STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

September 5, 2012

Mr. Thomas Morin, LG
Environmental Partners, Inc.
295 NE Gilman Boulevard, STE 201
Issaquah, Washington 98027

Re: Opinion on Proposed Cleanup of the following Site:

- Name: Washougal Compressor Station
- Address: 1309 NE Brown Road, Washougal, WA 98532
- Facility/Site No.: 26815238
- Cleanup Site ID No.: 3962
- VCP No.: SW0719

Dear Mr. Morin:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Washougal Compressor Station facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

YES. Ecology has determined that, upon completion of your proposed cleanup, further remedial action will likely be necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following suspected or confirmed releases:

- Petroleum Hydrocarbons in Soil and Groundwater

- Volatile Organic Compounds (VOCs) in Soil and Groundwater
- Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) in Soil and Groundwater
- Glycol in Soil and Groundwater
- Polychlorinated Biphenyls (PCBs) in Soil and Groundwater
- Metals in Soil and Groundwater
- Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) in Soil and Groundwater
- Napthalene in Soil and Groundwater
- Fuel Additives and Blending Compounds (1,2-dibromoethane [EDB], 1,2-dichloroethane [EDC], and Methyl Tertiary Butyl Ether [MTBE]) in Soil and Groundwater

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. September 18, 1996, Terra Technologies. Oil Release Response Report, Northwest Pipeline Corporation, 1309 NE Brown Road, Washougal, Washington 98617.

2. December 2005, Williams Gas Pipeline, Environmental Partners, Inc., and Portnoy Environmental. Site Condition Summary and Sampling Plan, Washougal Compressor Station, 3104 166th Avenue East, Sumner, Washington.

3. November 10, 2006, DRAFT Summary of Completed Remedial Actions – Washougal Compressor Station, E-mail from Eric Koltes, Environmental Partners, Inc., to Steve Teel, Ecology.

4. January 10, 2007, RE: DRAFT Summary of Completed Remedial Actions – Washougal Compressor Station, E-mail from Steve Teel, Ecology, to Eric Koltes, Environmental Partners, Inc.

5. December 21, 2007, Williams Gas Pipeline, Environmental Partners, Inc., and Portnoy Environmental. Interim Remedial Action Report No. 1, AOPCs 3, 13S, and TWS 1, Washougal Compressor Station, 1309 NE Brown Road, Washougal, Washington 98532.

6. August 2008, Williams Gas Pipeline, Environmental Partners, Inc., and Portnoy Environmental. Deferred AOPC Sampling Plan, Washougal Compressor Station, 1309 NE Brown Road, Washougal, Washington 98532.

7. October 9, 2008, Washougal Response to Ecology Comments, E-mail from Eric Koltes, Environmental Partners, Inc. (EPI), to Steve Teel, Ecology.

8. August 16, 2011, Williams Gas Pipeline, Environmental Partners, Inc., and Portnoy Environmental. Terrestrial Ecological Evaluation Program, Northwest Pipeline GP I-5 Corridor Compressor Station Facilities.

9. June 4, 2012, Williams Gas Pipeline, Environmental Partners, Inc., and Portnoy Environmental. Remedial Investigation and Cleanup Action Plan, Volumes I and II, Washougal Compressor Station, 1309 NE Brown Road, Washougal, Washington 98532.

The reports listed above will be kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Appointments can be made by calling the SWRO resource contact at (360) 407-6365.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that, upon completion of your proposed cleanup, **further remedial action** will likely be necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is <u>not</u> sufficient to establish cleanup standards and select a cleanup action

The Washougal Compressor Station consists of two contiguous parcels totaling 9.42 acres on the east and west side of NE Brown Road in Washougal, Washington. The compressor station was originally constructed in 1971. This facility is part of the Northwest Pipeline/Williams Gas Pipeline (natural gas) and consists of a compressor station within a fenced and locked enclosure. The area inside the fence is approximately 2.9 acres. Included within the fenced enclosure are two compressor buildings, various other support buildings, a former meter building, ten above-ground storage tanks (ASTs), two main pipelines and several connecting pipelines, and fin fans. Outside of the main fenced area there are two smaller fenced areas that contain pipeline pig receivers. Concrete secondary containment was not installed at the ASTs until 2005.

Depth to groundwater is unknown. Groundwater was not encountered within the maximum depth of investigation of 3 feet below grade (fbg). However, it is estimated that perched groundwater may be encountered at the soil-bedrock contact.

Ecology issued an opinion letter in January 2006 on the *Site Condition Summary and Sampling Plan*. Ecology's opinion was that the work plan was not likely to meet the substantive requirements contained in MTCA.

Ecology issued an opinion letter in October 2008 on the proposed remedial investigation work plan (*Deferred AOPC Sampling Plan*). Ecology's opinion was that the work plan was not likely to meet the substantive requirements contained in MTCA.

Previous reports have identified 14 Areas of Potential Concern (AOPC):

- AOPC 1 – Lube Oil and Glycol ASTs
- AOPC 2 – Northern Fin Fans
- AOPC 3 – Southern Fin Fans
- AOPC 4 – Northern Glycol Reservoir ASTs
- AOPC 5 – Southern Glycol Reservoir AST
- AOPC 6 – Former Meter Building
- AOPCs 7, 8, and 9 – Petroleum Contaminated Soil Excavation Area Adjacent to Compressor Building
- AOPC 10 – Used Oil/Pipeline Liquids AST
- AOPC 11 – Septic System and Leach Field
- AOPC 12 – Former Gasoline Underground Storage Tank (UST)
- AOPC 13N and 13S – Pig Receivers
- AOPC 14 – Pig Receiver

Based on a review of the available information, Ecology has the following comments on the *Remedial Investigation and Cleanup Action Plan, Volumes I and II, Washougal Compressor Station*:

General Comments

1. The report is incomplete because it is lacking the following items:

    a. Boring logs need to be included in an appendix.

    b. Section 5.5 states that it is anticipated that the report that summarizes the results of the Terrestrial Ecological Evaluation (TEE) for Compressor Station Facilities will be submitted to Ecology in January 2012. As of the

date of this letter, this TEE report has not been received. The TEE report is necessary for supporting the proposed cleanup levels in Table WSCS-1. Also, the TEE cleanup levels for total petroleum hydrocarbons-gasoline range (TPH-G), total petroleum hydrocarbons-diesel range (TPH-D), total petroleum hydrocarbons-oil range (TPH-O), lead, cadmium, and chromium need to be added to the table. Please submit the TEE report prior to or concurrently with the submittal of the revised Cleanup Action Plan.

c. Ecology's previous opinion letter stated that grab groundwater samples need to be collected and analyzed for all of the constituents of concern for the Site. The Site investigation did not attempt to sample groundwater. Instead, the results of a well log search were used to conclude that groundwater occurred at depths greater than 100 feet. This does not meet the substantive requirements of MTCA. It is very likely that perched groundwater is present beneath the Site. Please see WAC 173-340-720(2) for the definition of potable groundwater. Also, WAC 173-340-720(2)(b) states that groundwater shall be classified as potable to protect drinking water beneficial uses unless certain criteria are applicable; one of these criteria is insufficient yield (less than 0.5 gallon per minute on a sustainable basis to a well constructed in compliance with WAC 173-160 and in accordance with normal domestic well construction practices for the area in which the site is located). Please note that the minimum casing diameter recommended for such well construction to meet the substantive requirement under WAC 173-340-720 (2)(i) for this potability test is 6 inches inner diameter.

2. Ecology does not agree with the scoring used in Section 12.3.3.1, Protectiveness; Section 12.3.3.2, Permanence; Section 12.3.3.4, Effectiveness over the Long Term; and, Section 12.3.3.6, Technical and Administrative Implementability. The scoring assumes that there is not a complete soil to groundwater pathway. Ecology does not agree with this assumption at this time. As indicated in the following comments, additional characterization at the Site is necessary.
Also, the scoring cannot be evaluated because the TEE report has not yet been submitted. This report is the basis for the TEE cleanup levels for the Site.

3. Table WSCS-16. Please modify this table and the corresponding text to delete references to a MTCA Method B Cleanup Level. Ecology views this Site as appropriate for a Method A Cleanup Level for Unrestricted Land Use. Also, please delete the columns that refer to a remediation level.

4. The data tables for each of the AOPCs need to be revised to include the TEE Cleanup Levels.

5. The final cleanup levels shown in Table WSCS-16 need to be revised to incorporate the TEE Cleanup Levels. For example, the table shows the "Final Cleanup Level" for chromium as 2,000 milligrams per kilogram (mg/kg). However, the applicable TEE Cleanup Level is 42 mg/kg. The TEE pathway is apparently not considered in the table because of "hot spot removal." However, the cleanup levels that will be used to determine whether the hot spot removal is adequate needs to be based on TEE. Therefore, the TEE cleanup level needs to be shown on the table. Also, summary Site-wide statistics need to be provided that demonstrate that: 1) the upper 95 percent confidence limit is less than the TEE Cleanup Level; 2) no single sample concentration is greater than two times the TEE Cleanup Level; and, 3) less than ten percent of the sample concentrations exceed the TEE Cleanup Level.

6. Table WSCS-18. The proposed use of a deed restriction as a remedy does not meet the substantive requirements of MTCA. As stated in WAC 173-340-440(5), cleanup actions shall not rely primarily on institutional controls where it is technically possible to implement a more permanent cleanup action for all or a portion of the site.

7. Electronic data needs to be submitted to Ecology's Environmental Information Management (EIM) database. In accordance with Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated shall be submitted in both a written and electronic format. For additional information regarding electronic format requirements, see the website http://www.ecy.wa.gov/eim. All laboratory analyses shall be performed by a State of Washington Certified Laboratory for each analytical method used.

Comments on Specific AOPCs

8. **AOPC 1 – Lube Oil and Glycol ASTs**: Additional soil and groundwater characterization is necessary to define the extent of TPH-O, cadmium, and chromium contamination. Additional soil samples for cPAHs, PCBs, arsenic, and lead analyses are also needed. See below comments:

    a. In reference #6, above, EPI responded that *"To account for potential fill issues associated with pouring the containment floor, field assessment will include: (1) observations of soil types for the presence of fill material (if fill material/native interface is observed, the 'surface' sample will be collected at this interface and the '18 inch' sample will be collected 18 inches below the interface), or (2) if the interface is not discernible, a 36 inch sample will be added to each sample location in each AOPC and analyzed for the*

appropriate COPCs." The report does not contain the observations of soil types and no 36-inch sample was collected for petroleum hydrocarbons analyses. A description of these observations needs to be added to the report. However, a 36-inch sample was collected for cadmium at location WS1-BG50. The result from this depth (7 mg/kg) was the highest measured cadmium concentrations for this AOPC. However, no deeper samples were collected, so the vertical extent of cadmium contamination was not determined. This location in particular appears to show an increasing cadmium concentration with depth. Further samples are needed to assess the vertical extent of cadmium contamination above the TEE Vascular Plants Cleanup Level of 4 mg/kg. Cadmium soil concentration also exceeds the MTCA Method A Cleanup Level for Unrestricted Land Uses (Method A CUL) of 2 mg/kg. Assessment of groundwater is also necessary (see above comment 1c).

b. The sample locations were located on the perimeter of the concrete secondary containment pad. Since the pad wasn't installed until 2005 and the facility was constructed in 1971, soils immediately surrounding the tanks may be contaminated. Therefore, samples need to also be collected from beneath the pad and immediately surrounding the tanks to characterize the extent of contamination.

c. Figure WSCS-10 shows a hot spot removal area for TPH-O centered on sample location WSSB1-3. The adequacy of this proposed cleanup cannot be evaluated until a TEE Cleanup Level for TPH-O is established. WSSB1-3@ 18 inches detected TPH-O at a concentration of 120 mg/kg. None of the other six sample locations that were analyzed for TPH-O had concentrations above the laboratory reporting limit. This reporting limit ranged from 100-140 mg/kg. Also, no samples were analyzed for TPH-O to define the extent of this hot spot except for samples WSSB1-2 and WSSB1-4. A total of 38 samples from 14 locations were collected in 2009 from this AOPC for analysis of cadmium only. TPH-G, TPH-D, TPH-O, arsenic, lead, and chromium should have been analyzed in all of the soil samples collected from this AOPC.

d. The report needs to be revised to indicate that chromium exceeds TEE Cleanup Levels. Sample WSSB1-7@ 3 inches (47 mg/kg) exceeds the TEE Cleanup Level for chromium (42 mg/kg).

e. There are insufficient data to evaluate whether TPH-O, arsenic, and lead concentrations exceed TEE Cleanup Levels (see above comments 1b and 5).

9. **AOPC 2 – Northern Fin Fans**: Additional soil and groundwater characterization is necessary to define the extent of TPH-O, cadmium, and chromium contamination. Additional soil samples for TPH-G, VOCs, and TPH-D analyses are also needed. See below detailed comments:

    a. All of the constituents of concern were among the analyses list for selected samples from the initial three sampling locations. Results from this initial round of sampling showed that cadmium exceeded the TEE Cleanup Level and the Method A CUL at location WSSB2-2 and chromium exceeded the TEE Cleanup Level at location WSSB2-3. TPH-G and TPH-D were also detected at concentrations below the Method A CUL. A TEE Cleanup Level for TPH-O has not been established; however, the TPH-O concentration from location WSSB2-2@ 3 inches (250 mg/kg) likely will exceed it. The follow-up soil sampling in 2009 (10 samples from four locations) only analyzed for cadmium. The analyses list for these samples should have included all of the constituents of concern.

    b. Figure WSCS-11 shows a hot spot removal area for chromium. However, there are no sample results data that define the extent of excavation.

10. **AOPC 3 – Southern Fin Fans**: Ecology's opinion letters from 2006 and 2008 list the constituents of concern for this AOPC to be petroleum hydrocarbons, glycol, metals, cPAHs, and PCBs. An interim action cleanup for arsenic contamination was performed in July 2006. The interim action results were summarized in a November 2006 e-mail and in a December 2007 report (referenced above). To date, soil samples from this AOPC have only been analyzed for arsenic (11 samples) and VOCs (two samples). Additional soil samples need to be collected for the constituents of concern besides arsenic and VOCs.

11. **AOPC 4 – Northern Glycol Reservoir ASTs**: Selected samples from five of the six sample locations exceed the TEE Cleanup Level for chromium of 42 mg/kg. One of these five locations also has a sample that exceeds the TEE Cleanup Level for lead. Additional samples are needed to characterize the extent of chromium and lead contamination.

12. **AOPC 6 – Former Meter Building**: Additional soil and groundwater characterization is necessary to define the extent of chromium and lead contamination. See below comments:

    a. The report needs to be revised to indicate that selected samples also exceed TEE Cleanup Levels for chromium and lead.

b. Assessment of groundwater is also necessary (see above comment 1c).

c. Additional soil samples are needed to define the extent of chromium contamination. The follow-up soil sampling in 2009 (61 samples from 25 locations) did not analyze for chromium.

d. Additional soil samples are needed to define the extent of lead contamination in the vicinity of location WS6-AT34.

13. **AOPC 7 – Petroleum-Impacted Soil Excavation Area Adjacent to Compressor Building**: Additional soil characterization is necessary to define the extent of chromium contamination. Sample WSSB7-3@18 inches had a chromium concentration (96 mg/kg) above the TEE Cleanup Level of 42 mg/kg.

14. **AOPC 8 – Petroleum-Impacted Soil Excavation Area Adjacent to Compressor Building**: Additional soil and groundwater characterization is necessary to define the extent of cadmium contamination. See below comments:

    a. Assessment of groundwater is also necessary (see above comment 1c).

    b. The extent of cadmium soil contamination needs to be further defined. Cadmium contamination was observed at location WSSB8-2 to a depth of 18 inches. However, the aerial extent of this contamination has not been determined to the southeast.

15. **AOPC 9 – Petroleum-Impacted Soil Excavation Area Adjacent to Compressor Building**: Information on TEE Cleanup Levels is needed (see above comment 1b).

16. **AOPC 11 – Septic System and Leach Field**: Ecology's opinion letters from 2006 and 2008 list the constituents of concern for this AOPC to be petroleum hydrocarbons, VOCs, glycol, metals, cPAHs, and PCBs. To date, soil samples from this AOPC have only been analyzed for arsenic. Additional soil samples need to be collected for the constituents of concern besides arsenic.

17. **AOPC 13 - Pig Receivers 13N and 13S**: Ecology's opinion letters from 2006 and 2008 list the constituents of concern for this AOPC to be petroleum hydrocarbons, VOCs, glycol, metals, cPAHs, and PCBs. To date, soil samples from this AOPC have only been analyzed for arsenic. Additional soil samples need to be collected for the constituents of concern besides arsenic.

18. **AOPC 14 Pig Receiver**:

a. The sample result from WSSB14-4@3 inches had a TPH-D concentration of 160 mg/kg and a TPH-O concentration of 1,300 mg/kg; these results likely exceed the applicable TEE Cleanup Level. Figure WSCS-17 shows a hot spot removal area associated with this location. Ecology recommends that additional samples are collected to confirm that the hot spot removal will address all of the contamination associated with this AOPC.

b. The report needs to discuss the source of the mercury hot spot. Why was contamination found in that particular area? What certainty is there that there is no additional mercury contamination in this AOPC?

c. Additional detail needs to be added to the report to explain the cause of the TPH release from AOPC 14. Is there a potential for recontamination during continued use of this pig receiver or AOPC 13? Are additional engineering controls necessary for either of these AOPCs?

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site do not meet the substantive requirements of MTCA. The Site has yet to be fully defined. As such, cleanup standards cannot yet be fully established. Site soil and groundwater data should be compared against MTCA Method A cleanup levels for unrestricted land use and Site-specific TEE Cleanup Levels.

Standard points of compliance are currently being used for the Site. The point of compliance for protection of groundwater shall be established in the soils throughout the Site. For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance shall be established in the soils throughout the Site from the ground surface to 15 fbg. In addition, the point of compliance for the groundwater shall be established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you proposed for the Site does not meet the substantive requirements of MTCA. The Cleanup Action Plan (CAP) that was submitted does not address the entire Site and it has not been demonstrated that the extent of contamination has been defined. Please refer to Section 1 for specific comments on the CAP.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

4. State is immune from liability.

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 opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up your Property under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may resubmit your proposal for our review. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (360) 407-6247 or e-mail at steve.teel@ecy.wa.gov.

Sincerely,

SSTeel

Steve Teel, LHG
Hydrogeologist
Toxics Cleanup Program
Southwest Regional Office

ST/ksc:Washougal CS Proposed site cleanup likely FA 082012

Enclosures ([#]): A – Description and Diagrams of the Site

By certified mail: (7010 2780 0000 2503 6373)

cc: Mr. Aaron Galer, Environmental Scientist III, Williams - Northwest Pipeline
Mr. Eric Koltes, Environmental Partners, Inc.
Mr. Alan Hopkins, P.G., Portnoy Environmental
Bryan DeDoncker – Clark County Health Department
Scott Rose – Ecology
Dolores Mitchell – Ecology (w/o enclosures)

ENCLOSURE A

DESCRIPTION AND DIAGRAMS OF THE SITE

The Washougal Compressor Station consists of two contiguous parcels totaling 9.42 acres on the east and west side of NE Brown Road in Washougal, Washington. The compressor station was originally constructed in 1971. This facility is part of the Northwest Pipeline/Williams Gas Pipeline (natural gas) and consists of a compressor station within a fenced and locked enclosure. The area inside the fence is approximately 2.9 acres. Included within the fenced enclosure are two compressor buildings, various other support buildings (hazmat, auxiliary, generator, utility, and storage), a former meter building, ten above-ground storage tanks (ASTs), two main pipelines and several connecting pipelines, and fin fans. Contents of the ASTs included used oil/pipeline liquids, lube oil, glycol, diesel fuel, and water. Outside of the main fenced area there are two smaller fenced areas that contain pipeline pig receivers. Concrete secondary containment was not installed at the ASTs until 2005.

On August 15, 1996, an airborne release occurred of an undetermined amount of compressor oil (Mobil Pegasus 490 Oil) from the stack silencer during blow-down. Apparently, the crew at the facility did not realize that oil was in the gas line that was being blown down. Several nearby residential properties were covered by the mist of oil from the silencer. Approximately 50 cubic yards of petroleum-contaminated soil was excavated and stockpiled for disposal at the Columbia Ridge Landfill. On October 21, 1996, Ecology issued a No Further Action letter for this release.

The Site Condition Summary and Sampling Plan identified 14 Areas of Potential Concern (AOPC); these are summarized below.

AOPC 1 – Lube Oil and Glycol ASTs: These ASTs did not have a concrete secondary containment barrier until 2005. Interviews and site records suggest that past spills and releases have occurred at these ASTs. The constituents of concern for this AOPC are petroleum hydrocarbons, volatile organic compounds (VOCs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), glycol, polychlorinated biphenyls (PCBs), and metals.

AOPC 2 – Northern Fin Fans: Records and interviews indicate that spills and releases from these fin fans have occurred. Remedial excavation of soils surrounding the fans occurred in 1995; however, the report indicated that the associated soil sampling was not sufficient to determine compliance with the current MTCA regulation (data from these soil samples was not provided). The constituents of concern for this AOPC are petroleum hydrocarbons, VOCs, cPAHs, glycol, PCBs, and metals.

AOPC 3 – Southern Fin Fans: Records and interviews indicate that spills and releases from these fin fans have occurred. The constituents of concern for this AOPC are petroleum hydrocarbons, cPAHs, glycol, PCBs, and metals.

AOPC 4 – Northern Glycol Reservoir ASTs: Records and interviews indicate that spills and releases from these ASTs have occurred. Remedial excavation of petroleum-

contaminated soils surrounding the base of the AST occurred in 1995; however, the report indicated that the associated soil sampling was not sufficient to determine compliance with the current MTCA regulation (data from these soil samples was not provided). The constituents of concern for this AOPC are petroleum hydrocarbons, VOCs, cPAHs, glycol, PCBs, and metals.

AOPC 5 – Southern Glycol Reservoir AST: Records and interviews indicate that spills and releases from this AST have occurred. The constituents of concern for this AOPC are petroleum hydrocarbons, VOCs, cPAHs, glycol, PCBs, and metals.

AOPC 6 – Former Meter Building: During an inspection of the building, visible mercury was seen on a former meter stand. The primary constituent of concern for this AOPC is mercury. However, there is also a potential for soil contamination surrounding the perimeter of the former building from asbestos-containing building materials and lead based paint from sandblasting.

AOPC 7, 8, and 9 – Petroleum-Impacted Soil Excavation Area Adjacent to Compressor Building: These areas were based on the locations of remedial excavation of petroleum-contaminated soils on the northeast and southeast sides of the Compressor Building in 1995. However, the report indicated that the associated confirmation soil sampling was not sufficient to determine compliance with the current MTCA regulation (data from these soil samples was not provided). The constituents of concern for this AOPC are petroleum hydrocarbons, VOCs, cPAHs, glycol, PCBs, metals, and asbestos.

AOPC 10 – Used Oil/Pipeline Liquids AST: Spills may have occurred in this area during manual transfer of liquids from the AST into transport trucks and/or from fitting leaks. The constituents of concern for this AOPC consist of petroleum hydrocarbons, VOCs, cPAHs, glycol, PCBs, and metals.

AOPC 11 – Septic System and Leach Field: Compounds used at the facility could have improperly been disposed to the septic system. The report lists the constituents of concern for this AOPC as petroleum hydrocarbons, VOCs, cPAHs, PCBs, glycol, and metals.

AOPC 12 – Former Gasoline Underground Storage Tank (UST): Historical information indicates that a gasoline UST was formerly present at the facility. However, the location and usage history of this tank is unknown. Constituents of concern consist of petroleum hydrocarbons, aromatic fuel compounds (benzene, toluene, ethylbenzene, and total xylenes, ethylene dibromide, ethylene dichloride, lead, naphthalene, and methyl tertiary butyl ether.

AOPC 13N and 13S – Pig Receivers: Pipeline liquids can be released to the soil during pig retrieval. Constituents of concern include petroleum hydrocarbons, cPAHs, VOCs, PCBs, and metals.

AOPC 14 – Pig Receiver: Pipeline liquids can be released to the soil during pig retrieval. Constituents of concern include petroleum hydrocarbons, cPAHs, VOCs, PCBs, and metals.

The Site Condition Summary and Sampling Plan proposed to initially only clean up AOPCs that overlap temporary work space (TWS) areas associated with the pipeline rehabilitation project. At the Washougal Compressor Station, the TWS areas are described as follows:

TWS-1: To perform modifications to a block valve south of the compressor building. This TWS does not overlap any AOPC.

TWS-2: Replacement of the compressor skid in Compressor Building "B". No subsurface disturbance is expected as a result of this work. This TWS does not overlap any AOPC.

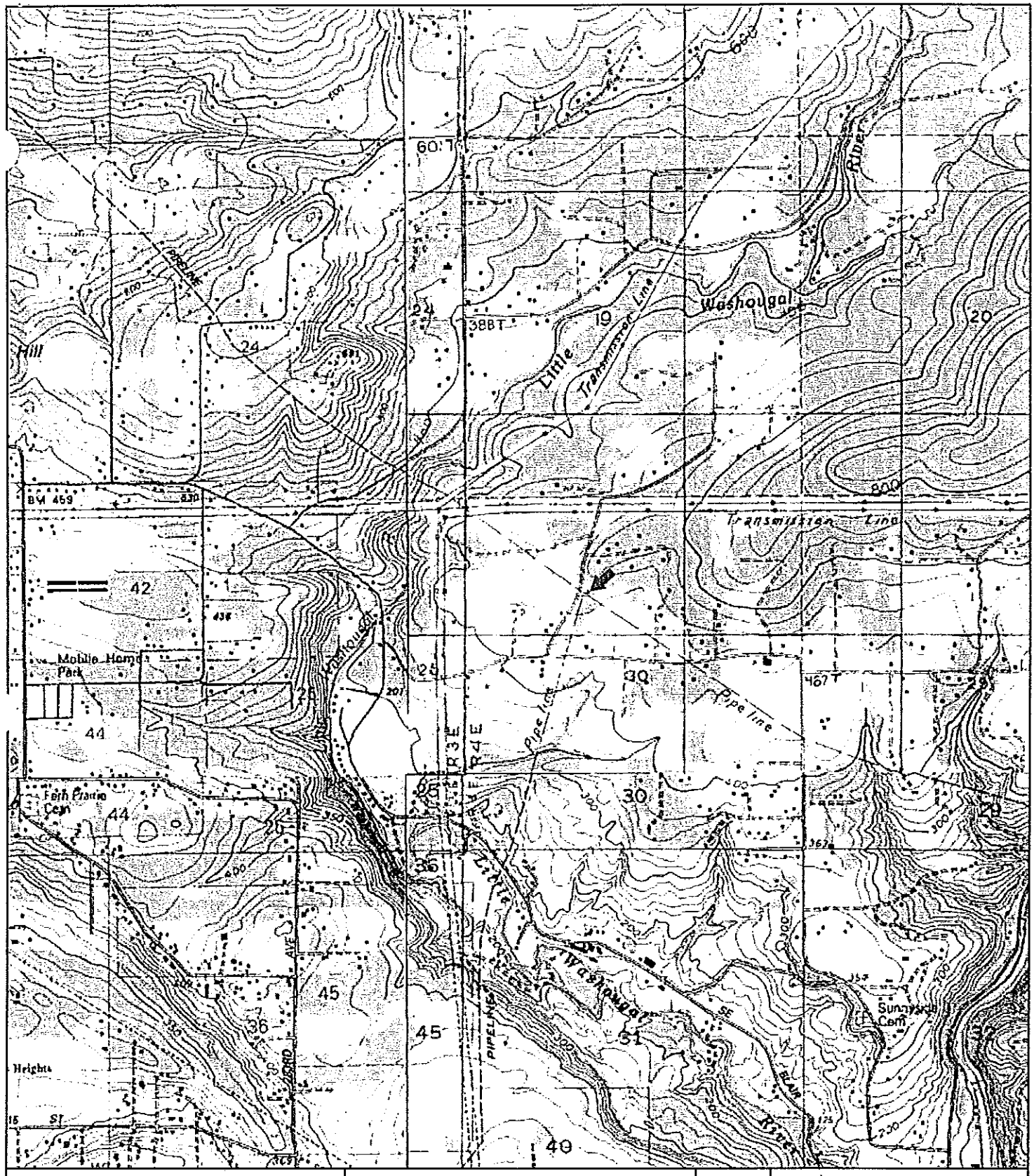
TWS-3: Isolation of the 26-inch diameter natural gas pipeline as use of this pipeline is to be discontinued. Work to be performed includes excavation, cutting, and capping of the 26-inch diameter pipe. This work space overlaps with AOPC-3 and -11.

TWS-4: Improvement of the pig receiving area to the northwest of the compressor station. This workspace overlaps AOPC-13.

Groundwater: It is very likely that soil contamination could have affected groundwater. Grab groundwater samples or samples from groundwater monitoring wells should be collected and analyzed for all of the constituents of concern for the Site.

As mentioned above, interim remedial actions and/or assessments were performed at AOPCs -3, -11, and -13S, -13N, and TWS 1 in 2006.

ATTACHMENTS (from consultant report)
Figure WSCS-1
Figure WSCS-2
Table WSCS-16



KEY:

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)

LARCH MNT., WA - 1986 revised 1993
LACAMAS CREEK, WA - 1990
CAMAS, WA-OR - 1993
WASHOUGAL, WA-OR - 1994

SCALE = 1:24,000

ENVIRONMENTAL PARTNERS INC

PORTNOY ENVIRONMENTAL

FIGURE WSCS-1
GENERAL VICINITY MAP
WASHOUGAL COMPRESSOR STATION

PROJECT	47301.4		
PREPARED FOR	NORTHWEST PIPELINE/WILLIAMS		
LOCATION	1309 NE BROWN ROAD WASHOUGAL, WASHINGTON		
SHEET 1 of 1	DRAWN BY JRG	REVIEWED BY EMK	DATE 08/18/05