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November 14, 2014

Ostrom Farms 8323 Steilacoom Road SE Lacey, Washington 98512

Attention: David Knudsen

Report Subsurface Environmental Assessment Ostrom Mushroom Farm Steilacoom, Washington File No. 0335-01-03

#### INTRODUCTION

Insight Geologic, Inc. is pleased to provide this report regarding our subsurface investigation activities at the Ostrom Farms Mushroom Facility located at 8322 Steilacoom Road SE in Lacey, Washington. The Ostrom Farm property is located northeast of the intersection between Marvin Road SW and SW Steilacoom Road in the city of Lacey. The property occupies approximately 34 acres of land zoned as low-density residential. The site is generally flat with a gentle slope to the north. Site elevations range from approximately 230 feet above mean sea level (MSL) in the southern portion to about 212 MSL at the northern property line. The majority of the property has been cleared of trees for the development of the growing facility buildings, drive areas and compost production. Surrounding land use consists of single family residential housing to the north and east, Nisqually Middle School is located to the west of the facility across Marvin Road. The site is shown relative to surrounding physical features in the Vicinity Map, Figure 1.

The facility is operated for the commercial production of mushrooms. Included in the operation is the production of compost used as the growing media for the mushrooms. Water is supplied by a water supply well and through an intertie with the City of Lacey. Sanitary wastes are disposed of through onsite septic tanks and drainfields. Stormwater is either recycled and used for compost production or is used to spray irrigate landscaped areas. Growing room wash down water is generally disposed of to ground.

Various chemicals are used and stored on site. They include malathion, diazinon, permethrin, formaldehyde, "BFW-31" a corrosion inhibitor, various drums of sanitizers, bulk

lubricating oil and diesel fuel. During the investigation and remediation of spent mushroom compost disposed of on the south side of Steilacoom Road the following pesticides were detected: aldrin, alpha-BHC, chlordane, DDT, DDD, DDE, dieldrin, endosulfan I and II, endrin, heptachlor epoxide and methoxychlor. The detection of these compounds in and near the spent mushroom compost indicates that they have been used in the past at the production facility.

Insight Geologic performed a Phase I Environmental Site Assessment (ESA) of Ostrom Farms' Lacey, Washington growing facility in March 2007. The results of our Phase I ESA indicated several areas of potential environmental concern including:

- 1. The facility has had a series of underground storage tanks located on the property. Some have been removed, others have been abandoned in place and at least one is still active for standby boiler fuel. Because of the exempt status of the tanks for agricultural purposes, periodic tightness testing is not conducted. No information could be found in the Washington State Department of Ecology (Ecology) files regarding the closure of underground tanks at the site, and therefore, no information is available regarding soil and/or ground water conditions adjacent to the tanks.
- 2. At least one spill of diesel fuel from the existing above ground storage tank has occurred. The fuel reportedly flowed to a catch basin that drains to the septic system in the northwest portion of the site.
- 3. Several batteries were observed in the fueling area exposed to the elements. Metals, particularly lead, can leach from the batteries and enter the stormwater system or migrate to ground water.
- 4. Soil outside the bulk lubricating oil storage area was observed to be heavily stained with oil, likely as the result of spills during deliveries.
- 5. A series of historic and active infiltration areas for wash water and stormwater are, or have been, located in the northern portion of the property. These infiltration facilities are unlined and the influent does not receive treatment prior to discharge. These facilities have the potential to have historically received water containing pesticides including DDT.
- 6. Treated soil from previous environmental remediation projects in the early 1990s was used in landscape berms in several areas of the property.

At the request of Ostrom Farms, Insight Geologic performed subsurface sampling and analysis of soil and ground water samples from the areas identified during the Phase I ESA.

#### SCOPE OF SERVICES

The purpose of our services was to evaluate soil and ground water conditions in the areas of the identified environmental concerns on the property. We conducted the following tasks for this phase of the project:

- 1. Prepare a Health and Safety Plan for Insight Geologic's representatives while on site.
- 2. Conduct utility location at the site to assess the presence of potential subsurface obstructions.
- 3. Drill 16 exploratory borings on the site using a truck mounted drilling rig to collect representative soil and ground water samples from the borings.
- 4. Collect representative soil samples from 12 hand-augered borings in the area of the waste water disposal ponds and treated soil stockpiles (berms).
- 5. Provide for the chemical analysis of selected soil and ground water samples for the presence of gasoline-range hydrocarbons using Ecology method NWTPH-Gx, diesel- and oil-range hydrocarbons using Ecology Method NWTPH-Dx (extended), volatile organic compounds (VOCs) using EPA Method 8260, chlorinated pesticides using EPA Method 8081 and lead using EPA 7000 series methodology.
- **6.** Evaluate the laboratory results with respect to current Ecology Model Toxics Control Act (MTCA) Method A cleanup levels.

#### **SUMMARY OF ACTIVITIES**

#### **GENERAL**

We visited the site on June 14, 15 and 20, 2007 to collect representative soil and ground water samples from several areas of potential environmental concern identified on the property during our Phase I ESA conducted in March 2007. The areas of environmental concern included the former maintenance shop, the former boiler house, the current fueling area, the current underground storage tank for the existing boiler, and areas containing treated petroleum-containing soil used for landscaping. Borings were drilled using an AMS Power Probe rig that uses a combination of hydraulic and vibratory methods to advance a 4-foot long sampler having acetate liners into the ground. Upon retrieval, the sampler is opened and the soil contained inside the sampler is observed for visual and olfactory indications of contamination. A representative sample is collected from each sampled interval, placed into a jar which is sealed, labeled and placed into an ice chest for storage pending analysis. The soil from the sampled interval is described by the field geologist in general accordance with the Unified Soil Classification System on boring logs. The logs of the borings conducted at the Ostrom Farm facility are contained in Attachment A to this report.

If ground water was encountered in a boring, a sample was collected using polyethylene tubing inserted down the inside of the drill string and connected to a peristaltic pump. The water was pumped from the boring until it was relatively clear and free of suspended sediment. When purging was complete, representative ground water samples were collected into laboratory-supplied containers appropriate for the intended analyses. The samples were

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delivered to an on-site mobile laboratory for analysis operated by Libby Environmental of Olympia, Washington.

#### SOIL

Sixteen borings and 12 hand auger borings were conducted at the site in the locations depicted in Figure 2. In general, the soils encountered in the borings consisted of loose to dense sand and gravel containing variable amounts of silt. The materials encountered appeared to be glacial outwash and ablation till deposited during the waning stages of the Vashon Stade of the Fraser glaciation which ended between 10,000 and 15,000 years ago.

#### **GROUND WATER**

Ground water was encountered at depths between about 10 and 15 feet below ground surface in two borings (B-11 and B-12) located near the waste water disposal pond in the northeastern portion of the site. Ground water samples were collected from each of the borings and submitted for analysis. Ground water was not encountered in any of the other borings conducted.

#### CHEMICAL ANALYSIS

Soil and ground water samples were analyzed by Libby Environmental for the presence of gasoline-, diesel- and oil-range hydrocarbons using Ecology Method NWTPH-G and NWTPH-Dx (extended), for volatile aromatic hydrocarbons (VOCs) using EPA Method 8260 and for lead using EPA method 7000 series methodology. Selected soil and ground water samples were also analyzed for the presence of chlorinated pesticides using EPA Method 8081. Laboratory reports are contained in Attachment B. Laboratory results are summarized in Tables 1-5.

#### RESULTS

#### SOIL

Laboratory reports indicated the presence of diesel-range hydrocarbons in the soil sample collected from boring B-6 at a depth of 4 feet below ground surface in the fueling area at a concentration of 7,900 milligrams per kilogram (mg/kg). The Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup level for diesel in soil is 2,000 mg/kg. Oil-range hydrocarbons were detected in boring B-11 near the wastewater disposal pond at a depth of 8 feet below ground surface at a concentration of 4,100 mg/kg. The MTCA Method A cleanup level for oil-range hydrocarbons is 2,000 mg/kg. Diesel- and oil-range hydrocarbons either were not detected or were detected at concentrations less than the respective cleanup levels in the remaining samples analyzed. Gasoline-range hydrocarbons were not detected in any of the soil samples. Lead and VOCs either were not detected, or were detected at concentrations less than individual cleanup levels. The chlorinated pesticide DDT (dichloro-diphenyl-trichloroethane) and breakdown products DDD

(dichloro-diphenyl-dichloroethylene) and DDE (dichloro-diphenyl-dichloroethene) were detected in the four soil samples analyzed from borings B-11 and B-12 in the area of the wastewater disposal pond at concentrations less than Ecology's MTCA Method A cleanup level of 3.0 mg/kg for the sum of the three compounds.

#### **GROUND WATER**

DDT, DDD and DDE were detected in the two ground water samples collected from borings B-11 and B-12 at concentrations less than Ecology's MTCA Method A cleanup level of 0.3 micrograms per liter ( $\mu$ g/l) for the sum of the three compounds. Gasoline-, diesel- and oil-range hydrocarbons were not detected in the water samples. VOCs and lead were not detected in the water samples.

#### CONCLUSIONS

Insight Geologic has performed a subsurface investigation of suspected areas of environmental concern at the Ostrom Farms Mushroom Facility in Lacey, Washington. The subsurface investigation was performed following our completion of a Phase I environmental site assessment of the property in March 2007.

The results of our subsurface investigation indicate the presence of diesel-range hydrocarbons in shallow soil in the fueling area of the property at concentrations exceeding Ecology's MTCA Method A cleanup level of 2,000 mg/kg. We understand that a fuel spill occurred in the fueling area several years ago and it is our opinion that this is the likely source of contamination in this area.

Oil-range hydrocarbons were detected in soil at a depth of 8 feet below ground surface in the area of the wastewater disposal pond at concentrations exceeding Ecology's MTCA Method A cleanup level of 2,000 mg/kg. We understand that storm water flows from the concrete apron area outside the maintenance building to stormwater catch basins and then to the wastewater disposal pond without any pre treatment. It appears that oil-range hydrocarbons from spills and maintenance conducted on the apron area have migrated to the waste water disposal pond and impacted shallow soils. Ground water in this area does not appear to have been affected by fuel or oil-range hydrocarbons, VOCs or lead.

DDT, DDD and DDE were detected in soil and ground water samples collected from the area of the waste water disposal pond at concentrations slightly less than their respective cleanup levels. These compounds appear to be relics of the historic use of DDT on the property prior to 1972 when it was banned for use in the United States.

Soil in the area of the former maintenance shop, the former boiler house and underground storage tank, and the present boiler house and stand-by fuel tank does not appear to have been impacted by fuel- or oil-range hydrocarbons, VOCs or lead.

Soil remediated in the early 1990s to remove petroleum hydrocarbons and subsequently used in landscape berms in the north and east portions of the property does not appear to

contain petroleum hydrocarbons, VOCs or lead at concentrations greater than Ecology's MTCA Method A cleanup levels for these compounds.

Based on the results of our subsurface investigation, we recommend remediation of petroleum-contaminated soil detected in the fueling area and in the waste water disposal pond. Remediation should be conducted under Ecology's oversight through the Voluntary Cleanup Program (VCP) so that a determination of "No Further Action" (NFA) may be obtained when remediation is completed. Given the relatively shallow depth of the impacted soil, excavation and disposal appears to be the most cost effective option for cleanup.

#### LIMITATIONS

We have prepared this report for use by Ostrom Farms regarding the subsurface investigation of areas of suspected environmental concern at their mushroom growing facility located at 8322 Steilacoom Road SE in Lacey, Washington. This report may be made available to regulatory agencies.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Please refer to Attachment C titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

We trust this report meets your current requirements. Please contact us if you have questions regarding information presented in this report, or if you require additional information. We appreciate the opportunity to be of service to you on this project.

Yours very truly,

INSIGHT GEOLOGIC, INC.

William E. Halbert, L.G, L.HG.

Principal Hydrogeologist

TABLE 1
Summary of Chemical Analytical Results - Soil<sup>1</sup>
Ostrom's Farms
Lacey, Washington

Sample	Sample	Depth	Gasoline-range	Volat	ile Organi	c Compo	unds <sup>3</sup>	1,3,5-Trimethyl-	Isopropyl-	n-Butyl-	Lead <sup>7</sup>
Number	Date	(feet)	Hydrocarbons <sup>2</sup>	В	E	T	X	benzene⁴	toluene <sup>5</sup>	benzene <sup>6</sup>	
B1-14'	6/14/07	14.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5,0
B1-20°	6/14/07	20.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B2-14'	6/14/07	14.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B2-20'	6/14/07	20.0	<10.0	<0,0200	<0.0300	<0.0200	<0.030	<0.0200	<0,0200	<0.0200	<5.0
B3-16'	6/20/07	16.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0,0200	<0.0200	<0.0200	<5.0
B4-20'	6/20/07	20.0	<10.0	<0.0200	<0.0300	< 0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B5-12'	6/20/07	12.0	<10.0	< 0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B6-4'	6/20/07	4.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	0.1200	0.0600	0.100	<5.0
B7-12'	6/20/07	12.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B8-20	6/20/07	20,0	<10.0	<0.0200	<0.0300	< 0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B11-8'	6/14/07	8.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B11-15	6/14/07	15.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B12-11'	6/14/07	11.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
B12-16'	6/14/07	16.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0,0200	<0.0200	<0.0200	<5.0
TP1A-4'	6/14/07	4.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP1B-3,5'	6/14/07	3.5	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP2A-3.5	6/14/07	3,5	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP2B-4	6/14/07	4.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5,0
TP3A-2.5'	6/14/07	2.5	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP3B-3'	6/14/07	3.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	5.6
TP3C-2.5'	6/14/07	2.5	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP3D-2'	6/14/07	2.0	<10.0	<0.0200	<0,0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	6.0
TP4A-1'	6/14/07	1.0	<10.0	<0.0200	<0,0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TP4B-1'	6/14/07	1.0	<10.0	<0.0200	<0.0300	<0.0200	<0,030	<0.0200	<0.0200	<0.0200	<5.0
HA1-1'	6/14/07	1.0	<10.0	<0.0200	<0.0300	0.3100	<0.030	<0.0200	<0.0200	<0.0200	<5.0
HA2-1'	6/14/07	1.0	<10.0	<0.0200	<0.0300	<0.0200	<0.030	<0.0200	<0.0200	<0.0200	<5.0
TCA Method	A cleanup leve	ls	30/100	0.03	6.0	7.0	9.0	N/A	NA	N/A	250

#### Kintac

Laboratory analysis of all samples conducted by Libby Environmental Chemistry Laboratories in Champia; Weshington.

Analysis of gaseline-range hydrocarbons was conducted using method NWTPH-Gx.

Analysis of valetile organic compaunds was conducted using EPA method 8260B

<sup>&</sup>quot;Analysis of 1,3,5-Trimethylbenzene was conducted using EPA method 8260B

Analysis of isopropylitalizene was conducted using EPA method \$250B.

Analysis of n-Butylbenzens was conducted using EPA method 8260B

Analysis of lead was conducted using EPA 7000 series prethodology.

The lower of the two cleanup levels shown for gesoline range hydrocarbons applies if benzene is present in the same sample.

All analytical results presented in the above table are expressed in milligrams per kilogram (mg/kg).

B-benzene, E-ethylpenzene, T-toluene, X-total tylenes

<sup>&</sup>quot;<5.00" - Indicates that the analyte was not detected above the concentration shown

Values shown in hold indicate that the analyte was detected at this concentration.

Shaded values indicate exceedances of the respective MTCA Method A cleanup level.

TABLE 2
Summary of Chemical Analytical Results - Soil<sup>1</sup>
Ostrom's Farms
Lacey, Washington

Sample Number	Sample Date	Depth (feet)	Diesel-range - Hydrocarbons <sup>2</sup>	Heavy Oil-range Hydrocarbons <sup>3</sup>	Mineral Oil Hydrocarbons⁴
B1-14'	6/14/07	14.0	<10.0	<25.0	<40
B1-20'	6/14/07	20,0	<10.0	<25.0	<40
B2-14'	6/14/07	14.0	<10.0	<25.0	<40
B2-20'	6/14/07	20.0	<10.0	<25,0	<40
B3-16'	6/20/07	16.0	<10.0	<25.0	<40
B4-20'	6/20/07	20.0	<10.0	<25.0	<40
B5-12'	8/20/07	12.0	64	<25,0	<40
B6-4'	6/20/07	4.0	7,900	<25,0	<40
B7-12'	6/20/07	12.0	<10.0	<25.0	<40
B8-20'	6/20/07	20,0	<10.0	<25.0	<40
B11-8'	6/14/07	. 8.0	<10.0	<25,0	<40
B11-15'	6/14/07	15.0	<10,0	<25.0	<40
B12-11'	6/14/07	11.0	<10.0	A. inc	<40
B12-16'	6/14/07	16.0	<10.0	<25.0	<40
TP1A-4'	6/14/07	4.0	<10.0	<25,0	<40
TP1B-3.5'	6/14/07	3.5	<10.0	<25.0	<40
TP2A-3.5	6/14/07	3.5	<10.0	<25.0	<40
TP2B-4'	6/14/07	4.0	<10.0	<25.0	<40
TP3A-2.5	6/14/07	2.5	<10.0	<25.0	<40
TP3B-3'	6/14/07	3.0	<10.0	<25.0	<40
TP3C-2.5	6/14/07	2.5	<10.0	<25.0	<40
TP3D-2'	6/14/07	2.0	<10.0	<25.0	<40
TP4A-1'	6/14/07	1.0	<10.0	<25,0	<40
TP48-1'	6/14/07	1.0	<10.0	<25.0	<40
. HA1-1'	6/14/07	1.0	<10.0	<25.0	<40
HA2-1'	6/14/07	1.0	<10.0	<25.0	<40
MTCA Method A c	leanup Level		2,000	2,000	4,000

#### Notes:

- Laboratory analysis of all samples conducted by Litbby Environmental Chemistry Laboratories in Clympia: Washington:
- Analysis of diesel-range hydrocarbons was conducted using method NWTPH-Dx.
- Anallysis of heavy oil range hydrocarbons was conducted using method NWTPH-Dx Extended.
- Analysis of mineral oil-range hydrocarbons was conducted using method NWTPH.Dx Edended.
- All analytical results presented in the above table are expressed in milligrams per kilogram (mg/kg):
- "<10.00" indicates that the analyte was not detected above the concentration shown:
- Values shown in bold indicate that the analyte was detected at this concentration:
- Shaded values indicate exceedences of the respective MTCA Method A cleanup level:

TABLE 3
Summary of Chemical Analytical Results - Ground Water<sup>1</sup>
Ostrom's Farms

Lacey, Washington

Sample	Sample	Gasoline-range	Volat	Volatile Organic Compounds3	c Compo	unds3	Diesel-range	Heavy Oil-range	1
Number	Date	Hydrocarbons <sup>2</sup>	8	Ш	1	×	Hydrocarbons <sup>4</sup>	Hydrocarbons	Lead
B4W-20	6/20/07	<100	<1.0	<1.0	<2.0	<3.0	0 <del>2</del> 20	<500	<b>4.5</b>
B11-W	6/14/07	<100	0,1>	0.12	2.0	3.0	<b>250</b>	<500	ζ. 3
B12-W	6/14/07	<100	4.0	٥.٢ م	20.0	3.0	- - - - - - - - - - - - - - - - - - -	<500 <500	<2.5
MTCA Method A cleanup Level	anup Level	800	5.0	200	. 1,000	1,000	200	200	15

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*Laboratory analysis at all samples randucted by Libby Environmental Chemistry Laboratory Clympia, Washingth Analysis of gasoline-range hydrocarbons was conducted using neethod NW TPH-G. Analysis of violatile organic compounds was conducted using nethod B260B. Analysis of diesel-range hydrocarbons was conducted using method NWTPH-Dx. Analysis of heavy all-range hydrocarbons was conducted using method NWTPH-Dx. Extended. Analysis of fotal lead was conducted using EPA Method 3A21. All analysical results presented in the above fable are expressed in micrograms per Res (1997).	B-benzerie: E-ethytheinzene: T-folluene, X-tofal wyletres
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TABLE 4
Summary of Chemical Analytical Results - Soil
Ostrom's Farms
Lacey, Washington

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Sum of listed	constituents	2.139	0.023	0.019	0.016	3.00
des <sup>2</sup>	4,4-DDT	0.04	0.007	0.003	0.007	
Chlorinated Pesticides <sup>2</sup>	4,4-DDE	0.419	0.00	0.005	0.002	
Chlo	4,4-DDD	. 1.68	0.007	0.005	9,004	
Depth	(feet)	8.0	15.0	11.0	16.0	
Sample	Date	6/14/07	6/14/07	6/14/07	6/14/07	leanup Level <sup>3</sup>
Sample	Number	811-8	B11-15	B12-11	812-16	MTCA Method A Ck

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ted by Libby Environ	nduzied veing met	4,4-DDE 2004,4-	table are expresse at detected above th	alyzed for this com	liyle was detected a
cted by Libby Environ	ondusfed verng met	0, 4, 4 DIDE and 4.4	not detected above th	nalyzed for this com	alyte was detected a
ucled by Libby Environ	conducted using met	10, 4,4-00F and 4,4-	ove table are expresse not detected above th	analyzed for this com	nalyte was detected a the respective MTCA
ducted by Libby Environ	s conducted veing met	00, 4,4,00E and 4,4	ove table are expresse s not detected above th	analyzed for this com	analyje was delected a f the resmodive MTEA
nducted by Libby Environ	is conducted using met	DOD, 4,4-DDE and 4,4-	above table are expresse as not detected above th	ot analyzed for this com	e analyte was detected a of the resnactive MTCA
onducted by Libby Environ	vas conducted using met	LDGD, 4,4-DQE and 4,4-	rabove table are expresse was not detected above th	not analyzed for this com	he analyte was detected a softhe respective MTCA
conducted by Libby Enviror	was conducted using met	4-DDD, 4,4-DDE and 4,4-	le above table are expresse was not detected above th	s neit analyzed for this com	the analyte was defected a so of the respective MTCA
s conducted by Libby Environ	s was conducted using metr	4,4.000,4,4.00Eand4,4	the above table are expresse to was not detected above th	is not analyzed for this com	it the analyte was detected a see of the respective lift? A
es conducted by Libby Environ	es was conducted tieting meth	14/4000,4,4000 and 4,4	n the above table are expresse we was not detected above th	nas hot analyzed for this com	iat the analyte was detected a ness of the restractive MTCA.
les conducted by Libby Environ	des was conducted using met	of 4,40000, 4,4-0000 and 4,4-	in the above table are expresse alvie was not detected above th	was not snalyzed for this com	that the analyte was detected a present the respective lift? A
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mbles conducted by Libby Environ	icides was conducted using met	18. of 4,4000, 4,400E and 4,41	id in the above table are expresse analyte was not detected above th	le was not analyzed for this com	ie that the analyte was defected a extenses of the respective MTCA
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s of all sembles conducted by Libby Enviror	atest Pestados was condusted veing met	Lents levels of 4,4-DDD, 4,4-DDE and 4,4-I	s presented in the above table are expresses that the analyte was not detected above the	the sample was not analyzed for this comp	old indicate that the analyte was detected a rate expectances of the respective MTCA
ils of all samples conducted by Libby Environ	mated Pestades was conducted using met	then'ts levels of 4,4-DOD, 4,4-DDE and 4,4-	its presented in the above table are expresse as that the analyte was not detected above th	at the sample was not analyzed for this comp	bold indicate that the analyte was detected a licate exceedances of the restactive MTCA
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65. aboratory analysis of all earnbles conducted by Libby Erwiron	Analysis of Chlothated Pesticides was condusted using melf	Combined constituents levels of 4.4-DDD; 4,4-DDE and 4.4-	ill analytical results presented in the above table are expresse <10 M)* Indicates that the analyte was not detected above the	$\cdot^{\kappa}$ , indicates that the sample was not analyzed for this compound	aliyes shown in bold indicate that the analyte was detected at this concentratio trades values indicate assemblesses of the restactive MTCA Methol 4. Cleaning
itéS: Taboratory analysis of all sambles conducted by Libby Etwiror	Analysis of Chlomated Pesticides was conducted teing met	*Combined constituents levels of 4,4-DDD, 4,4-DDE and 4,4-	All analytical results presented in the above table are expressed in milligrams per kilogram (myfilig "<10.00" - Indicates that the analyte was not defected above the consentation shown.	"" - indicates that the sample was not analyzed for this com	Values shown in bold indicate that the analyte was deletifed a Readed using indicate exceptaness of the respective MITCA
OfeS: Taboratory analysis of all samples conducted by Libby Erwiron	*Analysis of chlorinated Pestacioes was condusted using met	*Compined constituents levels of 4,4-DDD; 4,4-DDE and 4,4-DDT must be grater than listed value	All analytical results presented in the above table are expressed and the control of the control	$\mathbb{R}^{-1}$ , indicates that the sample was not analyzed for this comp	Values shown in thoid indicate that the analyte was defected a Shadan united indicate concernment of the recreation MITCA
Notes: ** Laboratory analysis of all sambles conducted by Libby Etwironmental Chemistry Laboratories in Olympia, Washingto	Analysis of chiematest Pestados was condusted using method SW646 6081	*Compined constituents levels of 4,4-DDD, 4,4-DDE and 4,4-	All analytical results presented in the above table are expressed in miligrams per litt. "<10.00" - Indicates that the analyte was not detected above the consentration show	**- indicates that the sample was not analyzed for this com	Values shown in bold indicate that the analyte was detected at this concentration, it has do not the concentration.
Notes: Laboratory analysis of all sembles conducted by Libby Erviror	Analysis of Chlatmated Pesticides was conducted using met	**Compined constituents levels of 4.4-DGD, 4,4-DQE and 4.4-	All analytical results presented in the above table are expressed in 10 analytical results presented in the analytic was not detected above the	"". indicates that the sample was not analyzed for this com	Values shown in bold indicate that the analyte was detected a shaden require indicate exceptances at the restactive MITCA.

TABLE 5

# Summary of Chemical Analytical Results - Water<sup>1</sup> Ostrom's Farms Lacey, Washington

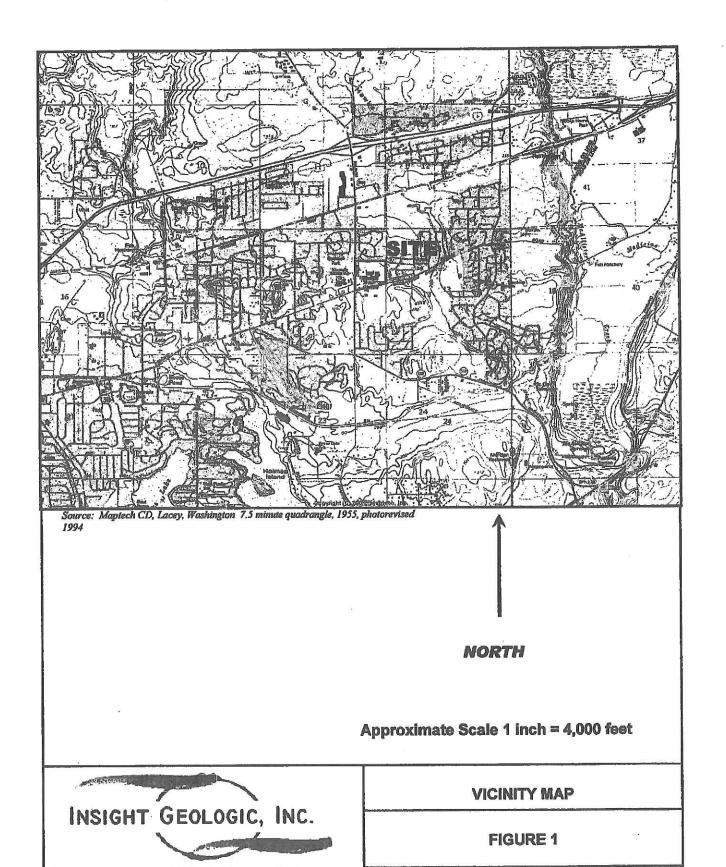
Sample	Sample	Depth	양	Chlorinated Pesticides	des <sup>2</sup>	Sum of listed
Number	Date	(feet)	4,4-DDD	4,4-DDE	4,4-DDT	constituents
B11-W	6/14/07	15.0	0.049	0.045	0.023	0.117
B12-W	6/14/07	11.0	0.036	0.047	0.062	0.145
ATCA Metho	TCA Method A Cleanup Level	ivel <sup>3</sup>				1/6rl E:0

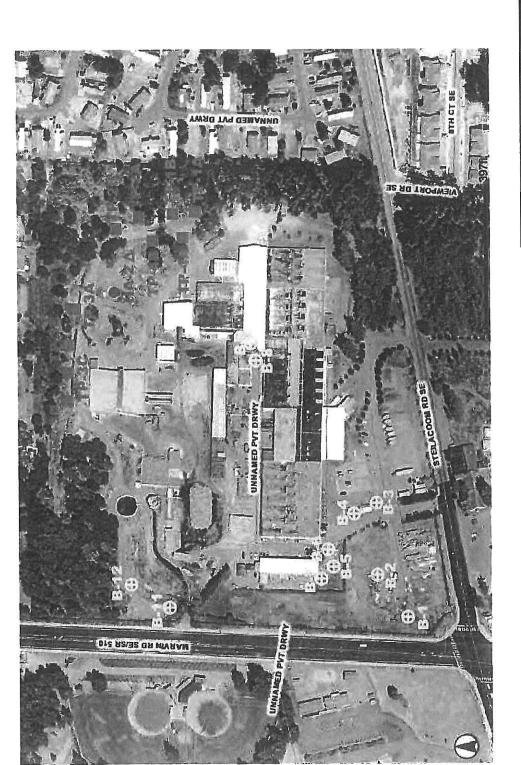
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	TOTAL PROPERTY	7	ed using metho	ひととなるという	
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	でいるというない。		scanducted using metho	ウィア かいじゅうしょく かい	
	できるからない		as conducted using metho	ひとがらし マイ ひじじゅうかん かい	
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	TOTAL STATE OF THE PROPERTY OF		*esticides was conducted using metho	ロアアからいははなっているというできること	
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	veis of all samples reindinited by I like Emironmental chemistry (aboratories in Ohmbia: Washin		mnated Pesticides was conducted using metho	ひととからいはいかと、かられるというというということには	
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	TO THE STATE OF THE PARTY OF TH		if Chlonnated Pesticides was conducted using metho	C. L. Markey Charles for the Property of the Control of the Contro	
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Notes	TOTAL STATE OF SELECTION OF SEL		Analysis of Chiomated Pesticides was conducted using metho	のことをなることによって、からない。 ちゅうしょうしょうしょうしょう	
	TOTAL STATE OF STATES OF S		Ahalysis of Chlomated Pesticides was conducted using method SWB46 808	2. S. C.	

All analytical results presented in the above table are expressed in missograms per liter (Light). "< 10.00" - Indicates that the analyte was not detected above the concentration shown.

"--"-indicates that the sample was not analyzed for this compound. Values strown in botid inclose that the analyte was detected at this concentration.

Shaded values indicate exceedences of the respective MTCA Method A pleanup tevel.





INSIGHT GEOLOGIC, INC.

SUBSURFACE EXPLORATION LOCATIONS

FIGURE

# ATTACHMENT A BORING LOGS

#### **SOIL CLASSIFICATION SYSTEM**

	MAJOR DIVISION	S	GROUP SYMBOL	GROUP NAME
24			GW	WELL-GRADED GRAVEL, FINE TO COARSE GRAVEL
COARSE	GRAVEL.	CLEAN GRAVEL	GP	POORLY-GRADED GRAVEL
Grained Soils	More Than 50% of Coarse Fraction	GRAVEL	GM	SILTY GRAVEL
	Retained on No. 4 Steve	WITH FINES	GC	CLAYEY GRAVEL
	The state of the s		sw	WELL-GRADED SAND, FINE TO COARSE SAND
More Than 50%	SAND	CLEAN SAND	SP	POORLY-GRADED SAND
Retained on No. 200 Sleve	More Than 50% of Coarse Fraction	SAND	SM	SILTY SAND
	Passes No. 4 Sleve	WITH FINES	sc	CLAYEY SAND
		W14500 AANO	. ML	SILT
FINE GRAINED	SILT AND CLAY	INORGANIC	CL	CLAY
SOLS	Liquid Limit Leas Than 60	ORGANIC	OL	ORGANIC SILT, ORGANIC CLAY
			МН	SILT OF HIGH PLASTICITY, ELASTIC SILT
More Than 50% Passes	SILT AND CLAY	INORGANIC	CH	CLAY OF HIGH PLASTICITY, FAT CLAY
No. 200 Sleve	Liquid Limit 50 or More	ORGANIC	ОН	ORGANIC CLAY, ORGANIC SILT
	HIGHLY ORGANIC SOI	_8	PT	PEAT

#### NOTES:

- Field classification is based on visual evaluation of soil in general accordance with ASTM D2488-90.
- Descriptions of soil density or consistency are based on interpretation of blow count data, visual appearance of soils, and/or test data.

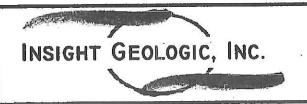
#### SOIL MOSTURE MODIFIERS:

Dry - Absence of moisture, dusty, dry to the touch

Moist - Damp, but no visible water

Wet - Visible free water or saturated, usually soil is obtained from below

water table



**SOIL CLASSIFICATION SYSTEM** 

FIGURE A-1

Project Name: Ostrom's Farm	Well No.: B1	
Location : Ostrom's Farm	Total Depth : 20 Feet	
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.
Drilling Equipment : Power Probe 9630		- indianti decende, nic.
Driller ; Rob Warren		
Logged By: Kevin Vandehey		, in apper
Date : 6/14/07		
Depth to water: N/A		
Depth/Fast Lithology Inches Driven Recovery USCS	SOIL DESCRIPTION	

	48/16	GM	CDAVEL MITU CAND, Light grow, fine to accome a social with fine to accome and
- 1.5			GRAVEL WITH SAND: Light gray, fine to coarse gravel with fine to coarse sand and silt, loose, moist
	- 1	- 1	and siit, loose, moist
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2-0	48/41	ML	
			GRAVELLY SILT: Light gray silt with fine to medium gravel, very dense, moist
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20			

Project Name: Ostrom's Farms	Well No.: B2	
Location: Ostrom's Farms	Total Depth : 20 Feet	
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.
Drilling Equipment: Power Probe 9630		1
Driller: Rob Warren		
Logged By: Kevin Vandehey		
Date : 6/14/07		
Depth to water: N/A		
Depth/Feet Lithology Inches Driven /Recovery USCS	SOIL DESCRIPTION	

				3
		48/12	SP	SAND: Dark brown, silty, fine to medium sand with fine to medium gravel, loose,
_		ŀ		moist
			1	
_				
<b> </b>	0-10	48/17	GM	GRAVEL WITH SAND: Brown, fine to medium gravel with fine to coarse sand and
<b>-</b> 5				silt, loose, moist
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_	0,0			
	000			
	STO	48/25		Grades medium dense
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<b>— 10</b>	0.0			
	200	48/34		Grades very dense
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L <sub>20</sub>	75.377	<u> </u>	L	

Project Name: Ostrom's Farm	Well No. : B3	
Location : Ostrom's Farm	Total Depth: 16 Feet	
Drilling Contractor : NW Probe	INSIGHT GEOLOGIC, INC.	
Drilling Equipment: Power Probe 9630		ingrafit deorgate, inc.
Driller: Rob Warren	- MACHINE STATE OF THE STATE OF	
Logged By: Kevin Vandehay		
Date : 6/20/07		
Depth to water: N/A		
Depth/Feet Lithology Inches Driven /Recovery USCS	SOIL DESCRIPTION	I

GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, model of the sand of the	
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	St
	2
GRAVEL: Light gray fine to coarse, with fine to medium sand, and silt, loose, mo	st
40/30 GW	
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Project No	ame: Ostro	m's Farm	Well No. : B4	
Location :	: Ostrom's F	arm	Total Depth : 20 Feet	
Drilling Co	ontractor : N	W Probe	INSIGHT GEOLOGIC, INC.	
		ower Probe 9630		
Driller: R	Rob Warren			
Logged B	y : Kevin Va	ndehey		
Date : 6/2	20/07			
Depth to	water: N/A			
Depth/Feet Lithology	Inches Driven /Recovery	nscs	SOIL DESCRIPTION	

-				
		48/20	SP	SAND: Dark brown, silty, fine to medium sand with fine to medium gravel, loose,
-	2			moist
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ſ	0.50	48/22	GM	GRAVEL WITH SAND: Light brown, fine to medium gravel with fine to coarse sand
<b>-</b> .5	010			and silt, medium dense, moist
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	016	48/12		Grades dense
-	8.0			
-10	0.0			
-	0.0			
	0.0			
-		48/26	SP	SAND: Light gray, fine to coarse sand with fine gravel, trace silt, dense, moist
-				
				9 "
F	4 (1) (2) (4)			
-15				
-	0 0	48/32	GM	GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to coarse sand
_	<b>E</b>			GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to coarse sand and slit, very dense, moist to wet
-	017			
	0.0			
L <sub>20</sub>	0-0		<u> </u>	

		<del></del>	
Project Name: Ostrom's Farm	Well No.: B5	1	
Location : 'Ostrom's Farm	Total Depth: 18 Feet		
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.	
Drilling Equipment : Power Probe 9630		INDIGHT GEOLGGIA, INC.	
Driller: Rob Warren			
Logged By: Kevin Vandehey			
Date : 6/20/07			
Depth to water: N/A			
Depth/Feet Lithology Inches Driven /Recovery USCS	SOIL DESCRIPTION		

<del>-0</del>		48/17	CM	
	至十里	40/17	SM	SILTY SAND: Dark brown, silty, fine sand with fine gravel, loose, moist
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	基金手			
	<b>平主手</b>			
-		48/19	GM	ODAVELIMENTO AND LIVE C
	500			GRAVEL WITH SAND: Light gray, fine to medium gravel with coarse to fine sand and silt, loose, moist
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	200			
	经到	48/31		Grades medium dense
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Γ	6.8	48/18		Grades dense
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- 15	0.0			
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L	300			
	0 0	24/24		Grades very dense
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-	് ത്			
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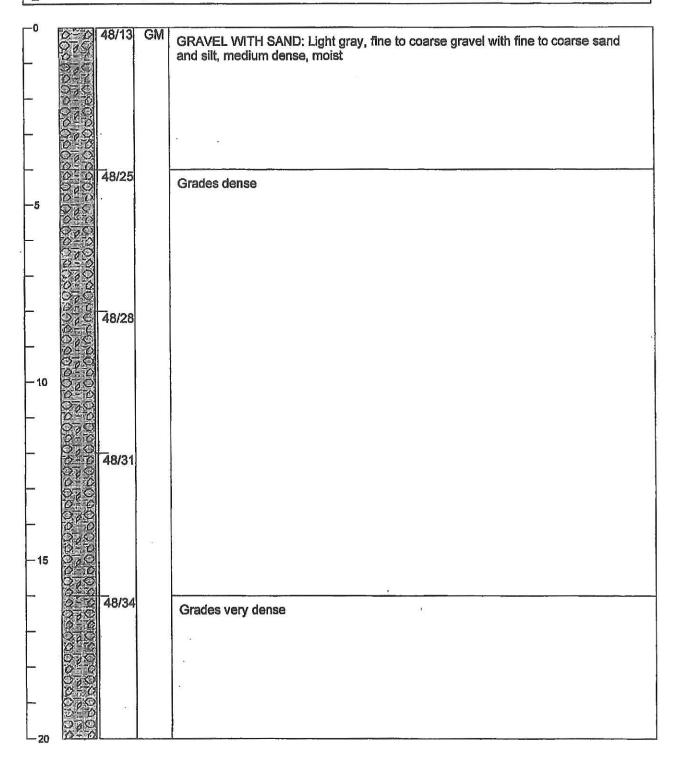
Project Name: Ostrom's Farm	Well No.: B6		
Location : Ostrom's Farm	rom's Farm Total Depth : 16 Feet		
Drilling Contractor : NVV Probe	INSIGHT GEOLOGIC, INC.		
Drilling Equipment: Power Probe 9630		(HOROLL OF GENERAL 1990)	
Driller: Rob Warren	•		
Logged By: Kevin Vandehey			
Date : 6/20/07			
Depth to water: N/A			
DeptiviFeet Lithology Inches Driven Recovery USCS	SOIL DESCRIPTION	N	

		2		
		48/10	ML	SILT: Dark brown silt with fine to medium gravel, loose, moist, slight oil smell
	10-15			
3	: :::: <u>*</u>			
			58	
_		10/4.4	014	
	070	48/14	GM	GRAVEL WITH SAND: Light gray, fine to coarse gravel with fine to coarse sand and silt, medium dense, moist
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-	070	48/28		Grades dense
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1	0 0			
	070	48/32		Grades very dense
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Project Name: Ostrom's Farm	Well No.: B7	
Location: Ostrom's Farm	Total Depth: 16 Feet	Contract of the Contract of th
Drilling Contractor : NW Probe	INSIGHT GEOLOGIC, INC.	
Drilling Equipment: Power Probe 9630		indiciti acocoda, mo.
Driller: Rob Warren		
Logged By: Kevin Vandehey		
Date: 6/20/07		
Depth to water: N/A		
Depth/Feat Lithology Inches Driven //Recovery USCS	SOIL DESCRIPTION	

<b>□</b> 0.		48/18	SM	SILTY SAND: Dark brown, silty, fine to medium sand with fine gravel, loose, moist
				SILTY SAND: Dark brown, sitty, line to medium sand with line graver, loose, moist
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	至中主			
-	主要主			
	聖		1	
-	1			
	- 中华 - 中华			
	0,0	48/16	GM	GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to coarse sand
				GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to coarse sand and silt, medium dense, moist
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	075 070	48/25		Grades dense
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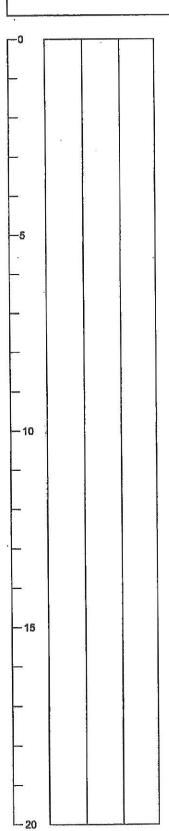
Project Name: Ostrom's Farm	Well No.; B8	
Location : Ostrom's Farm	Total Depth : 20 Feet	
Drilling Contractor : NW Probe	INSIGHT GEOLOGIC, INC.	
Drilling Equipment : Power Probe 9630	ingigiti Grorostal inc.	
Driller: Rob Warren		
Logged By: Kevin Vandehey		
Date: 6/20/07		
Depth to water: N/A		
Depth/Feet Lithology Inches Driven Recovery USCS	SOIL DESCRIPTION	,



Project Name: Ostrom's Farm	Well No. : B9	
Location : Ostrom's Farm	Total Depth : 20 Feet	
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.
Drilling Equipment : Power Probe 9630		(MOIGHT OFORWARD INC.
Driller: Rob Warren		
Logged By: Kevin Vandehey		
Date : 6/20/07		
Depth to water: N/A		
Depth/Feet Lithology Inches Driven /Recovery USCS	SOIL DESCRIPTION	N

<b>⊢</b> 0	7.0	10/17	CM	
	530	48/17	GM	GRAVEL WITH SAND: Light brown, fine to medium gravel with fine to coarse sand and silt, loose, moist
	0-7			and silt, loose, moist
	000			
b	5.0		*	
-	25.0			
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ł	000			
-	73.239	48/18		
	0.70	10/10	1	
-5	0-0			
	132		- 1	
	OT C	8		
_	9-9	300		
	100			
-	0.00	1		
	0			
	000			
<del>-</del>	0-0	48/21	1	A discount of the same of the
	070			Grades medium dense
-	2-6		1	
	5 0			
40	0.0			
<b>⊢</b> 10	2 2	i		
1	500		1	
-	070			
			- 1	
L	3			
	0-0	48/29	- 1	Grades dense
1	200			Grades derise
-	ŏīć.		- 1	
1	0-0	5003		
L	000			
	070			
	0.0			1
15	200			
1	0.0			
L	0 0	L		
	<b>2</b> 2	48/31		Grades very dense
	0 0			alamaa tali aaliaa
	070			
1	Q. P.			
_	0 70			
	0.0			]
	2.0			
	300			
L- 20	0-0			

	Project Name:	Ostrom's Farm	Well No. :	B10	
*		Not D	rilled		INSIGHT GEOLOGIC, INC.



Project Name: Ostrom's Farm	Well No.: B11	
Location : Ostrom's Farm	Total Depth: 15.5 Feet	· Allegania de la companya de la com
Drilling Contractor: NW Probe	INSIGHT GEOLOGIC, INC.	
Drilling Equipment: Power Probe 9630		Links dill de dend dit man
Oriller: Rob Warren		
Logged By: Kevin Vandehey		
Date : 6/14/07		
Depth to water: N/A		- Carrier - Carr
Depth/Feet Lithology Inches Driven Recovery USCS	SOIL DESCRIPTION	I

0				
	<u>ま</u> まかま にかま	48/17	SM	SILTY SAND: Dark brown, silty, fine to medium sand, loose, moist
_	大学文 デキエ			
	- 東京 - 東京 - 東京			a contract of the contract of
				~
- ,	177	48/23	ML	
		10/20	1416	SILT: Dark brown/black silt, soft, moist
-5				
				Petroleum odor at 7 feet
- :				
-	0 0	48/16	GM	GRAVEL WITH SAND: Gray, fine to medium gravel with fine to coarse sand and
				silt, dense, moist to wet
	0,0			
- 10				
-				
_	and o	407	- NAI	
		42/	ML	SILT: Green gray silt with fine to medium sand and fine to medium gravel, very dense, wet
-				
	L. Yellow Tomore Way			
<b>— 15</b>				
"				

Project Name: Ostrom's Farm	Well No.: B12	
Location : Ostrom's Farm	Total Depth: 16 Feet	
Drilling Contractor: NW Probe		INSIGHT GEOLOGIC, INC.
Drilling Equipment: Power Probe 9630		
Driller: Rob Warren		
Logged By : Kevin Vandehey		
Date : 6/14/07		
Depth to water: 13 Feet		
epth/Feet lihology nches Driven Recovery ISCS	SOIL DESCRIPTIO	N.

				š
[° [		48/0		No recovery
_				
-				
_	ŧ			•
	W			
-	\$ <b>.</b>	48/3	SM	SILTY SAND: Brown, silty fine sand with fine to medium gravel, loose, dry
-5				
-	噩			
L	是主要			
+		48/16	GM	CRAVEL MITH SAND: Brown fine to coarse gravel with fine to coarse sand and
				GRAVEL WITH SAND: Brown, fine to coarse gravel with fine to coarse sand and silt, dense, moist
	000			
- 10	070			
	6-70 070			
			•	
L		48/33	SM	
	謎	40/33	SIVI	SILTY SAND: Gray, fine to coarse sand with fine to coarse gravel and silt, very dense, moist to wet
				8
- 15				

Proj	ect Name: Ostrom's	farm Well No.: B13	× 8
Loc	ation: Ostrom's Farm	Total Depth: 19 Feet	
Drill	ling Contractor: NW P	be	ISIGHT GEOLOGIC, INC.
Drill	ling Equipment : Powe	Probe 9630	CHOIN GEOLGOTO, CAS.
Drill	ler : Rob Warren		
Log	ged By: Kevin Vande	еу	***
Date	e : 6/14/07		
Dep	oth to water: N/A		
<b>Depth/Feet</b>	Lithology Inches Driven Recovery USCS	SOIL DESCRIPTION	

L-0		48/16	SM	OHEN CANED B. L. J. W. C. W. W. C. W. W
	+++			SILTY SAND: Dark brown, silty fine sand with fine to medium gravel, loose, moist
-				
F				597
	五字王			
H	王士			
	王丰王			
-	平量主!	48/3		
	T + T			
5		.		
	工士		ļ	
-	五字			
	建工			į (
	日本で			
1	25			
-	900	48/13	GM	CRAVEL WITH CAND: Light grow fine to coarse grovel with fine to medium send
1	5,0			GRAVEL WITH SAND: Light gray, fine to coarse gravel with fine to medium sand and silt, medium dense, moist
-	0-0			
	0-0			
-10	0.10			
	0-0			
F	000			
	900			
-	900	48/24		Grades dense
	0.0			Grades delise
	0 0			8
	0-0			
	0-0			
	000			
- 15	000			
	0,0			
	010	48/27		Grades very dense
				Grades very defise
-	10			
	500			
-	970			
	ŏ,ŏ			
L	0 - 0	<u> </u>		

Project Name: Ostrom's Farm	Well No.: B14					
Location : Ostrom's Farm	Total Depth : 20 Feet					
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.				
Drilling Equipment: Power Probe 9630		Ittoresit are contained				
Driller: Rob Warren						
Logged By: Kevin Vandehey	Logged By: Kevin Vandehey					
Date : 6/14/07	Date : 6/14/07					
Depth to water: N/A						
Depth/Faet Lithology Inches Driven /Recovery USCS	SOIL DESCRIPTIO	N				

<b>-0</b>	(January State   1	10/7	ONAT	
	12	48/7	SM	SILTY SAND: Dark brown, silty sand with fine gravel, loose, moist
<u> </u> -	工			
	$\frac{x}{x} + \frac{x}{x}$			
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	子学子		a a	
-	÷ T i		ļ	
	至中王	i		
-	T	48/0		
		40/0		No sample recovered
-5				^
-				
in the second	- 68			
-				
	0/10	48/7	GM	GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to medium sand
	0 0			GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to medium sand and silt, medium dense, moist
	0.0			
40	Ŏ,Ō			
10	0.0			
	2.2			
Γ	Ď ETO			
L	250			
	建设	48/25		Grades dense
	o to			
	800			
			*	
	ŎŢŎ			
15				
			: }	
L	200	40100		
	0.0	48/29		Grades very dense
-				
	78090909 18185 181			
-				
	0,0			
-	Šį Š			
	1575			
L <sub>20</sub>	0.0	<u> </u>	نــــــــــــــــــــــــــــــــــــــ	

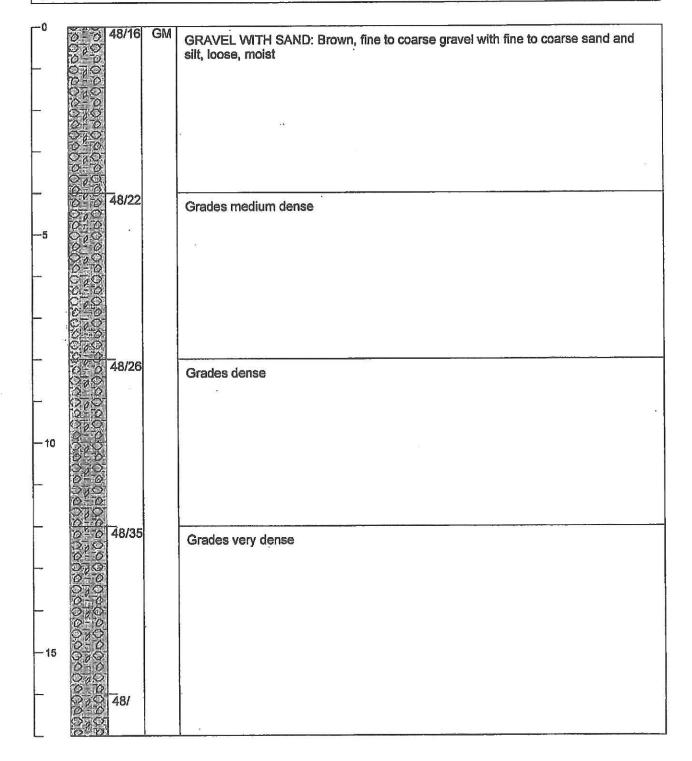
Project Name: Ostrom's Farm	Well No.: B15						
Location : Ostrom's Farm	Total Depth : 20 Feet						
Drilling Contractor : NW Probe	INSIGHT GEOLOGIC, INC.						
Drilling Equipment : Power Probe 9630		Timesoff around in a					
Driller: Rob Warren							
Logged By: Kevin Vandehey		3000,2400,000					
Date : 6/14/07							
Depth to water: N/A							
ighology Lithology nches Driven Recovery JSCS							
Depth/Feet Lithology Inches Driv /Recovery USCS							

-0			
	至中二 48/15	SM	SILTY SAND: Dark brown silty fine sand, occasional fine gravel, loose, moist
-	平亚子		
	产工艺		
_	英王主		
	<b>圣</b> 辈子		
-	上王主		
	<b>非</b> 学手出		
F	0-0 48/13	GM	
	0.00		GRAVEL WITH SAND: Brown, fine to coarse gravel with fine to coarse sand and silt, loose, moist
-5	07,0		Siit, 10036, 111013t
	0 - 0		
r	0.50		
	0.0		
	0-0		
	8-8		
	0 48/12		Grades medium dense
	646		
	888		
-10	(200)		
	9,0		
_	5,5		
	8-8		
F	0 0 48/13		
	979		Grades dense
_	5,5		
	0 0		
r			
45	0 0		
15	0 0		
L	0,00		
	0 0 48/31		Grades very dense
	6 6		Contract Contraction and V Notice Contraction
2	000		
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	0,00		
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	00000000000000000000000000000000000000		
L <sub>20</sub>	0-0		

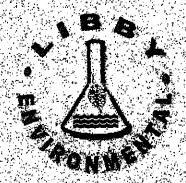
Project Name: Ostrom's Farm	Well No.: B16				
Location: Ostrom's Farm	Total Depth : 20 Feet				
Drilling Contractor : NW Probe		INSIGHT GEOLOGIC, INC.			
Drilling Equipment: Power Probe 9630		Inglatti acordate, inc.			
Driller: Rob Warren					
Logged By: Kevin Vandehey					
Date : 6/15/07					
Depth to water: N/A					
Depth/Feet Lithology Inches Driven //Recovery USCS	SOIL DESCRIPTIO	ON .			

<b>-0</b>	Francisco de	10110	600	
	<b>第五条</b>	48/10	SM	SILTY SAND: Dark brown, silty fine to medium sand with fine to medium gravel,
	作士生型			loose, moist
	事士 平自		l	
i	平量平均			
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	臣士子过	1		
	产工工			*
	二十二			
	+ ++			
		48/23	SP	
	三丁 1	10/20		SAND: Light gray, fine to coarse sand with fine to coarse gravel and silt, medium
5	10 10 10			dense, moist
	4-1-1-			⊗
	14.5			
		1		
-				*
8			383	
_	6 3 5 81			
	200	48/24	GM	GRAVEL WITH SAND: Light gray, fine to medium gravel with fine to coarse sand
	500			and silt, dense, moist
	0-0			2.
	100			
10	0,0			
	0-0			
	60	ľ		*
1	0,00			
	0-0			
	5-0	48/25		
	300	30		
<b> -</b>	070			
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L	200			al a
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45	010			
<del> - 15</del>	XPX			
	0,0			
<b>–</b>	0 0	48/20		
. ]	0,0	70120		Grades very dense
L	0 0			
	000	1		
_		ĺ		
	6-0			*
-	0,0			*
	8.8			
$L_{20}$	7			

Project Name: Ostrom's Farm	Well No. : B17	
Location : Ostrom's Farm	Total Depth: 17 Feet	A CONTRACTOR OF THE PARTY OF TH
Drilling Contractor: NW Probe	INSIGHT GEOLOGIC, INC.	
Drilling Equipment : Power Probe 9630		(More) II ar arranged in a
Driller: Rob Warren		
Logged By: Kevin Vandehey		99.5
Date : 6/15/07		
Depth to water: N/A		
Depth/Feet Lithology Inches Driven //Recovery USCS	SOIL DESCRIPTION	· · · · · · · · · · · · · · · · · · ·



# ATTACHMENT B LABORATORY REPORTS



## Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

July 13, 2007

Bill Halbert Insight Geologic, PLLC 2528 Ellis Street Olympia, WA 98501

Dear Mr. Halbert:

Please find enclosed the analytical data report for the Ostrom's Farm project located in Olympia Washington. Mobile Lab Services were conducted on June 14 & 15, 2007. Soil and water samples were analyzed for Diesel & Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx, Hydrocarbon Identification by NWTPH-HCID, VOC's by EPA Method 8260B, Total Lead by EPA Method 7000 Series, and Pesticides by EPA Method 8081.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed. All soil samples are reported on a dry weight basis.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call, it was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely.

Sherry L. Chileutt

President

Libby Environmental, Inc.

## ATTACHMENT B CHEMICAL ANALYTICAL PROGRAM

#### **ANALYTICAL METHODS**

Chain-of-custody procedures were followed during the transfer of field samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality assurance/quality control (QA/QC) records are included in this Attachment. The analytical results are also summarized in the text of this report.

#### ANALYTICAL DATA REVIEW

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries, and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report.

#### ANALYTICAL DATA REVIEW SUMMARY

Based on our data quality review, it is our opinion that the analytical data are of acceptable quality for their intended use.

#### LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL** 

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL							
Sample Description		Method	B1-14'	B1-20'	B2-141	B2-20'	B11-8'
<u> </u>		Blank					
Date Extracted	Reporting	N/A	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07
Date Analyzed	Limits	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07
-	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
		· · · · · · · · · · · · · · · · · · ·			***		
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	πd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.02	nd	nd	nd	nd	nd	nđ
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	bn	nd	nd	nd	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	πd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nđ	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nđ
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrenes	0.02	nd	nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL** 

Sample Description		Method	B1-14'	B1-20'	B2-14'	B2-20'	B11-8'
		Blank					
Date Extracted	Reporting	N/A	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07
Date Analyzed	Limits	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07	6/14/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chiorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nđ	nd	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nđ	nd	nđ	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nđ	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropand	0.03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.03	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		114	122	118	124	123	125
1,2-Dichloroethane-d4		108	114	112	114	116	118
Toluene-d8		105	108	106	110	107	108
4-Bromofluorobenzene		105	109	112	110	110	112

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### QA/QC Data - EPA 8260B Analyses

· · · · · · · · · · · · · · · · · · ·		Sample Ide	ntification:	L070613-1			-
		Matrix Spik	(e	Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	***************************************
1,1-Dichloroethene	2.00	1.70	85	2.00	1.41	71	18.6
Benzene	2.00	1.97	99	2.00	1.58	79	22,0
Toluene	2.00	2.04	102	2.00	1.68	84	19.4
Chlorobenzene	2.00	2.39	120	2.00	2.11	106	12,4
Trichloroethene (TCE)	2.00	2.25	113	2.00	1.89	95	17.4
Surrogate Recovery							· · · · · · · · · · · · · · · · · · ·
Dibromofluoromethane			113			111	
1,2-Dichloroethane-d4			109			96	
Toluene-d8			110			105	
4-Bromofluorobenzene			106			96	

	Laborator	y Control Sa	mple
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
1,1-Dichloroethene	2.00	1.49	75
Benzene	2.00	1.79	90
Toluene	2.00	1.83	92
Chlorobenzene	2.00	2.40	120
Trichloroethene (TCE)	2.00	2.17	109
Surrogate Recovery			<u> </u>
Dibromofluoromethane			116
1,2-Dichloroethane-d4			112
Toluene-d8			109
4-Bromofluorobenzene			102

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

**ACCEPTABLE RPD IS 35%** 

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		B11-15'	B12-11'	B12-16'	B12-16'	Method	TP1A
					Dup	Blank	4'
Date Extracted	Reporting	6/14/07	6/14/07	6/14/07	6/14/07	N/A	6/15/07
Date Analyzed	Limits	6/14/07	6/14/07	6/14/07	6/14/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	лd	nd	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nđ	nd	nd
Bromomethane	0.09	nd.	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	πd
l,I-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1.1-Dichloroethane	0.02	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nđ	nd	nd	nd	nd	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nđ	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB)	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrenes	0.02	nd	nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		B11-15'	B12-11'	B12-16'	B12-16'	Method	TP1A
-					Dup	Blank	4'
Date Extracted	Reporting	6/14/07	6/14/07	6/14/07	6/14/07	N/A	6/15/07
Date Analyzed	Limits	6/14/07	6/14/07	6/14/07	6/14/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nď	nđ	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nd
tert-Butylbenzene	0.02	nd .	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	nđ	nd	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.02	nd	nđ	nđ	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.03	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		116	119	122	117	111	125
1,2-Dichloroethane-d4		114	117	113	111	106	124
Toluene-d8		106	109	106	105	108	110
4-Bromofluorobenzene		111	111	111	105	106	104

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL** 

Sample Description		TP1B-3.5'	TP2A-3.5'	TP2B-4'	TP3A-2.5'	TP3A-2.51	TP3B-3'
						Dup	
Date Extracted	Reporting	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	. (mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.02	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Велие	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cîs-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nd	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nď	nd	nd
I,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nđ	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrenes	0.02	nd	nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

#### VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		TP1B-3.5'	TP2A-3.5'	TP2B-4'	TP3A-2.5'	TP3A-2.5'	TP3B-3'
						Dup	
Date Extracted	Reporting	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nđ	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nđ	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nđ	nd	nd	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	n <b>d</b>
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.03	nd	nd	nđ	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							<del></del>
Dibromofluoromethane		118	119	117	109	105	117
1,2-Dichloroethane-d4		117	119	116	105	96.8	109
Toluene-d8		106	1 <b>07</b>	107	102	103	107
4-Bromofluorobenzene		107	104	105	110	103	108

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### QA/QC Data - EPA 8260B Analyses

	_	Sample Ide	ntification:	TP3C-2.5'			
		Matrix Spik	ie .	Matrix Spike Duplicate			RPD
·	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	<del></del>
1,1-Dichloroethene	2.00	1.61	81	2.00	1.61	81	0.0
Benzene	2.00	2.00	100	2.00	1,96	98	2.0
Toluene	2.00	1.52	76	2.00	1.99	100	26.8
Chlorobenzene	2.00	2.22	111	2.00	2.19	110	1.4
Trichloroethene (TCE)	2.00	2.36	118	2.00	2.33	117	1.3
Surrogate Recovery							
Dibromofluoromethane			113			109	
1,2-Dichloroethane-d4			101			93	
Toluene-d8			106			107	
4-Bromofluorobenzene			99			<del>9</del> 9	

	Laborator	y Control Sa	ımple
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
1,1-Dichloroethene	2.00	1.95	98
Benzene	2.00	1.69	85
Toluene	2.00	1.77	89
Chlorobenzene	2.00	2.29	115
Trichloroethene (TCE)	2.00	2.01	101
Surrogate Recovery			
Dibromofluoromethane			117
1,2-Dichloroethane-d4			106
Toluene-d8			108
4-Bromofluorobenzene			104

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

**ACCEPTABLE RPD IS 35%** 

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description	***************************************	TP3C-2.5'	TP3D-2'	HA1-1	HA2	TP4A-1	TP4B-1
Date Extracted	Reporting	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
Date / Mary 200	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Colon	(11-5/1-5/	····	(····B···B/	(·····································	(11-6767	(	· ( <i></i>
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	$\mathbf{nd}$	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nđ	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.02	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nd	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nđ	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nđ	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nd	nd	0.31	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nď	nđ	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrenes	0.02	nd	nd nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL** 

Sample Description		TP3C-2.5'	TP3D-2'	HA1-1	HA2	TP4A-1	TP4B-1
Date Extracted	Reporting	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	n <b>đ</b>	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nđ	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nđ	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
I,2,4-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nđ
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	n <b>d</b>	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nđ	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nđ	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0,03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nđ	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nđ	nd
Naphthalene	0.03	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		112	114	111	108	110	113
1,2-Dichloroethane-d4		103	103	97.2	98.2	103	105
Toluene-d8		107	107	107	106	108	108
4-Bromofluorobenzene		104	102	109	9 <b>8.</b> 4	99.3	102

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		Method	B3-16'	B4-20'	B6-4'	B5-12'	B7-12'
• •		Blank					
Date Extracted	Reporting	N/A	6/20/07	6/20/07	6/20/07	6/20/07	6/20/07
Date Analyzed	Limits	6/23/07	6/21/07	6/23/07	6/23/07	6/23/07	6/23/07
•	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
,	<u> </u>	, , ,	<u> </u>	<u> </u>			
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nđ	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.02	nd	nd	nd	nd	nd	nd
trans -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
I, I-Dichloroethane	0.02	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nd	nd	nd	nd	nđ	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nđ	nd
Carbon tetrachloride	0.02	nd	πd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nđ	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nđ	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	nd	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nd	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nd	nđ	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachioroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	0.056	nd	nd
Styrenes	0.02	nd	nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		Method	B3-16'	B4-20'	B6-4'	B5-12'	B7-12'
		Blank					
Date Extracted	Reporting	N/A	6/20/07	6/20/07	6/20/07	6/20/07	6/20/07
Date Analyzed	Limits	6/21/07	6/21/07	6/23/07	6/21/07	6/21/07	6/21/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd.	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nd	nd	nd	nd	nd	nd
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	0.12	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nđ
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	0.06	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	0.10	nd	nd
1,2-Dibromo-3-Chloropropan	e 0.03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nď
Naphthalene	0.03	nd	nd	nđ	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	ņđ	nd	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		113	111	119	126	115	118
1,2-Dichloroethane-d4		93.3	100	101	126	98.5	94.6
Toluene-d8		111	106	124	114	111	114
4-Bromofluorobenzene		98.3	97.8	111	107	106	106

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### QA/QC Data - EPA 8260B Analyses

	Matrix Spike			Matr	ix Spike Dupl	icate	RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
1,1-Dichloroethene	2.00	1.70	85	2.00	1.41	71	18.6
Benzene	2.00	1.97	99	2.00	1.58	79	22.0
Toluene	2.00	2.04	102	2.00	1.68	84	19.4
Chlorobenzene	2.00	2.39	120	2.00	2.11	106	12.4
Trichloroethene (TCE)	2.00	2.25	113	2.00	1.89	95	17.4
Surrogate Recovery			<del></del>		·····		
Dibromofluoromethane							
1,2-Dichloroethane-d4							
Toluene-d8							

Toluene-d8

4-Bromofluorobenzene

	Laborator	y Control Sa	ımple
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
1,1-Dichloroethene	2.00	2.39	120
Benzene	2.00	2.36	118
Toluene	2.00	2.10	105
Chlorobenzene	2.00	2.52	126
Trichloroethene (TCE)	2.00	2.63	132
Surrogate Recovery		_	
Dibromofluoromethane			119
1,2-Dichloroethane-d4			101
Toluene-d8			112
4-Bromofluorobenzene			101

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

**ACCEPTABLE RPD IS 35%** 

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description	· ·	B8-20	B12-11'	B12-16'	B12-16'	Method	TP1A
					Dup	Blank	4'
Date Extracted	Reporting	6/20/07	6/14/07	6/14/07	6/14/07	N/A	6/15/07
Date Analyzed	Limits	6/23/07	6/14/07	6/14/07	6/14/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Dichlorodifluoromethane	0.06	nd	nd	nd	nd	nd	nd
Chloromethane	0.06	nd	nd	nd	nd	nd	nd
Vinyl chloride *	0.02	nd	nd	nd	nd	nd	nd
Bromomethane	0.09	nd	nd	nd	nd	nd	nd
Chloroethane	0.06	nd	nd	nd	nd	nd	nd
Trichlorofluoromethane	0.05	nd	nd	nd	nd	nd	nd
1,1-Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Methylene chloride	0.03	$\mathbf{nd}$	nd	nd	nd	nd	nd
trans-1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloroethane	0.02	nd	nd	nd	nd	nd	nd
2,2-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd
cis -1,2-Dichloroethene	0.02	nd	nd	nd	nd	nd	nd
Chloroform	0.02	nđ	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	0.02	nd	nd	nd	nd	nđ	nd
Carbon tetrachloride	0.02	nd	nd	nd	nd	nd	nd
1,1-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Benzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd	nd	nd	nd	nd
Trichloroethene (TCE)	0.03	nd	nd	nd	nd	nd	nd
1,2-Dichloropropane	0.02	nd	nd	$\mathbf{nd}$	nd	nd	nd
Dibromomethane	0.04	nd	nd	nd	nd	nd	nd
Bromodichloromethane	0.02	nd	nd	nd	nd	nđ	nd
cis-1,3-Dichloropropene	0.02	nd	nd	nd	nd	nd	nd
Toluene	0.02	nđ	nd	nd	nd	nd	nd
Trans-1,3-Dichloropropene	0.03	nd	nd	nd	nd	nd	nd
1,1,2-Trichloroethane	0.03	nd	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichloropropane	0.05	nd	nd	nd	nd	nd	nd'
Dibromochloromethane	0.03	nd	nd	nd	nd	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd	nd	nd	nd	nd
Chlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.03	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.03	nd	nd	nd	nd	nd	nd
Total Xylenes	0.03	nd	nd	nd	nd	nd	nd
Styrenes	0.02	nd	nd	nd	nd	nd	nd

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN SOIL

Sample Description		B11-15'	B12-11'	B12-16'	B12-16'	Method	TPIA
					Dup	Blank	4'
Date Extracted	Reporting	6/14/07	6/14/07	6/14/07	6/14/07	N/A	6/15/07
Date Analyzed	Limits	6/14/07	6/14/07	6/14/07	6/14/07	6/15/07	6/15/07
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Bromoform	0.02	nd	nd	nd	nd	nd	nd
Isopropylbenzene	0.08	nd	nd	nd	nd	nd	nd
1,2,3-Trichloropropane	0.02	nd	nd	nd	nd	nd	nd
Bromobenzene	0.03	nd	nd	nd	$\mathbf{nd}$	nd	nd
1,1,2,2-Tetrachloroethane	0.02	nd	nd	nd	nd	nd	nd
n-Propylbenzene	0.02	nd	nd	nd	nd	nd	nd
2-Chlorotoluene	0.02	nđ	nd	nd	nd	nd	nd
4-Chlorotoluene	0.02	nđ	nd	nd	nd	nd	bn
1,3,5-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nd
tert-Butylbenzene	0.02	nd	nd	nd	nd	nđ	nd
1,2,4-Trimethylbenzene	0.02	nd	nd	nd	nd	nd	nd
sec-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,3-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
Isopropyltoluene	0.02	nd	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dichlorobenzene	0.02	nd	nd	nd	nd	nd	nd
n-Butylbenzene	0.02	nd	nd	nd	nd	nd	nd
1,2-Dibromo-3-Chloropropane	0.03	nd	nd	nd	nd	nd	nd
1,2,4-Trichlorolbenzene	0.05	nd	nd	nd	nd	nd	nd
Hexachloro-1,3-butadiene	0.10	nd	nd	nd	nd	nd	nd
Naphthalene	0.03	nd	nd	nd	nd	nd	nd
1,2,3-Trichlorobenzene	1.0	nd	nď	nd	nd	nd	nd
Surrogate Recovery							
Dibromofluoromethane		105	125				<u> </u>
1,2-Dichloroethane-d4		80.2	114				
Toluene-d8		110	116				
4-Bromofluorobenzene		102	110				

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN WATER** 

Sample Description		Method Blank	B11-W	B11-12	
Date Sampled	Reporting	N/A	6/14/07	6/14/07	
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	
Date Milary 200	(ug/l)	(ug/l)	(ug/l)	(ug/l)	
Manager and the state of the st	(ug/1)	(HE) I)	(ug/I)	(48/1)	
Dichlorodifluoromethane	2.0	nd	nd	nd	
Chloromethane	2.0	nd	nd	nd	
Vinyl chloride *	0.2	nđ	nd	nđ	
Bromomethane	2.0	nd	nd	nd	
Chloroethane	2.0	n <b>d</b>	nd	nd	
Trichlorofluoromethane	2.0	nd	nd	nd	
1,1-Dichloroethene	2.0	nd	nd	nd	
Methylene chloride	1.0	nd	nd	nd	
trans-1,2-Dichloroethene	1.0	nd	nd	nd	
1,1-Dichloroethane	1.0	nd	nd	nd	
2,2-Dichloropropane	2.0	nd	nd	nd	
cis-1,2-Dichloroethene	1.0	nd	nd	nd	
Chloroform	1.0	пd	nď	nd	
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	
Carbon tetrachloride	1.0	nd	nd	nd	
1,1-Dichloropropene	1.0	nd	nd	nd	
Benzene	1.0	nd	nđ	nd	
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd	
Trichloroethene (TCE)	1.0	nd	nd	nd	
1,2-Dichloropropane	1.0	nd	nd	nd	
Dibromomethane	1.0	nd	nd	nd	•
Bromodichloromethane	1.0	nd	nd	nd	
cis-1,3-Dichloropropene	1.0	nd	nd	nd	
Toluene	1.0	nd	nd	nd	
Trans-1,3-Dichloropropene	1.0	nd	nd	nd	
1,1,2-Trichloroethane	1.0	nd	nd	nd	
Tetrachloroethene (PCE)	1.0	nd	nd	nd	
1,3-Dichloropropane	1.0	nd	nd	nd	
Dibromochloromethane	1.0	nd	nd	nd	
1,2-Dibromoethane (EDB) *	0.01	nd	nd	nd	
Chlorobenzene	1.0	nd	nd	nd	
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	
Ethylbenzene	1.0	nd	nd	nd	
Total Xylenes	1.0	nd	nd	nd	
Styrenes	1.0	nd	nd	nd	

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN WATER

Sample Description		Method	B11-W	B11-12	
	<del> </del>	Blank			
Date Extracted	Reporting	N/A	6/14/07	6/14/07	
Date Analyzed	Limits	6/15/07	6/15/07	6/15/07	
	(ug/l)	(ug/l)	(ug/l)	(ug/l)	
Bromoform	1.0	nd	nd	nd	
Isopropylbenzene	4.0	nd	nd	nđ	
1,2,3-Trichloropropane	1.0	nd	nd	nd	
Bromobenzene	1.0	nd	nd	nd	
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	
n-Propylbenzene	1.0	nd	nd	nd	
2-Chlorotoluene	1.0	nd	nd	nd	
4-Chlorotoluene	1.0	nd	nd	nd	
1,3,5-Trimethylbenzene	1.0	nd	nd	nd	
tert-Butylbenzene	1.0	nd	nd	nd	
1,2,4-Trimethylbenzene	1.0	nd	nd	nd	
sec-Butylbenzene	1.0	nd	nd	nd	
1,3-Dichlorobenzene	1.0	nd	nđ	nd	
Isopropyltoluene	1.0	nd	nd	nd	
1,4-Dichlorobenzene	1.0	nd	nd	nd	
1,2-Dichlorobenzene	1.0	nd	nd	nd	
n-Butylbenzene	1.0	nd	nd	nd	
1,2-Dibromo-3-Chloropropane	1.0	nd	nd	nd	
1,2,4-Trichlorolbenzene	2.0	nd	nd	nd	
Hexachloro-1,3-butadiene	5.0	nd	nd	nd	
Naphthalene	5.0	nd	nđ	nd	
1,2,3-Trichlorobenzene	5.0	nd	nd	nd	
Surrogate Recovery			<del></del>	<u> </u>	<u> </u>
Dibromofluoromethane		111	115	115	
1,2-Dichloroethane-d4		106	108	106	
Toluene-d8		108	106	108	
4-Bromofluorobenzene		106	104	105	

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### QA/QC Data - EPA 8260B Analyses

	Sample Identification: B11-12							
	Matrix Spike			Matrix Spike Duplicate			RPD	
	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)		
1,1-Dichloroethene	40	37.1	93	40	38.7	97	4.2	
Benzene	40	33.3	83	40	35.4	89	6.l	
Toluene	40	35.3	88	40	36.5	91	3,3	
Chlorobenzene	40	45.6	114	40	47.9	120	4.9	
Trichloroethene (TCE)	40	39.9	100	40	41.4	104	3.7	
Surrogate Recovery								
Dibromofluoromethane			118			114		
1,2-Dichloroethane-d4			113			99		
Toluene-d8			109			107		
4-Bromofluorobenzene			104			103		

	Laborator	y Control Sa	mple
	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)
1,1-Dichloroethene	40	39.0	98
Benzene	40	34.0	85
Toluene	40	35.4	89
Chlorobenzene	40	45.8	115
Trichloroethene (TCE)	40	40.2	101
Surrogate Recovery			
Dibromofluoromethane			117
1,2-Dichloroethane-d4			106
Toluene-d8			108
4-Bromofluorobenzene			104

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

**ACCEPTABLE RPD IS 35%** 

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN WATER** 

Sample Description		Method	B4W-20	B4W-20	
		Blank		Dup	
Date Sampled	Reporting	N/A	6/20/07	6/20/07	
Date Analyzed	Limits	6/21/07	6/21/07	6/21/07	
	(ug/l)	(ug/l)	(ug/l)	(ug/l)	
Dichlorodifluoromethane	2.0	m d	nd	1	
Chloromethane	2.0	nd nd	nd	nd nd	
	0.2				
Vinyl chloride *	2.0	nd	nd d	nd	
Bromomethane		nd	nd d	nd - 1	
Chloroethane	2.0	nd d	nd d	nd 	
Trichlorofluoromethane	2.0	nd d	nd 1	nd	
1,1-Dichloroethene	2.0	nd	nd	nd	
Methylene chloride	1.0	nd	nd	nd	
trans-1,2-Dichloroethene	1.0	nd	nd	nd	
1,1-Dichloroethane	1.0	nd	nd	nd	
2,2-Dichloropropane	2.0	nd	nd	nd	
cis -1,2-Dichloroethene	1.0	nd	nd	nd	
Chloroform	1.0	nd	nd	nd	
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	
Carbon tetrachloride	1.0	nd	nd	nd	
1,1-Dichleropropene	1.0	nd	nd	nd	
Benzene	1.0	nd	nd	nd	
1,2-Dichloroethane (EDC)	1.0	nd	nd	nd	
Trichloroethene (TCE)	1.0	nd	nd	nd	
1,2-Dichloropropane	1.0	nd	nd	nd	
Dibromomethane	1.0	nd	nd	nd	
Bromodichloromethane	1.0	nd	nd	nd	
cis-1,3-Dichloropropene	1.0	nd	nd	nd	
Toluene	1.0	nd	nd	nd	
Trans-1,3-Dichloropropene	1.0	nd	nd	nd	
1,1,2-Trichloroethane	1.0	nd	nd	nd	
Tetrachloroethene (PCE)	1,0	nd	nd	nd	
1,3-Dichloropropane	1.0	nd	nd	nd	
Dibromochloromethane	1.0	nd	nd	nd	
1,2-Dibromoethane (EDB) *	0.01	nd	nd	nd	
Chlorobenzene	1.0	nd	nd	nd	
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	
Ethylbenzene	1.0	nd	nd	nd	
Total Xylenes	1.0	nd	nd	nd	
Styrenes	1.0	nd nd	nd	nd	

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

**VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B IN WATER** 

Sample Description		Method	B4W-20	B4W-20	
		Blank		Dup	
Date Extracted	Reporting	N/A	6/20/07	6/20/07	
Date Analyzed	Limits	6/21/07	6/21/07	6/21/07	
	(ug/l)	(ug/l)	(ug/l)	(ug/l)	
Bromoform	1.0	nd	nd	nd	
lsopropylbenzene	4.0	nd	nd	nd	
1,2,3-Trichloropropane	1.0	nd	nd	nd	
Bromobenzene	1.0	nd	nd	nd	
1,1,2,2-Tetrachloroethane	1.0	nd	nd	nd	
n-Propylbenzene	1.0	nd	nd	nd	
2-Chlorotoluene	1.0	nd	nd	nd	
4-Chlorotoluene	1.0	nd	nd	nd	
1,3,5-Trimethylbenzene	1.0	nd	nd	nd	
tert-Butylbenzene	1.0	nd	nd	nd	
1,2,4-Trimethylbenzene	1.0	nd	nd	nd	
sec-Butylbenzene	1.0	nd	nd	nd	
1,3-Dichlorobenzene	1.0	nd	nd	n <b>d</b>	
Isopropyltoluene	1.0	nd	nd	nd	
1,4-Dichlorobenzene	1.0	nd	nd	nd	
1,2-Dichlorobenzene	1.0	nd	nd	nd	
n-Butylbenzene	1.0	nd	nd	nd	
1,2-Dibromo-3-Chloropropane	e 1.0	nd	nd	nd	
1,2,4-Trichlorolbenzene	2.0	nd	nd	nd	
Hexachloro-1,3-butadiene	5.0	nd	nd	nd	
Naphthalene	5.0	nd	nd	nd	
1,2,3-Trichlorobenzene	5.0	nd	nd	nd	
Surrogate Recovery					
Dibromofluoromethane		117	121	121	
1,2-Dichloroethane-d4		106	105	121	
Toluene-d8		107	107	110	
4-Bromofluorobenzene		98.3	106	118	

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>\*</sup> INSTRUMENT DETECTION LIMIT

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### QA/QC Data - EPA 8260B Analyses

		Sample Ide Matrix Spil	entification: ce	Matrix Spike Duplicate			RPD
	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	-
1,1-Dichloroethene	40	37.1	93	40	38.7	97	4.2
Benzene	40	33.3	83	40	35.4	89	6.1
Toluene	40	35.3	88	40	36.5	91	3.3
Chlorobenzene	40	45.6	114	40	47.9	120	4.9
Trichloroethene (TCE)	40	39.9	100	40	41.4	104	3.7
Surrogate Recovery						<u> </u>	
Dibromofluoromethane							
1,2-Dichloroethane-d4							
T-1							

Toluene-d8

4-Bromofluorobenzene

	Laboratory Control Sample				
	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)		
1,1-Dichloroethene	40	43.9	110		
Benzene	40	45.6	114		
Toluene	40	41.2	103		
Chlorobenzene	40	51.3	128		
Trichloroethene (TCE)	40	49.4	124		
Surrogate Recovery					
Dibromofluoromethane			120		
1,2-Dichloroethane-d4			109		
Toluene-d8			108		
4-Bromofluorobenzene			102		

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

**ACCEPTABLE RPD IS 35%** 

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

## Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/14/2007	116	nd	nd	nd
B1-14'	6/14/2007	110	nd	nd	nd
B1-20'	6/14/2007	101	nd	nd	ná
B2-14'	6/14/2007	99	nd	nd	$\mathbf{nd}$
B2-20'	6/14/2007	91	nd	nd	nd
B11-8'	6/14/2007	108	$\mathbf{nd}$	nd	4100
B11-15'	6/14/2007	121	nd	nd	nd
B12-11'	6/14/2007	117	nd	nd	nd
B12-11' Dup	6/14/2007	86	nd	nd	$\mathbf{nd}$
B12-16'	6/14/2007	108	nd	nd	nd
Practical Quantitation Lir	nit		25	40	40

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

## Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/15/2007	101	nd	nd	nd
TP1A-4'	6/15/2007	81	nd	nd	$\mathbf{nd}$
TP1B-3.5'	6/15/2007	87	nd	nd	nd
TP2A-3.5'	6/15/2007	95	$\mathbf{nd}$	nd	nd
TP2B-4'	6/15/2007	92	nd	nd	nd
TP3A-2.5"	6/15/2007	77	nd	nd	nd
TP3B-3'	6/15/2007	75	nd	nd	nd
TP3C-2.5'	6/15/2007	83	$\mathbf{nd}$	nd	nd
TP3D-2	6/15/2007	80	nd	nd	nd
HA1-1	6/15/2007	119	nd	nd	nd
TP4A-1	6/15/2007	76	nd	nd	nd
TP4B-1	6/15/2007	97	nd	nd	nd
HA2	6/15/2007	96	nd	nd	nd
HA2 Dup	6/15/2007	110	nd	nd	nd
Practical Quantitation Lin	ait		25	40	40

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/20/2007	108	nd	nd	nd
B3-16	6/20/2007	86	nd	nd	nd
B4-20	6/20/2007	72	nd	nd	nd
B6-4	6/20/2007	int	7900	nd	nd
B5-12	6/20/2007	76	64	nd	nd
B7-12	6/20/2007	94	nd	nd	nd
B8-20	6/20/2007	103	nd	nd	$\mathbf{nd}$
B8-20 Dup	6/20/2007	96	nd	nd	nd
Practical Quantitation Lin	nit		25	40	40

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Hydrocarbon Identification by NWTPH-HCID for Soil

Sample	Date	Surrogate	Gasoline	Diesel	Mineral Oil	Heavy Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	6/14/2007	116	nd	nd	nd	nd
B13-14	6/14/2007	87	nd	nd	nd	nd
B13-19	6/14/2007	116	nd	nd	nd	nd
Protical Overti	totion Timit		20	50	100	100
Practical Quantit	tation Limit		20	50	100	100

<sup>&</sup>quot;nd" Indicates not detected at listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;D" Indicates detected above the listed detection limit.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(ug/l)	(ug/l)	(ug/l)
Method Blank	6/14/07	87	nd	nd	nd
B11-W	6/14/07	130	nd	nd	nd
B12-W	6/14/07	124	nd	nd	nd
Practical Quantitatio	n Limit		200	400	400

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

### Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(ug/l)_	(ug/l)	(ug/l)
Method Blank	6/21/07	91	nd	nd	nd
B4W-20	6/21/07	108	nd	nd	nd
Practical Quantitatio	n Limit		200	400	400

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Analyses of Gasoline (NWTPH-Gx) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Gasoline (ug/l)
Method Blank	6/14/07	87	nd
B11-W	6/14/07	86	nd
B11-W Dup	6/14/07	92	nd
B12-W	6/14/07	82	nd
Practical Quantitation	100		

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

## Analyses of Gasoline (NWTPH-Gx) in Soil

Sample	Date	Surrogate	Gasoline
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	6/14/07	87	nd
B1-14'	6/14/07	95	nd
B1-20'	6/14/07	99	nd
B2-14'	6/14/07	88	nd
B2-20'	6/14/07	88	nd
B11-8'	6/14/07	113	nd
B11-15'	6/14/07	79	nd
B12-11'	6/14/07	92	n <b>d</b>
B12-11' Dup	6/14/07	92	nd
B12-16'	6/14/07	92	nd
Practical Quantitation Lin	mit		10

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Analyses of Gasoline (NWTPH-Gx) in Soil

Sample	Date	Surrogate	Gasoline
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	6/15/07	79	nd
TP1A-4'	6/15/07	80	$\operatorname{nd}$
TP1B-3.5'	6/15/07	76	nd
TP2A-3.5'	6/15/07	80	nd
TP2B-4'	6/15/07	68	nd
TP2B-4' Dup	6/15/07	78	nd
TP3A-2.5"	6/15/07	66	nd
TP3B-3'	6/15/07	78	nd
TP3C-2.5'	6/15/07	82	nd
TP3D-2	6/15/07	68	nd
HA1-1	6/15/07	70	nd
T4A-1	6/15/07	75	nd
T4B-1	6/15/07	68	nd
HA2	6/15/07	68	nd
Practical Quantitation	on Limit		10

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# Analyses of Gasoline (NWTPH-Gx) in Soil

Sample	Date	Surrogate	Gasoline
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	6/20/07	104	nd
B6-4	6/20/07	81	nd
B5-12	6/20/07	113	nd
B7-12	6/20/07	112	nd
Practical Quantitation	n Limit		10

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

OSTROMS PROJECT
Lacey, Washington
Insight Geologic, Inc.
Libby Env.Project No.L070614-10

# Analyses of Total Lead in Water by EPA Method 7421

Sample	Date	Lead
Number	Analyzed	(ug/l)
Method Blank	6/18/07	nd
B11-W	6/18/07	nd
B11-W Dup	6/18/07	nd
B12-W	6/18/07	nd
Practical Quantitation Limit		2.5

"nd" Indicates not detected at the listed detection limits.

OSTROMS PROJECT Lacey, Washington Insight Geologic, Inc. Libby Env.Project No.L070614-10

# QA/QC for Lead in Water by EPA Method 7421

Sample	Date	Lead	
Number	Analyzed	(ug/l)	
LCS	6/18/07	108	
MS	6/18/07	78%	
MSD	6/18/07	77%	
RPD	6/18/07	1.3	
Practical Quantitation Limit		2.5	

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135% ACCEPTABLE RPD IS 35%

OSTROMS PROJECT
Lacey, Washington
Insight Geologic, Inc.
Libby Env.Project No.L070614-10

## Analyses of Lead in Soil by EPA Method 7421

Sample	Date	Lead
Number	Analyzed	(mg/kg)
Method Blank	6/18/07	nd
B1-14'	6/18/07	nd
B1-20'	6/18/07	nd
B2-14'	6/18/07	nd
B2-20'	6/18/07	nd
B11-8'	6/18/07	nd
B11-15'	6/18/07	nd
B12-11'	6/18/07	nd
B12-11' Dup	6/18/07	nd
B12-16'	6/18/07	nd
TP1A-4'	6/18/07	nđ
TP1B-3.5'	6/18/07	nd
TP2A-3.5'	6/18/07	nd
TP2B-4'	6/18/07	nd
TP2B-4' Dup	6/18/07	nd
TP3A-2.5"	6/18/07	nd
TP3B-3'	6/18/07	5.6
TP3C-2.5'	6/18/07	nd
TP3D-2	6/18/07	6.0
HA1-1	6/18/07	$\mathbf{nd}$
T4A-1	6/18/07	nd
T4B-1	6/18/07	nd
HA2	6/18/07	nd
Practical Quantitation Limit		5.0

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

OSTROMS PROJECT
Lacey, Washington
Insight Geologic, Inc.
Libby Env.Project No.L070614-10

# QA/QC for Lead in Soil by EPA Method 7421

Sample	Date	Lead
Number	Analyzed	(mg/kg)
LCS	6/18/07	108
TP3C-2.5' MS	6/18/07	93%
TP3C-2.5' MSD	6/18/07	105%
RPD	6/18/07	12
Practical Quantitation Limit		5.0

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135% ACCEPTABLE RPD IS 35%

OSTROMS PROJECT
Lacey, Washington
Insight Geologic, Inc.
Libby Env.Project No.L070614-10

# Analyses of Lead in Soil by EPA Method 7421

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	7/1/07	nd
B6-4'	7/1/07	nd
B5-12'	7/1/07	nd
B7-12'	7/1/07	23
Practical Quantitation Limit		5.0

"nd" Indicates not detected at the listed detection limits.

OSTROMS PROJECT
Lacey, Washington
Insight Geologic, Inc.
Libby Env.Project No.L070614-10

# QA/QC for Lead in Soil by EPA Method 7421

Sample	Date	Lead
Number	Analyzed	(mg/kg)
LCS	7/1/07	100%
MS	7/1/07	104%
MSD	7/1/07	113%
RPD	7/1/07	8.3
Practical Quantitation Limit		5.0

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135% ACCEPTABLE RPD IS 35%

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07/10/2007

Libby Environmental, LLC

4139 Libby Rd NE Olympia, WA 98506 Attn: Sherry Chilcutt Project:

Ostrom's

Client ID:

B11-8'

Sample Matrix: Date Sampled:

Soil

Date Received:

06/14/2007 06/19/2007

Spectra Project:

2007060301

Spectra Number: 1

Analyte	Result	<u>Units</u>	<u>Method</u>
4,4-DDD	1.68	mg/Kg	SW846 8081
4,4-DDE	0.419	mg/Kg	SW846 8081
4,4-DDT	0.040	mg/Kg	SW846 8081
Aldrin	< 0.002	mg/Kg	SW846 8081
Dieldrin	< 0.002	mg/Kg	SW846 8081
Endosulfan I	< 0.002	mg/Kg	SW846 8081
Endosulfan II	< 0.002	mg/Kg	SW846 8081
Endosulfan Sulfate	< 0.002	mg/Kg	SW846 8081
Endrin	< 0.002	mg/K.g	SW846 8081
Endrin Aldehyde	<0.002	mg/K.g	SW846 8081
Endrin Ketone	< 0.002	mg/K.g	SW846 8081
Heptachlor	< 0.002	mg/Kg	SW846 8081
Heptachlor Epoxide	< 0.002	mg/Kg	SW846 8081
Methoxychlor	< 0.002	mg/Kg	SW846 8081
alpha-BHC	< 0.002	mg/Kg	SW846 8081
alpha-Chlordane	< 0.002	mg/Kg	SW846 8081
beta-BHC	< 0.002	mg/Kg	SW846 8081
delta-BHC	< 0.002	mg/Kg	SW846 8081
gamma-BHC (Lindane)	< 0.002	mg/Kg	SW846 8081
gamma-Chlordane	< 0.002	mg/Kg	SW846 8081

Surrogate	% Recovery	Method	
Decachiorobiphenyl	94	SW846 8081	

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

a5/jjb

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07/10/2007

Libby Environmental, LLC

4139 Libby Rd NE Olympia, WA 98506 Attn: Sherry Chilcutt Project:

Ostrom's B11-15'

Client ID: B11-Sample Matrix: Soil

Date Sampled: 06/14/2007 Date Received: 06/19/2007 Spectra Project: 2007060301

Spectra Number: 2

Analyte	<u>Result</u>	<u>Units</u>	Method
4,4-DDD	0.007	mg/Kg	SW846 8081
4,4-DDE	0.009	mg/Kg	SW846 8081
4,4-DDT	0.007	mg/Kg	SW846 8081
Aldrin	< 0.002	mg/Kg	SW846 8081
Dieldrin	< 0.002	mg/Kg	SW846 8081
Endosulfan I	< 0.002	mg/Kg	SW846 8081
Endosulfan II	< 0.002	mg/Kg.	SW846 8081
Endosulfan Sulfate	< 0.002	mg/Kg	SW846 8081
Endrin	< 0.002	mg/Kg	SW846 8081
Endrin Aldehyde	< 0.002	mg/Kg	SW846 8081
Endrin Ketone	< 0.002	mg/Kg	SW846 8081
Heptachlor	< 0.002	mg/Kg	SW846 8081
Heptachlor Epoxide	< 0.002	mg/Kg	SW846 8081
Methoxychlor	< 0.002	mg/Kg	SW846 8081
alpha-BHC	< 0.002	mg/Kg	SW846 8081
alpha-Chlordane	< 0.002	mg/Kg	SW846 8081
beta-BHC	< 0.002	mg/Kg	SW846 8081
delta-BHC	< 0.002	mg/Kg	SW846 8081
gamma-BHC (Lindane)	< 0.002	mg/Kg	SW846 8081
gamma-Chlordane	<0.002	mg/Kg	SW846 8081

Surrogate	% Recovery	Method	
Decachlorobiphenyl	110	SW846 8081	

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

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07/10/2007

Libby Environmental, LLC

4139 Libby Rd NE Olympia, WA 98506 Attn: Sherry Chilcutt Project:

Ostrom's

Client ID:

B11-W

Sample Matrix:

Water

Date Sampled:

06/14/2007

Date Received:

06/19/2007

Spectra Project:

2007060301

Spectra Number: 3

Analyte	Result
4,4'-DDD	0.049
4,4'-DDE	0.045
4,4'-DDT	0.023
Aldrin	<0.01
Dieldrin	< 0.01
Endosulfan I	<0.01
Endosulfan II	<0.01
Endosulfan Sulfate	< 0.01
Endrin	<0.01
Endrin Aldehyde	< 0.01
Endrin Ketone	<0.01
Heptachlor	< 0.01
Heptachlor Epoxide	< 0.01
Methoxychlor	< 0.01
alpha-BHC	< 0.01
alpha-Chlordane	< 0.01
beta-BHC	< 0.01
delta-BHC	< 0.01
gamma-BHC (Lindane)	< 0.01
gamma-Chlordane	< 0.01
<del></del>	

<u>Units</u>	Method
μg/L	SW846 8081
μ <b>g</b> /L	SW846 8081
μ <b>g/</b> L	SW846 8081
μ <b>g</b> /L	SW846 8081
μg/L	SW846 8081

Surrogate	% Recovery	Method
Decachiorobiphenyl	119	SW846 8082

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager a5/jjb

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07/10/2007

Libby Environmental, LLC

4139 Libby Rd NE Olympia, WA 98506 Attn: Sherry Chilcutt Project:

Ostrom's

Client ID:

B12-11

Sample Matrix:

Soil

Date Sampled: Date Received: 06/14/2007

06/19/2007

Spectra Project: 2007060301

Spectra Number: 4

Analyte	<u>Result</u>	<u>Units</u>	<u>Method</u>
4,4-DDD	0.005	mg/Kg	SW846 8081
4,4-DDE	0.005	mg/Kg	SW846 8081
4,4-DDT	0.009	mg/Kg	SW846 8081
Aldrin	< 0.002	mg/Kg	SW846 8081
Dieldrin	< 0.002	mg/Kg	SW846 8081
Endosulfan I	< 0.002	mg/Kg	SW846 8081
Endosulfan II	< 0.002	mg/Kg	SW846 8081
Endosulfan Sulfate	< 0.002	mg/Kg	SW846 8081
Endrin	< 0.002	mg/Kg	SW846 8081
Endrin Aldehyde	< 0.002	mg/Kg	SW846 8081
Endrin Ketone	< 0.002	mg/Kg	SW846 8081
Heptachlor	< 0.002	mg/Kg	SW846 8081
Heptachlor Epoxide	< 0.002	mg/Kg	SW846 8081
Methoxychlor	< 0.002	mg/Kg	SW846 8081
alpha-BHC	< 0.002	mg/Kg	SW846 8081
alpha-Chlordane	< 0.002	mg/Kg	SW846 8081
beta-BHC	< 0.002	mg/Kg	SW846 8081
delta-BHC	< 0.002	mg/Kg	SW846 8081
gamma-BHC (Lindane)	< 0.002	mg/Kg	SW846 8081
gamma-Chlordane	< 0.002	mg/Kg	SW846 8081

Surrogate	% Recovery	Method	
Decacilorobiphenyl	110	SW846 8081	

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

a5/jjb

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07/10/2007

Libby Environmental, LLC

4139 Libby Rd NE Olympia, WA 98506 Attn: Sherry Chilcutt Project: Client ID: Ostrom's

Sample Matrix:

B12-16

Date Sampled:

Soil 06/14/2007

Date Received:

06/19/2007

Spectra Project:

2007060301

Spectra Number: 5

Analyte	<u>Result</u>	<u>Units</u>	<u>Method</u>
4,4-DDD	0.004	mg/Kg	SW846 8081
4,4-DDE	0.005	mg/Kg	SW846 8081
4,4-DDT	0.007	mg/Kg	SW846 8081
Aldrin	< 0.002	mg/Kg	SW846 8081
Dieldrin	< 0.002	mg/Kg	SW846 8081
Endosulfan I	< 0.002	mg/Kg	SW846 8081
Endosulfan II	< 0.002	mg/Kg	SW846 8081
Endosulfan Sulfate	< 0.002	mg/Kg	SW846 8081
Endrin	< 0.002	mg/Kg	SW846 8081
Endrin Aldehyde	< 0.002	mg/Kg	SW846 8081
Endrin Ketone	< 0.002	mg/Kg	SW846 8081
Heptachlor	< 0.002	mg/Kg	SW846 8081
Heptachlor Epoxide	< 0.002	mg/Kg	SW846 8081
Methoxychlor	< 0.002	mg/Kg	SW846 8081
alpha-BHC	< 0.002	mg/Kg	SW846 8081
alpha-Chlordane	< 0.002	mg/Kg	SW846 8081
beta-BHC	< 0.002	mg/Kg	SW846 8081
delta-BHC	< 0.002	mg/Kg	SW846 8081
gamma-BHC (Lindane)	<0.002	mg/Kg	SW846 8081
gamma-Chlordane	<0.002	mg/Kg	SW846 8081

Surrogate	% Recovery	Method
Decachlorobiphenyl	102	SW846 8081

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager طزز/که

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07/10/2007

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Project:

	Client ID:
Libby Environmental, LLC	Sample Ma

Libby Environmental, LLC
4139 Libby Rd NE
Olympia, WA 98506
Attn: Sherry Chilcutt

Sample Matrix: Water
06/14/2007
Date Sampled: 06/14/2007
Date Received: 06/19/2007
Spectra Project: 2007060301

Spectra Number: 6

Ostrom's B12-W

Amalada	Result	_Units	Method
Analyte	<del></del>		SW846 8081
4,4'-DDD	0.036	μg/L -	
4,4'-DDE	0.047	μg/L	SW846 8081
4,4'-DDT	0.062	μg/L	SW846 8081
Aldrin	< 0.01	μg/L	SW846 8081
Dieldrin	< 0.01	μg/L	SW846 8081
Endosulfan I	< 0.01	μg/L	SW846 8081
Endosulfan II	< 0.01	μg/L	SW846 8081
Endosulfan Sulfate	< 0.01	μg/L	SW846 8081
Endrin	< 0.01	μ <b>g</b> /L	SW846 8081
Endrin Aldehyde	< 0.01	μg/L	SW846 8081
Endrin Ketone	< 0.01	μg/L	SW846 8081
Heptachlor	< 0.01	μg/L	SW846 8081
Heptachlor Epoxide	< 0.01	μg/L	SW846 8081
Methoxychlor	< 0.01	μg/L	SW846 8081
alpha-BHC	< 0.01	μg/L	SW846 8081
alpha-Chlordane	< 0.01	μg/L	SW846 8081
beta-BHC	< 0.01	μg/L	SW846 8081
delta-BHC	< 0.01	μ <b>g</b> /L	SW846 8081
gamma-BHC (Lindane)	< 0.01	μ <b>g</b> /L	SW846 8081
gamma-Chlordane	< 0.01	μg/L	SW846 8081

Surrogate	% Recovery	Method
Decachlorobiphenyl	110	SW846 8081

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager

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# ATTACHMENT C LIMITATIONS AND GUIDELINES FOR USE

#### ATTACHMENT C

#### REPORT LIMITATIONS AND GUIDELINES FOR USE1

This Attachment provides information to help you manage your risks with respect to the use of this report.

# ENVIRONMENTAL SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES, PERSONS AND PROJECTS

This report has been prepared for the exclusive use of Ostrom Farms and their authorized agents. This report may be made available to regulatory agencies for review. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

Insight Geologic, Inc. structures our services to meet the specific needs of our clients. For example, an environmental site assessment study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except Ostrom Farms should rely on this environmental report without first conferring with Insight Geologic, Inc.. This report should not be applied for any purpose or project except the one originally contemplated.

#### THIS ENVIRONMENTAL REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

This report has been prepared for the Ostrom Farms Mushroom Facility located at 8322 Steilacoom Road SE in Lacey, Washington. Insight Geologic, Inc. considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless Insight Geologic, Inc. specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made after the date of this report, Insight Geologic, Inc. should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

#### **RELIANCE CONDITIONS FOR THIRD PARTIES**

Our report was prepared for the exclusive use of our Client. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement

<sup>&</sup>lt;sup>1</sup> Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

with the Client and generally accepted environmental practices in this area at the time this report was prepared.

#### **ENVIRONMENTAL REGULATIONS ARE ALWAYS EVOLVING**

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. Insight Geologic, Inc. cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

# UNCERTAINTY MAY REMAIN EVEN AFTER THIS PHASE II ESA IS COMPLETED

No ESA can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely-spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

#### SUBSURFACE CONDITIONS CAN CHANGE

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or ground water fluctuations. Always contact Insight Geologic, Inc. before applying this report to determine if it is still applicable.

#### SOIL AND GROUND WATER END USE

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other sites or for other on-site uses of the affected media (soil and/or ground water). Note that hazardous substances may be present in some of the site soil and/or ground water at detectable concentrations that are less than the referenced cleanup levels. Insight Geologic, Inc. should be contacted prior to the export of soil or ground water from the subject site or reuse of the affected media on site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or ground water from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

#### MOST ENVIRONMENTAL FINDINGS ARE PROFESSIONAL OPINIONS

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are

taken. Insight Geologic, Inc. reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

#### DO NOT REDRAW THE EXPLORATION LOGS

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

#### READ THESE PROVISIONS CLOSELY

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. Insight Geologic, Inc. includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with Insight Geologic, Inc. if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

## GEOTECHNICAL, GEOLOGIC AND GEOENVIRONMENTAL REPORTS SHOULD NOT BE INTERCHANGED

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

#### **BIOLOGICAL POLLUTANTS**

Insight Geologic, Inc's Scope of Work specifically excludes the investigation, detection, or assessment of the presence of Biological Compounds which are Pollutants in or around any structure. Accordingly, this report includes no interpretations, recommendations, findings, or conclusions for the purpose of detecting, assessing, or abating Biological Pollutants. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.