



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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April 10, 2018

Mr. Helmuth Schlueter
620 112th St SE, #366
Everett, WA 98208

Re: Rescission of No Further Action Opinion at the following Site:

- **Site Name:** Schlueter Property
- **Site Address:** 1515 196th St SE, Bothell, WA 98012
- **Facility/Site No.:** 2886743
- **Cleanup Site No.:** 1348
- **VCP Project No.:** NW3148

Dear Mr. Schlueter:

The Washington State Department of Ecology (Ecology) issued a No Further Action (NFA) opinion letter regarding the Schlueter Property facility (Site) dated December 29, 2017. Ecology is rescinding the NFA opinion on the basis of additional Site information obtained during the public comment period for removal of the Site from the Ecology Hazardous Sites List. We are providing this opinion under the authority of 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?

YES. Ecology has determined that 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 described below. The Site is defined by the nature and extent of contamination associated with the following releases:



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- Gasoline-range hydrocarbons (TPHg); diesel-range petroleum hydrocarbons (TPHd); oil-range petroleum hydrocarbons (TPHo); benzene, toluene, ethylbenzene, xylenes (BTEX); cadmium; and lead into the Soil and Ground Water.

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

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels 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. Earth Consultants, Inc., *Draft Geotechnical Engineering Study, Proposed North Creek Residential Development, 196th Street Southeast, Snohomish County, Washington*, January 26, 2005.
2. Department of Ecology and Snohomish Health District, *Initial Investigation Field Report, Schlueter Property, 1515 196th St SE, Bothell, WA*; April 27, 2005.
3. Migizi Group, Inc., *Initial Characterization, Subsurface Investigation, Property Located at 1515 196th Street SE, Bothell, WA*; June 12, 2017.
4. Migizi Group, Inc., *Additional Soil Sampling, Localized Groundwater Elevation Data, and Request for No Further Action Opinion, 1515 196th Street SE, Bothell, WA*; September 5, 2017.
5. Department of Ecology, *No Further Action Opinion, VCP NW3148, Schlueter Property, 1515 196th St. SE, Bothell, WA*, December 29, 2017.

This opinion is based on the information contained in the documents listed in **Enclosure B**. Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Record form (<https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>) and emailing it to PublicRecordsOfficer@ecy.wa.gov, or contacting the Public Records Officer at 360-407-6040. A number of these documents are accessible in electronic form from the Site web page, which can be found at <https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=1348>.

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 **further remedial action** is 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 sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

The lateral and vertical extent of soil potentially affected by chemicals of concern has been adequately defined by the Site investigation and cleanup completed in May and June 2017. Soil impacts were limited to the upper 16 inches (1.3 feet) of the soil column. Data from water well reports in the Ecology database indicate depths to ground water in the areas of the Site where soil samples were collected to be approximately 10 to 15 feet below ground surface. Confirmation soil sampling results were below MTCA Method A cleanup levels, which are protective of ground water.

The Site had previously undergone a Site Hazard Assessment and a Site Hazard Ranking; therefore, a public comment period for the proposed removal of the Site from the Ecology Hazardous Sites List was conducted from March 2 through April 2, 2018. Comments received during this period included a Site geotechnical report completed in 2005 (previously unavailable to Ecology) that indicates the presence of ground water at depths of 2.5 to 3.5 feet below ground surface beneath the Site. This information contradicts hydrogeologic conditions Site described in the NFA opinion letter, which indicated depths to ground water of 10 to 15 feet bgs based on local water well reports.

The following additional information is required to further characterize the Site:

- Retain a driller licensed in the State of Washington to install temporary monitoring wells along the Property boundary, downgradient of historical Site contamination sources. Monitoring well screens must intercept the uppermost zone of saturation.
- Measure stabilized static ground water levels prior to sampling. Collect representative ground water samples using low-flow purging techniques, including monitoring of field parameters for stabilization prior to sample collection. Filter samples to be tested for metals through an in-line 45-micron filter.

- Submit the ground water samples to an analytical laboratory certified by the State of Washington, for analysis of TPHg, TPHd, TPHo, BTEX, dissolved cadmium, and dissolved lead.
- Enter sampling results into the Ecology EIM database.

Before further work is completed, Ecology encourages the development of a work plan to insure that sufficient data is collected to avoid unnecessary expenditure of time and money.

2. Establishment of cleanup standards.

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

Soil

Cleanup Levels: Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the requirements for a Simplified Terrestrial Ecological Evaluation (TEE) per WAC 173-340-7492(2).

The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. Soil cleanup levels based on leaching (protection of ground water) and protection of direct contact are appropriate. The MTCA Method A cleanup levels identified chemicals of concern are considered appropriate for soil at the Site and are protective of human health and the environment.

Point of Compliance: For soil cleanup levels based on the protection of ground water, the standard point of compliance is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

3. Selection of cleanup action.

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

The selected cleanup action consisted of excavation and off-Site disposal of soil with concentrations of chemicals of concern above cleanup levels.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. The cleanup implemented at the Site consisted of excavation and off-Site disposal of 2.51 tons (approximately 1.9 cubic yards) of soil with concentrations of TPHg, benzene, and xylenes above cleanup levels. Confirmation soil samples collected from the sides and bottom of the excavation showed results below cleanup levels.

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 performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. 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

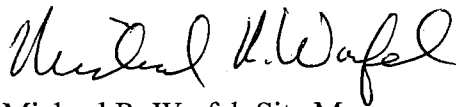
Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to

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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 435-649-7257 or e-mail at michael.warfel@ecy.wa.gov.

Sincerely,



Michael R. Warfel, Site Manager
NWRO Toxics Cleanup Program

Enclosure: A – Description and Diagrams of the Site

cc: Jason Souza, Migizi Group
Sonia Fernandez, VCP Coordinator, NWRO
Beth McKee, VCP Financial Manager (without enclosures)
Louise Bardy, VCP Unit Supervisor, NWRO

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined by releases of cadmium, lead, gasoline-range hydrocarbons (TPHg), diesel-range petroleum hydrocarbons (TPHd), oil-range petroleum hydrocarbons (TPHo), benzene, toluene, ethylbenzene, and xylenes (BTEX) into the Soil. The Site is located at 1515 196th St SE, Bothell, WA 98012, on Snohomish County tax parcel 27051800402000, which covers 2.55 acres.

Area and Property Description: The Property is located in southwestern Snohomish County, between the cities of Bothell and Mill Creek (**Figure 1**). The Property is presently undeveloped and is surrounded by the following adjacent land uses:

- North and West: residential and open space
- East: self-storage and truck rental
- South: private school and multiple warehouses

Site History and Current Use: Historic mapping data and field observations indicate that the Property was originally developed as rural/residential, with structures that included barns and smaller buildings. A visit to the Property in 2000 by the Snohomish Health District (SHD) noted the presence of several structures, including a red barn located in the western portion of the Property. A Property map included in the February 2005 Site Hazard Assessment completed by SHD shows the presence of five structures, a concrete pad, an area of fill, and two areas of illegal dumping.

Structures were present in a 2007 aerial photo, but a 2011 aerial photo showed that all structures had been removed and the Property appeared to be bare ground. A 2015 aerial photo shows most of the Property covered uniformly with a grey surface (likely compacted gravel), storage of construction equipment, silt fencing to control surface water runoff, and controlled access through a fenced gate and driveway in the southeast corner of the property. None of the waste-related features observed by SHD in 2000 and 2005 is evident on the 2011 and 2015 aerial photos. Frank Coluccio Construction has leased the Property since 2015 for equipment and materials staging, associated with a water and sewer main construction project in the 196th Street SE right-of-way (Alderwood Water & Wastewater District project).

Sources of Contamination: Potential sources of contamination are alleged illegal dumping, leaking drums of unknown materials, and piles of solid waste materials that were previously observed on the Property by the SHD; see section below regarding Release and Extent of Contamination.

Physiographic Setting: The northern and central portions of the Property are relatively flat, at an approximate elevation of 190 feet above mean sea level (amsl). Land surface slopes to the south and southwest, towards a drainage ditch that runs along the north side of 196th Street SE.

Surface/Storm Water System: A storm water catchment and conveyance system is not present on the Property. Aerial photographs show the southern sloping part of the Property is heavily vegetated and no evidence of surface drainage channels, indicating that precipitation likely infiltrates into the ground or slowly flows downhill to the drainage ditch along 196th Street SE. Snohomish County mapping indicates that the drainage ditch discharges to North Creek approximately 100 feet from the southwest corner of the Property.

Ecological Setting: The soil type at the Site indicated by the soils map of Snohomish County is Everett gravelly sandy loam, described as well-drained soils underlain by porous glacial materials. The surface of the northern and central parts of the Property are gravel-covered, to facilitate storage of construction equipment and materials. Mapped Snohomish County inventoried wetlands are shown on adjacent parcels to the north and west of the Property.

Geology: The geologic map of Snohomish County shows the Site is underlain by Vashon-age advance glacial outwash, which generally consists of well-sorted sand and gravel deposits.

Ground Water: Test pit logs from a geotechnical investigation completed on the Site and adjacent properties in 2005 showed ground water seepage at depths of 2.5 to 3.5 feet below ground surface (bgs). Data from water well reports in the Ecology database indicate a depth to the regional water table of approximately 10 to 15 feet below ground surface. This estimate is based on records of former dewatering wells drilled in the 196th Street SE right-of-way, to facilitate construction of the Alderwood Water & Wastewater District water and sewer mains beneath the street.

Release and Extent of Contamination: Pursuant to complaints of illegal dumping on the Property and an Environmental Report Tracking System (ERTS) referral from Ecology, the SHD conducted a site inspection in February 2005 that included collection of soil samples (**Figure 2**). Potential sources of contamination observed on the Property included drums and piles of material that appeared to be sandblast grit. The SHD selected the following chemicals of concern due to observations of soil staining, oil-like waste, and sand blast grit: diesel- and oil-range petroleum hydrocarbons (TPHd and TPHo), arsenic, cadmium, chromium, and lead.

SHD collected eight soil samples from ground surface to depths of 3 to 19 inches. Sample results (**Table 1**) showed concentrations of the following chemicals above MTCA Method A soil cleanup levels: cadmium (four locations), lead (one location), and TPHo (one location). The sample showing the TPHo exceedance (concentration of 70,000 mg/kg) was collected from visually stained soil below a leaking 5-gallon oil bucket.

A Site Hazard Assessment was completed by SHD on behalf of Ecology in January 2006, with a resulting rank of 4 on a scale of 1 to 5, where 1 represents a site with the greatest potential

impact on human health and the environment. The Site was added to the Ecology Confirmed and Suspected Contaminated Sites List in February 2006.

The Property owner retained Migizi Group (Migizi) in 2017 to conduct additional soil sampling at the Site. Field condition descriptions in the June 2017 Migizi report confirmed indications from the 2011 and 2015 aerial photos of the Property, that prior presence of waste materials were not evident and were apparently removed from the Property.

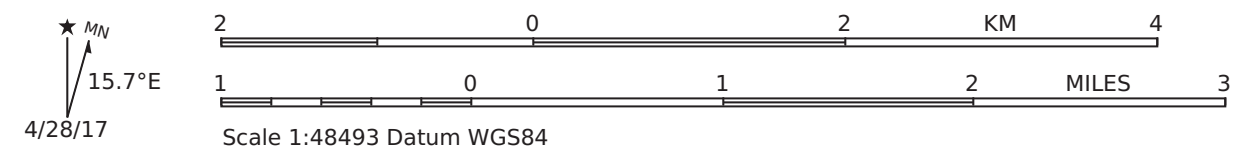
Migizi established a grid pattern in the five areas of the Site where observed and potential contamination occurred as identified by the April 2005 Site investigation by SHD (**Figure 3**). A statistical random grid sampling method (as described in *Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup Program Publication No. 10-09-057, Revised June 2016*) was used to select grid points for collection of soil samples below the surficial layer of gravel, from depth intervals of 6 to 10 inches. Samples were tested for the following chemicals of concern: TPHg, TPHd, TPHo, BTEX, cadmium, and lead. Sample results showed the following chemical concentrations above MTCA Method A cleanup levels at grid location number 75 (**Table 2** and **Figure 4**): TPHg, benzene, and xylenes.

Ground water samples were not collected at the Site, because the 2005 geotechnical report showing shallow ground water seepage into test pits was not available at the time of the 2017 soil sampling work, and the assumed depth to ground water was based only on information from local water well reports.

Cleanup Actions: Additional soil samples were collected at grid location number 75 to assess the lateral and vertical extent of the detected chemicals. The cleanup implemented at the Site consisted of excavation and off-Site disposal of 2.51 tons (approximately 1.9 cubic yards) of soil at this location (**Figure 5**). Confirmation soil samples collected from the sides and bottom of the final excavation limits showed results below cleanup levels. The sample results confirm that soil impacts were limited to the upper 16 inches (1.3 feet) of the soil column at that location.

The lateral and vertical extent of soil potentially affected by chemicals of concern has been adequately defined by the Site investigation, soil cleanup, and soil confirmation sampling completed in May and June 2017. Impacts to groundwater from the documented contaminant releases at the Site have not been evaluated.

Site Diagrams and Data Tables



17921 Bothell-Everett Hwy,
Suite 102, Bothell, WA
425-398-2300

Location	1515 196th Street SE Bothell, WA		Title	Property Location		Figure	1
Job Number	P952-B17	Drawn By	SKL	Checked By	JDS	Approved By	JDS
Date	May 1, 2017						

Enclosure A, Figure 1

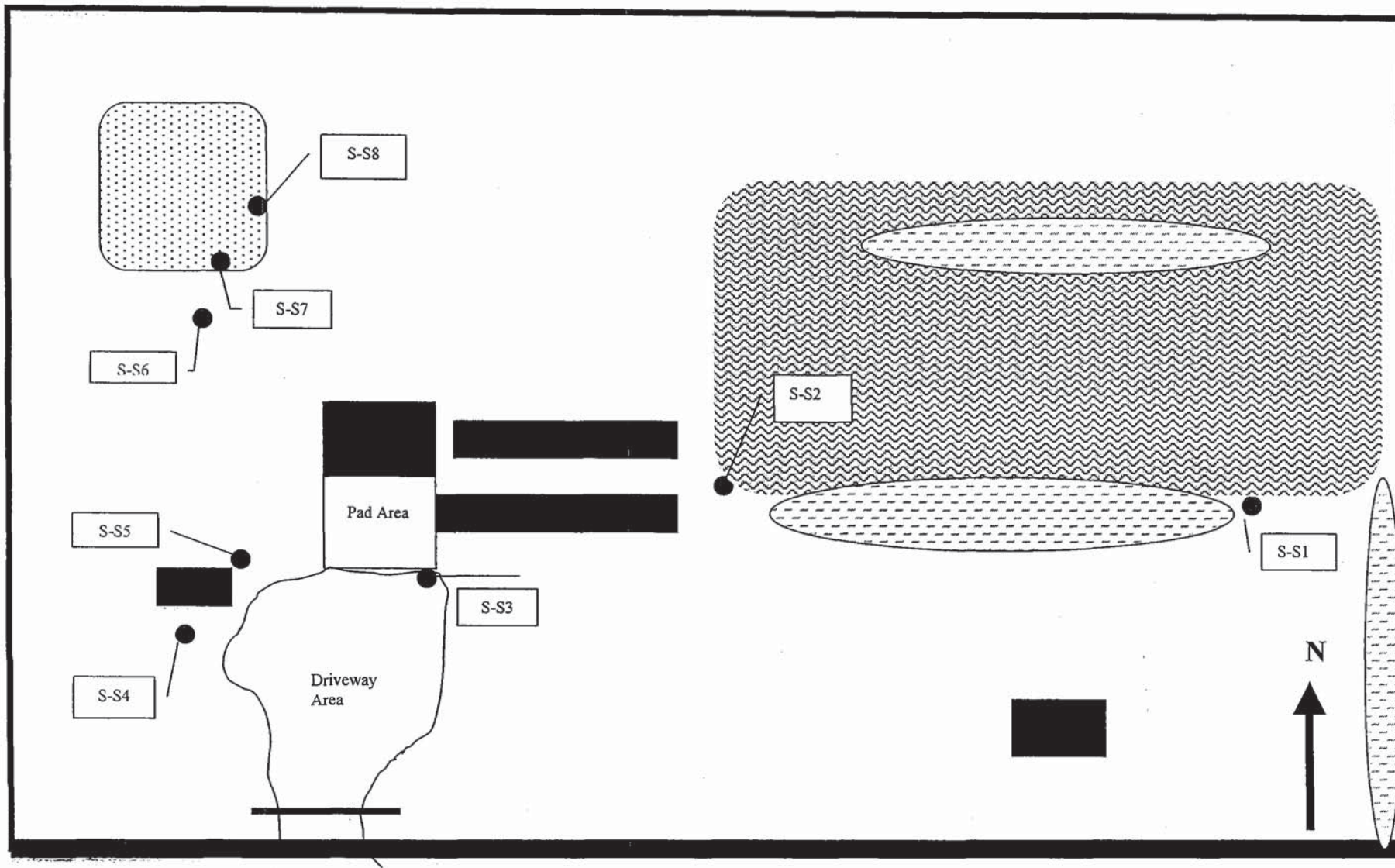





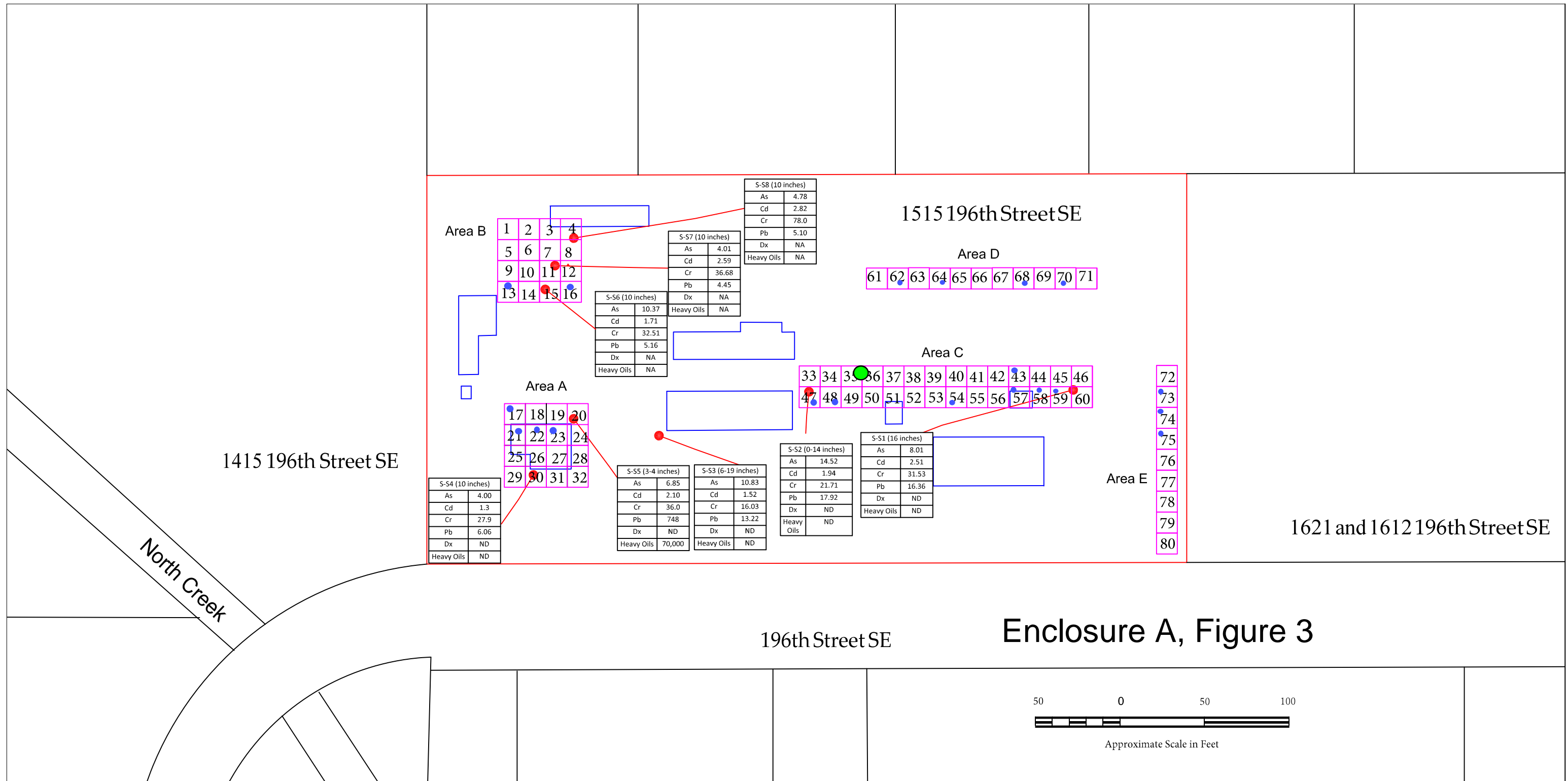


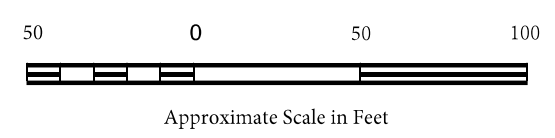
Figure 1
 Schleuter Property
 1515 196th Street SE
 February, 2005
 Snohomish Health District

- Areas of Illegal Dumping 
- Structures 
- Sample Areas 
- Fill Area 
- Open Graveled Area 

Enclosure A, Figure 2



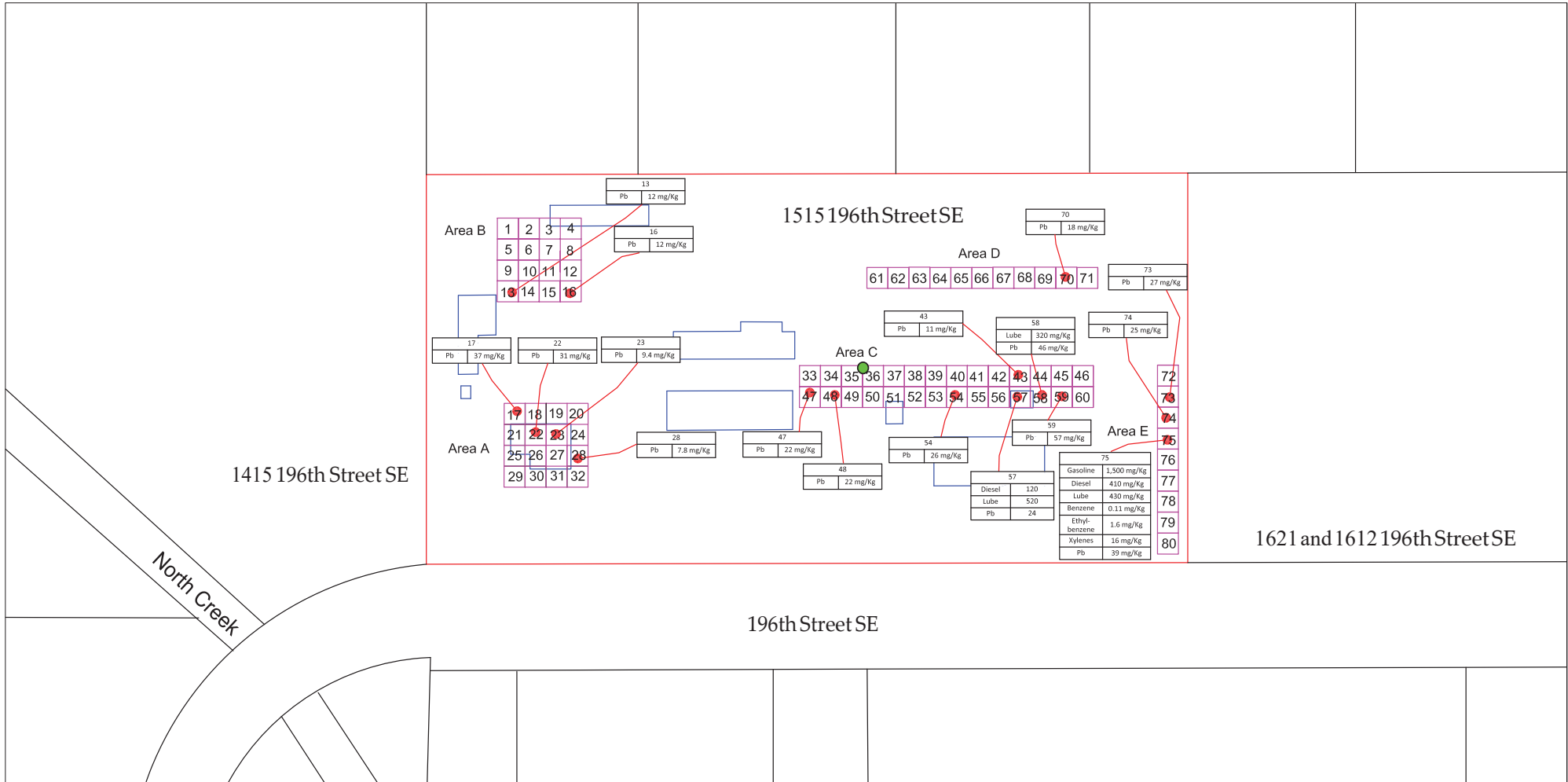
Enclosure A, Figure 3










- Site Parcel
- Historical Site Structure
- Parcel Boundaries
- Sample Grids (~155 square feet each square)
- N
- Tree Landmark
- Sample Locations

Migizi Group, Inc.
 17921 Bothell-Everett Hwy.
 Suite 102
 Bothell, WA 98012
 425-398-2300
 425-398-2333 fax
 www.migizigroup.com

PROJECT: Schlueter RIFS	
SHEET TITLE: Site Figure	
DESIGNER: SKL	JOB NO. P966-B17
DRAWN BY: SKL	SCALE: As Shown
CHECKED BY: JDS	FIGURE: 2
DATE: May 5, 2017	FILE: 966 Figure 2.dwg

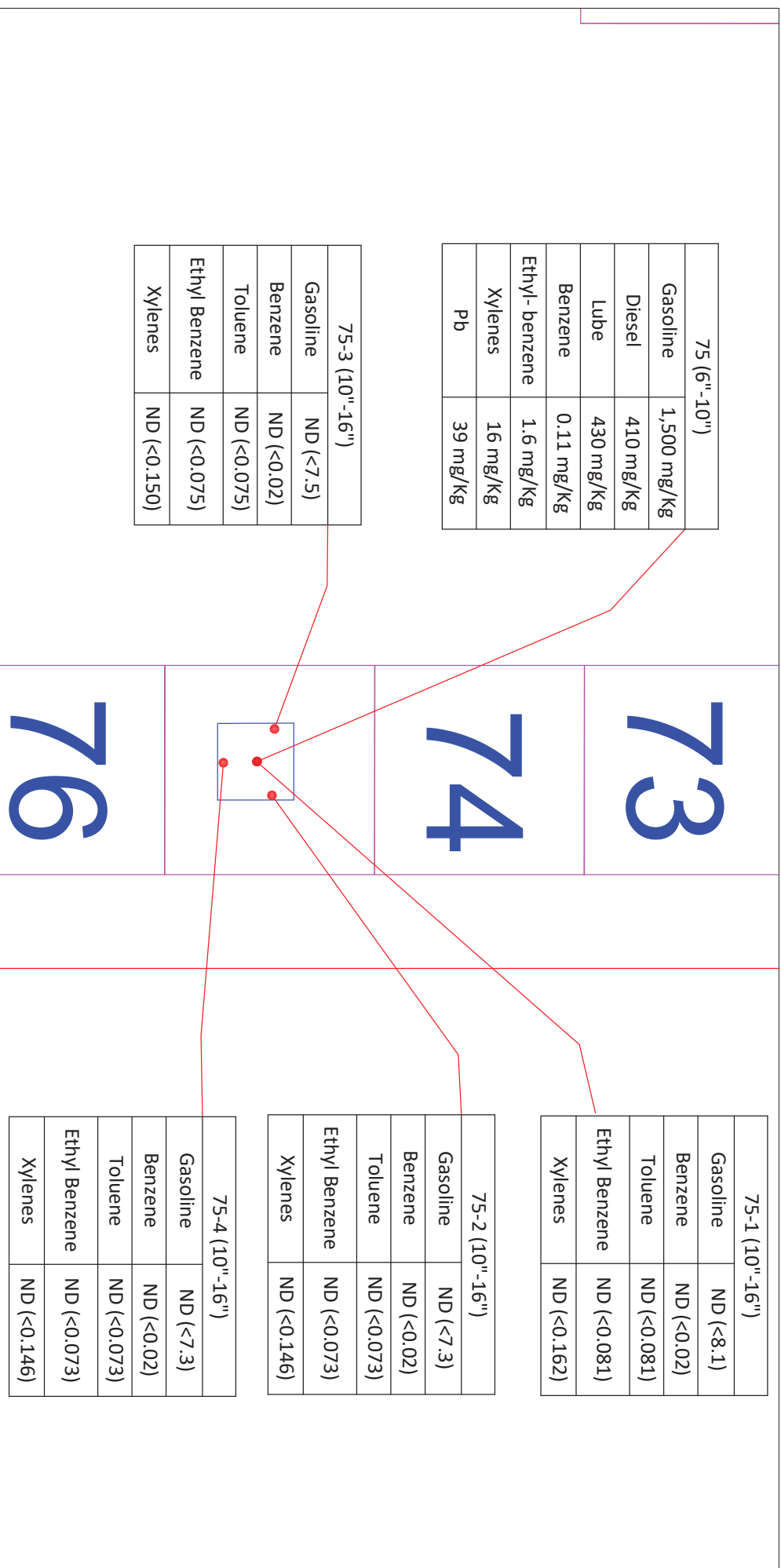


	Site Parcel		Sample Grids (~155 square feet each square)
	Historical Site Structure		
	Parcel Boundaries		Tree Landmark
			Sample Locations

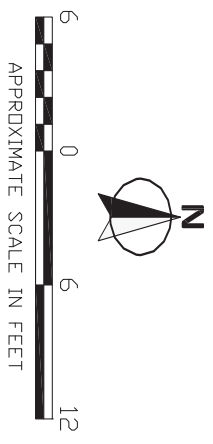
Migizi Group, Inc.
 17921 Bothell-Everett Hwy.
 Suite 102
 Bothell, WA 98012
 425-398-2300
 425-398-2333 fax
 www.migizigroup.com

PROJECT: Schlueter RIFS	
SHEET TITLE: Site Figure	
DESIGNER: SKL	JOB NO. P966-B17
DRAWN BY: SKL	SCALE: As Shown
CHECKED BY: JDS	FIGURE: 2
DATE: May 5, 2017	FILE: 966 Figure 2.dwg

Enclosure A, Figure 4



Excavated Soil inside Sample Grid 75



Migizi Group, Inc.
 17921 Bothell-Everett Hwy.
 Suite 102
 Bothell, WA 98012
 425-398-2300
 425-398-2333 fax
 www.migizigroup.com

PROJECT: Schlueter RIFS

SHEET TITLE: Soil Excavation and Sampling Plan

DESIGNER: SKL	JOB NO. P966-B17
DRAWN BY: SKL	SCALE: As Shown
CHECKED BY: JDS	FIGURE: 3
DATE: November 3, 2017	FILE: 966 Figure 3.dwg

Enclosure A, Figure 5

Table 1 February 9, 2005 SHD Soil Sampling @ 1515 196 th ST SE Schleuter Site							
Analysis →		As	Cd	Cr	Pb	NWTPH Dx	NWTPH Heavy Oils
MTCA Method A Clean-up Level →		20	2	19/20 00	250	2000	2000
Location ↓	Sample Depth ↓						
S-S1	16 inches	8.01	2.51	31.53	16.36	ND	ND
S-S2	0-14 inches	14.52	1.94	21.71	17.92	ND	ND
S-S3	6-19 inches	10.83	1.52	16.03	13.22	ND	ND
S-S4	10 inches	4.00	1.3	27.49	6.06	ND	ND
S-S5	3-4 inches	6.85	2.10	36.0	*748	ND	*70,000
S-S6	10 inches	10.37	1.71	32.51	5.16	NA	NA
S-S7	10 inches	4.01	2.59	36.68	4.45	NA	NA
S-S8	10 inches	4.78	2.82	78.0	5.10	NA	NA

All results are noted in mg/kg unless otherwise noted
 Bold type depicts MTCA exceedances.
 ND = Non-Detect
 NA = Analysis not performed
 * = Sample collected in a highly contaminated area below a leaking 5 gallon oil bucket

Enclosure A, Table 1

VCP NW3148, Schleuter Property - Results of Soil Samples Collected May 15, 2017

Sample No.	HCID			TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl Benzene	Xylenes	Cadmium	Lead
	GRO	DRO	ORO									
13	<13	<33	<66	NA	NA	NA	NA	NA	NA	NA	<0.66	12
16	<13	<33	<66	NA	NA	NA	NA	NA	NA	NA	<0.66	12
17	<13	<31	<63	NA	NA	NA	NA	NA	NA	NA	<0.63	37
22	<13	<31	<63	NA	NA	NA	NA	NA	NA	NA	<0.63	31
23	<13	<31	<63	NA	NA	NA	NA	NA	NA	NA	<0.63	9.4
28	<12	<29	<59	NA	NA	NA	NA	NA	NA	NA	<0.59	7.8
43	<12	<30	<60	NA	NA	NA	NA	NA	NA	NA	<0.6	11
47	<12	<30	<61	NA	NA	NA	NA	NA	NA	NA	<0.61	22
48	<13	<34	<67	NA	NA	NA	NA	NA	NA	NA	<0.67	22
54	<15	<38	<76	NA	NA	NA	NA	NA	NA	NA	<0.76	26
57	<12	<31	>61	NA	120	520	NA	NA	NA	NA	<0.61	24
58	<13	<32	>63	NA	<55	320	NA	NA	NA	NA	<0.63	46
59	<12	<30	<61	NA	NA	NA	NA	NA	NA	NA	<0.61	57
62	<11	<29	<57	NA	NA	NA	NA	NA	NA	NA	<0.57	<5.7
64	<11	<27	<54	NA	NA	NA	NA	NA	NA	NA	<0.54	<5.4
67	<11	<27	<55	NA	NA	NA	NA	NA	NA	NA	<0.55	<5.5
70	<12	<29	<59	NA	NA	NA	NA	NA	NA	NA	<0.59	18
73	<12	<31	<62	NA	NA	NA	NA	NA	NA	NA	<0.62	27
74	<13	<32	<63	NA	NA	NA	NA	NA	NA	NA	<0.63	25
75	>14	>35	>69	1,500	410	430	0.11	0.8	1.6	16	<0.69	39
MTCA A	----	----	----	30	2,000	2,000	0.03	7	6	9	2	250
	Sample subsequently tested for TPH fractions based on HCID detections											
	Result greater than MTCA Method A soil cleanup level											
All table values in milligrams per kilogram (mg/kg)												

Enclosure A, Table 2