REPORT

Trench Backfill Soils Characterization Workplan

Landsburg Mine Site

Submitted to:

Washington State Department of Ecology
3190 - 160th Avenue SE
Bellevue, WA 98008

Submitted by:

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200, Redmond, Washington, USA 98052

+1 425 883-0777

923-1000-005.5000

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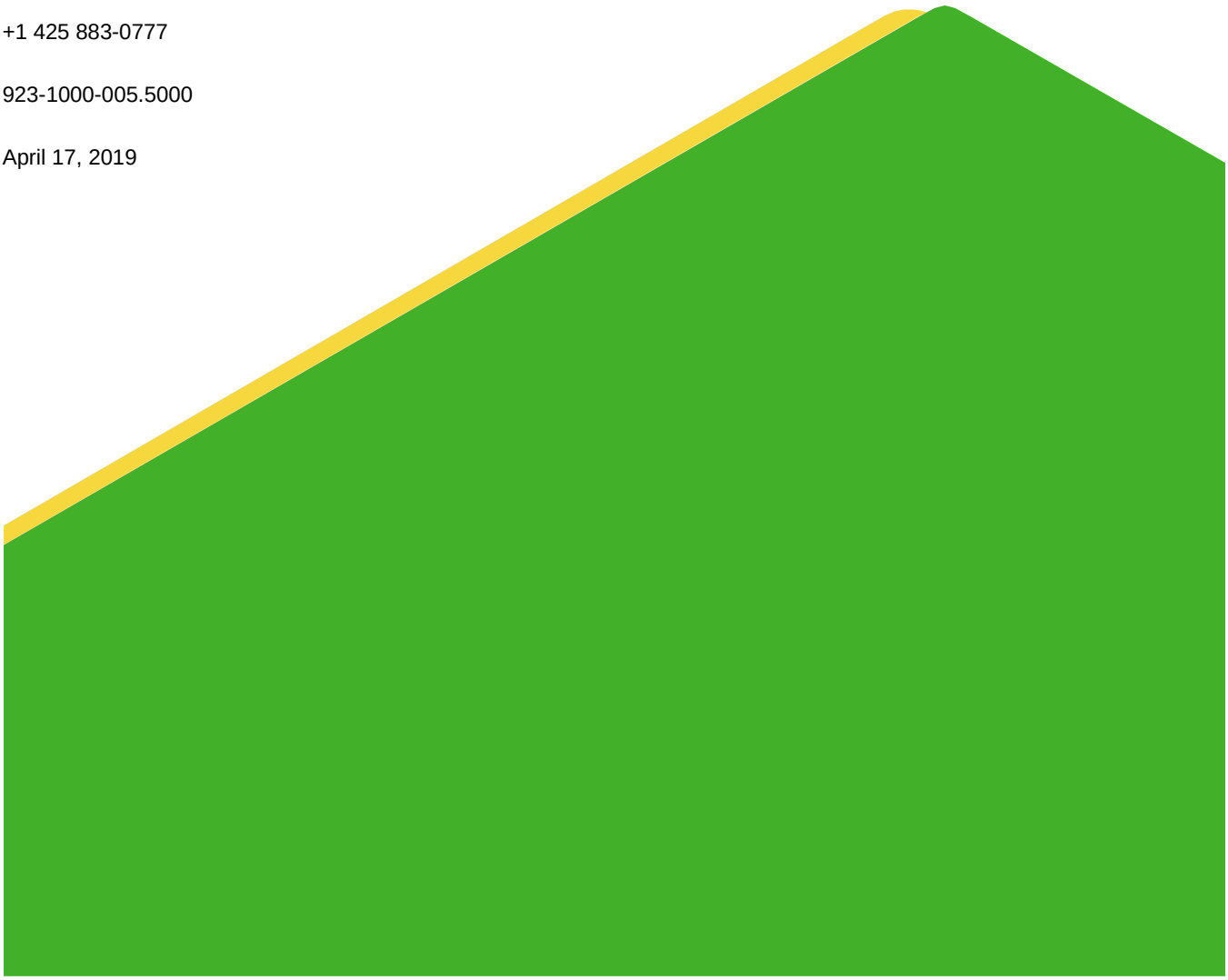

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1.0 INTRODUCTION

This Trench Backfill Soils Characterization Workplan (Workplan) for the Landsburg Mine Site (Site) is a supplement to the Engineering Design Report (EDR) (Golder 2018). The EDR indicates that when a source or sources of suitable backfill material were identified a workplan will be submitted to the Washington State Department of Ecology (Ecology) for review and approval. The workplan is to establish the due diligence, screening, and sampling and analyses that will be conducted to verify that the backfill material will not become a potential source of contaminants to the site, including the potential to leach contaminants to the groundwater.

A major redevelopment project is being conducted at the Microsoft Main Campus located at One Microsoft Way, Redmond, Washington. The Microsoft redevelopment project will include the excavation and off-site disposal of over two million cubic yards of native soils (Microsoft 2019a). This Workplan is specific to the potential fill materials from the Microsoft excavation and describes the characterization already conducted to select this soil as an appropriate source, and the additional confirmational screening and testing that will be conducted during trench backfill.

The Landsburg Potentially Liable Persons (PLP Group) believe the soil from the Microsoft redevelopment project is acceptable fill material for the Landsburg Mine Site; as supported by the following:

- The Microsoft project would be a single source for the entire volume of trench backfill, which allows for greater quality control than if multiple sites were supplying fill soil.
- Only soils deeper than 4 feet below ground surface would be accepted at the Site.
- Geotechnical studies indicate that the soils from the Microsoft excavation area are structurally suitable for use as trench backfill at the Site.
- Due diligence indicated that there have been no historical uses of the planned Microsoft excavation area that would indicate a potential for contamination to underlying soils.
- Field screening at both the source area (Microsoft project) and at the Site before placement in the trench, combined with periodic confirmational sampling and analyses will verify backfill soil placed into the Site trenches will not introduce contaminants to the Site.

2.0 DUE DILIGENCE OF FILL SOURCE SITE

An Environmental Review was completed of the Microsoft excavation area by Golder Associates Inc. (Golder) to determine if any historical use of the proposed source areas could have resulted in contamination to underlying soils. The findings of the Environmental Review are summarized in this section.

2.1 Current Use of Fill Source Site

Native soil from the Microsoft project, proposed for use as fill material at the Landsburg Site, would be excavated from King County Parcels 5503000010, 5503000020, 5503000030, 5503000040, 5503000080, 5503000090, 5503000130, 5503000150, and 5503000160, (the Parcels). The Parcels are currently used by Microsoft as commercial offices, parking lots, recreational sports fields, and storage space.

2.2 History of Fill Source Site

Microsoft has occupied the Parcels since approximately 1986 (Microsoft 2019b). Golder obtained historical aerial photographs from Environmental Data Resources Inc. for the years 1943, 1965, 1968, 1978, 1980, 1990, 1991,

2006, 2009, 2013, and 2017. The Parcels appear undeveloped in the 1943 photograph. In the 1965 photograph, one area on the eastern portion of Parcel 5503000150 and one area on the middle portion of Parcel 5503000010 appear to have been cleared, but no buildings appear to have been constructed. In the 1968 photograph, these areas appear to have been undeveloped and wooded once again. Major development of Parcels 5503000010, 5503000020, 5503000030, 5503000040, 5503000080, 5503000090, and 5503000130 for Microsoft use appears to occur in the 1978 and 1980 photograph. These parcels appear to have been developed for Microsoft use as commercial office buildings, parking lots, recreational sports fields, and storage space in the 1990 photograph. In the 1990 photograph, Parcel 5503000160 also appears to have been developed for Microsoft use as commercial office buildings and storage space.

Native soils excavated from the vicinity of the planned underground parking garage, on Parcels 5503000080, 5503000090, 5503000130, 5503000150, and 5503000160, would be the “source areas” for most of the soil transported to the Landsburg Site for use as trench fill material. The remaining parcels, where less extensive excavation is planned, were also undeveloped until the 1980s when Microsoft occupied them and began using them for commercial office buildings, parking lots, and storage space. As indicated by the historical aerials, no adverse environmental impacts are anticipated based on our review and evaluation of the historical aerial photographs.

2.3 Records Review of the Source Areas and Surrounding Areas

Golder retained Environmental Data Resources Inc. to perform an environmental regulatory database search of the general area of the Parcels. In accordance with the search requirements of ASTM E-1527-13 Standard (*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*), Golder reviewed the federal and state regulatory agency database records to identify the use, generation, storage, treatment or disposal of hazardous substances or petroleum products, or release incidents of such materials that might cause a release to or otherwise contaminate soils at the planned fill source areas.

The Parcels do not appear in any standard database listing that gives indications that the underlying soils could have adverse environmental impacts. The Microsoft Campus is listed on several databases indicating Microsoft as a hazardous waste generator in 1993 but withdrew as a hazardous waste generator in 1995. Microsoft was listed as reporting chemical storage under the Emergency Planning and Community Right to Know (EPCRA) program in 2000 and 2003. These database listings and activities do not indicate a release or contamination.

No sites or facilities listed as contaminated or with ongoing remediation were identified within one-quarter mile of the Microsoft Campus and soil excavation area. Based on the review of the regulatory database search, there is no indication that soils from the Microsoft excavation source areas are contaminated or otherwise environmentally compromised.

2.4 Physical Characteristics of Fill Materials

A Geotechnical Engineering Services completed by GeoEngineers, Inc. (GeoEngineers 2018) indicates the soils encountered at the Microsoft site consist of weathered and unweathered Vashon glacial till. Based on the review of 29 historical boreholes and 11 new boring completed by GeoEngineers in January 2018, GeoEngineers describes the subsurface conditions as follows:

- Asphalt concrete pavement and grass sod are typically encountered in the top 6-inches from ground surface, where present.

- Fill soils consisting of medium dense silty sand with variable gravel and organic content in the topsoil are encountered in portions of the planned excavation area from ground surface extending to depths of approximately 2 to 15 feet below ground surface (bgs).
- Glacially consolidated soils consisting of glacial till and advance outwash were encountered below the fill, where present. Glacial till generally consisting of medium dense to very dense silty sand with varying amounts of gravel and cobbles are encountered from ground surface extending to depths of approximately 40 feet bgs.
- Advance outwash underlies the fill and glacial till. Advance outwash consists of dense to very dense sand with variable silt and gravel content.

There were no indications of contamination noted in any of the borehole reports (e.g. no indications of discoloration or odors). All three types of soil materials (fill, glacial till, and advance outwash) are suitable for use as trench backfill material.

3.0 SCREENING, SAMPLING AND ANALYSIS

As described above, there is no indication that soil from the Microsoft redevelopment project could potentially contain contaminants. To provide further confirmation that backfill material used at the Site will not become a potential source of contaminants to the Site, including the potential to leach contaminants to the groundwater, field screening and confirmation sampling and analysis will be conducted.

3.1 Field Screening

Golder and their subcontractor will screen soil both during excavation at the Microsoft site and upon delivery of soil to the Landsburg Site for the potential presence of contamination. The same contractor that Golder has hired to backfill the Site trenches is also the contractor in charge of soil excavation activities at the Microsoft project. This connection allows for screening of the soils both during excavation and upon delivery to the Site.

Screening will include inspection of the soils for discoloration, petroleum or volatile organic odors, and routine screening of the soils for volatile organic compounds (VOCs) using a photo ionization detector (PID). Any soils exhibiting characteristics that indicate the potential presence of contamination will not be brought to the Site. If field screening at the Site detects the potential presence of contamination in soils brought to the Site, that soil will not be placed in the trench. The suspect material will be removed from the Site.

3.2 Sampling and Analysis Plan

Initial Soil Sampling and Analysis

An initial soil sampling and analysis round will occur prior to the start of the Microsoft excavation and transport of soils to the Landsburg Site. The initial round will include sampling from five different test pits distributed throughout accessible portions of the planned excavation area. Two distinct grab samples will be collected from each of the five test pits. Since only soil deeper than 4 feet below the surface will be brought to the Landsburg Site, soil samples will be collected from depths within the test pits that are greater than 4 feet from the surface. Laboratory analyses of the soil samples collected during this initial round of sampling will include an expanded list of analytes. Table 3-1 presents the expanded list of test analytes that will be included in the initial round of soil sampling. Sampling will occur at least two weeks prior to the actual excavation of the soils to allow enough time for laboratory analyses prior to transporting the soil the Landsburg Site.

Additional Soil Sampling and Analysis

The Microsoft excavation is planned to occur in stages and not all areas and depths of the site excavation will be accessible at the start of excavation. As the excavation progresses and access becomes available, additional soil sampling and analyses will be conducted. This additional soil sampling will provide documentation that various areas of the Microsoft source area are free of contaminants. Like the initial soil sampling, the additional samples will be collected by digging one or more test pits into representative soil that is scheduled for excavation. The sampling will occur at least one week prior to excavation to allow enough time for laboratory analyses prior to transporting the soil the Landsburg Site. The routine soil sampling will occur at a frequency that will result in at least 10 percent confirmation of all soil imported to the Site. Analysis of the additional soil samples will include the list of analytes presented in Table 3-2. These were the list of analytes that were listed in the EDR (Golder 2018). Table 3-3 presents sample containers, preservatives, and analytical holding times for the analyses that will be conducted during the characterization soil sampling.

If any soil sampling result contains contaminant concentrations above Model Toxics Control Act (MTCA) cleanup levels for unrestricted uses including protection of potable groundwater, that soil will not be permitted for transport to the Landsburg Site.

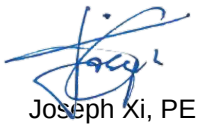
The provisions included in the Compliance Monitoring Plan (CMP) (Golder 2017) are applicable to the confirmation soil sampling proposed in this Workplan. Specifically, the requirements established in the CMP Health and Safety Plan (HASP) and Quality Assurance Project Plan (QAPP) will be followed.

4.0 SUMMARY

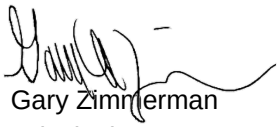
Due diligence performed on the Microsoft excavation area concluded there is no indication that soils from the Microsoft excavation source areas are contaminated or otherwise environmentally compromised. The geotechnical boreholes completed at the site encountered soil fill, glacial till and advance outwash, with no indication of contamination. Field screening of the soils will occur at both the excavation source area and upon delivery of soils at Site, and any soil exhibiting indications of potential contamination will not be used at the Landsburg Site. In addition, soil sampling and analyses will be conducted to confirm that the backfill material will not become a potential source of contaminants to the Site, including the potential to leach contaminants to the groundwater.

Signature Page

Golder Associates Inc.



Joseph Xi, PE
Senior Project Engineer



Gary Zimmerman
Principal

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Tables

Table 3-1: Analytes and Analytical Methods for Initial Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
Fuels				
TPH-gasoline	NWTPH-Gx	0.703	5	mg/kg
TPH-diesel	NWTPH-Dx	8.31	25	mg/kg
TPH-oil	NWTPH-Dx	17.2	50	mg/kg
Metals				
Arsenic	SW 6010	1.95	10	mg/kg
Cadmium	SW 6010	0.102	0.5	mg/kg
Total Chromium	SW 6010	0.076	0.5	mg/kg
Lead	SW 6010	1.42	5	mg/kg
Mercury	EPA 7471B	0.0002	0.25	mg/kg
Pesticides				
Aldrin	8081B	0.812	5	ug/kg
alpha-BHC	8081B	0.912	5	ug/kg
beta-BHC	8081B	0.727	5	ug/kg
delta-BHC	8081B	1.31	5	ug/kg
gamma-BHC	8081B	0.822	5	ug/kg
alpha-Chlordane	8081B	0.709	10	ug/kg
gamma-Chlordane	8081B	0.723	10	ug/kg
4,4'-DDD	8081B	0.575	10	ug/kg
4,4'-DDE	8081B	0.766	10	ug/kg
4,4'-DDT	8081B	0.593	10	ug/kg
Dieldrin	8081B	0.627	10	ug/kg
Endosulfan I	8081B	0.71	5	ug/kg
Endosulfan II	8081B	0.624	10	ug/kg
Endosulfan sulfate	8081B	0.474	10	ug/kg
Endrin	8081B	0.637	10	ug/kg
Endrin aldehyde	8081B	0.585	10	ug/kg
Endrin ketone	8081B	0.678	10	ug/kg
Heptachlor	8081B	0.942	5	ug/kg
Heptachlor epoxide	8081B	0.682	5	ug/kg
Methoxychlor	8081B	1.62	10	ug/kg
Toxaphene	8081B	17.7	50	ug/kg
Herbicides				
Dalapon	8151A	52.7	230	ug/kg
2,4,6-Trichlorophenol	8151A	3.67	4.7	ug/kg
Dicamba	8151A	7.33	9.4	ug/kg
MCPP	8151A	263	940	ug/kg
MCPA	8151A	659	940	ug/kg
Dichlorprop	8151A	6.73	71	ug/kg
2,4-D	8151A	7.95	9.4	ug/kg
Pentachlorophenol	8151A	0.351	4.8	ug/kg
2,4,5-TP	8151A	3.5	9.5	ug/kg
2,4,5-T	8151A	6.95	9.5	ug/kg
2,4-DB	8151A	4.17	9.5	ug/kg
Dinoseb	8151A	8.57	9.5	ug/kg

Table 3-1: Analytes and Analytical Methods for Initial Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
VOCs				
Dichlorodifluoromethane	8260C	0.35	1	ug/kg
Chloromethane	8260C	1.09	5	ug/kg
Vinyl Chloride	8260C	0.25	1	ug/kg
Bromomethane	8260C	0.46	1	ug/kg
Chloroethane	8260C	0.94	5	ug/kg
Trichlorofluoromethane	8260C	0.19	1	ug/kg
1,1-Dichloroethene	8260C	0.40	1	ug/kg
Acetone	8260C	2.37	10	ug/kg
Iodomethane	8260C	1.25	5	ug/kg
Carbon Disulfide	8260C	0.25	1	ug/kg
Methylene Chloride	8260C	2.48	5	ug/kg
(trans) 1,2-Dichloroethene	8260C	0.17	1	ug/kg
Methyl t-Butyl Ether	8260C	0.20	1	ug/kg
1,1-Dichloroethane	8260C	0.28	1	ug/kg
Vinyl Acetate	8260C	0.74	5	ug/kg
2,2-Dichloropropane	8260C	0.18	1	ug/kg
(cis) 1,2-Dichloroethene	8260C	0.17	1	ug/kg
2-Butanone	8260C	1.46	5	ug/kg
Bromochloromethane	8260C	0.33	1	ug/kg
Chloroform	8260C	0.19	1	ug/kg
1,1,1-Trichloroethane	8260C	0.25	1	ug/kg
Carbon Tetrachloride	8260C	0.26	1	ug/kg
1,1-Dichloropropene	8260C	0.27	1	ug/kg
Benzene	8260C	0.16	1	ug/kg
1,2-Dichloroethane	8260C	0.22	1	ug/kg
Trichloroethene	8260C	0.36	1	ug/kg
1,2-Dichloropropane	8260C	0.23	1	ug/kg
Dibromomethane	8260C	0.36	1	ug/kg
Bromodichloromethane	8260C	0.25	1	ug/kg
2-Chloroethyl Vinyl Ether	8260C	0.68	6.3	ug/kg
(cis) 1,3-Dichloropropene	8260C	0.17	1	ug/kg
Methyl Isobutyl Ketone	8260C	0.53	5	ug/kg
Toluene	8260C	0.21	5	ug/kg
(trans) 1,3-Dichloropropene	8260C	0.22	1	ug/kg
1,1,2-Trichloroethane	8260C	0.33	1	ug/kg
Tetrachloroethene	8260C	0.32	1	ug/kg
1,3-Dichloropropane	8260C	0.23	1	ug/kg
2-Hexanone	8260C	0.85	5	ug/kg
Dibromochloromethane	8260C	0.32	1	ug/kg
1,2-Dibromoethane	8260C	0.28	1	ug/kg
Chlorobenzene	8260C	0.19	1	ug/kg
1,1,1,2-Tetrachloroethane	8260C	0.29	1	ug/kg
Ethylbenzene	8260C	0.17	1	ug/kg
m,p-Xylene	8260C	0.67	2	ug/kg
o-Xylene	8260C	0.17	1	ug/kg

Table 3-1: Analytes and Analytical Methods for Initial Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
Styrene	8260C	0.20	1	ug/kg
Bromoform	8260C	0.83	5	ug/kg
Isopropylbenzene	8260C	0.15	1	ug/kg
Bromobenzene	8260C	0.21	1	ug/kg
1,1,2,2-Tetrachloroethane	8260C	0.25	1	ug/kg
1,2,3-Trichloropropane	8260C	0.26	1	ug/kg
n-Propylbenzene	8260C	0.15	1	ug/kg
2-Chlorotoluene	8260C	0.26	1	ug/kg
4-Chlorotoluene	8260C	0.24	1	ug/kg
1,3,5-Trimethylbenzene	8260C	0.15	1	ug/kg
tert-Butylbenzene	8260C	0.15	1	ug/kg
1,2,4-Trimethylbenzene	8260C	0.18	1	ug/kg
sec-Butylbenzene	8260C	0.20	1	ug/kg
1,3-Dichlorobenzene	8260C	0.19	1	ug/kg
p-Isopropyltoluene	8260C	0.15	1	ug/kg
1,4-Dichlorobenzene	8260C	0.20	1	ug/kg
1,2-Dichlorobenzene	8260C	0.15	1	ug/kg
n-Butylbenzene	8260C	0.16	1	ug/kg
1,2-Dibromo-3-chloropropane	8260C	1.43	5	ug/kg
1,2,4-Trichlorobenzene	8260C	0.28	1	ug/kg
Hexachlorobutadiene	8260C	1.38	5	ug/kg
Naphthalene	8260C	0.21	1	ug/kg
1,2,3-Trichlorobenzene	8260C	0.25	1	ug/kg
SVOCs				
n-Nitrosodimethylamine	8270D	0.019	0.033	mg/kg
Pyridine	8270D	0.082	0.33	mg/kg
Phenol	8270D	0.014	0.033	mg/kg
Aniline	8270D	0.068	0.17	mg/kg
bis(2-Chloroethyl)ether	8270D	0.018	0.033	mg/kg
2-Chlorophenol	8270D	0.015	0.033	mg/kg
1,3-Dichlorobenzene	8270D	0.015	0.033	mg/kg
1,4-Dichlorobenzene	8270D	0.014	0.033	mg/kg
Benzyl alcohol	8270D	0.086	0.17	mg/kg
1,2-Dichlorobenzene	8270D	0.014	0.033	mg/kg
2-Methylphenol (o-Cresol)	8270D	0.013	0.033	mg/kg
bis(2-Chloroisopropyl)ether	8270D	0.019	0.033	mg/kg
(3+4)-Methylphenol (m,p-Cres	8270D	0.012	0.033	mg/kg
n-Nitroso-di-n-propylamine	8270D	0.015	0.033	mg/kg
Hexachloroethane	8270D	0.014	0.033	mg/kg
Nitrobenzene	8270D	0.016	0.033	mg/kg
Isophorone	8270D	0.012	0.033	mg/kg
2-Nitrophenol	8270D	0.014	0.033	mg/kg
2,4-Dimethylphenol	8270D	0.008	0.033	mg/kg
bis(2-Chloroethoxy)methane	8270D	0.015	0.033	mg/kg
2,4-Dichlorophenol	8270D	0.008	0.033	mg/kg
1,2,4-Trichlorobenzene	8270D	0.015	0.033	mg/kg
Naphthalene	8270D	0.016	0.0067	mg/kg

Table 3-1: Analytes and Analytical Methods for Initial Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
4-Chloroaniline	8270D	0.050	0.17	mg/kg
Hexachlorobutadiene	8270D	0.016	0.033	mg/kg
4-Chloro-3-methylphenol	8270D	0.020	0.033	mg/kg
2-Methylnaphthalene	8270D	0.014	0.0067	mg/kg
1-Methylnaphthalene	8270D	0.011	0.0067	mg/kg
Hexachlorocyclopentadiene	8270D	0.010	0.033	mg/kg
2,4,6-Trichlorophenol	8270D	0.006	0.033	mg/kg
2,3-Dichloroaniline	8270D	0.008	0.033	mg/kg
2,4,5-Trichlorophenol	8270D	0.009	0.033	mg/kg
2-Chloronaphthalene	8270D	0.010	0.033	mg/kg
2-Nitroaniline	8270D	0.008	0.033	mg/kg
1,4-Dinitrobenzene	8270D	0.007	0.033	mg/kg
Dimethylphthalate	8270D	0.008	0.033	mg/kg
1,3-Dinitrobenzene	8270D	0.006	0.033	mg/kg
2,6-Dinitrotoluene	8270D	0.005	0.033	mg/kg
1,2-Dinitrobenzene	8270D	0.007	0.033	mg/kg
Acenaphthylene	8270D	0.008	0.0067	mg/kg
3-Nitroaniline	8270D	0.005	0.033	mg/kg
2,4-Dinitrophenol	8270D	0.101	0.17	mg/kg
Acenaphthene	8270D	0.011	0.0067	mg/kg
4-Nitrophenol	8270D	0.017	0.033	mg/kg
2,4-Dinitrotoluene	8270D	0.011	0.033	mg/kg
Dibenzofuran	8270D	0.007	0.033	mg/kg
2,3,5,6-Tetrachlorophenol	8270D	0.006	0.033	mg/kg
2,3,4,6-Tetrachlorophenol	8270D	0.006	0.033	mg/kg
Diethylphthalate	8270D	0.007	0.17	mg/kg
4-Chlorophenyl-phenylether	8270D	0.007	0.033	mg/kg
4-Nitroaniline	8270D	0.007	0.033	mg/kg
Fluorene	8270D	0.007	0.0067	mg/kg
4,6-Dinitro-2-methylphenol	8270D	0.007	0.17	mg/kg
n-Nitrosodiphenylamine	8270D	0.007	0.033	mg/kg
1,2-Diphenylhydrazine	8270D	0.008	0.033	mg/kg
4-Bromophenyl-phenylether	8270D	0.006	0.033	mg/kg
Hexachlorobenzene	8270D	0.005	0.033	mg/kg
Pentachlorophenol	8270D	0.012	0.17	mg/kg
Phenanthrene	8270D	0.008	0.0067	mg/kg
Anthracene	8270D	0.007	0.0067	mg/kg
Carbazole	8270D	0.007	0.033	mg/kg
Di-n-butylphthalate	8270D	0.012	0.17	mg/kg
Fluoranthene	8270D	0.008	0.0067	mg/kg
Benzidine	8270D	0.120	0.33	mg/kg
Pyrene	8270D	0.011	0.0067	mg/kg
Butylbenzylphthalate	8270D	0.007	0.17	mg/kg
bis-2-Ethylhexyladipate	8270D	0.007	0.17	mg/kg
3,3'-Dichlorobenzidine	8270D	0.050	0.17	mg/kg
Benzo[a]anthracene	8270D	0.007	0.0067	mg/kg
Chrysene	8270D	0.009	0.0067	mg/kg

Table 3-1: Analytes and Analytical Methods for Initial Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
bis(2-Ethylhexyl)phthalate	8270D	0.008	0.17	mg/kg
Di-n-octylphthalate	8270D	0.007	0.17	mg/kg
Benzo[b]fluoranthene	8270D	0.006	0.0067	mg/kg
Benzo[j,k]fluoranthene	8270D	0.009	0.0067	mg/kg
Benzo[a]pyrene	8270D	0.009	0.0067	mg/kg
Indeno[1,2,3-cd]pyrene	8270D	0.008	0.0067	mg/kg
Dibenz[a,h]anthracene	8270D	0.007	0.0067	mg/kg
Benzo[g,h,i]perylene	8270D	0.006	0.0067	mg/kg

Notes:

a- MDL is the Method Detection Limit and is specific to a laboratory from the results of MDL studies performed by the laboratory. The MDLs can change based on the results of future MDL studies.

b- RL is the Reporting Limit and is the laboratory Practical Quantitation Limit (PQL). RLs are laboratory specific, but shall be considered minimums.

ug/kg - microgram per kilogram

mg/kg - milligram per kilogram

Table 3-2: Analytes and Analytical Methods for Ongoing Confirmation Soil Sampling

Category / Analyte	Reference Method[a]	MDL[a]	RL[b]	Units
Fuels				
TPH-gasoline	NWTPH-Gx	0.70	5	mg/kg
TPH-diesel	NWTPH-Dx	8.31	25	mg/kg
TPH-oil	NWTPH-Dx	17.2	50	mg/kg
Metals				
Arsenic	SW 6010	1.95	10	mg/kg
Cadmium	SW 6010	0.10	0.5	mg/kg
Total Chromium	SW 6010	0.08	0.5	mg/kg
Lead	SW 6010	1.42	5	mg/kg
Mercury	EPA 7471B	0.0002	0.25	mg/kg

Notes:

a- MDL is the Method Detection Limit and is specific to a laboratory from the results of MDL studies performed by the laboratory. The MDLs can change based on the results of future MDL studies.

b- RL is the Reporting Limit and is the laboratory Practical Quantitation Limit (PQL). RLs are laboratory specific, but shall be considered minimums.

Table 3-3: Sample Container Types, Volumes, Handling, Preservation and Holding Times

Analytes of Concern	Container Type	Special Handling	Preservation	Maximum Holding Time
Metals	4-ounce Glass Jar	None	Store at 4°C± 2°C	180 days to analyze / 28 days to analyze for Mercury
NWTPH-Gasoline	(2) 40-milligram Glass Vials (pre-weighed)	5-gram collected with a power stop and easy draw syringe.	Methanol in Vials Store at 4°C± 2°C	14 days to analyze
NWTPH-Diesel	4-ounce Glass Jar	None	Store at 4°C± 2°C	14 days to extract, 40 days to analyze after extraction
Total Solids (percent Moisture)	2-ounce Glass Jar with Septum	None	Store at 4°C ± 2°C	180 days to analyze
VOCs	(3) 40-milligram Glass Vials (pre-weighed)	5-gram collected with a power stop and easy draw syringe.	Store at 4°C ± 2°C	freeze within 48 hours; 14 days to analyze
SVOCs	4-ounce Glass Jar	None	Store at 4°C ± 2°C	14 days to extract, 40 days to analyze after extraction
Pesticides	4-ounce Glass Jar	None	Store at 4°C ± 2°C	14 days to extract, 40 days to analyze after extraction
Herbicides	4-ounce Glass Jar	None	Store at 4°C ± 2°C	14 days to extract, 40 days to analyze after extraction

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