State of Washington
POLLUTION LIABILITY INSURANCE AGENCY
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January 8, 2019

Mr. Scott Rose
AEG
605 11th Avenue SE, Suite 201
Olympia, WA 98501

Re: No Further Action at the Following Site:

- **Facility/Site Name:** H&H Diesel
- **Facility/Site Address:** 407 Porter Way, Milton, WA 98354-9686
- **Facility Site ID:** 89863773
- **PTAP Project No.:** PSW031

Dear Mr. Rose:

The Washington State Pollution Liability Insurance Agency (PLIA) received your request for an opinion on your independent cleanup of the Genesee Fuel and Heating (Site). This letter provides our opinion. We are providing this opinion under the authority of Chapter 70.149 RCW and the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. PLIA has determined that no further remedial action is 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 located at 407 Porter Way, Milton, WA 98354-9686 and comprises two Pierce County tax parcels described below (Figs. 1, 2 and 3).

This opinion does not apply to any other release(s) that may affect the Properties (parcels). Any such releases, if known, are identified separately below.

1. Description of the Properties and Tax Parcels within the Site:

The Property includes the following tax parcels in Pierce County, affected by the Site and addressed by your cleanup (Figs. 1 & 2):

- Tax Parcel No. 0420057009
- Tax Parcel No. 0420057010

2. Description of the Site:

The parcels make up the Site and is defined by the nature and extent of contamination associated with the following release (Figs. 2 and 3):

- Total petroleum hydrocarbons as gasoline, diesel & oil (TPH-g, TPH-d & TPH-o) and associated benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene and arsenic, lead and chromium into the soil/groundwater/vapor.

3. Identification of Other Sites that may affect the Property.

Please note a parcel of real property can be affected by multiple sites. At this time, we have **no** information that this Property is affected by arsenic in groundwater from off property sources, e.g. the B&L Wood-waste Landfill FS ID# 1203, 0.3 miles south of this Property; and the US Gypsum Highway 99 Site FS ID# 84531356, 0.3 miles southwest of the Site. Arsenic contaminated groundwater flow from these properties is north towards the H&H Diesel Site (Figs. 1 and 7).

Enclosure A includes a detailed description and diagram of the Site, as currently known to PLIA.

Basis for the Opinion

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

1. Remedial Action Report, H & H Property, Milton, WA. Project No. 15-112 of April 26, 2016 by AEG
2. Technical Addendum Report, H & H Property, 407 Porter Way, Milton, WA. June 8, 2018 by AEG
3. Groundwater Quarterly Report August 2016, H & H Property, 407 Porter Way, Milton, WA. August 30, 2016 by AEG
4. Remedial Investigation Report, H & H Property, 407 Porter Way, Milton, WA. Project No. 15-112 April 20, 2015 by AEG

5. Groundwater Confirmation and Contingency Plan, 3616 S Genesee Street, Seattle, WA 98118 Project No. 15-112 of Dec 5, 2018 by SoundEarth Strategies
6. Restrictive Covenant No. 201812200078 of 12/20/18 with Pierce County WA Tax Parcel No. 0420057009 and 0420057010

Documents submitted to PLIA are subject to the Public Records Act (Chapter 42.56 RCW). To make a request for public records, please email pliamail@plia.wa.gov.

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

Analysis of the Cleanup

1. Cleanup of the Site

PLIA has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

a. Characterization of the Site.

PLIA has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in Enclosure A.

The Site is underlain by Quaternary age floodplain peat deposits, which in turn are generally overlain by the Semiahmoo muck soil unit. This native material is a fine-grained, floodplain deposit that is derived from herbaceous organic material (peat) and is commonly found in the valley drainages from Tacoma to Renton. This material is very poorly drained and the groundwater tends to be 0 to 12" below ground surface (bgs). The subsurface conditions found at the Site during this investigation generally consisted of imported fill to a depth of approximately 5' to 7' bgs, which tapered out north and south. Cut wood debris, bark, and dimensional lumber are present 7' to 10' bgs. At approximately 10' bgs, the subsurface transitioned to organic silt to the total depth explored of 15' bgs (Figs. 5 and 6).

Petroleum contaminated soil (PCS) detected at this Site is potentially associated with a former 500-gallon Stoddard Solvent underground storage tank (UST) decommissioned in 1991 and the cracked concrete vault used for waste oil storage east of the Service Garage (Fig. 2). Depth to PCS **above** MTCA Method A cleanup levels at the Site extends vertically between 4' to 8' bgs and extends laterally about 80' north south and 72' east west (Fig. 2).

Groundwater was encountered at the Site ranging from 6' to 11' bgs, and the direction of groundwater flow is to the south. Hylebos Creek is located approximately 600' to the west of the Site, and the Puyallup River is located approximately 2.5 miles south (Figs. 1 and 4).

The arsenic plumes from the nearby formal sites (B&L Woodwaste Landfill and USG Hwy 99) do not extend to the H&H Diesel site. Based on limited other available data surrounding the site, it is likely the source of impacts in GW beneath the site above the MTCA cleanup standards are from a non-point source likely associated with filling of the area (containing Asarco slag). Groundwater impacted with arsenic beneath the site is fairly ubiquitous; however, only 3 out of about 30 or so soil samples from the site exceed CULs for arsenic, none of which are high enough to be the source of the GW impacts. **This NFA determination does not include non-point sources of arsenic groundwater impacts.**

Petroleum contaminated groundwater (PCGW) detected at this Site is limited to the Property boundary and is defined by monitoring wells (MW), former MW-3 and bounded by MW-4, MW-5 and MW-6 (Fig. 3).

Conceptual Site Model (CSM)

i. Soil Direct Contact:

The depth and extent of the PCS at the Site **above** MTCA Method A cleanup levels is located approximately between 4' (bottom of the USTs) and 8' bgs and extends laterally about 80' north south and 72' east west (Fig. 2).
PCS detected at the Site **above** the MTCA Method A unrestricted land-use cleanup levels that are located between 4' to 8'are within the depths (0 to 15' bgs) that humans (utility workers and property developers) may come into contact.

Result: The direct contact exposure pathway was a concern at this Site.

ii. Vapor Exposure: The building footprint is within the lateral inclusion zone of 30' or 6' vertical separation from the edge of the Service Garage (Fig. 2). The lateral inclusion zone or vertical separation distance are defined as the areas surrounding a contaminant source through which vapor phase contamination might travel and intrude

into buildings (ITRC 2014, EPA 2015, Ecology Draft VI Guidance update 2016).

However, the Service Garage is open to the ambient air (21% oxygen by composition) that ensures sufficient and continuous air circulation that precludes accumulation of harmful vapors from posing a threat to indoor air.

Result: The vapor exposure pathway is not a concern at this Site.

iii. **Groundwater:** Depth to groundwater at the Site ranges from 6' to 11' bgs and the direction of groundwater flow is to the south.

PCGW detected at this Site is limited to the Property boundary and is defined by monitoring wells (MW), former MW-3 and bounded by MW-4, MW-5 and MW-6 (Fig. 3).

Result: The soil to groundwater leaching exposure pathway was a concern at this Site.

iv. **Surface water:** The nearest surface water body is the Hylebos Creek located approximately 600' to the west of the Site, and the Puyallup River is located approximately 2.5 miles south (Figs. 1 and 4).

Result: The surface exposure pathway is not a concern at this Site.

b. Establishment of cleanup standards.

PLIA has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

i. Cleanup Levels

Table 1. The COCs and cleanup levels are:

Contaminants of Concern (COCs)	Soil Cleanup Level mg/kg (**Method A**) Un-restricted Land Use	Groundwater Cleanup Level ug/l (Method A)	Sub-slab/soil gas Screening Levels ug/m^3 (Method B SL)	Indoor/Air Cleanup Levels ug/m^3 (Method B CUL)
TPH-d	2,000	500	-	-
TPH-o	2,000	500	-	-
TPH-g	30/100	800/1,000*		
			-	-
Benzene (**carcinogen)**	0.03	5	10.7	0.321
Toluene	7	1,000	76,000	2290
Ethylbenzene	6	700	15,200	457
Xylenes, -m, -o	9	1,000	1,520	45.7
Naphthalene (**carcinogen**) (does not include 1-methyl and 2-methyl naphthalene)	-	-	2.45	0.0735
Total Petroleum Hydrocarbon	-	-	4,700**	140
APH [EC5-8 Aliphatics]	-	-	90,000	2,700
APH [EC9-12 Aliphatics]	-	-	4,700	140
APH [EC9-10 Aromatics]	-	-	6,000	180

** Based on the current attenuation factor of 0.03.

ii. Points of Compliance.

The proposed Points of Compliance are:

Soil-Direct Contact: For soil cleanup levels based on human exposure via direct contact, the point of compliance is: "*…throughout the Site from ground surface to 15 ft. below the ground surface.*"

Groundwater: For groundwater, the standard point of compliance as established under WAC 173-340-720(8) is: "*…throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site.*"

Vapor: Ambient and indoor air throughout the Site.

c. Selection of cleanup action.

PLIA has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

i. Decommissioning of the former 500 Stoddard Solvent UST (1991).
ii. Cracked vault used for waste oil storage was cleaned out, rinsed, and filled with controlled-density fill (CDF): abandoned in place.
iii. Excavation and removal of 815 tons of PCS at the Site to the extent technically practicable.
iv. Proper abandonment of the impacted former MW-3 to facilitate removal of PCS at this location.
v. Conduct confirmation soil sampling and groundwater quality performance monitoring, post PCS excavation to confirm effectiveness of the remedial action.
vi. Install Permeable Membrane Filter (PMF) to facilitate bio-attenuation of the inaccessible residual PCS and groundwater within the excavation limits.
vii. Recorded Restrictive Covenant No. 201812200078 of 12/20/18 with the Pierce County WA Tax Parcel No. 0420057009 and 0420057010 with institutional controls (Enclosure B) for inaccessible PCS and PCGW at the Site.
viii. Developed Confirmation groundwater monitoring and contingency plans to address soil direct contact and groundwater exposure pathways as appropriate (Enclosure C).
ix. Developed Inspection Checklist for the Operation and Maintenance (O&M) and Institutional Controls at the Site (Enclosure D).

d. Cleanup.

PLIA has determined the cleanup action you performed meets the substantive requirements of MTCA and met clean-up levels at the points of compliance.

i. Direct Contact Exposure Pathway:

a. Decommissioning of former UST.

- The former 500-gallon Stoddard Solvent UST located east of building was permanently decommissioned by removal (1991).
- The cracked vault used for waste oil storage, located beneath the eastern portion of the building, was cleaned out, rinsed, and filled with controlled-density fill (CDF).

b. Excavation and removal of 815 tons of PCS at the Site:

- The lateral and vertical extent of PCS detected at the Site was successfully excavated to approximately 80' north south and 72' east west and vertically 9' to levels below the MTCA Method A Cleanup levels. However, inaccessible PCS above the MTCA Method A remain under the structures next to the concrete vault butting the building foundation and along the storm-water line (Fig. 5).
- **Points of Compliance:** The limit of the excavation is bounded by the extent of PCS confirmation sampling results below cleanup levels. The Performance sampling results for the PCS are above the MTCA Method A Cleanup level for unrestricted land use is addressed as part of the restrictive covenant and semiannual inspection of the engineer control (Enclosures C & D).

Result: The soil direct contact exposure pathway is no longer a concern at this Site.

ii. Groundwater Leaching Exposure Pathway:

a. Excavation and removal of 815 tons of PCS at the Site in contact with groundwater.
b. Conducted Performance Groundwater Monitoring to assess the completeness of the cleanup action implementation.
c. Installed Permeable Membrane Filter (PMF) to facilitate bio-attenuation of the inaccessible residual PCS and groundwater within the excavation limits (Figs. 2, 4 and 6).
d. Points of Compliance for contaminated groundwater: The limit of the PCGW is bounded by the extent of PCGW performance sampling results below cleanup levels. The Performance sampling results for the PCGW are below the MTCA Method A Cleanup levels for unrestricted land-use depicted by MW-4, MW-5 and MW-6 for four consecutive quarters (Fig. 3).
e. Filed a Restrictive Covenant No. 201812200078 of 12/20/18 with Pierce County WA Tax Parcel No. 0420057009 and 0420057010 (Enclosure B).
f. Developed a Groundwater Confirmation Monitoring and Contingency Plan approved by PLIA (Enclosure C).
g. Developed Engineered Control Semi-Annual Inspection Checklist for the O&M of the Institutional Control approved by PLIA (Enclosure D).

Result: The groundwater leaching exposure pathway is no longer a concern at this Site.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional controls are necessary at the Site:

- Semiannual inspection and maintenance of the **asphalt cap/wells/catch basin.**
- Limitations on use of the Site groundwater.

To implement those controls an Environmental Covenant has been recorded on the following parcels of real property at the Site:

- Tax Parcel No. 0420057009
- Tax Parcel No. 0420057010

PLIA approved the Environmental Covenant No. 201812200078 of 12/20/18 filed with the Pierce County WA Tax Parcel No. 0420057009 and 0420057010 attached as Enclosure B.

2. O&M of engineered controls, wells & catch basin.

Engineered controls prevent or limit movement of, or exposure to, hazardous substances. The following engineered control is necessary at the Property:

- **Placement of an asphalt cap (surface).**
- **Installation of Permeable Membrane Filter (sub-surface).**

PLIA has approved the O&M for the asphalt cap placed at this Site pending the 5-year review. Annual report of the asphalt cap, monitoring wells, catch basin, inspection and maintenance outcome must be sent to PLIA upon completion of that task with the attached Inspection Checklist (Enclosure D) as part of the

reporting discussed below.

3. Performance of Confirmational Monitoring & Contingency.

Confirmational monitoring is necessary at the Site to confirm the long-term effectiveness of the cleanup action. The monitoring data will be used by PLIA during periodic reviews of post-cleanup conditions. PLIA approved the confirmation monitoring & contingency plan for the groundwater (Enclosure C).

The following groundwater monitoring wells MW-4, MW-5 and MW-6 make up the groundwater confirmation monitoring program regime for this Site.

These wells shall be monitored at the following frequency (Table 3) pending the 5-year review.

Table 2: Frequency of Confirmation Monitoring Pending the 5-year Review

2018	2019	2020	2021	2022	2023
- Ground-water Performance Sampling completed -Basis for No Further Action (NFA) Determination	Inspection only O&M: Semi Annual	-Begin groundwater Confirmation Monitoring; 4 Quarters -Inspection of capped areas- Semi Annual -Monitoring Wells O&M -Catch Basins O&M -Develop report and submit to PLIA	Inspection only O&M: Semi Annual	Continue groundwater Confirmation Monitoring; 4 Quarters -Inspection of capped areas- Semi Annual -Monitoring Wells O&M -Catch Basins O&M -Develop report and submit to PLIA	-PLIA conducts 5-yr. Review; Assesses need for sampling reduction/cessation/continuation/ or Contingency for Further Action (Basis for the NFA Re-opener/rescission) -Contingency may occur at any period of monitoring

Contingency Plan

As a result of the residual PCS/PCGW present at this Site:

- All storm water catch-basins, conveyance systems, and other appurtenances located within this area shall be of water-tight construction. This is to ensure that the design and management of the storm-water facilities at this Property does not exacerbate and create a renewed plume movement of the contained contaminants at this Site.

The enclosed Site Inspection Checklist (Enclosure D) for the O&M of the capped areas (groundwater restriction areas), storm-water systems/catch basins, groundwater monitoring wells and the monitor of the groundwater quality at this Site pending the 5-year review shall be part of the reporting discussed below. Failure to conduct the semi-annual inspection, maintenance and reporting at the Site may trigger a contingency action and the basis to re-open the NFA for this Site.

Please note, in the event that the groundwater monitoring detects TPH constituents above MTCA Method A cleanup levels at the points of compliance (POC) wells and upon resampling to confirm this exceedance PLIA must approve a contingency action before one is implemented; the approval of a contingency plan is an NFA re-opener and rescission pending completion of further action. After groundwater mitigation efforts are completed under the contingency plan, you must conduct a performance groundwater sampling for four consecutive quarters to demonstrate compliance to support re-issuance of the NFA pending the next 5-year review.

Reporting and Record Keeping

Outcome of all Records associated with the Groundwater Confirmation Monitoring, Cap Inspections (Fig. 5), Repairs and Maintenance of the O&M of the wells and the integrity of the capping material (groundwater/vapor restricted areas) must be sent to **PLIA** within 30 days of finalizing the reports (Table 3) pending the 5-year reviews.

Periodic Review of Post-Cleanup Conditions

PLIA will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain protective of human health and the environment. If we conduct a periodic review and determine further remedial action is necessary at the Site, then we will withdraw any no further action determination made at this Site. Based on the result of the 5-year review, PLIA will evaluate the merits of continued monitoring, frequency and duration as appropriate.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

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

- Change the boundaries of the Site.
- 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 the Office of the Attorney General and the Department of Ecology (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 the 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 performed is equivalent. Courts make that determination (RCW 70.105D.080 and WAC 173-340-545).

3. State is immune from liability.

The state, PLIA, 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.

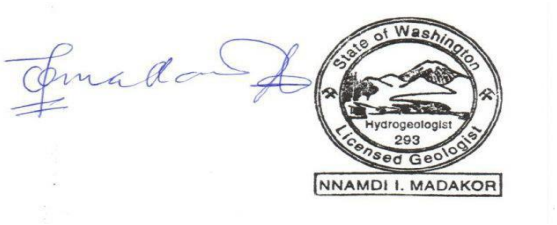
Termination of Agreement

Thank you for choosing to cleanup your Property under the Petroleum Technical Assistance Cleanup Program (PTAP). This opinion terminates the PTAP Agreement governing Project #PSW031.

Contact Information

If you have any questions about this opinion, please contact me by phone at 1-800-822-3905, or by email at nnamdi.madakor@plia.wa.gov.

Sincerely,



Nnamdi Madakor P. HG, P.G.
Technical Programs Manager

Nm: nm

Enclosure A: Fig. 1: Site Location and Vicinity
Fig. 2: Extent Soil TPH Impact & Site Outlay
Fig. 3: Extent Groundwater TPH Impact & POC for Site Groundwater
Fig. 4: Groundwater Flow Direction
Fig. 5: Extent of Residual PCS about Cleanup Levels – Post Excavation
Fig. 6: Vertical Extent AA' of Soil TPH Excavation, Residual & PMF
Fig. 7: Sources of Off Property Arsenic in GW near the Site
Enclosure B: Environmental Covenant No. 201812200078 of 12/20/18 Pierce County
Enclosure C: Groundwater Confirmation and Contingency Plan
Enclosure D: Engineered Control O&M Checklist

cc: Ms. Kristin Evered, PLIA (by email)
Ms. Carrie Pederson, PLIA (by email)
Mr. Robert R. Graham (owner)

Enclosure A
H&H Diesel Site – PSW031
Site Description

Background: The Site includes portions of Pierce County parcel numbers 0420057009 (4.96 acres) and 0420057010 (3.41 acres), located approximately 500' to the south of the intersection between Porter Way and 4th Avenue in Milton, Washington. The Site is bounded by commercial properties to the north, residential properties to the east, a wetland to the south, and Interstate 5 to the west.
Historical Use: According to Pierce County records, the 8,640-square-foot service garage was originally built in 1969, and the 720-square-foot storage building was built in 2001. Two aboveground storage tanks (ASTs), one for propane and the other for lube oil, are located on the east side of the service garage.
Current Use: The Site is currently occupied by a service garage (H&H Diesel) and storage building.
Geology: The Site is underlain by Quaternary age floodplain peat deposits. Peat deposits at the Site are generally overlain by the Semiahmoo muck soil unit. This native material is a fine-grained, floodplain deposit that is derived from herbaceous organic material (peat) and is commonly found in the valley drainages from Tacoma to Renton. This material is very poorly drained and the groundwater tends to be 0 to 12' bgs. The subsurface conditions found at the Site during this investigation generally consisted of imported fill to a depth of approximately 5 to 7' bgs, which tapered out as the excavation extended north and south. Cut wood debris, bark, and dimensional lumber was observed from 7 to 10' bgs. At approximately 10' bgs, the subsurface transitioned to organic silt to the total depth explored of 15' bgs.
Hydrogeology: Groundwater was encountered at the Site ranging from 6 to 11' bgs, and the direction of groundwater flow is to the south. Hylebos Creek is located approximately 600' to the west of the Site, and the Puyallup River is located approximately 2.5 miles south.
Site Investigations: (**1991**) 500-gallon Stoddard Solvent underground storage tank (UST) was reportedly removed from the Site. Contaminated soil associated with this UST was confirmed.
1996: Phase II Environmental Site Assessment indicated concentrations of diesel- and heavy oil-range petroleum hydrocarbons (TPH) in excess of the MTCA Method A soil cleanups levels and in groundwater samples. (**1999**) Remedial Investigation conducted at the Site: (**2001**) Limited soil and groundwater assessment was completed at the Site. (**2009 -2010**). Groundwater Monitoring wells were installed confirmed the presence of TPH-d, TPH-g & TPH-o and metals. (**2015)** Lateral and vertical extent of contamination delineated at the Site.

Figure 1: Site Location and Vicinity Map

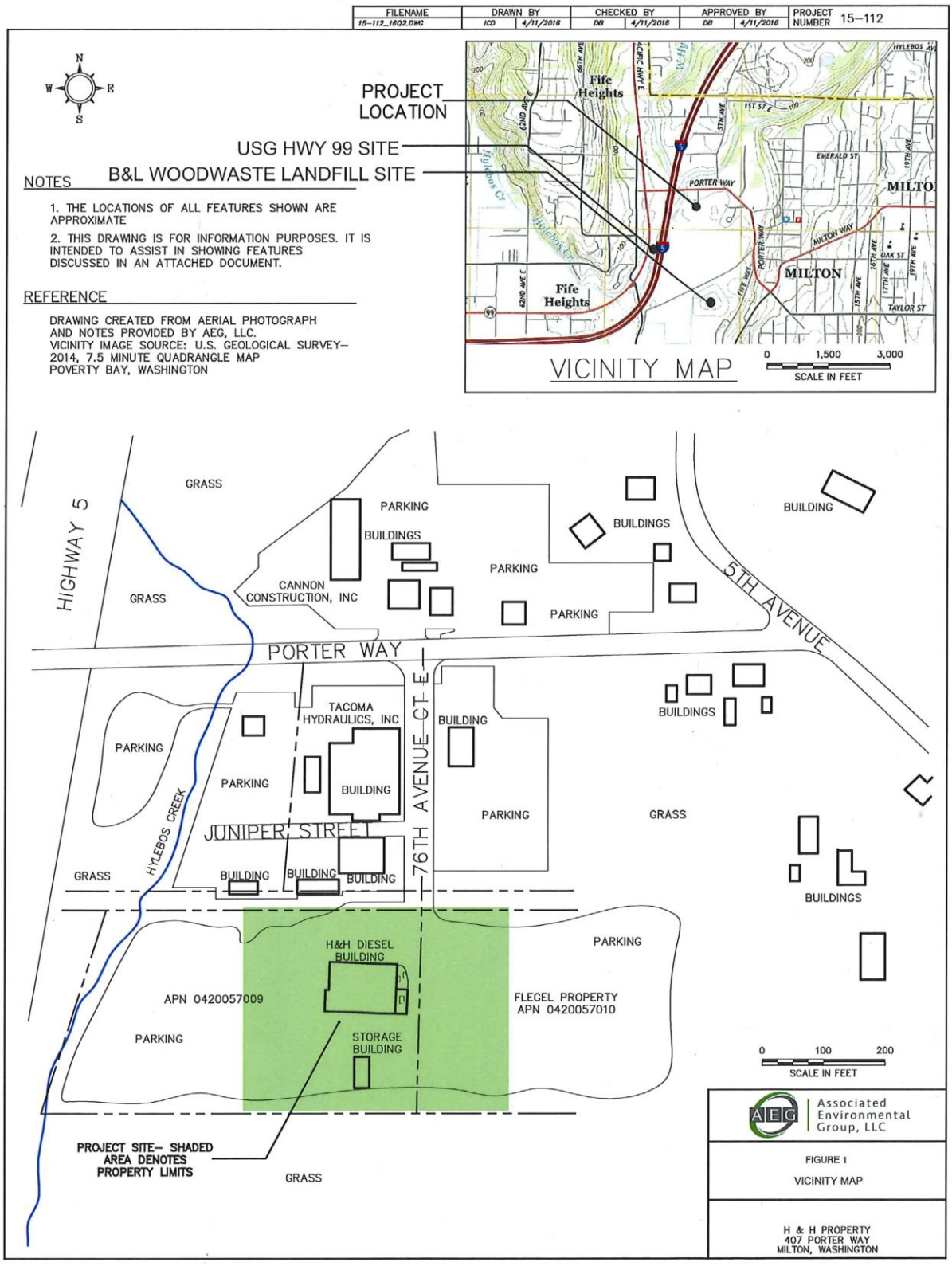


Figure 2: Extent of PCS Impact & Site Out lay

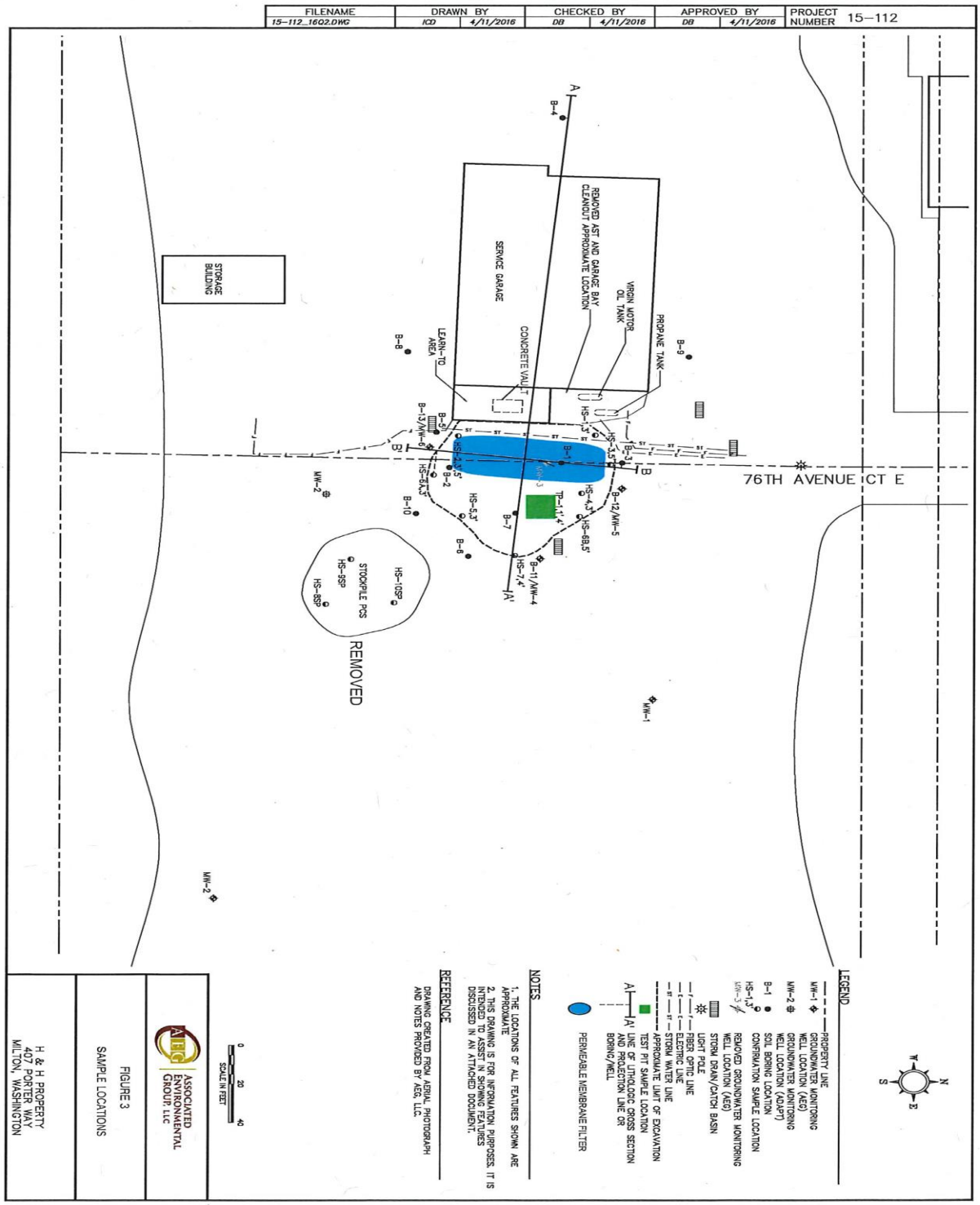


Figure 3: Extent of GW TPH Impact & GW POC

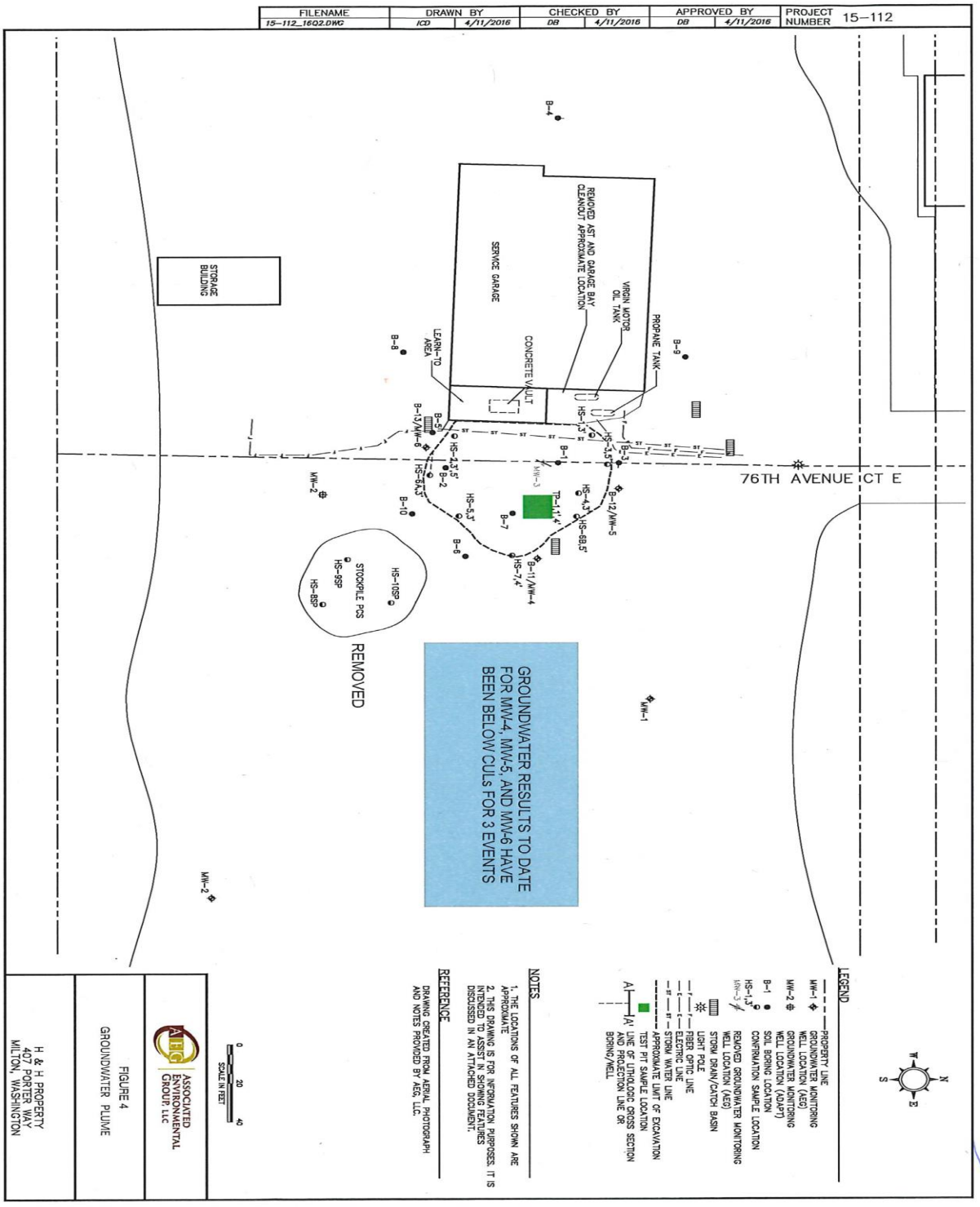


Fig. 4: Groundwater Flow Direction

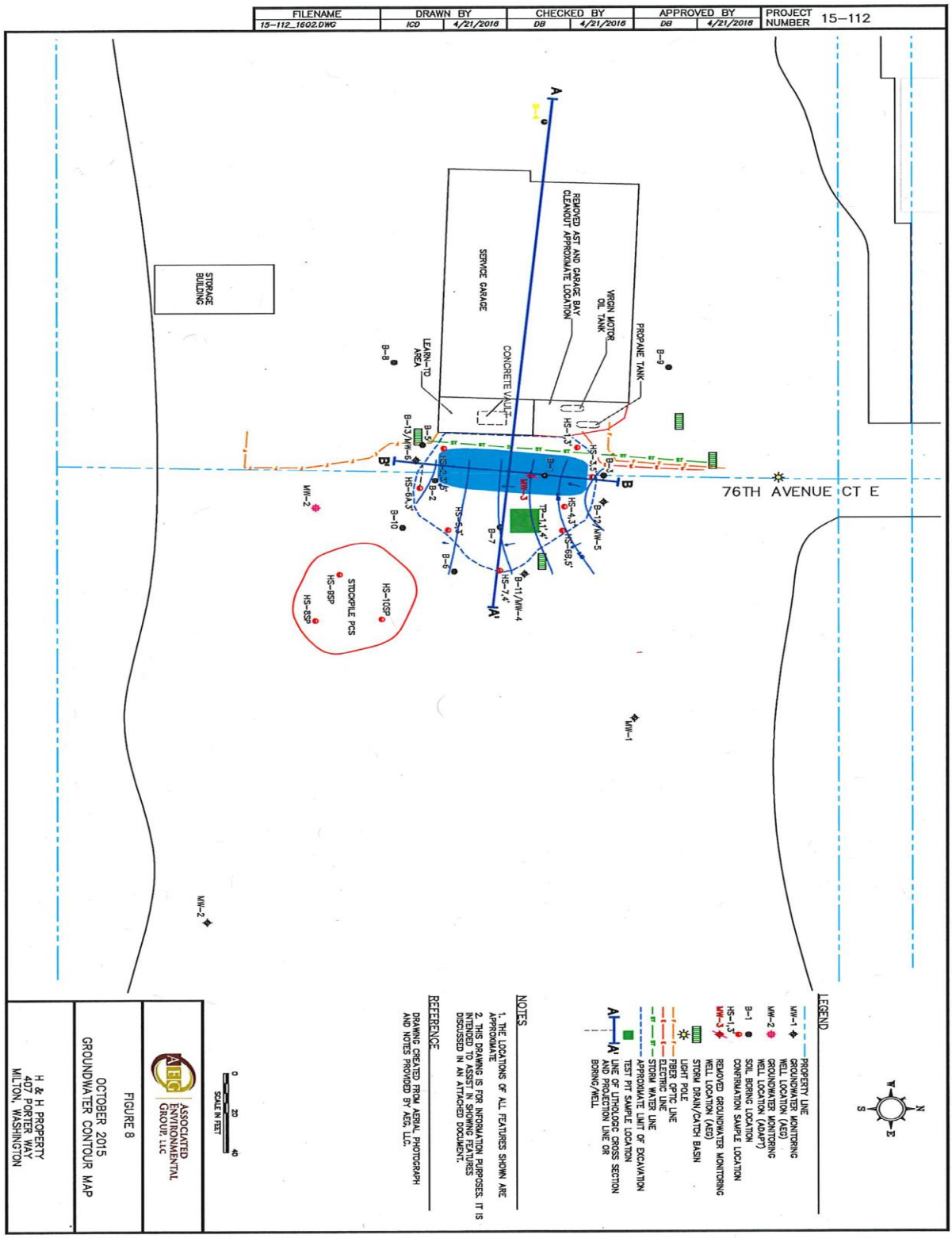


Fig. 5: Extent of Residual PCS above Cleanup Levels Post Excavation

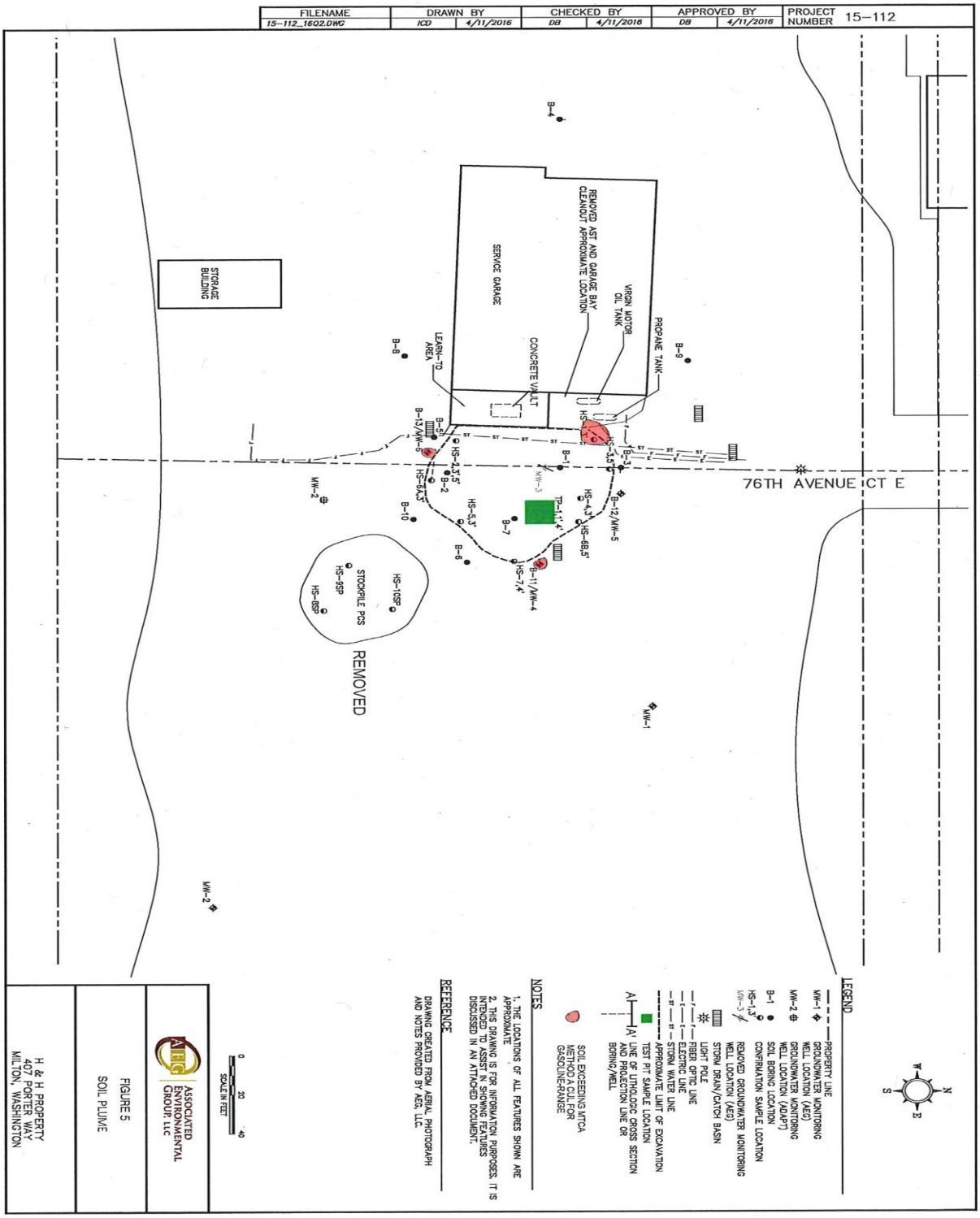


Fig. 6: Vertical Extent AA' of Soil TPH Excavation, PCS Residual & PMF

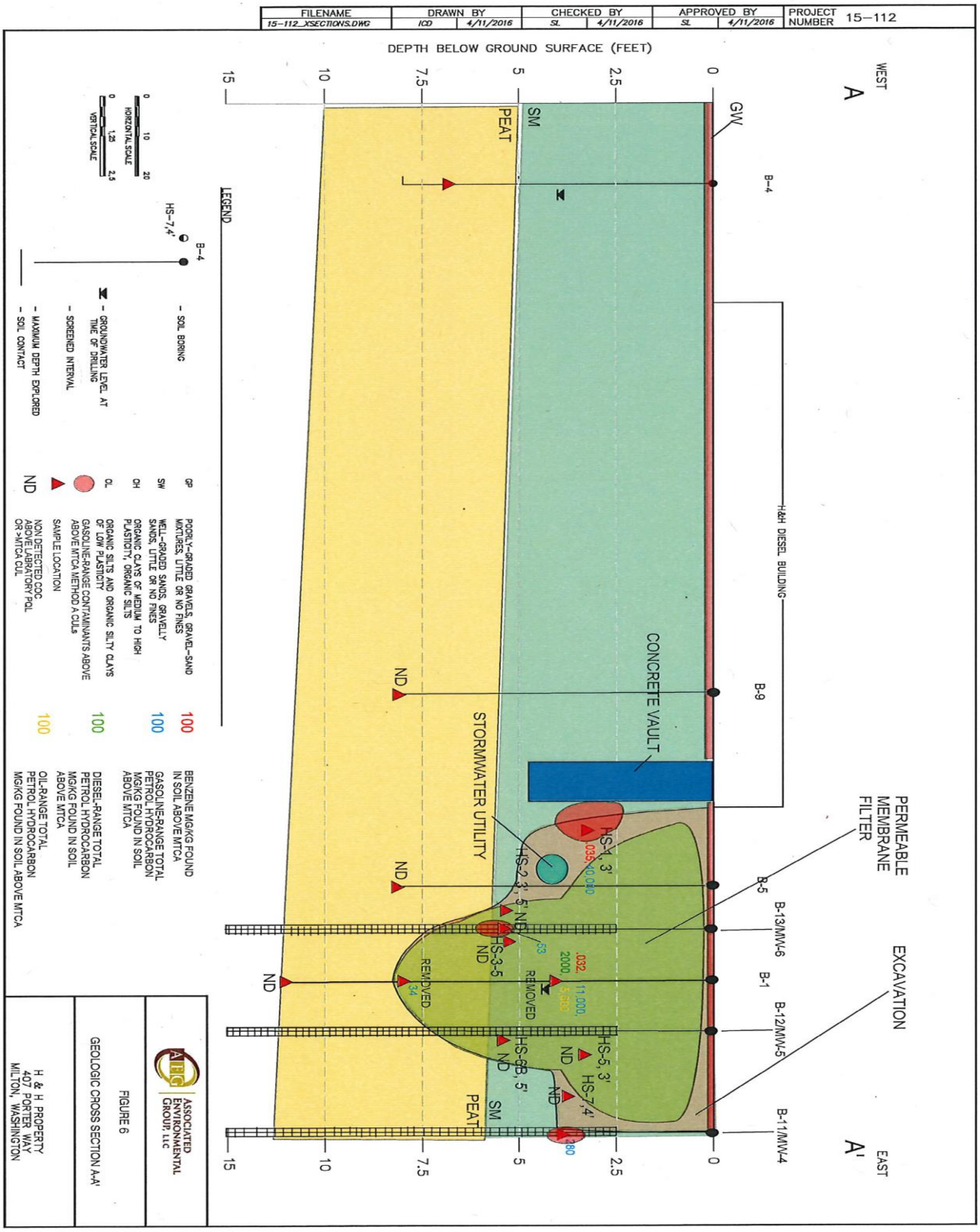
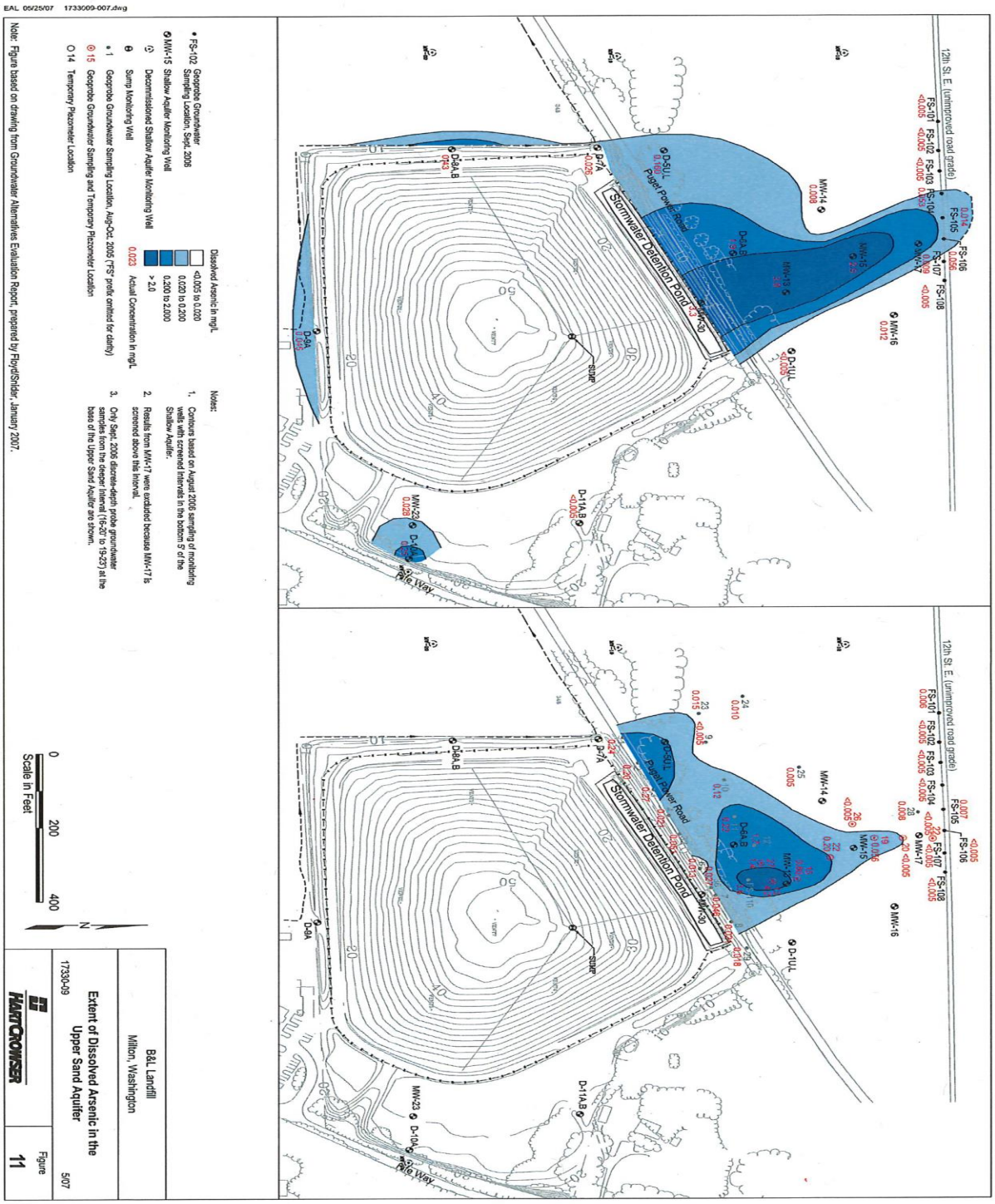


Fig. 7: Sources of Off Property Arsenic in GW near the Site



Note: Figure based on drawing from Groundwater Alternatives Evaluation Report, prepared by Floyd|Snider, January 2007.

Enclosure B

Restrictive Covenant No. 201812200078 of 12/20/18 with Pierce County WA Tax Parcel No. 0420057009 and 0420057010

Enclosure C
Groundwater Confirmation Monitoring & Contingency Plan

Enclosure D

Engineered Control Inspection Checklist