	0.01	U	**0.074**		**0.03**	
Fluorene	0.01	U	0.01	U	**0.028**		**0.025**	
Phenanthrene	0.01	U	0.01	U	**0.028**		**0.028**	
Anthracene	0.01	U	0.01	U	**0.04**		**0.025**	
Sum LPAH	**0.014**		**0.018**		**0.198**		**0.12**	**J**
Fluoranthene	0.01	U	0.01	U	**0.10**		**0.056**	
Pyrene	0.01	U	0.01	U	**0.071**		**0.034**	
Benzo(a)anthracene	0.01	U	0.01	U	**0.013**		**0.007**	
Chrysene	0.01	U	0.01	U	**0.03**		**0.013**	
Benzo(b)fluoranthene	0.01	U	0.01	U	**0.018**		0.01	U
Benzo(k)fluoranthene	0.01	U	0.01	U	**0.011**		**0.009**	**J**
Benzo(a)pyrene	0.01	U	0.01	U	**0.009**		0.01	U
Ideno(1,2,3-cd)pyrene	0.01	U	0.01	U	**0.01**		0.01	U
Dibenzo(a,h)anthracene	0.01	U	0.01	U	0.01	U	0.01	U
Benzo(ghi)perylene	0.01	U	0.01	U	**0.005**	**J**	0.01	U
Sum HPAH	0.01	U	0.01	U	**0.267**	**J**	**0.119**	**J**
2-Methylnaphthalene	**0.009**		**0.011**		**0.02**		**0.008**	**J**
1-Methylnaphthalene	0.01	U	0.01	U	**0.016**		**0.008**	**J**
Dibenzofuran	0.01	U	0.01	U	0.01	U	0.01	U
Retene	0.01	U	0.01	U	**0.05**		0.01	U
Chlorinated Phenolics								
2,4,6-Trichlorophenol	0.056	U	0.056	U	0.058	U	0.057	U
2,4,5-Trichlorophenol	0.056	U	0.056	U	0.058	U	0.057	U
2,3,4,6-Tetrachlorophenol	0.051	U	0.051	U	0.053	U	0.053	U
2,3,4,5-Tetrachlorophenol	0.051	U	0.051	U	0.053	U	0.053	U
Pentachlorophenol	0.047	U	0.046	U	0.048	U	0.048	U

U : The analyte was not detected at or above the reported value.

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

Bold: Detected value.

In November, naphthalene and 2-methylnaphthalene were the only PAHs detected in the wells monitored. Concentrations for naphthalene ranged from 0.014 to 0.018, while 2-methylnaphthalene ranged from 0.009 to 0.011 ug/L. Chlorinated phenolics were not detected in either of the wells during this round of sampling.

Most of the target PAHs were detected at both surface water stations.

Results of organics analysis of samples collected in April 2001 are summarized in Table 4.

Table 4: Summary of Analytical Results (ug/L) for April 27, 2001

	Groundwater				Surface Water			
Sample Station	MW-25		MW-26		ACCSW1		ACCSW2	
Polynuclear Aromatic Hydrocarbons								
Naphthalene	**0.044**		**0.038**		**0.15**		**0.11**	
Acenaphthylene	0.007	U	0.007	U	0.007	U	0.006	U
Acenaphthene	0.007	U	0.007	U	**0.65**		**0.079**	
Fluorene	0.007	U	0.007	U	**0.30**		**0.059**	
Phenanthrene	0.007	U	0.007	U	**0.15**		**0.035**	
Anthracene	0.007	U	0.007	U	**0.14**		**0.057**	
Sum LPAH	**0.044**		**0.038**		**1.39**		**0.34**	
Fluoranthene	0.007	U	0.007	U	**0.44**		**0.04**	
Pyrene	0.007	U	0.007	U	**0.34**		**0.006**	**J**
Benzo(a)anthracene	0.007	U	0.007	U	**0.06**		0.006	U
Chrysene	0.007	U	0.007	U	**0.08**		0.006	U
Benzo(b)fluoranthene	0.007	U	0.007	U	**0.04**		0.006	U
Benzo(k)fluoranthene	0.007	U	0.007	U	**0.19**	**J**	0.006	U
Benzo(a)pyrene	0.007	U	0.007	U	**0.16**		0.006	U
Ideno(1,2,3-cd)pyrene	0.007	U	0.007	U	**0.18**		0.006	U
Dibenzo(a,h)anthracene	0.007	U	0.007	U	0.066	U	0.006	U
Benzo(ghi)perylene	0.007	U	0.007	U	**0.009**	**J**	0.006	U
Sum HPAH	0.007	U	0.007	U	**1.499**	**J**	**0.046**	**J**
2-Methylnaphthalene	**0.036**		**0.051**		**0.20**		**0.028**	
1-Methylnaphthalene	**0.014**		**0.02**		**0.18**		**0.024**	
Dibenzofuran	0.007	U	0.007	U	**0.14**		**0.032**	
Retene	0.007	U	**0.012**	**J**	**0.09**		0.006	U
Chlorinated Phenolics								
2,4,6-Trichlorophenol	0.10	U	0.10	U	0.098	U	0.11	U
2,4,5-Trichlorophenol	0.10	U	0.10	U	0.098	U	0.11	U
2,3,4,6-Tetrachlorophenol	0.092	U	0.092	U	0.090	U	0.097	U
2,3,4,5-Tetrachlorophenol	0.092	U	0.092	U	0.090	U	0.097	U
Pentachlorophenol	0.084	U	0.084	U	0.082	U	0.088	U

U : The analyte was not detected at or above the reported value.
J : The analyte was positively identified. The associated numerical result is an estimate.
Bold: Detected value.

In June, naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene were detected in monitoring wells MW-25 and MW-26. Concentrations of these PAHs ranged from 0.038 to 0.044 ug/L for naphthalene, 0.036 to 0.051 ug/L for 2-methylnaphthalene, and 0.014 to 0.02 ug/L for 1-methylnaphthalene. Retene was detected in MW-26 at an estimated concentration of 0.012 ug/L. Chlorinated phenolics were not detected in either monitoring well during this round of sampling.

As in the November sampling, most of the PAHs analyzed for were detected at both surface water stations. Concentrations of LPAH and HPAH were higher in the November sampling than in the April results. Chlorinated phenolics were not detected at either surface water station during this round of sampling.

Discussion

Groundwater and surface water downgradient of the facility are being monitored to determine if the selected remedy of off-site disposal and containment of the contaminated soil and sediment from the facility property has been an effective form of remediation. At the completion of remediation, long distance transport of PAHs in groundwater was considered very unlikely due to the location of the remaining contaminant plumes, the physical properties of PAHs, and the tight hydrogeologic setting. It was anticipated that remaining PAHs on the ACC property would either become bound to soil particles, microbiologically degrade, or be resolubalized into the water column.

Because large volumes of low level contaminated soils that exceeded cleanup standards at all depths were present on site, Model Toxic Control Act (MTCA) Method B cleanup standards were established for areas of contamination within the facility boundary. MTCA Method B cleanup standards for groundwater within the facility boundary are 0.012 ug/L for carcinogenic PAHs (CPAHs) and 0.729 ug/L for pentachlorophenol (PCP). The facility boundary is the point of compliance for groundwater for MTCA Method A cleanup standards and Safe Drinking Water Act (SDWA) MCLs. Groundwater beneath the site is not expected to be used as a source of drinking water due to the low permeability of the site, expected low well yield, and deed restrictions. SDWA MCLs will be met at the facility boundary. MTCA Method A cleanup standards of 0.1 ug/L for CPAHs in groundwater would also be met at the facility boundary due to the hydrogeologic setting and the physical properties of PAHs.

In November 2000 and April 2001, naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene were again the primary PAHs detected in the downgradient monitoring wells. These PAHs are not classified as carcinogens and, therefore, do not exceed any of the standards that are applicable to this project. Since beginning the monitoring program in 1997, naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene have been the primary PAHs detected in the downgradient wells (as shown in Appendix C). The monitoring does indicate that PAHs are migrating beyond the facility boundary, even though concentrations have been below applicable

standards. Naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene have a greater solubility due to their lower molecular weights. Water solubility is a direct function of molecular weight, with the lighter weight compounds having greater solubility. In general, however, water solubility is relatively low for all PAHs due to their high octanol/water partition coefficients.

Chlorinated phenolics were not detected in either well during November or April; however, PCP was detected in well MW-22 in 1998. PCP was expected to undergo a fate similar to PAHs, such as absorption to soil particles and organic materials in the subsurface. Long-distance transport in groundwater was considered unlikely.

Most of the PAHs analyzed for were detected at both surface water stations during both sample events. Considering that these samples are collected adjacent to the landfill in which contaminated site debris was placed and a railroad track, the occurrence of PAHs in the surface water samples is not unexpected. In November and April the sum of both the LPAH and HPAH decreased from station ACCSW1 to station ACCSW2. Overall, PAH concentrations typically decrease from the upstream station to the downstream station. In the environment PAHs can volatilize, become fixed to sediments, biodegrade, or be photo-oxidized.

Table 5 is a summary of ambient water quality criteria for freshwater established for select PAHs and chlorinated phenolics. All detected analytes in the surface water samples were far below the freshwater quality criteria (EPA, 1992). For comparison, human health criteria for freshwater have also been included in Table 5. Over the monitoring period, HPAH concentrations have exceeded some of these criteria. However, access to the area where the surface water samples are collected is restricted with fencing and posted warning signs.

Table 5: Summary of Surface Water Quality and Human Health Criteria for Freshwater (ug/L)

	Priority Pollutant	Carcinogen	Fresh Acute Criteria	Fresh Chronic Criteria	Human Health Criteria
PAHs					
Naphthalene	Y	N	2300	620	
2-Chloronaphthalene	Y	N	1,600		
Acenapthene	Y	N	1,700*	520*	
Fluorene	Y	N			1,300
Anthracene	Y	N			9,600
Fluoranthene	Y	N	3,980		300
Pyrene	Y	N			960
Benzo(a)anthracene	Y	Y			0.0028
Chrysene	Y	Y			0.0028
Benzo(b)fluoranthene	Y	Y			0.0028
Benzo(k)fluoranthene	Y	Y			0.0028
Benzo(a)pyrene	Y	Y			0.0028
Dibenzo(a,h)anthracene	Y	Y			0.0028
Indeno(1,2,3-cd)pyrene	Y	Y			0.0028
Chlorinated Phenolics					
2,4,6-Trichlorophenol	Y	Y		970	2.10
2,4,5-Trichlorophenal	N	N			
Pentachlorophenol (for a pH of 6.5)	Y	Y	5.49	3.46	0.28

* Insufficient data to develop criteria value.

(EPA, 1992. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; State Compliance Final Rule.)

Conclusions and Recommendations

- In November 2000 and April 2001, naphthalene, 2-methylnaphthalene, and 1-methylnaphthalene were the primary PAHs detected in the downgradient monitoring wells. Although monitoring since 1997 indicates that PAHs are migrating beyond the facility boundary, none of the PAHs detected exceeds MTCA Method A cleanup standards or Safe Drinking Water Act MCLs for groundwater.

- Most of the PAHs analyzed for were detected at both surface water stations during both sample events. Considering that these samples are collected adjacent to the landfill in which contaminated site debris was placed and a railroad track, the occurrence of PAHs in the surface water samples is not unexpected. All detected analytes in the surface water samples were far below established water quality criteria for freshwater.

- The condition of the downgradient monitoring wells has declined. Since monitoring began in 1997, wells MW-22, MW-23, and MW-24 have been decommissioned. The reliability of data collected from these wells was unknown, due to the uneven subsidence of the wells' protective casings and concrete pads that were bending the well casings. At this time, only one of the original wells (MW-25) is suitable to be sampled. Well MW-26 has been added to the sampling network for the remainder of the monitoring period.

- As of April 2001, five years of monitoring have been completed. The effectiveness of the remedial action will be reviewed by the project manager and staff, and a decision will be made by the fall of 2001 to determine if long-term monitoring should be continued or concluded. The condition of the downgradient monitoring network should be considered in this determination. As stated previously, three of the four original wells had to be decommissioned due to problems related to the compression and/or decomposition of the upper five to 12 feet of surface material which is loose fill composed of wood chips, bark, and gravel. If new wells are installed to continue long-term monitoring, possible subsidence of the protective casings and concrete pads will need to be addressed or access needs to be obtained to install wells on the adjoining property.

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Appendix A

Groundwater and Surface Water Sampling

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Appendix A

Groundwater and Surface Water Sampling

Groundwater and surface water samples were collected on November 17, 2000 and again on April 27,2001 from two downgradient monitoring wells, MW-25 and MW-26, and two on-site surface water stations, ACCSW1 and ACCSW2. Various site conditions (ground subsidence, and site filling and grading) have rendered wells MW-22, MW-23, and MW-24 unusable. MW-23 was decommissioned in the fall of 1998. MW-22 and MW-24 were decommissioned in the fall of 2000.

The two monitoring wells were sampled using standard sampling techniques. Prior to sample collection, static water level measurements were recorded to 0.01 feet using an electronic water level probe. The probe was rinsed with deionized water after each use. Both wells were purged and sampled using a stainless steel submersible pump with a pump rate of about 0.5-gpm. Samples were collected when pH, temperature and specific conductance readings stabilized (changes of 10% or less between measurements). The pump was decontaminated between wells by circulating laboratory grade detergent/water through the pump for 5-minutes, followed by a clean water rinse. Purge water was discharged to the ground near each well. All samples for PAHs and chlorinated phenolics were collected in 1-gallon jars with Teflon lined lids.

Two surface water samples were collected to determine if on-site wetlands are receiving any contaminants from the former facility. The samples were collected from two areas considered representative of the site. The first sample location was at the outlet of a small seasonal pond which received surface runoff from the north half of the site. The second sample location was at a wetland area at the south end of the site, adjacent to the landfill. This station should represent runoff from most of the site, which would include possible leachate from the landfill. Surface water samples were collected using decontaminated stainless steel beakers, and transferred to 1-gallon sample jars. The surface water was assumed to be fully mixed and the sample collected at mid-depth and as close to the center of flowing water as could be reached from the bank. Temperature, pH, and specific conductance were measured at the time each sample was collected.

Upon sample collection and proper labeling, samples were stored in an ice-filled cooler. Chain-of-custody procedures were followed in accordance with Manchester Laboratory protocol (Ecology, 2000). The Ecology/EPA Laboratory in Manchester analyzed all samples.

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Appendix B

Laboratory Reporting Sheets

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MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E, Port Orchard Washington 98366

CASE NARRATIVE

December 26, 2000

Subject: American Crossarm & Conduit

Samples: 00-468015 to -468019

Case No. 4436-00

Officer: Pam Marti

By: Dickey D. Huntamer
Organics Analysis Unit

POLYNUCLEAR AROMATIC HYDROCARBONS

ANALYTICAL METHODS

The semivolatile water samples were solvent extracted with methylene chloride following the Manchester modification of the EPA SW 846 8270 with capillary GC/MS analysis of the sample extracts.

HOLDING TIMES

All analysis-holding times were within the recommended limits.

BLANKS

Low levels of some target compounds were detected in the laboratory blanks. Compounds that were found in the sample and in the blank were considered native to the sample if the area counts in the sample are greater than or equal to five times the area counts in the associated method blank.

SURROGATES

The surrogate compound recoveries were within acceptable limits.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE

Matrix spikes recoveries and relative percent differences were within acceptable limits.

ANALYTICAL COMMENTS

No significant problems were encountered in the analysis. The data is acceptable as qualified

DATA QUALIFIER CODES

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
Bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

CN-American Crossarm & Conduit PAH.DOC

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Dr E, Port Orchard Washington 98366

CASE NARRATIVE

December 19, 2000

Subject: American Crossarm and Conduit Project

Sample(s): 00468015-19

Officer(s): Pam Marti

By: Bob Carrell
Organics Analysis Unit

CHLORINATED PHENOLICS ANALYSIS

ANALYTICAL METHOD(S): (Draft EPA Method 8085)

The water samples for acid herbicides were extracted following Manchester Laboratory's standard operating procedure for the extraction of phenolic compounds. The samples were extracted with methylene chloride at pH < 2, solvent exchanged and derivatized along with two method blanks. These extracts were analyzed by capillary Gas Chromatography and Atomic Emission Detection (GC/AED). Confirmation of herbicides is performed by Gas Chromatography and Ion-Trap mass spectrometry (GC/ITD) or comparisons of elemental ratios of hetero-atoms to empirical formulas.

The method utilizes compound independent calibration (CIC) for quantitation of detected compounds. A calibration validation is performed each time CIC is used for target compounds. This is done by comparison of CIC to a single point calibration (SPC) of the target analyte being quantitated.

All analytes have a respective practical quantitation limit (PQL) that is higher than the corresponding method detection limit (MDL). If a target analyte is detected and its identification is unambiguously confirmed at a concentration below its PQL, the reported concentration is qualified as an estimate, ' J' qualifier.

HOLDING TIMES

All samples were extracted and analyzed within the method holding times.

BLANKS

No target compounds were detected in the laboratory blanks, demonstrating the system was free from contamination.

SURROGATES

The 2,4,6-tribromophenol surrogate recoveries were acceptable, ranging from 46% to 98%.

MATRIX SPIKING

The recoveries of the analytes for the matrix spike and matrix spike duplicate were acceptable. The relative percent differences (RPD's) between the matrix spike and matrix spike recoveries were also acceptable.

COMMENTS

The data is useable as qualified.

DATA QUALIFIER CODES

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

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

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

REJ - The data are unusable for all purposes.

NAF - Not analyzed for.

N - For organic analytes there is evidence the analyte is present in this sample.

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

NC - Not Calculated

E - This qualifier is used when the concentration of the associated value exceeds the known calibration range.

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Drive E, Port Orchard Washington 98366

CASE NARRATIVE

May 23, 2001

Subject: American Crossarm & Conduit

Samples: 01-17823- 178027

Case No. 1474-01

Officer: Pam Marti

By: Dickey D. Huntamer
Organics Analysis Unit

POLYNUCLEAR AROMATIC HYDROCARBONS

ANALYTICAL METHODS

The semivolatile water samples were solvent extracted with methylene chloride following the Manchester modification of the EPA SW 846 8270 with capillary GC/MS SIM analysis of the sample extracts.

HOLDING TIMES

All analysis-holding times were within the recommended limits.

BLANKS

Low levels of some target compounds were detected in the laboratory blanks. Compounds that were found in the sample and in the blank were considered native to the sample if the area counts in the sample are greater than or equal to five times the area counts in the associated method blank.

SURROGATES

The surrogate compound recoveries were within acceptable limits for all samples except, d-10 pyrene in sample –178027, which was low. Since the other surrogates in that sample were acceptable no additional qualifiers were added to the results.

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE

Matrix spikes recoveries and relative percent differences were within acceptable limits except for benzo(k)fluoranthene which was 10% low in one spike and right at the limit of 75% in the other. A "J" qualifier was added to the benzo(k)fluoranthene results.

ANALYTICAL COMMENTS

No significant problems were encountered in the analysis. The data is acceptable as qualified

DATA QUALIFIER CODES

U	-	The analyte was not detected at or above the reported value.
J	-	The analyte was positively identified. The associated numerical value is an estimate.
UJ	-	The analyte was not detected at or above the reported estimated result.
REJ	-	The data are unusable for all purposes.
NAF	-	Not analyzed for.
N	-	For organic analytes there is evidence the analyte is present in this sample.
NJ	-	There is evidence that the analyte is present. The associated numerical result is an estimate.
E	-	This qualifier is used when the concentration of the associated value exceeds the known calibration range.
Bold	-	The analyte was present in the sample. (Visual Aid to locate detected compound on report sheet.)

CN-American Crossarm & Conduit PAH 2.DOC

MANCHESTER ENVIRONMENTAL LABORATORY

7411 Beach Dr E, Port Orchard Washington 98366

CASE NARRATIVE

May 9, 2001

Subject: American Crossarm and Conduit Project

Sample(s): 01178023-27

Officer(s): Pam Marti

By: Bob Carrell
Organics Analysis Unit

CHLORINATED PHENOLS ANALYSIS

ANALYTICAL METHOD(S): (Draft EPA Method 8085)

These water samples for chlorinated phenols were extracted following Manchester Laboratory's standard operating procedure for the extraction of phenolic compounds (EPA method 8041 modified). The samples (and two method blanks) were first acidified to a pH of less than 2, then extracted with methylene chloride and solvent exchanged to hexane followed by derivatization. These extracts were then analyzed by capillary Gas Chromatography and Atomic Emission Detection (GC/AED). Confirmation of chlorinated phenols was performed by Gas Chromatography and Ion-Trap mass spectrometry (GC/ITD) or comparisons of elemental ratios of hetero-atoms to empirical formulas.

All analytes have a respective practical quantitation limit (PQL) that is higher than the corresponding method detection limit (MDL). If a target analyte is detected and its identification is unambiguously confirmed at a concentration below its PQL, the reported concentration is qualified as an estimate, ' J' qualifier.

HOLDING TIMES

All samples were extracted and analyzed within the recommended method holding times.

BLANKS

No target compounds were detected in the laboratory blanks at or above the reported value, thus demonstrating that the system was free from contamination.

SURROGATES

The 2,4,6-tribromophenol surrogate recoveries were acceptable, ranging from 70% to 103%.

MATRIX SPIKING

The matrix spike recoveries were acceptable except for the 2,4,5-trichlorophenol recovery on 01178023-LMX2 (157%). This appears to be due to a chlorinated compound that interferes with this trichlorophenol and seems to be generated during the extraction procedure. The relative percent difference (RPD) between the two matrix spikes was also acceptable. No qualifiers were added due to matrix spike recoveries.

COMMENTS

The data is useable as qualified.

DATA QUALIFIER CODES

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

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

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

REJ - The data are unusable for all purposes.

NAF - Not analyzed for.

N - For organic analytes there is evidence the analyte is present in this sample.

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

NC - Not Calculated

E - This qualifier is used when the concentration of the associated value exceeds the known calibration range.

Appendix C

Historical Data

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Summary of Analytes Detected (ug/L) at American Crossarm and Conduit on January 1997

Sample Station	MW-22	MW-25	MW-23	MW-24	MW-24A (Duplicate)	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons							
Naphthalene	0.014 U	**0.032**	**0.12**	**0.069**	**0.043**	**0.061**	**0.015**
Acenaphthylene	0.0074 U	0.0078 U	**0.0051 J**	0.0077 U	0.0075 U	**0.019**	**0.0057 J**
Acenaphthene	0.0074 U	0.0078 U	**0.0014 J**	0.0077 U	**0.00094 J**	**0.06**	**0.0058 J**
Fluorene	0.0074 U	**0.0037 J**	**0.014**	**0.0097**	**0.004 J**	**0.04**	**0.0055 J**
Phenanthrene	**0.0035 J**	**0.012**	**0.039**	**0.022**	**0.0099 J**	**0.03**	**0.0085**
Anthracene	0.0074 U	**0.0023 J**	**0.0032 J**	**0.0037 J**	**0.0028 J**	**0.035**	**0.016**
Sum LPAH	**0.0035 J**	**0.05 J**	**0.1827**	**0.1044 J**	**0.06064 J**	**0.245**	**0.0565 J**
Fluoranthene	0.0074 U	**0.0012 J**	**0.0068 J**	**0.0055 J**	**0.0021 J**	**0.042**	**0.012**
Pyrene	0.0074 U	0.0078 U	**0.0055 J**	**0.028**	0.0075 U	**0.041**	**0.012**
Benzo(a)anthracene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	**0.0061 J**	**0.00067 J**
Chrysene	0.0074 U	0.0078 U	**0.0027 J**	**0.0025 J**	0.0075 U	**0.014**	**0.0037 J**
Benzo(b)fluoranthene	0.0074 U	0.0078 U	0.019 U	0.019 U	0.019 U	**0.0071 J**	0.019 U
Benzo(k)fluoranthene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	0.0078 U	0.0078 U
Benzo(a)pyrene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	**0.0024 J**	0.0078 U
Indeno(1,2,3-cd)pyrene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	**0.0023 J**	0.0078 U
Dibenzo(a,h)anthracene	0.018 U	0.02 U	0.019 U	0.019 U	0.019 U	0.02 U	0.019 U
Benzo(ghi)perylene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	**0.0025 J**	0.0078 U
Sum HPAH	0.0074 U	**0.0012 J**	**0.015 J**	**0.036 J**	**0.0021 J**	**0.1174 J**	**0.02837 J**
2-Methylnaphthalene	**0.0097 J**	**0.017 J**	**0.029**	**0.007 J**	**0.0078 J**	**0.022**	0.0053 U
1-Methylnaphthalene	**0.0038 J**	**0.007 J**	**0.015 J**	**0.0094 J**	**0.0057 J**	**0.031**	**0.0034 J**
2-Chloronaphthalene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	0.0078 U	0.0078 U
Dibenzofuran	0.0074 U	0.0078 U	0.00095 U	0.0077 U	0.00033 U	**0.021**	**0.0024 J**
Retene	0.0074 U	0.0078 U	0.0076 U	0.0077 U	0.0075 U	**0.0062 J**	**0.00086 J**
Chlorinated Phenolics							
2,4,6-Trichlorophenol	0.029 U	0.031 U	0.031 U	0.031 U	0.030 U	0.031 U	0.031 U
2,4,5-Trichlorophenol	0.029 U	0.031 U	0.031 U	0.031 U	0.030 U	0.031 U	0.031 U
2,3,4,6-Tetrachlorophenol	0.029 U	0.031 U	0.031 U	0.031 U	0.030 U	**0.13**	**0.071**
2,3,4,5-Tetrachlorophenol	0.029 U	0.031 U	0.031 U	0.031 U	0.030 U	0.031 U	0.031 U
Pentachlorophenol	0.029 U	0.031 U	0.031 U	0.031 U	0.030 U	**0.58**	**0.35**

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit on September/December 1997

Sample Station	MW-22	MW-25	MW-23	MW-24	MW-24A (Duplicate)	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons[1]							
Naphthalene	0.0071 U	**0.01**	**0.014**	0.0067 U	0.0064 U	**0.29**	**0.12**
Acenaphthylene	0.0066 U	0.0063 U	**0.00056 J**	0.0067 U	0.0064 U	**0.013**	**0.0053 J**
Acenaphthene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.4**	**0.11**
Fluorene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.18**	**0.051**
Phenanthrene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.065**	**0.024**
Anthracene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.11**	**0.029**
Sum LPAH	0.0066 U	**0.01**	**0.01456 J**	0.0067 U	0.0064 U	**1.058**	**0.3393 J**
Fluoranthene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.23**	**0.031**
Pyrene	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	**0.16**	**0.021**
Benzo(a)anthracene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.021**	**0.0029 J**
Chrysene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.031**	**0.0037 J**
Benzo(b)fluoranthene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.018 J**	**0.0031 J**
Benzo(k)fluoranthene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.0064 J**	**0.0011 J**
Benzo(a)pyrene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.013**	**0.0018 J**
Indeno(1,2,3-cd)pyrene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.0073**	**0.0012 J**
Dibenzo(a,h)anthracene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.0012 J**	0.0064 U
Benzo(ghi)perylene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.007**	**0.0016 J**
Sum HPAH	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.4949 J**	**0.0674 J**
2-Methylnaphthalene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.14**	**0.035**
1-Methylnaphthalene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.16**	**0.043**
2-Chloronaphthalene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	0.0064 U	0.0065 U
Dibenzofuran	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.1**	**0.026**
Retene	0.0066 U	0.0063 U	0.0064 U	0.0067 U	0.0064 U	**0.017**	**0.0024 J**
Chlorinated Phenolics[2]							
2,4,6-Trichlorophenol	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2,4,5-Trichlorophenol	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
2,3,4,6-Tetrachlorophenol	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	**0.008**	**0.004**
2,3,4,5-Tetrachlorophenol	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Pentachlorophenol (PCP)	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	**0.007 J**	**0.005 J**

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

[1] = PAH results from samples collected in December 1997.

[2] = Chlorinated phenolic results from samples collected in September 1997.

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit in May 1998

Sample Station	MW-22	MW-25	MW-23	MW-24	MW-24A (Duplicate)	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons							
Naphthalene	**0.015**	**0.017**	**0.015**	**0.012**	**0.012**	**0.21**	**0.11**
Acenaphthylene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U
Acenaphthene	**0.0026 J**	0.0064 U	**0.0033 J**	0.0066 U	0.0066 U	**0.22**	**0.12**
Fluorene	**0.0028 J**	0.0064 U	**0.0033 J**	0.0066 U	0.0066 U	**0.13**	**0.096**
Phenanthrene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.16**	**0.11**
Anthracene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.073**	**0.036**
Sum LPAH	**0.0204 J**	**0.017**	**0.0216 J**	**0.012**	**0.012**	**0.793**	**0.472**
Fluoranthene	0.0033 U	0.0032 U	0.0034 U	0.0033 U	0.0033 U	**0.24**	**0.047**
Pyrene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.12**	**0.024**
Benzo(a)anthracene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.019**	**0.0057 J**
Chrysene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.026**	**0.0062 J**
Benzo(b)fluoranthene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.02**	**0.0073 J**
Benzo(k)fluoranthene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.0066 J**	**0.0037 J**
Benzo(a)pyrene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.006 J**	**0.0043 J**
Ideno(1,2,3-cd)pyrene	0.0033 U	0.0032 U	0.0034 U	0.0033 U	0.0033 U	**0.0078 J**	0.0032 U
Dibenzo(a,h)anthracene	0.0033 U	0.0032 U	0.0034 U	0.0033 U	0.0033 U	0.0032 U	0.0032 U
Benzo(ghi)perylene	0.0033 U	0.0032 U	0.0034 U	0.0033 U	0.0033 U	**0.0069 J**	0.0032 U
Sum HPAH	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.4523 J**	**0.0982 J**
2-Methylnaphthalene	**0.01**	**0.012**	**0.01**	**0.0098**	**0.01**	**0.089**	**0.031**
1-Methylnaphthalene	**0.0054**	**0.0062**	**0.0054**	**0.0049**	**0.0053**	**0.08**	**0.026**
2-Chloronaphthalene	0.0066 U	0.0064 U	0.0068 U	0.0066 U	0.0066 U	0.0065 U	0.0065 U
Dibenzofuran	0.0033 U	0.0032 U	**0.0026 J**	0.0033 U	0.0033 U	**0.082**	**0.066**
Retene	**0.0034 J**	0.0064 U	0.0068 U	0.0066 U	0.0066 U	**0.024**	**0.021**
Chlorinated Phenolics							
2,4,6-Trichlorophenol	0.024 U	0.024 U	0.025 U	0.024 U	0.024 U	**0.018 J**	**0.013 J**
2,4,5-Trichlorophenol	0.024 U	0.024 U	0.025 U	0.024 U	0.024 U	**0.0065 J**	**0.013 NJ**
2,3,4,6-Tetrachlorophenol	0.022 U	0.022 U	0.023 U	0.022 U	0.022 U	**0.093**	**0.068**
2,3,4,5-Tetrachlorophenol	0.022 U	0.022 U	0.023 U	0.022 U	0.022 U	0.022 U	0.023 U
Pentachlorophenol	**0.0033 J**	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.021 U

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

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

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit in October 1998

Sample Station	MW-22	MW-22A (Duplicate)	MW-24	MW-25	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons						
Naphthalene	**0.02**	**0.015**	**0.014**	**0.027**	**0.044**	**0.24**
Acenaphthylene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	0.0063 U	0.0063 U
Acenaphthene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.5**	**0.19**
Fluorene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.044**	**0.15**
Phenanthrene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.018**	**0.096**
Anthracene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.11**	**0.029**
Sum LPAH	**0.02**	**0.015**	**0.014**	**0.027**	**0.716**	**0.705**
Fluoranthene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.46**	**0.039**
Pyrene	0.012 U	0.012 U	0.012 U	0.012 U	**0.36**	**0.022**
Benzo(a)anthracene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.043**	**0.0042 J**
Chrysene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.073**	**0.0072**
Benzo(b)fluoranthene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.047**	**0.007**
Benzo(k)fluoranthene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.014**	**0.0026**
Benzo(a)pyrene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.02**	**0.0049**
Ideno(1,2,3-cd)pyrene	0.012 U	0.012 U	0.012 U	0.012 U	**0.015**	0.0063 U
Dibenzo(a,h)anthracene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	0.0063 U	0.0063 U
Benzo(ghi)perylene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.014 J**	**0.0039 J**
Sum HPAH	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**1.046 J**	**0.908 J**
2-Methylnaphthalene	**0.022**	**0.014**	**0.014**	**0.026**	**0.018**	**0.048**
1-Methylnaphthalene	**0.0097**	**0.0058 J**	0.0063 U	**0.011**	**0.043**	**0.046**
Dibenzofuran	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.07**	**0.091**
Retene	0.0062 U	0.0063 U	0.0063 U	0.0062 U	**0.027**	0.0063 U
Chlorinated Phenolics						
2,4,6-Trichlorophenol	0.047 U	0.047 U	0.048 U	0.047 U	0.049 U	0.047 U
2,4,5-Trichlorophenol	0.047 U	0.047 U	0.048 U	0.047 U	**0.0016 NJ**	0.047 U
2,3,4,6-Tetrachlorophenol	0.043 U	0.043 U	0.044 U	0.043 U	**0.0049 NJ**	**0.016 NJ**
2,3,4,5-Tetrachlorophenol	0.043 U	0.043 U	0.044 U	0.043 U	0.045 U	0.043 U
Pentachlorophenol	**0.0031 J**	**0.0031 NJ**	0.04 U	0.039 U	**0.17**	**0.024 NJ**

U = The analyte was not detected at or above the reported value.
J = The analyte was positively identified. The associated numerical value is an estimate.
NJ = There is evidence that the analyte is present. The associated numerical result is an estimate.

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit in June 1999

Sample Station	MW-24	MW-24A (Duplicate)	MW-25	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons					
Naphthalene	0.0063 U	0.0063 U	0.0063 U	**0.088**	**0.099**
Acenaphthylene	0.0032 U	0.0032 U	0.0032 U	**0.0066**	**0.0051**
Acenaphthene	0.0032 U	0.0032 U	**0.00014 J**	**0.24**	**0.12**
Fluorene	0.0032 U	0.0032 U	0.0032 U	**0.15**	**0.086**
Phenanthrene	0.0063 U	0.0063 U	0.0063 U	**0.22**	**0.096**
Anthracene	0.0063 U	0.0063 U	0.0063 U	**0.074**	**0.035**
Sum LPAH	0.0063 U	0.0063 U	**0.00014 J**	**0.7786**	**0.4411**
Fluoranthene	0.0063 U	0.0063 U	0.0063 U	**0.18**	**0.041**
Pyrene	0.0063 U	0.0063 U	0.0063 U	**0.11**	**0.018**
Benzo(a)anthracene	0.0063 U	0.0063 U	0.0063 U	**0.017**	**0.0077**
Chrysene	0.0063 U	0.0063 U	0.0063 U	**0.024**	**0.0067**
Benzo(b)fluoranthene	0.0063 U	0.0063 U	0.0063 U	**0.012**	**0.0041 J**
Benzo(k)fluoranthene	0.013 U	0.013 U	0.013 U	**0.012 J**	**0.0084 J**
Benzo(a)pyrene	0.0063 U	0.0063 U	0.0063 U	**0.01**	**0.0076**
Ideno(1,2,3-cd)pyrene	0.013 U	0.013 U	0.013 U	**0.018**	0.013 U
Dibenzo(a,h)anthracene	0.0063 U	0.0063 U	0.0063 U	0.0063 U	0.0063 U
Benzo(ghi)perylene	0.0063 U	0.0063 U	0.0063 U	**0.014 J**	0.0063 U
Sum HPAH	0.0063 U	0.0063 U	0.0063 U	**0.397 J**	**0.0935 J**
2-Methylnaphthalene	0.0063 U	0.0063 U	0.0063 U	**0.1**	**0.03**
1-Methylnaphthalene	0.0063 U	0.0063 U	0.0063 U	**0.088**	**0.037**
Dibenzofuran	0.0063 U	0.0063 U	0.0063 U	**0.066**	**0.043**
Retene	0.0063 U	0.0063 U	0.0063 U	**0.018**	0.0063 U
Chlorinated Phenolics					
2,4,6-Trichlorophenol	0.05 U	0.049 U	0.048 U	0.049 U	0.049 U
2,4,5-Trichlorophenol	0.05 U	0.049 U	0.048 U	0.049 U	0.049 U
2,3,4,6-Tetrachlorophenol	0.046 U	0.045 U	0.044 U	0.045 U	0.045 U
2,3,4,5-Tetrachlorophenol	0.046 U	0.045 U	0.044 U	0.045 U	0.045 U
Pentachlorophenol	0.041 U	0.041 U	0.04 U	0.04 U	0.041 U

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit in September 1999

Sample Station	MW-24	MW-25	MW-25A (Duplicate)	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons					
Naphthalene	0.016 U	0.016 U	0.016 U	**0.058**	**0.62 J**
Acenaphthylene	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U
Acenaphthene	0.016 U	0.016 U	0.016 U	**0.16**	**0.27**
Fluorene	0.016 U	0.016 U	0.016 U	**0.12**	**0.17**
Phenanthrene	0.016 U	0.016 U	0.016 U	**0.2**	**0.11**
Anthracene	0.016 U	0.016 U	0.016 U	**0.071**	**0.03**
Sum LPAH	0.016 U	0.016 U	0.016 U	**0.609**	**1.2 J**
Fluoranthene	0.016 U	0.016 U	0.016 U	**0.26**	**0.042**
Pyrene	0.016 U	0.016 U	0.016 U	**0.19**	**0.025**
Benzo(a)anthracene	0.016 U	0.016 U	0.016 U	**0.035**	**0.0041 J**
Chrysene	0.016 U	0.016 U	0.016 U	**0.079**	**0.0097 J**
Benzo(b)fluoranthene	0.016 U	0.016 U	0.016 U	**0.063**	**0.011 J**
Benzo(k)fluoranthene	0.016 U	0.016 U	0.016 U	**0.033**	**0.0051 J**
Benzo(a)pyrene	0.016 U	0.016 U	0.016 U	**0.012 J**	**0.005 J**
Ideno(1,2,3-cd)pyrene	0.016 U	0.016 U	0.016 U	**0.021**	**0.0044 J**
Dibenzo(a,h)anthracene	0.016 U	0.016 U	0.016 U	**0.0047 J**	0.016 U
Benzo(ghi)perylene	0.016 U	0.016 U	0.016 U	**0.016 J**	**0.0046 J**
Sum HPAH	0.016 U	0.016 U	0.016 U	**0.7137 J**	**0.1109 J**
2-Methylnaphthalene	**0.011 J**	**0.015 J**	**0.014 J**	**0.087**	**0.14**
1-Methylnaphthalene	**0.0051 J**	**0.0072 J**	**0.0073 J**	**0.064**	**0.11**
Dibenzofuran	0.016 U	0.016 U	0.016 U	**0.059**	**0.1**
Retene	0.016 U	0.016 U	0.016 U	**0.065**	**0.0035 J**
Chlorinated Phenolics					
2,4,6-Trichlorophenol	0.048 U	0.046 U	0.048 U	0.049 U	0.054 U
2,4,5-Trichlorophenol	0.048 U	0.046 U	0.048 U	0.049 U	0.054 U
2,3,4,6-Tetrachlorophenol	0.044 U	0.042 U	0.044 U	0.045 U	0.049 U
2,3,4,5-Tetrachlorophenol	0.044 U	0.042 U	0.044 U	0.045 U	0.049 U
Pentachlorophenol	0.04 U	0.038 U	0.04 U	**0.013 NJ**	0.045 U

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

N J = There is evidence that the analyte is present. The associated numerical value is an estimate.

Summary of Analytes Detected (ug/L) at American Crossarm and Conduit in June 2000

Sample Station	MW-25	MW-25A (Duplicate)	ACCSW1	ACCSW2
Polynuclear Aromatic Hydrocarbons				
Naphthalene	**0.022**	**0.019**	**0.037**	**0.016**
Acenaphthylene	0.0067 U	0.0067 U	0.0067 U	0.0067 U
Acenaphthene	0.0067 U	0.0067 U	**0.1**	**0.058**
Fluorene	0.0067 U	0.0067 U	**0.057**	**0.039**
Phenanthrene	0.0067 U	0.0067 U	**0.068**	**0.047**
Anthracene	0.0067 U	0.0067 U	**0.026**	**0.018**
Sum LPAH	**0.022**	**0.019**	**0.288**	**0.178**
Fluoranthene	0.0067 U	0.0067 U	**0.055**	**0.046**
Pyrene	0.0067 U	0.0067 U	**0.026**	**0.021**
Benzo(a)anthracene	0.0067 U	0.0067 U	**0.0058 J**	**0.0051 J**
Chrysene	0.0067 U	0.0067 U	**0.0075**	**0.0041 J**
Benzo(b)fluoranthene	0.0067 U	0.0067 U	**0.0067**	**0.0046 J**
Benzo(k)fluoranthene	0.0067 U	0.0067 U	**0.006 J**	**0.0056 J**
Benzo(a)pyrene	0.0067 U	0.0067 U	**0.0085**	0.0067 U
Ideno(1,2,3-cd)pyrene	0.0067 U	0.0067 U	**0.0031 J**	0.0067 U
Dibenzo(a,h)anthracene	0.0067 U	0.0067 U	0.0067 U	0.0067 U
Benzo(ghi)perylene	0.0067 U	0.0067 U	**0.003 J**	0.0067 U
Sum HPAH	0.0067 U	0.0067 U	**0.1216 J**	**0.0864 J**
2-Methylnaphthalene	**0.016**	**0.014**	**0.038**	**0.013**
1-Methylnaphthalene	**0.011**	**0.01**	**0.029**	**0.015**
Dibenzofuran	0.0067 U	0.0067 U	0.0067 U	0.0067 U
Retene	0.0067 U	0.0067 U	0.0067 U	0.0067 U
Chlorinated Phenolics				
2,4,6-Trichlorophenol	0.04 U	0.04 U	0.042 U	0.04 U
2,4,5-Trichlorophenol	0.04 U	0.04 U	0.042 U	0.04 U
2,3,4,6-Tetrachlorophenol	0.037 U	0.037 U	0.038 U	0.036 U
2,3,4,5-Tetrachlorophenol	0.037 U	0.037 U	0.038 U	0.036 U
Pentachlorophenol	0.033 U	0.033 U	0.035 U	0.033 U

U = The analyte was not detected at or above the reported value.

J = The analyte was positively identified. The associated numerical value is an estimate.

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Appendix C – Environmental Deed Restriction

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Grantors:	Peterson, Darrell and Judy
Grantees:	Not Applicable
Abbreviated Legal Description:	Lots 1-10 inclusive, Block "T" of Eliza Barrett's Alfred Street Addition to Chehalis, together with the vacated alley in said block, Lewis County, Washington.

complete legal description listed on page 5 of document

Assessor's Tax Parcel Numbers: 5274-001-000

DARRELL PETERSON and JUDY PETERSON, husband and wife, being owners of all the parcels of land situated within the boundaries of that certain property legally described as set forth on Exhibit "A", attached hereto, do hereby publish the following covenants and do hereby impose the same upon all real property described above.

Section 1. DECLARATION OF INTENT.

The undersigned hereby certify and declare that there is hereby established a general plan for the development, improvement, maintenance, and protection of the real property

above described. The following covenants are imposed pursuant to a general plan for the benefit of all said tracts, and each and every building site therein. They are designed for the mutual benefit of the building sites in said tract and shall pertain to, and pass to, each building site therein, and shall bind all persons, together with their representatives and/or successors in interest, who may, at any time, and from time to time, own said property.

More particularly, over the course of the past several years the United States Environmental Protection Agency (EPA) has undertaken the cleanup of hazardous substances located on the above described real property. In furtherance of this effort, EPA has determined that certain limitations or restrictions on the use of said property will assure the continued protection of public health and the environment.

Section 2. COVENANTS.

A. **Prohibition on Groundwater Wells.** In order to prevent public exposure to potentially contaminated groundwater beneath the site, there shall be no groundwater wells installed or used on the above described real property.

B. **Prohibition on Re-zoning to Residential or Agricultural Use.** The cleanup of hazardous substances by EPA was performed in anticipation of the site being used solely for commercial/industrial purposes, and not for residential or agricultural use. Any change in use could result in an increased risk to the public and, therefore, the above described real property, nor any part thereof, shall be re-zoned to either residential or agricultural use, nor shall such uses be allowed.

C. **Prohibition on Intrusive Activities Below Ground.** As part of the cleanup undertaken by EPA there has been placed upon the ground a layer of soil materials, or "cap" to

help protection the public from contact with any contaminants which may remain below the surface of the site. There shall be no intrusive activities beneath the surface of the cap, including any subsurface excavation or maintenance and repair of utilities, without the prior express approval from the State of Washington, Department of Ecology (DOE) or the EPA or a successor agency.

Additionally, any person undertaking intrusive activities will be subject to the safety requirements set forth in Section 1910.120 of the Occupational Health and Safety Act and Chapter 296-62 of the Washington Administrative Code (W.A.C.), as either may hereafter be amended.

The generation, transportation, and disposal of any excess subsurface materials will be subject to the requirements of Chapter 173-303 W.A.C. as hereafter amended.

D. **Term Enforcement and Construction**.

(1) **Term**. These covenants are to run with the land and shall be binding upon all parties and all persons claiming under them for a period of thirty (30) years from the date these covenants are recorded. after which time said covenants shall be automatically extended for successive periods of ten (10) years each unless an instrument signed by a majority of the then owners, and approved in writing by the EPA, has been recorded, agreeing to change said covenants in whole or in part.

(2) **Enforcement**. These covenants may be enforced by the EPA, DOE, the City of Chehalis, or any other affected governmental agency, as well as by individual lot owners. Enforcement shall be by proceedings at law or in equity against any person or

persons violating or attempting to violate any covenant either to restrain violation or to recover damages for violation.

(3) **Severability**. If any of these covenants by judgment or court order shall in no wise affect any of the other provisions which shall remain in full force and effect.

IN WITNESS WHEREOF we have hereunto set our hands this 18 day of August, 1997.

Darrell Peterson

Darrell Peterson

Judy Peterson

Judy Peterson

STATE OF WASHINGTON)
:ss
COUNTY OF L E W I S)

On this day personally appeared before me **DARRELL PETERSON and JUDY PETERSON,** to me known to be the individuals described in and who executed the within and foregoing instrument, and acknowledged to me that they signed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 18 day of August, 1997.

MARK C. SCHEIBMEIR NOTARY PUBLIC COMMISSION EXPIRES 6-14-98 STATE OF WASHINGTON

Notary Public in and for the state of Washington residing at Centralia
My name is (printed) Mark Scheibmeir
My appointment expires 6-14-98

EXHIBIT "A"

PARCEL A:

That part of Lots 1 through 10, inclusive. Block T, Eliza Barrett's Alfred Street Addition to Chehalis, as recorded in Volume 2 of Plats. page 152. TOGETHER WITH vacated alley in said Block T. ALSO TOGETHER WITH the South 30 feet of vacated John Street, the vacated East 30 feet of Railroad Avenue, and all of vacated Joseph Street adjacent to said Block T.

PARCEL B:

That portion of the S.S. Saunders Donation Land Claim described as follows: Beginning at the intersection of the East line of the Burlington Northern Railroad right-of-way and the Southeasterly line of the wife's half of said Donation Claim; thence Northeasterly along said Southeasterly line to the West line of Chehalis Avenue; thence North along said West line to the South line of Joseph Street; thence West along said South line to the East line of said Burlington Northern Railroad right-of-way; thence South along said East line to the Point of Beginning.

PARCEL C:

All of Blocks 54, 55, 56 and 57, W.M. Urquhart's Addition to Chehalis, as recorded in Volume 1 of Plats, page 50. EXCEPT that portion described as follows: Beginning at the Southwest corner of said Block 57; thence North along the West line thereof 230 feet; thence Southeasterly to a point on the East line of said Block 57 which is 160 feet North of the Southeast corner thereof; thence South along said East line to the Southeast corner of said Block 57; thence West along said South line to the Point of Beginning. Lewis County, Washington.

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Appendix D – Annual Site Inspection Form Conducted by Ecology

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for double-sided copying.

Annual Site Inspection Form Conducted By Ecology

American Crossarm and Conduit
Facility Site ID: 208
Tax Parcel No.: 5274-004-002 (Landfill)
Tax Parcel No.: 5274-003-000 (Machine Shop)
Tax Parcel No.: 5274-004-001 (Head Start Children's Facility and Fitness Center)

Inspector Name: _____

Inspection Date and Time: _____

Weather: _____

Description and Purpose of the Site Inspection: Condition of the landfill cover, fence around the landfill, visual observation of Dillenbaugh Creek and the stormwater lagoon and general walk through around the site.

Comments by the Inspector: _____

_____

_____

_____

1. Landfill Fencing:

a. Gate is properly operating.

Yes_____ No_____

Remarks: _____

b. Lock is in working condition and is free of corrosion and physical damage.

Yes_____ No_____

Remarks: _____

c. Fence is intact and erect.

Yes_____ No_____

Remarks: _____

d. Signs are present and readable.

Yes_____ No_____

Remarks: _____

e. Vandalism/Trespassing.

5. Yes_____ No_____

Remarks: _____

f. Fence Damaged.

6. Yes_____ No_____

Remarks: _____

2. Landfill Surface/Slopes:

a. Landfill Settlement (approximate depth).

7. Yes_____ No_____

Remarks: _____

b. Cracks on Surface.

8. Yes_____ No_____

Remarks: _____

c. Landfill Vegetative Cover.

9. Yes_____ No_____

Remarks: _____

d. Erosion on the Cover/Slopes.

10. Yes_____ No_____

Remarks: _____

e. Slopes Stability.

11. Yes_____ No_____

Remarks: _____

f. Bulges on the Cover.

12. Yes_____ No_____

Remarks: _____

g. Wet Areas/Water Damage.

13. Yes_____ No_____

Remarks: _____

3. Stormwater Lagoon.

Remarks: _____

_____

_____

_____

4. Condition of the 30-inch Stormwater Line from Chehalis Ave. to Stormwater Lagoon.

Remarks: _____

_____

_____

_____

5. Perimeter Ditches/Off-Site Discharge.

Remarks: _____

_____

_____

_____

6. Additional Comments.

14. Comments: _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

21. _____

7. Dillenbaugh Creek Visual Observation and Stormwater Lagoon and General Walk Through around the Site.

Remarks: _____

8. Stormwater Lagoon.

22. Remarks: _____

23. _____

24. _____

25. _____

26. _____

27. _____

28. _____

29. _____

30. _____

9. Tax Parcels 5274-003-000 (Machine Shop) and 5274-004-001 (Head Start Children's Facility and Fitness Center) Walk Through.

Remarks: _____

Signature of the Inspector: _____ Date: _____

Signature of the Supervisor: _____ Date: _____