Golder Associates Inc.

18300 NE Union Hill Road, Suite 200
Redmond, WA USA 98052-3333
Telephone (425) 883-0777
Fax (425) 882-5498
www.golder.com

September 22, 2004

Our Ref: 923-1000-002.R273

Palmer Coking Coal Company
31407 Highway 169
P.O. Box 10
Black Diamond, Washington 98010

Attention: Mr. Bill Kombol

RE: LANDSBURG MINE SITE INTERIM GROUNDWATER MONITORING RESULTS– AUGUST, 2004

Dear Mr. Kombol:

Golder Associates Inc. (Golder) completed an interim groundwater monitoring event at the Landsburg Mine Site during August, 2004. Groundwater samples were collected from monitoring wells LMW-2, LMW-3, LMW-4, LMW-5, LMW-6, LMW-7, LMW-8, LMW-9 and LMW-10 (see Figure 1). Monitoring wells LMW-2 , LMW-4 and LMW-10 are completed to monitor shallow and deeper zones within the Rogers seam north of the subsidence trench, and LMW-3, LMW-5 and LMW-8 are completed to monitor shallow and deeper zones within the Rogers coal seam south of the subsidence trench. These wells lay along the primary pathways for detection of a chemical release from the mine, were one to occur. Samples were also collected of the groundwater emanating from LMW-8, which is a shallow well monitoring the Rogers Portal #3 discharge and is a replacement for sampling the surface water discharge at the portal. LMW-8 provides a more representative water quality sample of the Rogers Portal #3 discharge than a sample of the surface water.

Groundwater sampling was conducted in accordance with the *Draft Interim Groundwater Monitoring Plan, Landsburg Mine Site* (Golder, 1997), and included the following activities:

- Measurement of static water levels at monitoring wells;
- Well purging to insure sample representativeness with the currently installed dedicated pumping systems;
- Measurement of field parameters pH, specific conductance, temperature, dissolved oxygen, and turbidity;
- Collection of representative samples in appropriate containers; metals samples were field filtered using an inline 0.45 μm filter; and
- Analyses of groundwater for volatile organic compounds (EPA Method 8260), priority pollutant metals and petroleum hydrocarbon identification scan.

OFFICES ACROSS AFRICA, ASIA, AUSTRALIA, EUROPE, NORTH AMERICA AND SOUTH AMERICA

Sampling activities were documented on Sample Integrity Data Sheets (SIDS). Copies of the completed SIDS are provided in Appendix A to this letter.

Following sample collection, all bottles were sealed, labeled and placed in a cooler maintained at approximately 4° C. All groundwater samples from monitoring wells were transported under chain-of-custody procedures to North Creek Analytical, Inc. for analyses, located in Bothell, Washington. Analysis on all water samples included volatiles by EPA Method 8260, priority metals suite of 13 analytes with the addition of Manganese and Iron, and a fuel hydrocarbon scan.

The attached Table 1 presents analytical results for all analyses. Laboratory analytical reports are provided in Appendix B. Screening levels are based on maximum contaminant levels (MCLs) or State of Washington MTCA Method B groundwater cleanup levels whichever value is more stringent. In cases where an established MCL or Method B Cleanup Level does not exist, a similar (surrogate) compound regulatory screening level is identified for comparison.

The analytical results indicate no significant changes in groundwater conditions from those observed during the remedial investigation (RI). One groundwater sample contained detectable organic compounds: LMW-10 had detectable benzene and toluene at 0.29μg/L and 0.44 μg/L, respectively. These detections are much below the MTCA levels as follows[1]:

- Benzene - MTCA cleanup level is 5μg/L for groundwater and 22.7μg/L for surface water.
- Toluene - MTCA cleanup level is 1000 μg/L for groundwater and 48,500 μg/L for surface water.

The previous April/May, 2004 groundwater monitoring results also showed slight concentrations of both benzene and toluene within LMW-10, though the observed concentrations were slightly higher when compared with current data (April/May data showed benzene and toluene at 0.39μg/L and 0.68μg/L, respectively). Since concentrations of the observed compounds are trace and appear to be decreasing in concentration, it is possible these organic compounds were introduced during the drilling and installation of LMW-10. However, future monitoring periods will provide evidence whether these detected organic compounds are emanating from the Rogers Coal Seam mine or are merely residual artifacts from the drilling process. Also, chloroform was present in the field blank in slight concentrations. This compound did not show up in any other samples allowing the conclusion that it may have been either accidentally introduced during lab processing or was present in the deionized water used for the sample.

Iron and manganese are the only metals that were detected at concentrations in excess of the screening levels of 0.3μg/L and 0.05μg/L, respectively. For these compounds the only screening levels are secondary maximum contaminant levels (SMCLs) which are not health-based standards, but are protective of aesthetic qualities of water only. The concentrations of iron and manganese detected during the August, 2004 sampling are similar to concentrations detected during the RI (Golder, 1996)[2] and the Interim Groundwater Sampling events in May, 2000, October, 2003, and April/May, 2004.

---

1 Ecology, Washington State Department of, 2001. *Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulations*. Publication No. 94-145. Olympia, Washington.

2 Golder Associates Inc., 1996. *Remedial Investigation and Feasibility Study for the Landsburg Mine Site.* Landsburg PLP Steering Committee.

If you have any questions or require any additional information, please contact Douglas Morell at (425) 883-0777.

Sincerely,

GOLDER ASSOCIATES INC.

for Ryan Vannier, L.G.
Project Hydrogeologist

Douglas J. Morell, Ph.D. L.Hy.
Principal

Attachments: Table
Figure
Appendix A Field Report Forms
Appendix B Laboratory Data

RGV/DJM/se

TABLE

TABLE 1

AUGUST 2004 GROUNDWATER ANALYTICAL RESULTS
LANDSBURG MINE SITE

ANALYTE	UNITS	LMW-2 8/20/2004	LMW-3 8/18/2004	LMW-4 8/19/2004	LMW-5 8/19/2004	LMW-6 8/19/2004	LMW-7 8/25/2004	LMW-8 8/18/2004	LMW-9 8/18/2004	LMW-10 8/24/2004	DuplicateL MW-5 8/19/2004	Field Blank 8/18/2004
Field Parameter												
pH	stnd	6.98	7.17	6.98	7.03	7.01	7.08	7.23	7.15	9.03	7.03	
Conductivity	uS/cm	201	156	131	221	76.9	195	235	170	285	221	
Temperature	°C	11.0	11.3	11.1	11.2	10.5	11.9	12.0	12.4	10.7	11.2	
Turbidity	NTU	0.80	0.87	0.36	0.34	0.73	0.86	907	6.98	1.04	0.34	
Metals												
Antimony	mg/L	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Arsenic	mg/L	0.001 U	0.00114	0.001 U	0.001 U	0.001 U	0.00186	0.00375	0.001 U	0.00176	0.001 U	0.001 U
Beryllium	mg/L	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chromium	mg/L	0.00194	0.001 U	0.00217	0.0015	0.001 U	0.001 U	0.00157	0.00178	0.001 U	0.00162	0.001 U
Copper	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Iron	mg/L	0.229	0.15 U	0.733	0.346	2.31	0.941	1.71	1.77	0.15 U	0.343	0.15 U
Lead	mg/L	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Manganese	mg/L	0.213	0.0612	0.186	0.204	0.00289	0.114	1.04	0.159	0.0166	0.204	0.01 U
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Nickel	mg/L	0.00131	0.00127	0.00116	0.001 U	0.001 U	0.001 U	0.00192	0.00120	0.001 U	0.001 U	0.001 U
Selenium	mg/L	0.00215	0.001 U	0.00275	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Silver	mg/L	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Thallium	mg/L	0.005 U	0.001 U	0.005 U	0.005 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Zinc	mg/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U

TABLE 1

AUGUST 2004 GROUNDWATER ANALYTICAL RESULTS
LANDSBURG MINE SITE

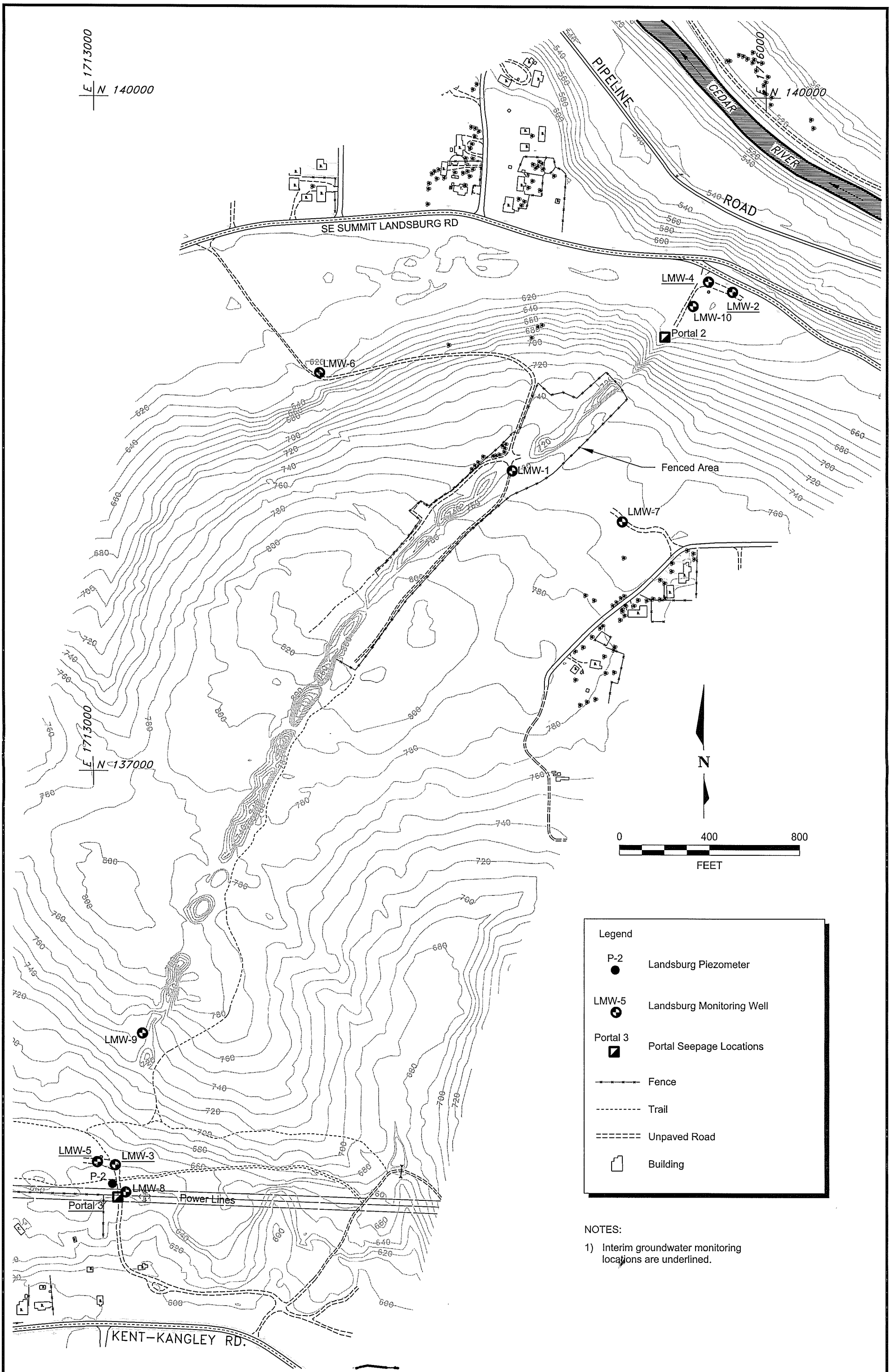
ANALYTE	UNITS	LMW-2 8/20/2004	LMW-3 8/18/2004	LMW-4 8/19/2004	LMW-5 8/19/2004	LMW-6 8/19/2004	LMW-7 8/25/2004	LMW-8 8/18/2004	LMW-9 8/18/2004	LMW-10 8/24/2004	DuplicateL MW-5 8/19/2004	Field Blank 8/18/2004
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,1-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1,2,2-Tetrachloroethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,1-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,3-Trichloropropane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2,4-Trimethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dibromo-3-chloropropane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloroethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,3-Dichloropropane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,4-Dichlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,2-Dichloropropane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chlorotoluene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Hexanone	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chlorotoluene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.29**	0.2 U	0.2 U
Bromobenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromoform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Bromomethane	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chlorobenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.45**

TABLE 1

AUGUST 2004 GROUNDWATER ANALYTICAL RESULTS
LANDSBURG MINE SITE

ANALYTE	UNITS	LMW-2 8/20/2004	LMW-3 8/18/2004	LMW-4 8/19/2004	LMW-5 8/19/2004	LMW-6 8/19/2004	LMW-7 8/25/2004	LMW-8 8/18/2004	LMW-9 8/18/2004	LMW-10 8/24/2004	DuplicateL MW-5 8/19/2004	Field Blank 8/18/2004
Chloromethane	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
cis-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromochloromethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dibromomethane	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Dichlorodifluoromethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexachlorobutadiene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m,p-Xylene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methyl tert-butyl ether	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene chloride	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
n-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
n-Propylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Naphthalene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
o-Xylene	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
p-Isopropyltoluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Styrene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
tert-Butylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.44**	0.2 U	0.2 U
trans-1,2-Dichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
trans-1,3-Dichloropropene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichloroethene	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Trichlorofluoromethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	µg/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Hydrocarbon Identification												
Diesel Range	mg/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Gas Range	mg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Heavy Fuel Oil	mg/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Insulating Oil	mg/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Kerosene Range	mg/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U
Lube Oil Range	mg/L	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U

FIGURE



NOTES:

1) Interim groundwater monitoring locations are underlined.

FIGURE 1

GROUNDWATER MONITORING LOCATIONS

PALMER/LANDSBURG MINE/WA

K:\CAD\Projects\1992\9231000\x002\R273\9231000002R273F01.dwg 09/22/2004, 14:10 Layout: Layout1

Golder Associates

APPENDIX A

FIELD REPORT FORMS

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW2-~~[illegible]~~ 82004

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/20/04 **Time** 1100

Media Water **Station** LMW-2

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 8.14 (39-8.14) × 0.66 gal/ft = 20.4

Sand Pack Interval 25-39 = 14' (14 ft × 1.95) × 0.25 = 6.8

Packer Depth - NA 27.2 × 3 = 82 gal

Sample Description Clear water; Moderately strong H_2S odor

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/20/04

Supervisor (signature) _____ **Date** _____

FIELD PARAMETERS SHEET

Well ID LMW-2
Date 08/29/04
Time Begin Purge 1000
Time Collect Sample ~~1045~~ 1100

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
8.14	1015	30	6.98	219 µS	11.1	0.30	0.59	
	1020	40	6.96	216 µS	11.1	0.26	0.48	
	1025	50	6.94	211 µS	11.0	0.23	0.57	
	1030	60	6.96	208 µS	11.0	0.20	1.06	
	1035	70	6.94	204 µS	11.0	0.16	1.24	
	1040	80	6.96	201 µS	11.0	0.16	1.01	
	1045	90	6.94	203 µS	11.0	0.14	0.82	
	1050	100	6.98	201 µS	11.0	0.14	0.80	

Comments: Purge rate set to 2 gpm. 116 Hz on Grundfos controller

Sampler's Initials RV

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW3-81804

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/18/04 **Time** 0950

Media Water **Station** LMW-3

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 13.26 (65 - 13.26) × 0.66 gal/ft = 34

Sand Pack Interval 69-47 = 22' (22' × 1.95) × 0.25 = 11

Packer Depth 39', well bottom = 65' 45 gal × 3 volumes = 135 gal

Sample Description Water is clear and void of odors

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

MS/MSD

	Aliquot Amount	Analysis	Container	Preservation / Amount
5	~~3~~ – 40 mL	VOA	VOA Vial	HCl
2	~~1~~ – 500 ml	Metals	HDPE	HNO3 (filter)
5	~~2~~ – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/18/04

Supervisor (signature) _____ **Date** _____

FIELD PARAMETERS SHEET

Well ID LMW-3
Date 08/18/04
Time Begin Purge 0830
Time Collect Sample 0950

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
27.23	0845	26.25	6.15	193.0 µS	11.3	0.92	1.80	
27.36	0900	52.50	6.78	166.8 µS	11.3	0.44	0.84	
27.45	0915	78.75	7.11	161.4 µS	11.3°C	0.44	0.47	
27.51	0930	105.0	7.15	157.4 µS	11.3	0.41	0.64	
27.52	0945	131.25	7.17	156.7 µS	11.3	0.41	0.87	

Comments:

12.80 after packer inflate Packer Pressure = 110 psi
Grundfos set to 125 Hz Grundfos assembly not operating
Pump removed and new Grundfos placed to purge well volume ~3.
3 well volumes removed befor sample collection

MS/MSD sample collected with LMW-3 sample

Sampler's Initials RV

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW4 - 81904

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/19/04 **Time** 1445

Media Water **Station** LMW-4

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 10.31 (210-187) × 0.66 = 15.2

Sand Pack Interval 189-211' = 22' (22 × 1.95) × 0.25 = 10.7

Packer Depth - 187 26 gal × 3 = 78 gal

Sample Description Clear water ; Void of odors

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/19/04

Supervisor (signature) _____ **Date** _____

FIELD PARAMETERS SHEET

Well ID LMW-4
Date 08/19/04
Time Begin Purge 1400
Time Collect Sample 1445

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
10.31	1400							
10.31	1410	20	6.90	141.3	11.2	1.36	0.88	
10.31	1415	30	6.96	135.6	11.1	0.43	0.62	
10.31	1420	40	6.94	132.4	11.1	0.22	0.31	
10.31	1425	50	6.98	131.3	11.1	0.19	0.39	
10.31	1430	60	6.95	130.6	11.1	0.14	1.59	
10.31	1435	70	6.95	132.1	11.1	0.13	0.51	
10.31	1440	80	6.98	131.5	11.1	0.13	0.36	

Comments: Inflated packer @ 110 psi Water level @ 10.31
Purging @ ≈ 2 gal/min - 146 HE

Sampler's Initials RW

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW5-81804

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/19/04 **Time** 0955

Media Water **Station** LMW-5

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 14.82 (242-222) × 0.66 = 13 gal × 3 = 39 gal

Sand Pack Interval - None

Packer Depth 222 ; Well Bottom - 242

Sample Description Clear water ; Moderate sulfide odor

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Duplicate

	Aliquot Amount	Analysis	Container	Preservation / Amount
6	~~3~~ – 40 mL	VOA	VOA Vial	HCl
2	~~1~~ – 500 ml	Metals	HDPE	HNO3 (filter)
4	~~2~~ – 1 Liter	TPH-HCID	Glass Amber	HCl

Duplicate = LMW55-81804 sample time @ 0855

Sampler (signature) [signature] **Date** 08/19/04

Supervisor (signature) **Date**

FIELD PARAMETERS SHEET

Well ID LMW-5
Date 08/19/04
Time Begin Purge 0920
Time Collect Sample 0955

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
14.80	0920	0						
14.80	0930	15	7.17	229 µS	11.2	0.59	0.48	
14.80	0935	22.5	7.08	219 µS	11.2	0.47	0.52	
14.80	0940	30	7.02	211 µS	11.2	0.47	0.50	
14.80	0945	37.5	7.02	239 µS	11.2	0.47	0.30	
14.80	0950	45	6.99	221 µS	11.2	0.47	0.30	
14.80	0955	52.5	7.03	221 µS	11.2	0.47	0.34	

Comments: Set Packer Pressure to 150 psi
Purge rate ≈ 1.5 gal/min @ 111 HZ

Duplicate sample collected: LMW55-81804 @ 0855

Sampler's Initials RV

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW6 -81904

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/19/04 **Time** 1320

Media Water **Station** LMW-6

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 46.42' (106 - 81) × 0.66 = 17

Sand Pack Interval - 83 - 106 = 23' (23 × 1.95) × 0.25 = 11

Packer Depth - 81' ; Bottom of well - 106' 28 × 3 84 gal

Sample Description

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/19/04

Supervisor (signature) **Date**

FIELD PARAMETERS SHEET

Well ID LMW-6
Date 05/19/04
Time Begin Purge 1220
Time Collect Sample 1320

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
46.13'	1215	0						
46.13'	1225	17.5	7.41	179.6 µS	10.1	1.37	15.7	
46.13'	1235	35	7.18	177.0 µS	10.4	0.57	1.81	
46.13'	1245	52.5	7.13	177.0 µS	10.5	0.37	0.65	
46.13'	1255	70	7.00	79.3 µS	10.5	0.38	0.45	
46.13'	1305	87.5	7.00	77.7 µS	10.5	0.31	0.64	
46.13'	1315	105	7.01	76.9	10.5	0.31	0.73	

Comments: Set packer @ 100psi 46.13' after inflate
Purge rate ≈ 1.75 gal/min 186 Hz on Grundfos controller

Sampler's Initials PN

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW 7-82504

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 8/25/04 **Time** 1420

Media Water **Station** LMW-7

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 229.56 (254 - 229.56) × 0.66 = 16.13 gal × 3 = 48.4 gal

Sand Pack Interval - NA

Packer Depth - NA ; Well Depth = 254 ft

Sample Description Clear Water

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/25/04

Supervisor (signature) **Date**

FIELD PARAMETERS SHEET

Well ID LMW-7
Date 0825
Time Begin Purge 1330
Time Collect Sample 1420

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
229.50	1315	Ø						
	1340	12.5 gal						
	1400	42.5 gal	7.28	217	11.9	0.29	2.51	
	1405	50 gal	7.03	200 µS	11.9	0.31	0.85	
	1410	57.5 gal	7.10	193.9	11.9	0.28	0.80	
	1415	65 gal	7.08	195.4	11.9	0.28	0.86	

Comments:
1330- Begin purge @ 321 Hz producing 0.5 gal/min
1340- Raise pump to 352 Hz producing 1.5 gal/min

Sampler's Initials_____

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW8 - 81804

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/18/04 **Time** 1210

Media Water **Station** LMW-8

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 5.31 (15.16 - 5.31) × 0.17 = 1.67

Sand Pack Interval [(15.16 - 6.0) 2.55] × 0.25 = 5.83

Well Depth - 15.16 7.50 gal / well vol = 22.5

Sample Description

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/18/04

Supervisor (signature) **Date**

FIELD PARAMETERS SHEET

Well ID LMW-8
Date 08/18/04
Time Begin Purge 1100
Time Collect Sample 1210

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
5.31	1042							
	1100		7.72	216 µS	11.8	15.18	904	
	1105	10 gal	7.12	196 µS	11.8	17.59	910	
	1130		7.88	201 µS	12.0	17.10	917	
	1140	15 gal	7.23	235 µS	12.0	17.09	907	

Comments:

Began pumping @ 1100
Pumped dry by 1105
Allowed to recharge for ≈ 25 min
1130 - Began pumping again
1135 - Purged dry
1140 - Began pumping again
1145 - Purged dry Begin sample prep
1210 - Collect sample

Sampler's Initials RV

LMW-9 101.61
TD 160.91

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW9 - 81804

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/18/04 **Time** 1450

Media Water **Station** LMW-9

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 101.61 (160-101) 0.17 = 10 gal

Sand Pack Interval 146-160 [(160-146) · 2.55] 0.25 9 gal

~~Packer~~ well Depth 160.91 19 gal / well vol ×3 = 57 gal

Sample Description Clear water, void of odors

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/18/04

Supervisor (signature) _____ **Date** _____

FIELD PARAMETERS SHEET

Well ID LMW-9
Date 08/18/04
Time Begin Purge 1355
Time Collect Sample 1450

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
101.61	1120	0 gal						
	1410	15 gal	7.28	195.3 µS	12.6	0.80	31.4	
	1420	25 gal	7.22	185.3 µS	12.8	0.74	17.1	
	1425	30 gal	7.21	178.9 µS	12.8	0.52	9.70	
	1430	35 gal	7.17	177.3 µS	12.5	0.60	7.12	
	1435	40 gal	7.15	174.4	12.4	0.53	8.55	
	1440	45 gal	7.15	171.0	12.4	0.41	6.92	
	1445	50 gal	7.14	170.3	12.4	0.45	7.24	
	1450	55 gal	7.15	170.1	12.4	0.47	6.98	

Comments:
Grundfos @ 225 Hz ≈ 1 gal/min

Sampler's Initials RV

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** LMW10

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler Dedicated Pump Grundfos or QED Bladder

Date 08/24/04 **Time** ~~1430~~ (DW) 1630

Media Water **Station** LMW-10

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - 0.77 Ft - Slightly Artesian

Sand Pack Interval - 287-267

~~Packer~~ Well Depth - 287' Pump @ 80'; Pump intake at 277 Ft.

Sample Description

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/24/04

Supervisor (signature) **Date**

FIELD PARAMETERS SHEET

Well ID LMW-10
Date 08/24/04
Time Begin Purge 0830 / 1130 see notes
Time Collect Sample 1630

Water Level feet bmp	Time	Volume Purged	pH	Conductivity uS/cm	Temp. °C	DO mg/L	Turbidity NTU	
18.72	1200	≈ 25 gal	8.96	289	11.0	0.24	2.04	
21.20	1215	30 gal	8.81	290	11.0	0.29	1.08	
23.18	1230	35 gal	9.00	292	10.9	0.29	1.09	
24.95	1245	40 gal	9.01	289	10.8	0.36	1.08	
26.42	1300	45 gal	9.02	289	10.8	0.33	1.03	
32.87	1430	75 gal	8.90	280	10.8	0.46	0.96	
33.68	1445	80 gal	8.95	282	10.8	0.30	0.98	
34.92	1500	~~80~~ 82.5 gal	9.03	285	10.7	0.24	1.04	

Comments:

Pump set at 65 psi (controller) 100 psi (valve). 7.5 discharge / 7.5 refill
Pumping approx 1 gal / 3 min

Pump valve problems - pump shut down and restarted at 1130
Pump out of Nitrogen @ 1300 hrs. New tank installed and restart @ 1305
By 1445 - Pump has slowed discharge rate substantially (≈ 0.5 gal / 3 min)
Changed to ID 84 10/10 1615 - ID 20 R40 D20

Sampler's Initials RV

Field Blank

SAMPLE INTEGRITY DATA SHEET

Plant/Site Landsburg Mine Site **Project No.** 923-1000-002

Site Location Ravensdale, WA **Sample ID** ~~LMW~~ FBLMW3-81804

Sampling Location Groundwater Monitoring Well End of dedicated sampling tube

Technical Procedure Reference(s) TP-1.4-6, TP-1.2-20, TP-1.2-23

Type of Sampler ~~Dedicated Pump Grundfos or QED Bladder~~ Direct fill of sample containers

Date 08/18/04 **Time** 0920

Media Water **Station** LMW-3

Sample Type: **grab** time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

SWL - NA

Sand Pack Interval - NA

Packer Depth - NA

Sample Description Water supplied by NCA laboratory

Field Measurements on Sample (pH, conductivity, etc.)

SEE FIELD PARAMETERS SHEET - NA

Aliquot Amount	Analysis	Container	Preservation / Amount
3 – 40 mL	VOA	VOA Vial	HCl
1 – 500 ml	Metals	HDPE	HNO3 (filter)
2 – 1 Liter	TPH-HCID	Glass Amber	HCl

Sampler (signature) [signature] **Date** 08/18/04

Supervisor (signature) _____ **Date** _____

APPENDIX B

LABORATORY DATA

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

02 September 2004

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA/USA 98052-3333

RE: Landsburg Mine

Enclosed are the results of analyses for samples received by the laboratory on 08/19/04 11:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager

CASE NARRATIVE for B4H0535

Client: Golder Associates Inc.
Project Manager: Gary Zimmerman
Project Name: Landsburg Mine
Project Number: 923-1000-002

1.0 DESCRIPTION OF CASE

Four (4) water samples and one Trip Blank were submitted for the analysis of:

- Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
- Dissolved Metals by EPA 6000/7000 Series Methods
- Volatile Organic Compounds by EPA 8260B

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received 19th August 2004 at a temperature of 7.4°C and logged in 20th August 2004. The samples were received outside the recommended temperature range of 2 to 6 Degrees Celsius. The samples were analyzed as requested after confirming with the client to proceed. A Trip Blank was received with the project but not listed on the COC. The COC was revised to list the Trip Blank, which was then held pending the request of analysis.

3.0 PREPARATION AND ANALYSIS

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Dissolved Metals by EPA 6000/7000 Series Methods
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Volatile Organic Compounds by EPA 8260B
Site-specific Matrix Spike and Matrix Spike Duplicate (MS/MSD) was requested on project sample LMW3-81804. A total of five (5) HCl preserved voa vials were provided in order to run project sample LMW3-81804 with site specific MS/MSD. Project sample LMW3-81804 was initially analyzed as requested with MS/MSD, however due to QC issues this data was not reportable. Due to limited sample volume a Matrix Spike Duplicate could not be re-run, project sample LMW3-81804 was re-analyzed with a Matrix Spike only. A full voa vial is used with each analytical shot, it is recommended that when site specific QC is required a minimum of six (6) voa vials be provided. The percent recovery for spike

Amar Gill
Project Manager
North Creek Analytical

CASE NARRATIVE for B4H0535

compounds 1,2,3-Trichlorobenzene and Naphthalene was above the method established control limit in the analytical batch Blank Spike (BS). The spike recovery for these compounds in the Blank Spike Duplicate (BSD) was within control limits as was the relative percent difference (RPD). The percent recovery for spike compound Bromomethane was above the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. Since the spike recoveries were above control limits and the all project samples were non-detect for 1,2,3-Trichlorobenzene, Bromomethane and Naphthalene no further action was deemed necessary. No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Amar Gill
Project Manager
North Creek Analytical

nca

Revised Chain of Custody

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210 [X]
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4H0535

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 15300 NE Union Hill Rd. #200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsburg
PROJECT NUMBER: 923-1000-002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: (10 STD) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: (5 STD) 4 3 2 1 <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl, HNO3, HCl

REQUESTED ANALYSES: NWTPH-HCID, Metals, VOCs

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-HCID	Metals	VOCs	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS (W)	NCA WO ID
1	LMW3-81804	08/18/04 / 0950	X	X	X	W	13 TB	Includes MS/MSD	-01
2	LMW8-81804	/ 1210	X	X	X		6		-02
3	LMW9-81804	/ 1450	X	X	X		6		-03
4	FBLMW3-81804	/ 0920	X	X	X		6		-04
5	TB	8/18/04 1200				W	1		-05
6									
7									
8									
9									
10									

PTY

RELEASED BY: [signature] DATE: 08/18/04
PRINT NAME: Ryan Vannier FIRM: Golder TIME: 1900
RECEIVED BY: Demi Hardmeier DATE: 8.19.04
PRINT NAME: Demi Hardmeier FIRM: NCA TIME: 11:50

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Metals samples are Field Filtered

TEMP: 7.4

PAGE OF

COC REV 1/03

Samples were not @2-6c upon receipt!

nca

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210 [X]
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4H0535

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd. #200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsberg
PROJECT NUMBER: 923-1000-002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: (10) STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: (5) STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl, HNO3, HCl

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	WTPH-HCID	Metals	VOCs	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS (RV)	NCA WO ID
1	LMW3-81804	08/18/04 / 0950	X	X	X	W	13	Includes MS/MSD	01
2	LMW8-81804	/ 1210	X	X	X		6		02
3	LMW9-81804	/ 1450	X	X	X		6		03
4	FBLMW3-81804	/ 0920	X	X	X		6		04
5									
6									
7									
8									
9									
10									

RELEASED BY: [signature] DATE: 08/18/04
PRINT NAME: Ryan Vannier FIRM: Golder TIME: 1900

RECEIVED BY: [signature] DATE: 8.19.04
PRINT NAME: Dennis Hardmeier FIRM: NCA TIME: 11:50

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Metals samples are Field Filtered

TEMP: 7.4

PAGE OF

COC REV 1/03

Samples were not @2-6c upon receipt!

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW3-81804	B4H0535-01	Water	08/18/04 09:50	08/19/04 11:50
LMW8-81804	B4H0535-02	Water	08/18/04 12:10	08/19/04 11:50
LMW9-81804	B4H0535-03	Water	08/18/04 14:50	08/19/04 11:50
FBLMW3-81804	B4H0535-04	Water	08/18/04 09:20	08/19/04 11:50

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW3-81804 (B4H0535-01) Water	**Sampled: 08/18/04 09:50**		**Received: 08/19/04 11:50**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*91.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*86.1 %*	*50-150*			"	"	"	"	
LMW8-81804 (B4H0535-02) Water	**Sampled: 08/18/04 12:10**		**Received: 08/19/04 11:50**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*90.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*87.3 %*	*50-150*			"	"	"	"	
LMW9-81804 (B4H0535-03) Water	**Sampled: 08/18/04 14:50**		**Received: 08/19/04 11:50**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*91.2 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*89.7 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FBLMW3-81804 (B4H0535-04) Water Sampled: 08/18/04 09:20 Received: 08/19/04 11:50									
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*92.9 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*87.3 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW3-81804 (B4H0535-01) Water Sampled: 08/18/04 09:50 Received: 08/19/04 11:50									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	**0.00114**	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	ND	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.0612**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	**0.00127**	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	
LMW8-81804 (B4H0535-02) Water Sampled: 08/18/04 12:10 Received: 08/19/04 11:50									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	**0.00375**	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00157**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**1.71**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**1.04**	0.0500	"	5	4H23031	08/23/04	08/27/04	EPA 6020	
Nickel	**0.00192**	0.00100	"	1	"	"	08/23/04	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW9-81804 (B4H0535-03) Water Sampled: 08/18/04 14:50 Received: 08/19/04 11:50									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00178**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**1.77**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.159**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	**0.00120**	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	
FBLMW3-81804 (B4H0535-04) Water Sampled: 08/18/04 09:20 Received: 08/19/04 11:50									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	ND	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	ND	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW3-81804 (B4H0535-01) Water Sampled: 08/18/04 09:50 Received: 08/19/04 11:50									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW3-81804 (B4H0535-01) Water Sampled: 08/18/04 09:50 Received: 08/19/04 11:50									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*101 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*102 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*101 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW8-81804 (B4H0535-02) Water Sampled: 08/18/04 12:10 Received: 08/19/04 11:50									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW8-81804 (B4H0535-02) Water Sampled: 08/18/04 12:10 Received: 08/19/04 11:50									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*98.8 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*102 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.8 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW9-81804 (B4H0535-03) Water Sampled: 08/18/04 14:50 Received: 08/19/04 11:50									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW9-81804 (B4H0535-03) Water Sampled: 08/18/04 14:50 Received: 08/19/04 11:50									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*100 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*100 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*99.5 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FBLMW3-81804 (B4H0535-04) Water Sampled: 08/18/04 09:20 Received: 08/19/04 11:50									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	**0.450**	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
FBLMW3-81804 (B4H0535-04) Water Sampled: 08/18/04 09:20 Received: 08/19/04 11:50									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/30/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*97.8 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*101 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*100 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23008: Prepared 08/23/04 Using EPA 3520C										
Blank (4H23008-BLK1)										
Gx Range Hydrocarbons	ND	0.250	mg/l							
Kerosene Range Hydrocarbons	ND	0.630	"							
Diesel Range Hydrocarbons	ND	0.630	"							
Insulating Oil Range Hydrocarbons	ND	0.630	"							
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"							
Lube Oil Range Hydrocarbons	ND	0.630	"							
Surrogate: 2-FBP	*DET*		"	*0.312*		*91.7*	*50-150*			
Surrogate: Octacosane	*DET*		"	*0.175*		*89.7*	*50-150*			
LCS (4H23008-BS1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		88.0	0-200			
Surrogate: 2-FBP	*DET*		"	*0.312*		*84.3*	*50-150*			
LCS Dup (4H23008-BSD1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		82.5	0-200	6.45	200	
Surrogate: 2-FBP	*DET*		"	*0.312*		*77.9*	*50-150*			
Matrix Spike (4H23008-MS1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	85.6	0-200			
Surrogate: 2-FBP	*DET*		"	*0.294*		*85.0*	*50-150*			
Matrix Spike Dup (4H23008-MSD1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	79.2	0-200	7.55	200	
Surrogate: 2-FBP	*DET*		"	*0.294*		*80.3*	*50-150*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23020: Prepared 08/23/04 Using EPA 7470A										
Blank (4H23020-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4H23020-BS1)										
Mercury	0.00503	0.000200	mg/l	0.00500		101	80-120			
LCS Dup (4H23020-BSD1)										
Mercury	0.00536	0.000200	mg/l	0.00500		107	80-120	6.35	20	
Duplicate (4H23020-DUP1)					**Source: B4H0491-01**					
Mercury	0.000117	0.000200	mg/l		ND				20	Q-30
Matrix Spike (4H23020-MS1)					**Source: B4H0491-01**					
Mercury	0.00521	0.000200	mg/l	0.00500	ND	104	70-130			Q-30
Matrix Spike (4H23020-MS2)					**Source: B4H0535-01**					
Mercury	0.00485	0.000200	mg/l	0.00500	ND	97.0	70-130			
Matrix Spike Dup (4H23020-MSD2)					**Source: B4H0535-01**					
Mercury	0.00483	0.000200	mg/l	0.00500	ND	96.6	70-130	0.413	20	
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Blank (4H23031-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Manganese	ND	0.0100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Thallium	ND	0.00100	"							
Zinc	ND	0.0100	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
LCS (4H23031-BS1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120			
Arsenic	0.211	0.00100	"	0.200		106	80-120			
Beryllium	0.206	0.00100	"	0.200		103	80-120			
Cadmium	0.210	0.00100	"	0.200		105	80-120			
Chromium	0.214	0.00100	"	0.200		107	80-120			
Copper	0.211	0.00100	"	0.200		106	80-120			
Manganese	0.214	0.0100	"	0.200		107	80-120			
Nickel	0.211	0.00100	"	0.200		106	80-120			
Lead	0.211	0.00100	"	0.200		106	80-120			
Antimony	0.0541	0.00300	"	0.0500		108	80-120			
Selenium	0.209	0.00100	"	0.200		104	80-120			
Thallium	0.210	0.00100	"	0.200		105	80-120			
Zinc	0.210	0.0100	"	0.200		105	80-120			
LCS Dup (4H23031-BSD1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120	0.00	20	
Arsenic	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Beryllium	0.202	0.00100	"	0.200		101	80-120	1.96	20	
Cadmium	0.211	0.00100	"	0.200		106	80-120	0.475	20	
Chromium	0.213	0.00100	"	0.200		106	80-120	0.468	20	
Copper	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Manganese	0.213	0.0100	"	0.200		106	80-120	0.468	20	
Nickel	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Lead	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Antimony	0.0543	0.00300	"	0.0500		109	80-120	0.369	20	
Selenium	0.210	0.00100	"	0.200		105	80-120	0.477	20	
Thallium	0.210	0.00100	"	0.200		105	80-120	0.00	20	
Zinc	0.209	0.0100	"	0.200		104	80-120	0.477	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Matrix Spike (4H23031-MS1)					**Source: B4H0535-01**					
Silver	0.0872	0.00100	mg/l	0.100	ND	87.2	43-124			
Arsenic	0.101	0.00100	"	0.100	0.00114	99.9	70-138			
Beryllium	0.0967	0.00100	"	0.100	0.000150	96.6	80-125			
Cadmium	0.0919	0.00100	"	0.100	ND	91.9	80-125			
Chromium	0.0926	0.00100	"	0.100	0.000460	92.1	76-125			
Copper	0.0883	0.00100	"	0.101	0.000450	87.0	71-125			
Manganese	0.152	0.0100	"	0.100	0.0612	90.8	54-158			
Nickel	0.0881	0.00100	"	0.0995	0.00127	87.3	73-125			
Lead	0.0892	0.00100	"	0.0995	0.000120	89.5	78-125			
Antimony	0.0432	0.00300	"	0.0500	0.00184	82.7	63-126			
Selenium	0.0982	0.00100	"	0.100	0.000480	97.7	61-156			
Thallium	0.0904	0.00100	"	0.100	0.000170	90.2	78-125			
Zinc	0.0977	0.0100	"	0.0995	0.00203	96.2	70-127			
Matrix Spike Dup (4H23031-MSD1)					**Source: B4H0535-01**					
Silver	0.0907	0.00100	mg/l	0.100	ND	90.7	43-124	3.93	50	
Arsenic	0.102	0.00100	"	0.100	0.00114	101	70-138	0.985	20	
Beryllium	0.0963	0.00100	"	0.100	0.000150	96.2	80-125	0.415	20	
Cadmium	0.0929	0.00100	"	0.100	ND	92.9	80-125	1.08	20	
Chromium	0.0929	0.00100	"	0.100	0.000460	92.4	76-125	0.323	20	
Copper	0.0896	0.00100	"	0.101	0.000450	88.3	71-125	1.46	20	
Manganese	0.153	0.0100	"	0.100	0.0612	91.8	54-158	0.656	20	
Nickel	0.0893	0.00100	"	0.0995	0.00127	88.5	73-125	1.35	20	
Lead	0.0904	0.00100	"	0.0995	0.000120	90.7	78-125	1.34	20	
Antimony	0.0457	0.00300	"	0.0500	0.00184	87.7	63-126	5.62	20	
Selenium	0.0986	0.00100	"	0.100	0.000480	98.1	61-156	0.407	20	
Thallium	0.0921	0.00100	"	0.100	0.000170	91.9	78-125	1.86	20	
Zinc	0.0972	0.0100	"	0.0995	0.00203	95.6	70-127	0.513	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Blank (4H31004-BLK1)										
Iron	ND	0.150	mg/l							
LCS (4H31004-BS1)										
Iron	4.92	0.150	mg/l	5.00		98.4	80-120			
LCS Dup (4H31004-BSD1)										
Iron	4.96	0.150	mg/l	5.00		99.2	80-120	0.810	20	
Matrix Spike (4H31004-MS1)					**Source: B4H0535-01**					
Iron	5.47	0.150	mg/l	5.00	ND	109	80-120			
Matrix Spike Dup (4H31004-MSD1)					**Source: B4H0535-01**					
Iron	5.37	0.150	mg/l	5.00	ND	107	80-120	1.85	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethene	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							
Carbon tetrachloride	ND	0.200	"							

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
Chlorobenzene	ND	0.200	ug/l							
Chloroethane	ND	1.00	"							
Chloroform	ND	0.200	"							
Chloromethane	ND	1.00	"							
cis-1,2-Dichloroethene	ND	0.200	"							
cis-1,3-Dichloropropene	ND	0.200	"							
Dibromochloromethane	ND	0.200	"							
Dibromomethane	ND	0.200	"							
Dichlorodifluoromethane	ND	0.500	"							
Ethylbenzene	ND	0.200	"							
Hexachlorobutadiene	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
m,p-Xylene	ND	0.500	"							
Methyl tert-butyl ether	ND	1.00	"							
Methylene chloride	ND	2.00	"							
n-Butylbenzene	ND	0.200	"							
n-Propylbenzene	ND	0.500	"							
Naphthalene	ND	0.500	"							
o-Xylene	ND	0.250	"							
p-Isopropyltoluene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
Styrene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Tetrachloroethene	ND	0.200	"							
Toluene	ND	0.200	"							
trans-1,2-Dichloroethene	ND	0.200	"							
trans-1,3-Dichloropropene	ND	0.200	"							
Trichloroethene	ND	0.200	"							
Trichlorofluoromethane	ND	0.500	"							
Vinyl chloride	ND	0.200	"							
Surrogate: 1,2-DCA-d4	*4.04*		"	*4.00*		*101*	*70-130*			
Surrogate: Toluene-d8	*4.05*		"	*4.00*		*101*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
1,1,1,2-Tetrachloroethane	4.24	0.200	ug/l	4.00		106	80-120			
1,1,1-Trichloroethane	3.98	0.200	"	4.00		99.5	80-120			
1,1,2,2-Tetrachloroethane	4.42	0.500	"	4.00		110	80-120			
1,1,2-Trichloroethane	4.23	0.200	"	4.00		106	80-120			
1,1-Dichloroethane	4.13	0.200	"	4.00		103	80-120			
1,1-Dichloroethene	3.98	0.200	"	4.00		99.5	80-120			
1,1-Dichloropropene	4.08	0.200	"	4.00		102	80-120			
1,2,3-Trichlorobenzene	4.91	0.200	"	4.00		123	80-120			X
1,2,3-Trichloropropane	4.20	0.500	"	4.00		105	80-120			
1,2,4-Trichlorobenzene	4.72	0.200	"	4.00		118	80-120			
1,2,4-Trimethylbenzene	4.17	0.200	"	4.00		104	80-120			
1,2-Dibromo-3-chloropropane	4.38	0.500	"	4.00		110	80-120			
1,2-Dibromoethane	4.27	0.200	"	4.00		107	80-120			
1,2-Dichlorobenzene	4.24	0.200	"	4.00		106	80-120			
1,2-Dichloroethane	3.85	0.200	"	4.00		96.2	80-120			
1,2-Dichloropropane	4.02	0.200	"	4.00		100	80-120			
1,3,5-Trimethylbenzene	4.23	0.500	"	4.00		106	80-120			
1,3-Dichlorobenzene	4.25	0.200	"	4.00		106	80-120			
1,3-Dichloropropane	4.18	0.200	"	4.00		104	80-120			
1,4-Dichlorobenzene	4.22	0.200	"	4.00		106	80-120			
2,2-Dichloropropane	4.20	0.500	"	4.00		105	80-120			
2-Butanone	43.5	2.00	"	40.0		109	80-120			
2-Chlorotoluene	3.99	0.500	"	4.00		99.8	80-120			
2-Hexanone	42.0	2.00	"	40.0		105	80-120			
4-Chlorotoluene	3.81	0.500	"	4.00		95.2	80-120			
4-Methyl-2-pentanone	43.1	2.00	"	40.0		108	80-120			
Acetone	44.3	10.0	"	40.0		111	80-120			
Benzene	4.04	0.200	"	4.00		101	80-120			
Bromobenzene	4.11	0.500	"	4.00		103	80-120			
Bromochloromethane	4.46	0.200	"	4.00		112	80-120			
Bromodichloromethane	4.10	0.200	"	4.00		102	80-120			
Bromoform	4.40	0.200	"	4.00		110	80-120			
Bromomethane	5.85	2.00	"	4.00		146	80-120			X
Carbon disulfide	4.10	0.500	"	4.00		102	80-120			
Carbon tetrachloride	4.03	0.200	"	4.00		101	80-120			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
Chlorobenzene	4.24	0.200	ug/l	4.00		106	80-120			
Chloroethane	4.07	1.00	"	4.00		102	80-120			
Chloroform	3.95	0.200	"	4.00		98.8	80-120			
Chloromethane	4.08	1.00	"	4.00		102	80-120			
cis-1,2-Dichloroethene	4.21	0.200	"	4.00		105	80-120			
cis-1,3-Dichloropropene	4.09	0.200	"	4.00		102	80-120			
Dibromochloromethane	4.40	0.200	"	4.00		110	80-120			
Dibromomethane	4.07	0.200	"	4.00		102	80-120			
Dichlorodifluoromethane	3.92	0.500	"	4.00		98.0	80-120			
Ethylbenzene	4.19	0.200	"	4.00		105	80-120			
Hexachlorobutadiene	4.42	0.500	"	4.00		110	80-120			
Isopropylbenzene	4.20	0.500	"	4.00		105	80-120			
m,p-Xylene	8.33	0.500	"	8.00		104	80-120			
Methyl tert-butyl ether	4.12	1.00	"	4.00		103	80-120			
Methylene chloride	4.04	2.00	"	4.00		101	80-120			
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120			
n-Propylbenzene	4.16	0.500	"	4.00		104	80-120			
Naphthalene	5.00	0.500	"	4.00		125	80-120			X
o-Xylene	4.22	0.250	"	4.00		106	80-120			
p-Isopropyltoluene	4.23	0.200	"	4.00		106	80-120			
sec-Butylbenzene	4.17	0.200	"	4.00		104	80-120			
Styrene	4.38	0.500	"	4.00		110	80-120			
tert-Butylbenzene	4.16	0.500	"	4.00		104	80-120			
Tetrachloroethene	4.15	0.200	"	4.00		104	80-120			
Toluene	4.12	0.200	"	4.00		103	80-120			
trans-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120			
trans-1,3-Dichloropropene	4.28	0.200	"	4.00		107	80-120			
Trichloroethene	4.01	0.200	"	4.00		100	80-120			
Trichlorofluoromethane	3.94	0.500	"	4.00		98.5	80-120			
Vinyl chloride	3.84	0.200	"	4.00		96.0	80-120			
Surrogate: 1,2-DCA-d4	*3.85*		"	*4.00*		*96.2*	*70-130*			
Surrogate: Toluene-d8	*3.96*		"	*4.00*		*99.0*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
1,1,1,2-Tetrachloroethane	4.18	0.200	ug/l	4.00		104	80-120	1.43	30	
1,1,1-Trichloroethane	4.12	0.200	"	4.00		103	80-120	3.46	30	
1,1,2,2-Tetrachloroethane	4.36	0.500	"	4.00		109	80-120	1.37	30	
1,1,2-Trichloroethane	4.12	0.200	"	4.00		103	80-120	2.63	30	
1,1-Dichloroethane	4.18	0.200	"	4.00		104	80-120	1.20	30	
1,1-Dichloroethene	4.18	0.200	"	4.00		104	80-120	4.90	30	
1,1-Dichloropropene	4.22	0.200	"	4.00		106	80-120	3.37	30	
1,2,3-Trichlorobenzene	3.96	0.200	"	4.00		99.0	80-120	21.4	30	
1,2,3-Trichloropropane	3.89	0.500	"	4.00		97.2	80-120	7.66	30	
1,2,4-Trichlorobenzene	4.11	0.200	"	4.00		103	80-120	13.8	30	
1,2,4-Trimethylbenzene	4.15	0.200	"	4.00		104	80-120	0.481	30	
1,2-Dibromo-3-chloropropane	3.89	0.500	"	4.00		97.2	80-120	11.9	30	
1,2-Dibromoethane	4.15	0.200	"	4.00		104	80-120	2.85	30	
1,2-Dichlorobenzene	4.02	0.200	"	4.00		100	80-120	5.33	30	
1,2-Dichloroethane	4.11	0.200	"	4.00		103	80-120	6.53	30	
1,2-Dichloropropane	4.11	0.200	"	4.00		103	80-120	2.21	30	
1,3,5-Trimethylbenzene	4.14	0.500	"	4.00		104	80-120	2.15	30	
1,3-Dichlorobenzene	4.10	0.200	"	4.00		102	80-120	3.59	30	
1,3-Dichloropropane	4.11	0.200	"	4.00		103	80-120	1.69	30	
1,4-Dichlorobenzene	4.11	0.200	"	4.00		103	80-120	2.64	30	
2,2-Dichloropropane	3.85	0.500	"	4.00		96.2	80-120	8.70	30	
2-Butanone	38.0	2.00	"	40.0		95.0	80-120	13.5	30	
2-Chlorotoluene	4.26	0.500	"	4.00		106	80-120	6.55	30	
2-Hexanone	36.6	2.00	"	40.0		91.5	80-120	13.7	30	
4-Chlorotoluene	4.02	0.500	"	4.00		100	80-120	5.36	30	
4-Methyl-2-pentanone	40.3	2.00	"	40.0		101	80-120	6.71	30	
Acetone	39.5	10.0	"	40.0		98.8	80-120	11.5	30	
Benzene	4.08	0.200	"	4.00		102	80-120	0.985	30	
Bromobenzene	4.15	0.500	"	4.00		104	80-120	0.969	30	
Bromochloromethane	4.46	0.200	"	4.00		112	80-120	0.00	30	
Bromodichloromethane	4.24	0.200	"	4.00		106	80-120	3.36	30	
Bromoform	3.90	0.200	"	4.00		97.5	80-120	12.0	30	
Bromomethane	6.47	2.00	"	4.00		162	80-120	10.1	30	X
Carbon disulfide	4.31	0.500	"	4.00		108	80-120	4.99	30	
Carbon tetrachloride	4.12	0.200	"	4.00		103	80-120	2.21	30	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
Chlorobenzene	4.15	0.200	ug/l	4.00		104	80-120	2.15	30	
Chloroethane	4.16	1.00	"	4.00		104	80-120	2.19	30	
Chloroform	3.92	0.200	"	4.00		98.0	80-120	0.762	30	
Chloromethane	4.20	1.00	"	4.00		105	80-120	2.90	30	
cis-1,2-Dichloroethene	4.35	0.200	"	4.00		109	80-120	3.27	30	
cis-1,3-Dichloropropene	4.08	0.200	"	4.00		102	80-120	0.245	30	
Dibromochloromethane	4.27	0.200	"	4.00		107	80-120	3.00	30	
Dibromomethane	4.16	0.200	"	4.00		104	80-120	2.19	30	
Dichlorodifluoromethane	4.10	0.500	"	4.00		102	80-120	4.49	30	
Ethylbenzene	4.12	0.200	"	4.00		103	80-120	1.68	30	
Hexachlorobutadiene	4.14	0.500	"	4.00		104	80-120	6.54	30	
Isopropylbenzene	4.16	0.500	"	4.00		104	80-120	0.957	30	
m,p-Xylene	8.29	0.500	"	8.00		104	80-120	0.481	30	
Methyl tert-butyl ether	4.34	1.00	"	4.00		108	80-120	5.20	30	
Methylene chloride	4.04	2.00	"	4.00		101	80-120	0.00	30	
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120	0.00	30	
n-Propylbenzene	4.20	0.500	"	4.00		105	80-120	0.957	30	
Naphthalene	3.91	0.500	"	4.00		97.8	80-120	24.5	30	
o-Xylene	4.15	0.250	"	4.00		104	80-120	1.67	30	
p-Isopropyltoluene	4.18	0.200	"	4.00		104	80-120	1.19	30	
sec-Butylbenzene	4.19	0.200	"	4.00		105	80-120	0.478	30	
Styrene	4.26	0.500	"	4.00		106	80-120	2.78	30	
tert-Butylbenzene	4.25	0.500	"	4.00		106	80-120	2.14	30	
Tetrachloroethene	4.08	0.200	"	4.00		102	80-120	1.70	30	
Toluene	4.11	0.200	"	4.00		103	80-120	0.243	30	
trans-1,2-Dichloroethene	4.25	0.200	"	4.00		106	80-120	4.82	30	
trans-1,3-Dichloropropene	4.22	0.200	"	4.00		106	80-120	1.41	30	
Trichloroethene	4.10	0.200	"	4.00		102	80-120	2.22	30	
Trichlorofluoromethane	4.10	0.500	"	4.00		102	80-120	3.98	30	
Vinyl chloride	4.01	0.200	"	4.00		100	80-120	4.33	30	
Surrogate: 1,2-DCA-d4	*3.84*		"	*4.00*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*3.98*		"	*4.00*		*99.5*	*70-130*			
Surrogate: 4-BFB	*4.02*		"	*4.00*		*100*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
1,1,1,2-Tetrachloroethane	3.90	0.200	ug/l	4.00	ND	97.5	70-130			
1,1,1-Trichloroethane	4.04	0.200	"	4.00	ND	101	70-130			
1,1,2,2-Tetrachloroethane	3.92	0.500	"	4.00	ND	98.0	70-130			
1,1,2-Trichloroethane	3.85	0.200	"	4.00	ND	96.2	70-130			
1,1-Dichloroethane	3.99	0.200	"	4.00	ND	99.8	70-130			
1,1-Dichloroethene	4.14	0.200	"	4.00	ND	104	59-158			
1,1-Dichloropropene	4.09	0.200	"	4.00	ND	102	70-130			
1,2,3-Trichlorobenzene	3.24	0.200	"	4.00	ND	81.0	70-130			
1,2,3-Trichloropropane	3.69	0.500	"	4.00	ND	92.2	70-130			
1,2,4-Trichlorobenzene	3.37	0.200	"	4.00	ND	84.2	70-130			
1,2,4-Trimethylbenzene	3.80	0.200	"	4.00	ND	95.0	70-130			
1,2-Dibromo-3-chloropropane	3.29	0.500	"	4.00	ND	82.2	70-130			
1,2-Dibromoethane	3.76	0.200	"	4.00	ND	94.0	70-130			
1,2-Dichlorobenzene	3.71	0.200	"	4.00	ND	92.8	70-130			
1,2-Dichloroethane	3.91	0.200	"	4.00	ND	97.8	70-130			
1,2-Dichloropropane	3.82	0.200	"	4.00	ND	95.5	70-130			
1,3,5-Trimethylbenzene	3.92	0.500	"	4.00	ND	98.0	70-130			
1,3-Dichlorobenzene	3.79	0.200	"	4.00	ND	94.8	70-130			
1,3-Dichloropropane	3.77	0.200	"	4.00	ND	94.2	70-130			
1,4-Dichlorobenzene	3.75	0.200	"	4.00	ND	93.8	70-130			
2,2-Dichloropropane	3.62	0.500	"	4.00	ND	90.5	70-130			
2-Butanone	35.8	2.00	"	40.0	ND	89.5	70-130			
2-Chlorotoluene	3.98	0.500	"	4.00	ND	99.5	70-130			
2-Hexanone	33.8	2.00	"	40.0	ND	84.5	70-130			
4-Chlorotoluene	3.88	0.500	"	4.00	ND	97.0	70-130			
4-Methyl-2-pentanone	36.3	2.00	"	40.0	ND	90.8	70-130			
Acetone	38.0	10.0	"	40.0	ND	95.0	70-130			
Benzene	3.92	0.200	"	4.00	ND	98.0	63-148			
Bromobenzene	3.77	0.500	"	4.00	ND	94.2	70-130			
Bromochloromethane	4.01	0.200	"	4.00	ND	100	70-130			
Bromodichloromethane	3.92	0.200	"	4.00	ND	98.0	70-130			
Bromoform	3.74	0.200	"	4.00	ND	93.5	70-130			
Bromomethane	4.07	2.00	"	4.00	ND	102	70-130			
Carbon disulfide	4.22	0.500	"	4.00	ND	106	70-130			
Carbon tetrachloride	4.26	0.200	"	4.00	ND	106	70-130			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
Chlorobenzene	3.88	0.200	ug/l	4.00	ND	97.0	80-128			
Chloroethane	4.14	1.00	"	4.00	ND	104	70-130			
Chloroform	3.72	0.200	"	4.00	ND	93.0	70-130			
Chloromethane	3.75	1.00	"	4.00	ND	93.8	70-130			
cis-1,2-Dichloroethene	3.96	0.200	"	4.00	ND	99.0	70-130			
cis-1,3-Dichloropropene	3.66	0.200	"	4.00	ND	91.5	70-130			
Dibromochloromethane	3.81	0.200	"	4.00	ND	95.2	70-130			
Dibromomethane	3.84	0.200	"	4.00	ND	96.0	70-130			
Dichlorodifluoromethane	4.10	0.500	"	4.00	ND	102	70-130			
Ethylbenzene	3.95	0.200	"	4.00	ND	98.8	70-130			
Hexachlorobutadiene	3.82	0.500	"	4.00	ND	95.5	70-130			
Isopropylbenzene	4.05	0.500	"	4.00	ND	101	70-130			
m,p-Xylene	7.87	0.500	"	8.00	ND	98.4	70-130			
Methyl tert-butyl ether	3.66	1.00	"	4.00	ND	91.5	70-130			
Methylene chloride	3.77	2.00	"	4.00	ND	94.2	70-130			
n-Butylbenzene	3.89	0.200	"	4.00	ND	97.2	70-130			
n-Propylbenzene	3.98	0.500	"	4.00	ND	99.5	70-130			
Naphthalene	3.21	0.500	"	4.00	ND	80.2	70-130			
o-Xylene	3.89	0.250	"	4.00	ND	97.2	70-130			
p-Isopropyltoluene	4.02	0.200	"	4.00	ND	100	70-130			
sec-Butylbenzene	4.08	0.200	"	4.00	ND	102	70-130			
Styrene	3.93	0.500	"	4.00	ND	98.2	70-130			
tert-Butylbenzene	3.95	0.500	"	4.00	ND	98.8	70-130			
Tetrachloroethene	4.01	0.200	"	4.00	ND	100	70-130			
Toluene	3.92	0.200	"	4.00	ND	98.0	72-127			
trans-1,2-Dichloroethene	4.04	0.200	"	4.00	ND	101	70-130			
trans-1,3-Dichloropropene	3.80	0.200	"	4.00	ND	95.0	70-130			
Trichloroethene	3.98	0.200	"	4.00	ND	99.5	80-126			
Trichlorofluoromethane	4.30	0.500	"	4.00	ND	108	70-130			
Vinyl chloride	3.91	0.200	"	4.00	ND	97.8	70-130			
Surrogate: 1,2-DCA-d4	*4.09*		"	*4.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*4.01*		"	*4.00*		*100*	*70-130*			
Surrogate: 4-BFB	*3.93*		"	*4.00*		*98.2*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/02/04 09:59

Notes and Definitions

Q-30	This sample was laboratory filtered since it was not field filtered as is required by the methodology.
X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

09 September 2004

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA/USA 98052-3333

RE: Landsburg Mine

Enclosed are the results of analyses for samples received by the laboratory on 08/20/04 14:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager

CASE NARRATIVE for B4H0551

Client: Golder Associates Inc.
Project Manager: Gary Zimmerman
Project Name: Landsburg Mine
Project Number: 923-1000-002

1.0 DESCRIPTION OF CASE

Four (4) water samples and one Trip Blank were submitted for the analysis of:

- Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
- Dissolved Metals by EPA 6000/7000 Series Methods
- Volatile Organic Compounds by EPA 8260B

2.0 COMMENTS ON SAMPLE RECEIPT

The samples were received 20th August 2004 at a temperature of 6.2°C and logged in 22nd August 2004. The samples were received outside the recommended temperature range of 2 to 6 Degrees Celsius. The samples were analyzed as requested after confirming with the client to proceed. A Trip Blank was received with the project but not listed on the COC. The COC was revised to list the Trip Blank, which was then held pending the request of analysis.

3.0 PREPARATION AND ANALYSIS

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Dissolved Metals by EPA 6000/7000 Series Methods
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Volatile Organic Compounds by EPA 8260B
The percent recovery for spike compound Bromomethane was above the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. Since the spike recoveries were above control limits and the all project samples were non-detect for Bromomethane no further action was deemed necessary. The percent recovery for spike compound 2,2-Dichloropropane was below the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. 2,2-Dichloropropane was non-detect in all project samples. These results may be biased low. No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Amar Gill
Project Manager
North Creek Analytical

nca

Revised Chain of Custody

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4H0551

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd. Ste 200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsburg
PROJECT NUMBER: 923-1000-002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD.) | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 (STD.) | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl | HNO_3 | HCl

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs 8260	Metals	NWTPH-HCID	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	LMW4-81904	08/19/04 1445	X	X	X				01
2	LMW6-81904	1320	X	X	X				02
3	LMW5-81904	0955	X	X	X				03
4	LMW55-81904	0855	X	X	X				04
5	T.B.	8-19-04 12:00				W	1		05
6									
7									
8									
9									
10									

RELEASED BY:		DATE: 08/19/04	RECEIVED BY: Tom Blankinship		DATE:
PRINT NAME: Ryan Vannier	FIRM: Golder	TIME: 1700	PRINT NAME: Blankinship	FIRM: NCA	TIME:
RELEASED BY:		DATE:	RECEIVED BY:		DATE:
PRINT NAME:	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME:

ADDITIONAL REMARKS: Metals were field filtered prior to submittal

TEMP: 6.2°C w/o

COC REV 1/03

PAGE 1 OF 1

Samples were not @2-6c upon receipt!

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd. Ste 200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsburg
PROJECT NUMBER: 923-1000-002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl, HNO_3, HCl

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs 8260	Metals	NWTPH-HCID	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	LMW4-81904	08/19/04 1445	X	X	X				
2	LMW6-81904	1320	X	X	X				
3	LMW5-81904	0955	X	X	X				
4	LMW55-81904	0855	X	X	X				
5									
6									
7									
8									
9									
10									

RELEASED BY: [signature] DATE: 08/19/04
PRINT NAME: Ryan Vannier FIRM: Golder TIME: 1700
RECEIVED BY: Tom Blankinship DATE:
PRINT NAME: Blankinship FIRM: NCA TIME:

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Metals were field filtered prior to submittal

TEMP: 6.2°c w/o

PAGE 1 OF 1

COC REV 1/03

Samples were not @2-6c upon receipt!

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW4-081904	B4H0551-01	Water	08/19/04 14:45	08/20/04 14:30
LMW6-081904	B4H0551-02	Water	08/19/04 13:20	08/20/04 14:30
LMW5-081904	B4H0551-03	Water	08/19/04 09:55	08/20/04 14:30
LMW55-081904	B4H0551-04	Water	08/19/04 08:55	08/20/04 14:30

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW4-081904 (B4H0551-01) Water	**Sampled: 08/19/04 14:45**		**Received: 08/20/04 14:30**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*96.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*127 %*	*50-150*			"	"	"	"	
LMW6-081904 (B4H0551-02) Water	**Sampled: 08/19/04 13:20**		**Received: 08/20/04 14:30**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*101 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*128 %*	*50-150*			"	"	"	"	
LMW5-081904 (B4H0551-03) Water	**Sampled: 08/19/04 09:55**		**Received: 08/20/04 14:30**						
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*100 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*132 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW55-081904 (B4H0551-04) Water Sampled: 08/19/04 08:55 Received: 08/20/04 14:30									
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*106 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*134 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW4-081904 (B4H0551-01) Water Sampled: 08/19/04 14:45 Received: 08/20/04 14:30									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00217**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**0.733**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.186**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	**0.00116**	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	**0.00275**	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	
LMW6-081904 (B4H0551-02) Water Sampled: 08/19/04 13:20 Received: 08/20/04 14:30									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**2.31**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.0289**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	08/25/04	"	
Thallium	ND	0.00100	"	"	"	"	08/23/04	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW5-081904 (B4H0551-03) Water Sampled: 08/19/04 09:55 Received: 08/20/04 14:30									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00150**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**0.346**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.204**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	08/25/04	"	
Thallium	ND	0.00100	"	"	"	"	08/23/04	"	
Zinc	ND	0.0100	"	"	"	"	"	"	
LMW55-081904 (B4H0551-04) Water Sampled: 08/19/04 08:55 Received: 08/20/04 14:30									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00162**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**0.343**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.204**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	08/25/04	"	
Thallium	ND	0.00100	"	"	"	"	08/23/04	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW4-081904 (B4H0551-01) Water Sampled: 08/19/04 14:45 Received: 08/20/04 14:30									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW4-081904 (B4H0551-01) Water Sampled: 08/19/04 14:45 Received: 08/20/04 14:30									
Chloromethane	ND	1.00	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*100 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*103 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*97.2 %*	*70-130*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW6-081904 (B4H0551-02) Water Sampled: 08/19/04 13:20 Received: 08/20/04 14:30									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW6-081904 (B4H0551-02) Water Sampled: 08/19/04 13:20 Received: 08/20/04 14:30									
Chloromethane	ND	1.00	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*98.8 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*99.8 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.0 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW5-081904 (B4H0551-03) Water Sampled: 08/19/04 09:55 Received: 08/20/04 14:30									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW5-081904 (B4H0551-03) Water Sampled: 08/19/04 09:55 Received: 08/20/04 14:30									
Chloromethane	ND	1.00	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*104 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*104 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.5 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW55-081904 (B4H0551-04) Water Sampled: 08/19/04 08:55 Received: 08/20/04 14:30									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW55-081904 (B4H0551-04) Water Sampled: 08/19/04 08:55 Received: 08/20/04 14:30									
Chloromethane	ND	1.00	ug/l	1	4H31057	08/31/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*98.8 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*102 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*101 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23008: Prepared 08/23/04 Using EPA 3520C										
Blank (4H23008-BLK1)										
Gx Range Hydrocarbons	ND	0.250	mg/l							
Kerosene Range Hydrocarbons	ND	0.630	"							
Diesel Range Hydrocarbons	ND	0.630	"							
Insulating Oil Range Hydrocarbons	ND	0.630	"							
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"							
Lube Oil Range Hydrocarbons	ND	0.630	"							
Surrogate: 2-FBP	*DET*		"	*0.270*		*106*	*50-150*			
Surrogate: Octacosane	*DET*		"	*0.115*		*137*	*50-150*			
LCS (4H23008-BS1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		88.0	0-200			
Surrogate: 2-FBP	*DET*		"	*0.270*		*97.4*	*50-150*			
LCS Dup (4H23008-BSD1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		82.5	0-200	6.45	200	
Surrogate: 2-FBP	*DET*		"	*0.270*		*90.0*	*50-150*			
Matrix Spike (4H23008-MS1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	85.6	0-200			
Surrogate: 2-FBP	*DET*		"	*0.255*		*98.0*	*50-150*			
Matrix Spike Dup (4H23008-MSD1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	79.2	0-200	7.55	200	
Surrogate: 2-FBP	*DET*		"	*0.255*		*92.5*	*50-150*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23020: Prepared 08/23/04 Using EPA 7470A										
Blank (4H23020-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4H23020-BS1)										
Mercury	0.00503	0.000200	mg/l	0.00500		101	80-120			
LCS Dup (4H23020-BSD1)										
Mercury	0.00536	0.000200	mg/l	0.00500		107	80-120	6.35	20	
Duplicate (4H23020-DUP1)					**Source: B4H0491-01**					
Mercury	0.000117	0.000200	mg/l		ND				20	Q-30
Matrix Spike (4H23020-MS1)					**Source: B4H0491-01**					
Mercury	0.00521	0.000200	mg/l	0.00500	ND	104	70-130			Q-30
Matrix Spike (4H23020-MS2)					**Source: B4H0535-01**					
Mercury	0.00485	0.000200	mg/l	0.00500	ND	97.0	70-130			
Matrix Spike Dup (4H23020-MSD2)					**Source: B4H0535-01**					
Mercury	0.00483	0.000200	mg/l	0.00500	ND	96.6	70-130	0.413	20	
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Blank (4H23031-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Manganese	ND	0.0100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Thallium	ND	0.00100	"							
Zinc	ND	0.0100	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
LCS (4H23031-BS1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120			
Arsenic	0.211	0.00100	"	0.200		106	80-120			
Beryllium	0.206	0.00100	"	0.200		103	80-120			
Cadmium	0.210	0.00100	"	0.200		105	80-120			
Chromium	0.214	0.00100	"	0.200		107	80-120			
Copper	0.211	0.00100	"	0.200		106	80-120			
Manganese	0.214	0.0100	"	0.200		107	80-120			
Nickel	0.211	0.00100	"	0.200		106	80-120			
Lead	0.211	0.00100	"	0.200		106	80-120			
Antimony	0.0541	0.00300	"	0.0500		108	80-120			
Selenium	0.209	0.00100	"	0.200		104	80-120			
Thallium	0.210	0.00100	"	0.200		105	80-120			
Zinc	0.210	0.0100	"	0.200		105	80-120			
LCS Dup (4H23031-BSD1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120	0.00	20	
Arsenic	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Beryllium	0.202	0.00100	"	0.200		101	80-120	1.96	20	
Cadmium	0.211	0.00100	"	0.200		106	80-120	0.475	20	
Chromium	0.213	0.00100	"	0.200		106	80-120	0.468	20	
Copper	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Manganese	0.213	0.0100	"	0.200		106	80-120	0.468	20	
Nickel	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Lead	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Antimony	0.0543	0.00300	"	0.0500		109	80-120	0.369	20	
Selenium	0.210	0.00100	"	0.200		105	80-120	0.477	20	
Thallium	0.210	0.00100	"	0.200		105	80-120	0.00	20	
Zinc	0.209	0.0100	"	0.200		104	80-120	0.477	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Matrix Spike (4H23031-MS1)					**Source: B4H0535-01**					
Silver	0.0872	0.00100	mg/l	0.100	ND	87.2	43-124			
Arsenic	0.101	0.00100	"	0.100	0.00114	99.9	70-138			
Beryllium	0.0967	0.00100	"	0.100	0.000150	96.6	80-125			
Cadmium	0.0919	0.00100	"	0.100	ND	91.9	80-125			
Chromium	0.0926	0.00100	"	0.100	0.000460	92.1	76-125			
Copper	0.0883	0.00100	"	0.101	0.000450	87.0	71-125			
Manganese	0.152	0.0100	"	0.100	0.0612	90.8	54-158			
Nickel	0.0881	0.00100	"	0.0995	0.00127	87.3	73-125			
Lead	0.0892	0.00100	"	0.0995	0.000120	89.5	78-125			
Antimony	0.0432	0.00300	"	0.0500	0.00184	82.7	63-126			
Selenium	0.0982	0.00100	"	0.100	0.000480	97.7	61-156			
Thallium	0.0904	0.00100	"	0.100	0.000170	90.2	78-125			
Zinc	0.0977	0.0100	"	0.0995	0.00203	96.2	70-127			
Matrix Spike Dup (4H23031-MSD1)					**Source: B4H0535-01**					
Silver	0.0907	0.00100	mg/l	0.100	ND	90.7	43-124	3.93	50	
Arsenic	0.102	0.00100	"	0.100	0.00114	101	70-138	0.985	20	
Beryllium	0.0963	0.00100	"	0.100	0.000150	96.2	80-125	0.415	20	
Cadmium	0.0929	0.00100	"	0.100	ND	92.9	80-125	1.08	20	
Chromium	0.0929	0.00100	"	0.100	0.000460	92.4	76-125	0.323	20	
Copper	0.0896	0.00100	"	0.101	0.000450	88.3	71-125	1.46	20	
Manganese	0.153	0.0100	"	0.100	0.0612	91.8	54-158	0.656	20	
Nickel	0.0893	0.00100	"	0.0995	0.00127	88.5	73-125	1.35	20	
Lead	0.0904	0.00100	"	0.0995	0.000120	90.7	78-125	1.34	20	
Antimony	0.0457	0.00300	"	0.0500	0.00184	87.7	63-126	5.62	20	
Selenium	0.0986	0.00100	"	0.100	0.000480	98.1	61-156	0.407	20	
Thallium	0.0921	0.00100	"	0.100	0.000170	91.9	78-125	1.86	20	
Zinc	0.0972	0.0100	"	0.0995	0.00203	95.6	70-127	0.513	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Blank (4H31004-BLK1)										
Iron	ND	0.150	mg/l							
LCS (4H31004-BS1)										
Iron	4.92	0.150	mg/l	5.00		98.4	80-120			
LCS Dup (4H31004-BSD1)										
Iron	4.96	0.150	mg/l	5.00		99.2	80-120	0.810	20	
Matrix Spike (4H31004-MS1)					**Source: B4H0535-01**					
Iron	5.47	0.150	mg/l	5.00	ND	109	80-120			
Matrix Spike Dup (4H31004-MSD1)					**Source: B4H0535-01**					
Iron	5.37	0.150	mg/l	5.00	ND	107	80-120	1.85	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
Blank (4H31057-BLK1)										
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethene	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							
Carbon tetrachloride	ND	0.200	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
Blank (4H31057-BLK1)										
Chlorobenzene	ND	0.200	ug/l							
Chloroethane	ND	1.00	"							
Chloroform	ND	0.200	"							
Chloromethane	ND	1.00	"							
cis-1,2-Dichloroethene	ND	0.200	"							
cis-1,3-Dichloropropene	ND	0.200	"							
Dibromochloromethane	ND	0.200	"							
Dibromomethane	ND	0.200	"							
Dichlorodifluoromethane	ND	0.500	"							
Ethylbenzene	ND	0.200	"							
Hexachlorobutadiene	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
m,p-Xylene	ND	0.500	"							
Methyl tert-butyl ether	ND	1.00	"							
Methylene chloride	ND	2.00	"							
n-Butylbenzene	ND	0.200	"							
n-Propylbenzene	ND	0.500	"							
Naphthalene	ND	0.500	"							
o-Xylene	ND	0.250	"							
p-Isopropyltoluene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
Styrene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Tetrachloroethene	ND	0.200	"							
Toluene	ND	0.200	"							
trans-1,2-Dichloroethene	ND	0.200	"							
trans-1,3-Dichloropropene	ND	0.200	"							
Trichloroethene	ND	0.200	"							
Trichlorofluoromethane	ND	0.500	"							
Vinyl chloride	ND	0.200	"							
Surrogate: 1,2-DCA-d4	*4.19*		"	*4.00*		*105*	*70-130*			
Surrogate: Toluene-d8	*3.99*		"	*4.00*		*99.8*	*70-130*			
Surrogate: 4-BFB	*3.90*		"	*4.00*		*97.5*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
LCS (4H31057-BS1)										
1,1,1,2-Tetrachloroethane	3.93	0.200	ug/l	4.00		98.2	80-120			
1,1,1-Trichloroethane	3.92	0.200	"	4.00		98.0	80-120			
1,1,2,2-Tetrachloroethane	4.09	0.500	"	4.00		102	80-120			
1,1,2-Trichloroethane	4.01	0.200	"	4.00		100	80-120			
1,1-Dichloroethane	3.98	0.200	"	4.00		99.5	80-120			
1,1-Dichloroethene	3.87	0.200	"	4.00		96.8	80-120			
1,1-Dichloropropene	3.93	0.200	"	4.00		98.2	80-120			
1,2,3-Trichlorobenzene	4.27	0.200	"	4.00		107	80-120			
1,2,3-Trichloropropane	3.80	0.500	"	4.00		95.0	80-120			
1,2,4-Trichlorobenzene	4.14	0.200	"	4.00		104	80-120			
1,2,4-Trimethylbenzene	3.89	0.200	"	4.00		97.2	80-120			
1,2-Dibromo-3-chloropropane	4.07	0.500	"	4.00		102	80-120			
1,2-Dibromoethane	3.97	0.200	"	4.00		99.2	80-120			
1,2-Dichlorobenzene	3.84	0.200	"	4.00		96.0	80-120			
1,2-Dichloroethane	3.59	0.200	"	4.00		89.8	80-120			
1,2-Dichloropropane	3.75	0.200	"	4.00		93.8	80-120			
1,3,5-Trimethylbenzene	3.83	0.500	"	4.00		95.8	80-120			
1,3-Dichlorobenzene	3.79	0.200	"	4.00		94.8	80-120			
1,3-Dichloropropane	3.80	0.200	"	4.00		95.0	80-120			
1,4-Dichlorobenzene	3.75	0.200	"	4.00		93.8	80-120			
2,2-Dichloropropane	2.85	0.500	"	4.00		71.2	80-120			X
2-Butanone	41.3	2.00	"	40.0		103	80-120			
2-Chlorotoluene	3.61	0.500	"	4.00		90.2	80-120			
2-Hexanone	39.0	2.00	"	40.0		97.5	80-120			
4-Chlorotoluene	3.92	0.500	"	4.00		98.0	80-120			
4-Methyl-2-pentanone	39.4	2.00	"	40.0		98.5	80-120			
Acetone	44.2	10.0	"	40.0		110	80-120			
Benzene	3.67	0.200	"	4.00		91.8	80-120			
Bromobenzene	3.78	0.500	"	4.00		94.5	80-120			
Bromochloromethane	4.26	0.200	"	4.00		106	80-120			
Bromodichloromethane	3.90	0.200	"	4.00		97.5	80-120			
Bromoform	3.89	0.200	"	4.00		97.2	80-120			
Bromomethane	5.45	2.00	"	4.00		136	80-120			X
Carbon disulfide	3.93	0.500	"	4.00		98.2	80-120			
Carbon tetrachloride	3.86	0.200	"	4.00		96.5	80-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
LCS (4H31057-BS1)										
Chlorobenzene	3.89	0.200	ug/l	4.00		97.2	80-120			
Chloroethane	4.07	1.00	"	4.00		102	80-120			
Chloroform	3.84	0.200	"	4.00		96.0	80-120			
Chloromethane	3.79	1.00	"	4.00		94.8	80-120			
cis-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120			
cis-1,3-Dichloropropene	3.42	0.200	"	4.00		85.5	80-120			
Dibromochloromethane	3.93	0.200	"	4.00		98.2	80-120			
Dibromomethane	3.85	0.200	"	4.00		96.2	80-120			
Dichlorodifluoromethane	3.89	0.500	"	4.00		97.2	80-120			
Ethylbenzene	3.89	0.200	"	4.00		97.2	80-120			
Hexachlorobutadiene	3.79	0.500	"	4.00		94.8	80-120			
Isopropylbenzene	3.90	0.500	"	4.00		97.5	80-120			
m,p-Xylene	7.74	0.500	"	8.00		96.8	80-120			
Methyl tert-butyl ether	3.87	1.00	"	4.00		96.8	80-120			
Methylene chloride	3.82	2.00	"	4.00		95.5	80-120			
n-Butylbenzene	3.73	0.200	"	4.00		93.2	80-120			
n-Propylbenzene	3.74	0.500	"	4.00		93.5	80-120			
Naphthalene	4.40	0.500	"	4.00		110	80-120			
o-Xylene	3.90	0.250	"	4.00		97.5	80-120			
p-Isopropyltoluene	3.84	0.200	"	4.00		96.0	80-120			
sec-Butylbenzene	3.79	0.200	"	4.00		94.8	80-120			
Styrene	3.89	0.500	"	4.00		97.2	80-120			
tert-Butylbenzene	3.79	0.500	"	4.00		94.8	80-120			
Tetrachloroethene	3.71	0.200	"	4.00		92.8	80-120			
Toluene	3.81	0.200	"	4.00		95.2	80-120			
trans-1,2-Dichloroethene	3.96	0.200	"	4.00		99.0	80-120			
trans-1,3-Dichloropropene	3.71	0.200	"	4.00		92.8	80-120			
Trichloroethene	3.70	0.200	"	4.00		92.5	80-120			
Trichlorofluoromethane	3.90	0.500	"	4.00		97.5	80-120			
Vinyl chloride	3.74	0.200	"	4.00		93.5	80-120			
Surrogate: 1,2-DCA-d4	*4.14*		"	*4.00*		*104*	*70-130*			
Surrogate: Toluene-d8	*4.01*		"	*4.00*		*100*	*70-130*			
Surrogate: 4-BFB	*3.88*		"	*4.00*		*97.0*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
LCS Dup (4H31057-BSD1)										
1,1,1,2-Tetrachloroethane	4.06	0.200	ug/l	4.00		102	80-120	3.25	30	
1,1,1-Trichloroethane	3.92	0.200	"	4.00		98.0	80-120	0.00	30	
1,1,2,2-Tetrachloroethane	4.05	0.500	"	4.00		101	80-120	0.983	30	
1,1,2-Trichloroethane	3.92	0.200	"	4.00		98.0	80-120	2.27	30	
1,1-Dichloroethane	4.04	0.200	"	4.00		101	80-120	1.50	30	
1,1-Dichloroethene	3.83	0.200	"	4.00		95.8	80-120	1.04	30	
1,1-Dichloropropene	4.03	0.200	"	4.00		101	80-120	2.51	30	
1,2,3-Trichlorobenzene	3.57	0.200	"	4.00		89.2	80-120	17.9	30	
1,2,3-Trichloropropane	4.02	0.500	"	4.00		100	80-120	5.63	30	
1,2,4-Trichlorobenzene	3.64	0.200	"	4.00		91.0	80-120	12.9	30	
1,2,4-Trimethylbenzene	3.86	0.200	"	4.00		96.5	80-120	0.774	30	
1,2-Dibromo-3-chloropropane	3.88	0.500	"	4.00		97.0	80-120	4.78	30	
1,2-Dibromoethane	4.00	0.200	"	4.00		100	80-120	0.753	30	
1,2-Dichlorobenzene	3.82	0.200	"	4.00		95.5	80-120	0.522	30	
1,2-Dichloroethane	3.74	0.200	"	4.00		93.5	80-120	4.09	30	
1,2-Dichloropropane	3.93	0.200	"	4.00		98.2	80-120	4.69	30	
1,3,5-Trimethylbenzene	3.89	0.500	"	4.00		97.2	80-120	1.55	30	
1,3-Dichlorobenzene	3.83	0.200	"	4.00		95.8	80-120	1.05	30	
1,3-Dichloropropane	3.88	0.200	"	4.00		97.0	80-120	2.08	30	
1,4-Dichlorobenzene	3.82	0.200	"	4.00		95.5	80-120	1.85	30	
2,2-Dichloropropane	2.86	0.500	"	4.00		71.5	80-120	0.350	30	X
2-Butanone	38.5	2.00	"	40.0		96.2	80-120	7.02	30	
2-Chlorotoluene	3.79	0.500	"	4.00		94.8	80-120	4.86	30	
2-Hexanone	35.2	2.00	"	40.0		88.0	80-120	10.2	30	
4-Chlorotoluene	3.89	0.500	"	4.00		97.2	80-120	0.768	30	
4-Methyl-2-pentanone	39.1	2.00	"	40.0		97.8	80-120	0.764	30	
Acetone	37.6	10.0	"	40.0		94.0	80-120	16.1	30	
Benzene	3.91	0.200	"	4.00		97.8	80-120	6.33	30	
Bromobenzene	3.86	0.500	"	4.00		96.5	80-120	2.09	30	
Bromochloromethane	4.17	0.200	"	4.00		104	80-120	2.14	30	
Bromodichloromethane	4.00	0.200	"	4.00		100	80-120	2.53	30	
Bromoform	3.92	0.200	"	4.00		98.0	80-120	0.768	30	
Bromomethane	5.56	2.00	"	4.00		139	80-120	2.00	30	X
Carbon disulfide	4.02	0.500	"	4.00		100	80-120	2.26	30	
Carbon tetrachloride	4.03	0.200	"	4.00		101	80-120	4.31	30	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31057: Prepared 08/31/04 Using EPA 5030B										
LCS Dup (4H31057-BSD1)										
Chlorobenzene	3.95	0.200	ug/l	4.00		98.8	80-120	1.53	30	
Chloroethane	4.03	1.00	"	4.00		101	80-120	0.988	30	
Chloroform	3.80	0.200	"	4.00		95.0	80-120	1.05	30	
Chloromethane	3.82	1.00	"	4.00		95.5	80-120	0.788	30	
cis-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120	0.00	30	
cis-1,3-Dichloropropene	3.63	0.200	"	4.00		90.8	80-120	5.96	30	
Dibromochloromethane	3.99	0.200	"	4.00		99.8	80-120	1.52	30	
Dibromomethane	4.09	0.200	"	4.00		102	80-120	6.05	30	
Dichlorodifluoromethane	3.87	0.500	"	4.00		96.8	80-120	0.515	30	
Ethylbenzene	3.95	0.200	"	4.00		98.8	80-120	1.53	30	
Hexachlorobutadiene	3.67	0.500	"	4.00		91.8	80-120	3.22	30	
Isopropylbenzene	3.89	0.500	"	4.00		97.2	80-120	0.257	30	
m,p-Xylene	7.83	0.500	"	8.00		97.9	80-120	1.16	30	
Methyl tert-butyl ether	4.06	1.00	"	4.00		102	80-120	4.79	30	
Methylene chloride	4.01	2.00	"	4.00		100	80-120	4.85	30	
n-Butylbenzene	3.72	0.200	"	4.00		93.0	80-120	0.268	30	
n-Propylbenzene	3.83	0.500	"	4.00		95.8	80-120	2.38	30	
Naphthalene	3.71	0.500	"	4.00		92.8	80-120	17.0	30	
o-Xylene	3.94	0.250	"	4.00		98.5	80-120	1.02	30	
p-Isopropyltoluene	3.85	0.200	"	4.00		96.2	80-120	0.260	30	
sec-Butylbenzene	3.89	0.200	"	4.00		97.2	80-120	2.60	30	
Styrene	4.01	0.500	"	4.00		100	80-120	3.04	30	
tert-Butylbenzene	3.83	0.500	"	4.00		95.8	80-120	1.05	30	
Tetrachloroethene	3.83	0.200	"	4.00		95.8	80-120	3.18	30	
Toluene	3.85	0.200	"	4.00		96.2	80-120	1.04	30	
trans-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120	2.25	30	
trans-1,3-Dichloropropene	3.94	0.200	"	4.00		98.5	80-120	6.01	30	
Trichloroethene	3.88	0.200	"	4.00		97.0	80-120	4.75	30	
Trichlorofluoromethane	3.95	0.500	"	4.00		98.8	80-120	1.27	30	
Vinyl chloride	3.78	0.200	"	4.00		94.5	80-120	1.06	30	
Surrogate: 1,2-DCA-d4	*4.11*		"	*4.00*		*103*	*70-130*			
Surrogate: Toluene-d8	*3.94*		"	*4.00*		*98.5*	*70-130*			
Surrogate: 4-BFB	*3.97*		"	*4.00*		*99.2*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:11

Notes and Definitions

Q-30	This sample was laboratory filtered since it was not field filtered as is required by the methodology.
X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

09 September 2004

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA/USA 98052-3333
RE: Landsburg Mine

Enclosed are the results of analyses for samples received by the laboratory on 08/20/04 13:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager

CASE NARRATIVE for B4H0550

Client: Golder Associates Inc.
Project Manager: Gary Zimmerman
Project Name: Landsburg Mine
Project Number: 923-1000-002

1.0 DESCRIPTION OF CASE

One (1) water sample and one Trip Blank was submitted for the analysis of:

- Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
- Dissolved Metals by EPA 6000/7000 Series Methods
- Volatile Organic Compounds by EPA 8260B

2.0 COMMENTS ON SAMPLE RECEIPT

The sample was received 20th August 2004 at a temperature of 11°C and logged in 22nd August 2004. The sample was received outside the recommended temperature range of 2 to 6 Degrees Celsius. The sample was analyzed as requested after confirming with the client to proceed. A Trip Blank was received with the project but not listed on the COC. The COC was revised to list the Trip Blank, which was then held pending the request of analysis.

3.0 PREPARATION AND ANALYSIS

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Dissolved Metals by EPA 6000/7000 Series Methods
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Volatile Organic Compounds by EPA 8260B
The percent recovery for spike compounds 1,2,3-Trichlorobenzene and Naphthalene was above the method established control limit in the analytical batch Blank Spike (BS). The spike recovery for these compounds in the Blank Spike Duplicate (BSD) was within control limits as was the relative percent difference (RPD). The percent recovery for spike compound Bromomethane was above the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. Since the spike recoveries were above control limits and the all project samples were non-detect for 1,2,3-Trichlorobenzene,

Amar Gill
Project Manager
North Creek Analytical

CASE NARRATIVE for B4H0550

Bromomethane and Naphthalene no further action was deemed necessary. No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Amar Gill
Project Manager
North Creek Analytical

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210 ☒
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: BHH0550

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd, Ste. 200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsburg
PROJECT NUMBER: 923-1000-002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl, HNO3, HCl

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs	Metals	NWTPH-HCID	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	LMW2-82004	08/20/04 / 1100	X	X	X	W	6		01
2	Trip Blank		X			W	2	Hold until notification	02
3									
4									
5									
6									
7									
8									
9									
10									

RELEASED BY: [signature] DATE: 08/20/04
PRINT NAME: Ryan Vannier FIRM: Golder TIME: 1325
RECEIVED BY: [signature]
PRINT NAME: BRANDY TONTZ FIRM: NCA DATE: 8/20/04 TIME: 1325

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Metal sample is field filtered

Samples were not @2-6c upon receipt!

TEMP: 11.0

COC REV 1/03

PAGE 1 OF 1

W/O

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW2-082004	B4H0550-01	Water	08/20/04 11:00	08/20/04 13:25

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW2-082004 (B4H0550-01) Water Sampled: 08/20/04 11:00 Received: 08/20/04 13:25									
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H23008	08/23/04	08/25/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*91.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*130 %*	*50-150*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW2-082004 (B4H0550-01) Water Sampled: 08/20/04 11:00 Received: 08/20/04 13:25									
Silver	ND	0.00100	mg/l	1	4H23031	08/23/04	08/25/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	08/23/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00194**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**0.229**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4H23020	08/23/04	08/23/04	EPA 7470A	
Manganese	**0.213**	0.0100	"	"	4H23031	08/23/04	08/23/04	EPA 6020	
Nickel	**0.00131**	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	**0.00215**	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW2-082004 (B4H0550-01) Water Sampled: 08/20/04 11:00 Received: 08/20/04 13:25									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW2-082004 (B4H0550-01) Water Sampled: 08/20/04 11:00 Received: 08/20/04 13:25									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*104 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*100 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*99.0 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23008: Prepared 08/23/04 Using EPA 3520C										
Blank (4H23008-BLK1)										
Gx Range Hydrocarbons	ND	0.250	mg/l							
Kerosene Range Hydrocarbons	ND	0.630	"							
Diesel Range Hydrocarbons	ND	0.630	"							
Insulating Oil Range Hydrocarbons	ND	0.630	"							
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"							
Lube Oil Range Hydrocarbons	ND	0.630	"							
Surrogate: 2-FBP	*DET*		"	*0.270*		*106*	*50-150*			
Surrogate: Octacosane	*DET*		"	*0.115*		*137*	*50-150*			
LCS (4H23008-BS1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		88.0	0-200			
Surrogate: 2-FBP	*DET*		"	*0.270*		*97.4*	*50-150*			
LCS Dup (4H23008-BSD1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		82.5	0-200	6.45	200	
Surrogate: 2-FBP	*DET*		"	*0.270*		*90.0*	*50-150*			
Matrix Spike (4H23008-MS1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	85.6	0-200			
Surrogate: 2-FBP	*DET*		"	*0.255*		*98.0*	*50-150*			
Matrix Spike Dup (4H23008-MSD1)					**Source: B4H0535-01**					
Diesel Range Hydrocarbons	DET	0.630	mg/l	1.89	0.0330	79.2	0-200	7.55	200	
Surrogate: 2-FBP	*DET*		"	*0.255*		*92.5*	*50-150*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23020: Prepared 08/23/04 Using EPA 7470A										
Blank (4H23020-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4H23020-BS1)										
Mercury	0.00503	0.000200	mg/l	0.00500		101	80-120			
LCS Dup (4H23020-BSD1)										
Mercury	0.00536	0.000200	mg/l	0.00500		107	80-120	6.35	20	
Duplicate (4H23020-DUP1)					**Source: B4H0491-01**					
Mercury	0.000117	0.000200	mg/l		ND				20	Q-30
Matrix Spike (4H23020-MS1)					**Source: B4H0491-01**					
Mercury	0.00521	0.000200	mg/l	0.00500	ND	104	70-130			Q-30
Matrix Spike (4H23020-MS2)					**Source: B4H0535-01**					
Mercury	0.00485	0.000200	mg/l	0.00500	ND	97.0	70-130			
Matrix Spike Dup (4H23020-MSD2)					**Source: B4H0535-01**					
Mercury	0.00483	0.000200	mg/l	0.00500	ND	96.6	70-130	0.413	20	
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Blank (4H23031-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Manganese	ND	0.0100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Thallium	ND	0.00100	"							
Zinc	ND	0.0100	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
LCS (4H23031-BS1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120			
Arsenic	0.211	0.00100	"	0.200		106	80-120			
Beryllium	0.206	0.00100	"	0.200		103	80-120			
Cadmium	0.210	0.00100	"	0.200		105	80-120			
Chromium	0.214	0.00100	"	0.200		107	80-120			
Copper	0.211	0.00100	"	0.200		106	80-120			
Manganese	0.214	0.0100	"	0.200		107	80-120			
Nickel	0.211	0.00100	"	0.200		106	80-120			
Lead	0.211	0.00100	"	0.200		106	80-120			
Antimony	0.0541	0.00300	"	0.0500		108	80-120			
Selenium	0.209	0.00100	"	0.200		104	80-120			
Thallium	0.210	0.00100	"	0.200		105	80-120			
Zinc	0.210	0.0100	"	0.200		105	80-120			
LCS Dup (4H23031-BSD1)										
Silver	0.210	0.00100	mg/l	0.200		105	80-120	0.00	20	
Arsenic	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Beryllium	0.202	0.00100	"	0.200		101	80-120	1.96	20	
Cadmium	0.211	0.00100	"	0.200		106	80-120	0.475	20	
Chromium	0.213	0.00100	"	0.200		106	80-120	0.468	20	
Copper	0.210	0.00100	"	0.200		105	80-120	0.475	20	
Manganese	0.213	0.0100	"	0.200		106	80-120	0.468	20	
Nickel	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Lead	0.211	0.00100	"	0.200		106	80-120	0.00	20	
Antimony	0.0543	0.00300	"	0.0500		109	80-120	0.369	20	
Selenium	0.210	0.00100	"	0.200		105	80-120	0.477	20	
Thallium	0.210	0.00100	"	0.200		105	80-120	0.00	20	
Zinc	0.209	0.0100	"	0.200		104	80-120	0.477	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H23031: Prepared 08/23/04 Using EPA 3005A										
Matrix Spike (4H23031-MS1)					**Source: B4H0535-01**					
Silver	0.0872	0.00100	mg/l	0.100	ND	87.2	43-124			
Arsenic	0.101	0.00100	"	0.100	0.00114	99.9	70-138			
Beryllium	0.0967	0.00100	"	0.100	0.000150	96.6	80-125			
Cadmium	0.0919	0.00100	"	0.100	ND	91.9	80-125			
Chromium	0.0926	0.00100	"	0.100	0.000460	92.1	76-125			
Copper	0.0883	0.00100	"	0.101	0.000450	87.0	71-125			
Manganese	0.152	0.0100	"	0.100	0.0612	90.8	54-158			
Nickel	0.0881	0.00100	"	0.0995	0.00127	87.3	73-125			
Lead	0.0892	0.00100	"	0.0995	0.000120	89.5	78-125			
Antimony	0.0432	0.00300	"	0.0500	0.00184	82.7	63-126			
Selenium	0.0982	0.00100	"	0.100	0.000480	97.7	61-156			
Thallium	0.0904	0.00100	"	0.100	0.000170	90.2	78-125			
Zinc	0.0977	0.0100	"	0.0995	0.00203	96.2	70-127			
Matrix Spike Dup (4H23031-MSD1)					**Source: B4H0535-01**					
Silver	0.0907	0.00100	mg/l	0.100	ND	90.7	43-124	3.93	50	
Arsenic	0.102	0.00100	"	0.100	0.00114	101	70-138	0.985	20	
Beryllium	0.0963	0.00100	"	0.100	0.000150	96.2	80-125	0.415	20	
Cadmium	0.0929	0.00100	"	0.100	ND	92.9	80-125	1.08	20	
Chromium	0.0929	0.00100	"	0.100	0.000460	92.4	76-125	0.323	20	
Copper	0.0896	0.00100	"	0.101	0.000450	88.3	71-125	1.46	20	
Manganese	0.153	0.0100	"	0.100	0.0612	91.8	54-158	0.656	20	
Nickel	0.0893	0.00100	"	0.0995	0.00127	88.5	73-125	1.35	20	
Lead	0.0904	0.00100	"	0.0995	0.000120	90.7	78-125	1.34	20	
Antimony	0.0457	0.00300	"	0.0500	0.00184	87.7	63-126	5.62	20	
Selenium	0.0986	0.00100	"	0.100	0.000480	98.1	61-156	0.407	20	
Thallium	0.0921	0.00100	"	0.100	0.000170	91.9	78-125	1.86	20	
Zinc	0.0972	0.0100	"	0.0995	0.00203	95.6	70-127	0.513	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Blank (4H31004-BLK1)										
Iron	ND	0.150	mg/l							
LCS (4H31004-BS1)										
Iron	4.92	0.150	mg/l	5.00		98.4	80-120			
LCS Dup (4H31004-BSD1)										
Iron	4.96	0.150	mg/l	5.00		99.2	80-120	0.810	20	
Matrix Spike (4H31004-MS1)					**Source: B4H0535-01**					
Iron	5.47	0.150	mg/l	5.00	ND	109	80-120			
Matrix Spike Dup (4H31004-MSD1)					**Source: B4H0535-01**					
Iron	5.37	0.150	mg/l	5.00	ND	107	80-120	1.85	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethene	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							
Carbon tetrachloride	ND	0.200	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
Chlorobenzene	ND	0.200	ug/l							
Chloroethane	ND	1.00	"							
Chloroform	ND	0.200	"							
Chloromethane	ND	1.00	"							
cis-1,2-Dichloroethene	ND	0.200	"							
cis-1,3-Dichloropropene	ND	0.200	"							
Dibromochloromethane	ND	0.200	"							
Dibromomethane	ND	0.200	"							
Dichlorodifluoromethane	ND	0.500	"							
Ethylbenzene	ND	0.200	"							
Hexachlorobutadiene	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
m,p-Xylene	ND	0.500	"							
Methyl tert-butyl ether	ND	1.00	"							
Methylene chloride	ND	2.00	"							
n-Butylbenzene	ND	0.200	"							
n-Propylbenzene	ND	0.500	"							
Naphthalene	ND	0.500	"							
o-Xylene	ND	0.250	"							
p-Isopropyltoluene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
Styrene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Tetrachloroethene	ND	0.200	"							
Toluene	ND	0.200	"							
trans-1,2-Dichloroethene	ND	0.200	"							
trans-1,3-Dichloropropene	ND	0.200	"							
Trichloroethene	ND	0.200	"							
Trichlorofluoromethane	ND	0.500	"							
Vinyl chloride	ND	0.200	"							
Surrogate: 1,2-DCA-d4	*4.04*		"	*4.00*		*101*	*70-130*			
Surrogate: Toluene-d8	*4.05*		"	*4.00*		*101*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
1,1,1,2-Tetrachloroethane	4.24	0.200	ug/l	4.00		106	80-120			
1,1,1-Trichloroethane	3.98	0.200	"	4.00		99.5	80-120			
1,1,2,2-Tetrachloroethane	4.42	0.500	"	4.00		110	80-120			
1,1,2-Trichloroethane	4.23	0.200	"	4.00		106	80-120			
1,1-Dichloroethane	4.13	0.200	"	4.00		103	80-120			
1,1-Dichloroethene	3.98	0.200	"	4.00		99.5	80-120			
1,1-Dichloropropene	4.08	0.200	"	4.00		102	80-120			
1,2,3-Trichlorobenzene	4.91	0.200	"	4.00		123	80-120			X
1,2,3-Trichloropropane	4.20	0.500	"	4.00		105	80-120			
1,2,4-Trichlorobenzene	4.72	0.200	"	4.00		118	80-120			
1,2,4-Trimethylbenzene	4.17	0.200	"	4.00		104	80-120			
1,2-Dibromo-3-chloropropane	4.38	0.500	"	4.00		110	80-120			
1,2-Dibromoethane	4.27	0.200	"	4.00		107	80-120			
1,2-Dichlorobenzene	4.24	0.200	"	4.00		106	80-120			
1,2-Dichloroethane	3.85	0.200	"	4.00		96.2	80-120			
1,2-Dichloropropane	4.02	0.200	"	4.00		100	80-120			
1,3,5-Trimethylbenzene	4.23	0.500	"	4.00		106	80-120			
1,3-Dichlorobenzene	4.25	0.200	"	4.00		106	80-120			
1,3-Dichloropropane	4.18	0.200	"	4.00		104	80-120			
1,4-Dichlorobenzene	4.22	0.200	"	4.00		106	80-120			
2,2-Dichloropropane	4.20	0.500	"	4.00		105	80-120			
2-Butanone	43.5	2.00	"	40.0		109	80-120			
2-Chlorotoluene	3.99	0.500	"	4.00		99.8	80-120			
2-Hexanone	42.0	2.00	"	40.0		105	80-120			
4-Chlorotoluene	3.81	0.500	"	4.00		95.2	80-120			
4-Methyl-2-pentanone	43.1	2.00	"	40.0		108	80-120			
Acetone	44.3	10.0	"	40.0		111	80-120			
Benzene	4.04	0.200	"	4.00		101	80-120			
Bromobenzene	4.11	0.500	"	4.00		103	80-120			
Bromochloromethane	4.46	0.200	"	4.00		112	80-120			
Bromodichloromethane	4.10	0.200	"	4.00		102	80-120			
Bromoform	4.40	0.200	"	4.00		110	80-120			
Bromomethane	5.85	2.00	"	4.00		146	80-120			X
Carbon disulfide	4.10	0.500	"	4.00		102	80-120			
Carbon tetrachloride	4.03	0.200	"	4.00		101	80-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
Chlorobenzene	4.24	0.200	ug/l	4.00		106	80-120			
Chloroethane	4.07	1.00	"	4.00		102	80-120			
Chloroform	3.95	0.200	"	4.00		98.8	80-120			
Chloromethane	4.08	1.00	"	4.00		102	80-120			
cis-1,2-Dichloroethene	4.21	0.200	"	4.00		105	80-120			
cis-1,3-Dichloropropene	4.09	0.200	"	4.00		102	80-120			
Dibromochloromethane	4.40	0.200	"	4.00		110	80-120			
Dibromomethane	4.07	0.200	"	4.00		102	80-120			
Dichlorodifluoromethane	3.92	0.500	"	4.00		98.0	80-120			
Ethylbenzene	4.19	0.200	"	4.00		105	80-120			
Hexachlorobutadiene	4.42	0.500	"	4.00		110	80-120			
Isopropylbenzene	4.20	0.500	"	4.00		105	80-120			
m,p-Xylene	8.33	0.500	"	8.00		104	80-120			
Methyl tert-butyl ether	4.12	1.00	"	4.00		103	80-120			
Methylene chloride	4.04	2.00	"	4.00		101	80-120			
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120			
n-Propylbenzene	4.16	0.500	"	4.00		104	80-120			
Naphthalene	5.00	0.500	"	4.00		125	80-120			X
o-Xylene	4.22	0.250	"	4.00		106	80-120			
p-Isopropyltoluene	4.23	0.200	"	4.00		106	80-120			
sec-Butylbenzene	4.17	0.200	"	4.00		104	80-120			
Styrene	4.38	0.500	"	4.00		110	80-120			
tert-Butylbenzene	4.16	0.500	"	4.00		104	80-120			
Tetrachloroethene	4.15	0.200	"	4.00		104	80-120			
Toluene	4.12	0.200	"	4.00		103	80-120			
trans-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120			
trans-1,3-Dichloropropene	4.28	0.200	"	4.00		107	80-120			
Trichloroethene	4.01	0.200	"	4.00		100	80-120			
Trichlorofluoromethane	3.94	0.500	"	4.00		98.5	80-120			
Vinyl chloride	3.84	0.200	"	4.00		96.0	80-120			
Surrogate: 1,2-DCA-d4	*3.85*		"	*4.00*		*96.2*	*70-130*			
Surrogate: Toluene-d8	*3.96*		"	*4.00*		*99.0*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
1,1,1,2-Tetrachloroethane	4.18	0.200	ug/l	4.00		104	80-120	1.43	30	
1,1,1-Trichloroethane	4.12	0.200	"	4.00		103	80-120	3.46	30	
1,1,2,2-Tetrachloroethane	4.36	0.500	"	4.00		109	80-120	1.37	30	
1,1,2-Trichloroethane	4.12	0.200	"	4.00		103	80-120	2.63	30	
1,1-Dichloroethane	4.18	0.200	"	4.00		104	80-120	1.20	30	
1,1-Dichloroethene	4.18	0.200	"	4.00		104	80-120	4.90	30	
1,1-Dichloropropene	4.22	0.200	"	4.00		106	80-120	3.37	30	
1,2,3-Trichlorobenzene	3.96	0.200	"	4.00		99.0	80-120	21.4	30	
1,2,3-Trichloropropane	3.89	0.500	"	4.00		97.2	80-120	7.66	30	
1,2,4-Trichlorobenzene	4.11	0.200	"	4.00		103	80-120	13.8	30	
1,2,4-Trimethylbenzene	4.15	0.200	"	4.00		104	80-120	0.481	30	
1,2-Dibromo-3-chloropropane	3.89	0.500	"	4.00		97.2	80-120	11.9	30	
1,2-Dibromoethane	4.15	0.200	"	4.00		104	80-120	2.85	30	
1,2-Dichlorobenzene	4.02	0.200	"	4.00		100	80-120	5.33	30	
1,2-Dichloroethane	4.11	0.200	"	4.00		103	80-120	6.53	30	
1,2-Dichloropropane	4.11	0.200	"	4.00		103	80-120	2.21	30	
1,3,5-Trimethylbenzene	4.14	0.500	"	4.00		104	80-120	2.15	30	
1,3-Dichlorobenzene	4.10	0.200	"	4.00		102	80-120	3.59	30	
1,3-Dichloropropane	4.11	0.200	"	4.00		103	80-120	1.69	30	
1,4-Dichlorobenzene	4.11	0.200	"	4.00		103	80-120	2.64	30	
2,2-Dichloropropane	3.85	0.500	"	4.00		96.2	80-120	8.70	30	
2-Butanone	38.0	2.00	"	40.0		95.0	80-120	13.5	30	
2-Chlorotoluene	4.26	0.500	"	4.00		106	80-120	6.55	30	
2-Hexanone	36.6	2.00	"	40.0		91.5	80-120	13.7	30	
4-Chlorotoluene	4.02	0.500	"	4.00		100	80-120	5.36	30	
4-Methyl-2-pentanone	40.3	2.00	"	40.0		101	80-120	6.71	30	
Acetone	39.5	10.0	"	40.0		98.8	80-120	11.5	30	
Benzene	4.08	0.200	"	4.00		102	80-120	0.985	30	
Bromobenzene	4.15	0.500	"	4.00		104	80-120	0.969	30	
Bromochloromethane	4.46	0.200	"	4.00		112	80-120	0.00	30	
Bromodichloromethane	4.24	0.200	"	4.00		106	80-120	3.36	30	
Bromoform	3.90	0.200	"	4.00		97.5	80-120	12.0	30	
Bromomethane	6.47	2.00	"	4.00		162	80-120	10.1	30	X
Carbon disulfide	4.31	0.500	"	4.00		108	80-120	4.99	30	
Carbon tetrachloride	4.12	0.200	"	4.00		103	80-120	2.21	30	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
Chlorobenzene	4.15	0.200	ug/l	4.00		104	80-120	2.15	30	
Chloroethane	4.16	1.00	"	4.00		104	80-120	2.19	30	
Chloroform	3.92	0.200	"	4.00		98.0	80-120	0.762	30	
Chloromethane	4.20	1.00	"	4.00		105	80-120	2.90	30	
cis-1,2-Dichloroethene	4.35	0.200	"	4.00		109	80-120	3.27	30	
cis-1,3-Dichloropropene	4.08	0.200	"	4.00		102	80-120	0.245	30	
Dibromochloromethane	4.27	0.200	"	4.00		107	80-120	3.00	30	
Dibromomethane	4.16	0.200	"	4.00		104	80-120	2.19	30	
Dichlorodifluoromethane	4.10	0.500	"	4.00		102	80-120	4.49	30	
Ethylbenzene	4.12	0.200	"	4.00		103	80-120	1.68	30	
Hexachlorobutadiene	4.14	0.500	"	4.00		104	80-120	6.54	30	
Isopropylbenzene	4.16	0.500	"	4.00		104	80-120	0.957	30	
m,p-Xylene	8.29	0.500	"	8.00		104	80-120	0.481	30	
Methyl tert-butyl ether	4.34	1.00	"	4.00		108	80-120	5.20	30	
Methylene chloride	4.04	2.00	"	4.00		101	80-120	0.00	30	
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120	0.00	30	
n-Propylbenzene	4.20	0.500	"	4.00		105	80-120	0.957	30	
Naphthalene	3.91	0.500	"	4.00		97.8	80-120	24.5	30	
o-Xylene	4.15	0.250	"	4.00		104	80-120	1.67	30	
p-Isopropyltoluene	4.18	0.200	"	4.00		104	80-120	1.19	30	
sec-Butylbenzene	4.19	0.200	"	4.00		105	80-120	0.478	30	
Styrene	4.26	0.500	"	4.00		106	80-120	2.78	30	
tert-Butylbenzene	4.25	0.500	"	4.00		106	80-120	2.14	30	
Tetrachloroethene	4.08	0.200	"	4.00		102	80-120	1.70	30	
Toluene	4.11	0.200	"	4.00		103	80-120	0.243	30	
trans-1,2-Dichloroethene	4.25	0.200	"	4.00		106	80-120	4.82	30	
trans-1,3-Dichloropropene	4.22	0.200	"	4.00		106	80-120	1.41	30	
Trichloroethene	4.10	0.200	"	4.00		102	80-120	2.22	30	
Trichlorofluoromethane	4.10	0.500	"	4.00		102	80-120	3.98	30	
Vinyl chloride	4.01	0.200	"	4.00		100	80-120	4.33	30	
Surrogate: 1,2-DCA-d4	*3.84*		"	*4.00*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*3.98*		"	*4.00*		*99.5*	*70-130*			
Surrogate: 4-BFB	*4.02*		"	*4.00*		*100*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Batch 4H26018: Prepared 08/30/04 Using EPA 5030B

Matrix Spike (4H26018-MS1) — **Source: B4H0535-01**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	3.90	0.200	ug/l	4.00	ND	97.5	70-130			
1,1,1-Trichloroethane	4.04	0.200	"	4.00	ND	101	70-130			
1,1,2,2-Tetrachloroethane	3.92	0.500	"	4.00	ND	98.0	70-130			
1,1,2-Trichloroethane	3.85	0.200	"	4.00	ND	96.2	70-130			
1,1-Dichloroethane	3.99	0.200	"	4.00	ND	99.8	70-130			
1,1-Dichloroethene	4.14	0.200	"	4.00	ND	104	59-158			
1,1-Dichloropropene	4.09	0.200	"	4.00	ND	102	70-130			
1,2,3-Trichlorobenzene	3.24	0.200	"	4.00	ND	81.0	70-130			
1,2,3-Trichloropropane	3.69	0.500	"	4.00	ND	92.2	70-130			
1,2,4-Trichlorobenzene	3.37	0.200	"	4.00	ND	84.2	70-130			
1,2,4-Trimethylbenzene	3.80	0.200	"	4.00	ND	95.0	70-130			
1,2-Dibromo-3-chloropropane	3.29	0.500	"	4.00	ND	82.2	70-130			
1,2-Dibromoethane	3.76	0.200	"	4.00	ND	94.0	70-130			
1,2-Dichlorobenzene	3.71	0.200	"	4.00	ND	92.8	70-130			
1,2-Dichloroethane	3.91	0.200	"	4.00	ND	97.8	70-130			
1,2-Dichloropropane	3.82	0.200	"	4.00	ND	95.5	70-130			
1,3,5-Trimethylbenzene	3.92	0.500	"	4.00	ND	98.0	70-130			
1,3-Dichlorobenzene	3.79	0.200	"	4.00	ND	94.8	70-130			
1,3-Dichloropropane	3.77	0.200	"	4.00	ND	94.2	70-130			
1,4-Dichlorobenzene	3.75	0.200	"	4.00	ND	93.8	70-130			
2,2-Dichloropropane	3.62	0.500	"	4.00	ND	90.5	70-130			
2-Butanone	35.8	2.00	"	40.0	ND	89.5	70-130			
2-Chlorotoluene	3.98	0.500	"	4.00	ND	99.5	70-130			
2-Hexanone	33.8	2.00	"	40.0	ND	84.5	70-130			
4-Chlorotoluene	3.88	0.500	"	4.00	ND	97.0	70-130			
4-Methyl-2-pentanone	36.3	2.00	"	40.0	ND	90.8	70-130			
Acetone	38.0	10.0	"	40.0	ND	95.0	70-130			
Benzene	3.92	0.200	"	4.00	ND	98.0	63-148			
Bromobenzene	3.77	0.500	"	4.00	ND	94.2	70-130			
Bromochloromethane	4.01	0.200	"	4.00	ND	100	70-130			
Bromodichloromethane	3.92	0.200	"	4.00	ND	98.0	70-130			
Bromoform	3.74	0.200	"	4.00	ND	93.5	70-130			
Bromomethane	4.07	2.00	"	4.00	ND	102	70-130			
Carbon disulfide	4.22	0.500	"	4.00	ND	106	70-130			
Carbon tetrachloride	4.26	0.200	"	4.00	ND	106	70-130			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
Chlorobenzene	3.88	0.200	ug/l	4.00	ND	97.0	80-128			
Chloroethane	4.14	1.00	"	4.00	ND	104	70-130			
Chloroform	3.72	0.200	"	4.00	ND	93.0	70-130			
Chloromethane	3.75	1.00	"	4.00	ND	93.8	70-130			
cis-1,2-Dichloroethene	3.96	0.200	"	4.00	ND	99.0	70-130			
cis-1,3-Dichloropropene	3.66	0.200	"	4.00	ND	91.5	70-130			
Dibromochloromethane	3.81	0.200	"	4.00	ND	95.2	70-130			
Dibromomethane	3.84	0.200	"	4.00	ND	96.0	70-130			
Dichlorodifluoromethane	4.10	0.500	"	4.00	ND	102	70-130			
Ethylbenzene	3.95	0.200	"	4.00	ND	98.8	70-130			
Hexachlorobutadiene	3.82	0.500	"	4.00	ND	95.5	70-130			
Isopropylbenzene	4.05	0.500	"	4.00	ND	101	70-130			
m,p-Xylene	7.87	0.500	"	8.00	ND	98.4	70-130			
Methyl tert-butyl ether	3.66	1.00	"	4.00	ND	91.5	70-130			
Methylene chloride	3.77	2.00	"	4.00	ND	94.2	70-130			
n-Butylbenzene	3.89	0.200	"	4.00	ND	97.2	70-130			
n-Propylbenzene	3.98	0.500	"	4.00	ND	99.5	70-130			
Naphthalene	3.21	0.500	"	4.00	ND	80.2	70-130			
o-Xylene	3.89	0.250	"	4.00	ND	97.2	70-130			
p-Isopropyltoluene	4.02	0.200	"	4.00	ND	100	70-130			
sec-Butylbenzene	4.08	0.200	"	4.00	ND	102	70-130			
Styrene	3.93	0.500	"	4.00	ND	98.2	70-130			
tert-Butylbenzene	3.95	0.500	"	4.00	ND	98.8	70-130			
Tetrachloroethene	4.01	0.200	"	4.00	ND	100	70-130			
Toluene	3.92	0.200	"	4.00	ND	98.0	72-127			
trans-1,2-Dichloroethene	4.04	0.200	"	4.00	ND	101	70-130			
trans-1,3-Dichloropropene	3.80	0.200	"	4.00	ND	95.0	70-130			
Trichloroethene	3.98	0.200	"	4.00	ND	99.5	80-126			
Trichlorofluoromethane	4.30	0.500	"	4.00	ND	108	70-130			
Vinyl chloride	3.91	0.200	"	4.00	ND	97.8	70-130			
Surrogate: 1,2-DCA-d4	*4.09*		"	*4.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*4.01*		"	*4.00*		*100*	*70-130*			
Surrogate: 4-BFB	*3.93*		"	*4.00*		*98.2*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:04

Notes and Definitions

Q-30	This sample was laboratory filtered since it was not field filtered as is required by the methodology.
X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

09 September 2004

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA/USA 98052-3333
RE: Landsburg Mine

Enclosed are the results of analyses for samples received by the laboratory on 08/25/04 16:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager

CASE NARRATIVE for B4H0689

Client: Golder Associates Inc.
Project Manager: Gary Zimmerman
Project Name: Landsburg Mine
Project Number: 923-1000-002

1.0 DESCRIPTION OF CASE

One (1) water sample and one Trip Blank was submitted for the analysis of:

- Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
- Dissolved Metals by EPA 6000/7000 Series Methods
- Volatile Organic Compounds by EPA 8260B

2.0 COMMENTS ON SAMPLE RECEIPT

The sample was received 25th August 2004 at a temperature of 3.3°C and logged in 26th August 2004.

3.0 PREPARATION AND ANALYSIS

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Dissolved Metals by EPA 6000/7000 Series Methods
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Volatile Organic Compounds by EPA 8260B
The percent recovery for spike compounds 1,2,3-Trichlorobenzene and Naphthalene was above the method established control limit in the analytical batch Blank Spike (BS). The spike recovery for these compounds in the Blank Spike Duplicate (BSD) was within control limits as was the relative percent difference (RPD). The percent recovery for spike compound Bromomethane was above the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. Since the spike recoveries were above control limits and the all project samples were non-detect for 1,2,3-Trichlorobenzene, Bromomethane and Naphthalene no further action was deemed necessary. No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Amar Gill
Project Manager
North Creek Analytical

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 92
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4H0689

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd. Ste. 200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsburg
PROJECT NUMBER: 923-1000.002
SAMPLED BY: Ryan Vanier

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: 10 (STD.) 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: 5 (STD.) 4 3 2 1 <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl, HNO3, HCl

REQUESTED ANALYSES: VOCs 8260, Metals, NWTPH HCID

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs 8260	Metals	NWTPH HCID	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	LMW10-82404	08/24/04	X	X	X	W	6		-01
2									
3									
4									
5									
6									
7									
8									
9									
10									

RELEASED BY: [signature]	DATE: 08/24/04	RECEIVED BY: [signature]	DATE: 8/25/04
PRINT NAME: Ryan Vanier FIRM: Golder	TIME: 1800	PRINT NAME: PRANK TONTY FIRM: NCA	TIME: 1610
RELEASED BY:	DATE:	RECEIVED BY:	DATE:
PRINT NAME: FIRM:	TIME:	PRINT NAME: FIRM:	TIME:

ADDITIONAL REMARKS: Metals sample field filtered

TEMP: 3.3

PAGE 1 OF 1

COC REV 1/03

W/O

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc. 18300 NE Union Hill Rd, Suite 200 Redmond, WA/USA 98052-3333	Project: Landsburg Mine Project Number: 923-1000.002 Project Manager: Gary Zimmerman	**Reported:** 09/09/04 16:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW10-82404	B4H0689-01	Water	08/24/04 16:30	08/25/04 16:10

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW10-82404 (B4H0689-01) Water Sampled: 08/24/04 16:30 Received: 08/25/04 16:10									
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H28004	08/28/04	08/30/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*108 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*131 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW10-82404 (B4H0689-01) Water Sampled: 08/24/04 16:30 Received: 08/25/04 16:10									
Silver	ND	0.00100	mg/l	1	4H27002	08/27/04	08/27/04	EPA 6020	
Arsenic	**0.00176**	0.00100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	ND	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4I03008	09/03/04	09/03/04	EPA 7470A	
Manganese	**0.0166**	0.0100	"	"	4H27002	08/27/04	08/27/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW10-82404 (B4H0689-01) Water Sampled: 08/24/04 16:30 Received: 08/25/04 16:10									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	**0.290**	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW10-82404 (B4H0689-01) Water Sampled: 08/24/04 16:30 Received: 08/25/04 16:10									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	**0.440**	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*102 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*99.5 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H28004: Prepared 08/28/04 Using EPA 3520C										
Blank (4H28004-BLK1)										
Gx Range Hydrocarbons	ND	0.250	mg/l							
Kerosene Range Hydrocarbons	ND	0.630	"							
Diesel Range Hydrocarbons	ND	0.630	"							
Insulating Oil Range Hydrocarbons	ND	0.630	"							
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"							
Lube Oil Range Hydrocarbons	ND	0.630	"							
Surrogate: 2-FBP	*DET*		"	*0.270*		*98.1*	*50-150*			
Surrogate: Octacosane	*DET*		"	*0.115*		*123*	*50-150*			
LCS (4H28004-BS1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		77.0	0-200			
Surrogate: 2-FBP	*DET*		"	*0.270*		*97.8*	*50-150*			
LCS Dup (4H28004-BSD1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		85.5	0-200	10.5	200	
Surrogate: 2-FBP	*DET*		"	*0.270*		*115*	*50-150*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
Blank (4H27002-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Manganese	ND	0.0100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Thallium	ND	0.00100	"							
Zinc	ND	0.0100	"							
LCS (4H27002-BS1)										
Silver	0.199	0.00100	mg/l	0.200		99.5	80-120			
Arsenic	0.200	0.00100	"	0.200		100	80-120			
Beryllium	0.204	0.00100	"	0.200		102	80-120			
Cadmium	0.202	0.00100	"	0.200		101	80-120			
Chromium	0.200	0.00100	"	0.200		100	80-120			
Copper	0.200	0.00100	"	0.200		100	80-120			
Manganese	0.200	0.0100	"	0.200		100	80-120			
Nickel	0.200	0.00100	"	0.200		100	80-120			
Lead	0.199	0.00100	"	0.200		99.5	80-120			
Antimony	0.0519	0.00300	"	0.0500		104	80-120			
Selenium	0.201	0.00100	"	0.200		100	80-120			
Thallium	0.199	0.00100	"	0.200		99.5	80-120			
Zinc	0.200	0.0100	"	0.200		100	80-120			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
LCS Dup (4H27002-BSD1)										
Silver	0.199	0.00100	mg/l	0.200		99.5	80-120	0.00	20	
Arsenic	0.201	0.00100	"	0.200		100	80-120	0.499	20	
Beryllium	0.204	0.00100	"	0.200		102	80-120	0.00	20	
Cadmium	0.202	0.00100	"	0.200		101	80-120	0.00	20	
Chromium	0.202	0.00100	"	0.200		101	80-120	0.995	20	
Copper	0.200	0.00100	"	0.200		100	80-120	0.00	20	
Manganese	0.200	0.0100	"	0.200		100	80-120	0.00	20	
Nickel	0.200	0.00100	"	0.200		100	80-120	0.00	20	
Lead	0.200	0.00100	"	0.200		100	80-120	0.501	20	
Antimony	0.0519	0.00300	"	0.0500		104	80-120	0.00	20	
Selenium	0.200	0.00100	"	0.200		100	80-120	0.499	20	
Thallium	0.200	0.00100	"	0.200		100	80-120	0.501	20	
Zinc	0.201	0.0100	"	0.200		100	80-120	0.499	20	
Matrix Spike (4H27002-MS1)					**Source: B4H0700-01**					
Silver	0.0726	0.00100	mg/l	0.100	ND	72.6	43-124			
Arsenic	0.105	0.00100	"	0.100	0.00186	103	70-138			
Beryllium	0.0981	0.00100	"	0.100	ND	98.1	80-125			
Cadmium	0.0921	0.00100	"	0.100	ND	92.1	80-125			
Chromium	0.0927	0.00100	"	0.100	0.000810	91.9	76-125			
Copper	0.0885	0.00100	"	0.101	0.000290	87.3	71-125			
Manganese	0.204	0.0100	"	0.100	0.114	90.0	54-158			
Nickel	0.0880	0.00100	"	0.0995	0.000750	87.7	73-125			
Lead	0.0900	0.00100	"	0.0995	ND	90.5	78-125			
Antimony	0.0423	0.00300	"	0.0500	ND	84.6	63-126			
Selenium	0.106	0.00100	"	0.100	0.000600	105	61-156			
Thallium	0.0912	0.00100	"	0.100	ND	91.2	78-125			
Zinc	0.0970	0.0100	"	0.0995	0.00346	94.0	70-127			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
Matrix Spike Dup (4H27002-MSD1)					**Source: B4H0700-01**					
Silver	0.0657	0.00100	mg/l	0.100	ND	65.7	43-124	9.98	50	
Arsenic	0.105	0.00100	"	0.100	0.00186	103	70-138	0.00	20	
Beryllium	0.100	0.00100	"	0.100	ND	100	80-125	1.92	20	
Cadmium	0.0939	0.00100	"	0.100	ND	93.9	80-125	1.94	20	
Chromium	0.0933	0.00100	"	0.100	0.000810	92.5	76-125	0.645	20	
Copper	0.0895	0.00100	"	0.101	0.000290	88.3	71-125	1.12	20	
Manganese	0.204	0.0100	"	0.100	0.114	90.0	54-158	0.00	20	
Nickel	0.0885	0.00100	"	0.0995	0.000750	88.2	73-125	0.567	20	
Lead	0.0902	0.00100	"	0.0995	ND	90.7	78-125	0.222	20	
Antimony	0.0451	0.00300	"	0.0500	ND	90.2	63-126	6.41	20	
Selenium	0.106	0.00100	"	0.100	0.000600	105	61-156	0.00	20	
Thallium	0.0918	0.00100	"	0.100	ND	91.8	78-125	0.656	20	
Zinc	0.0984	0.0100	"	0.0995	0.00346	95.4	70-127	1.43	20	
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Blank (4H31004-BLK1)										
Iron	ND	0.150	mg/l							
LCS (4H31004-BS1)										
Iron	4.92	0.150	mg/l	5.00		98.4	80-120			
LCS Dup (4H31004-BSD1)										
Iron	4.96	0.150	mg/l	5.00		99.2	80-120	0.810	20	
Matrix Spike (4H31004-MS1)					**Source: B4H0535-01**					
Iron	5.47	0.150	mg/l	5.00	ND	109	80-120			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Matrix Spike Dup (4H31004-MSD1)					**Source: B4H0535-01**					
Iron	5.37	0.150	mg/l	5.00	ND	107	80-120	1.85	20	
Batch 4I03008: Prepared 09/03/04 Using EPA 7470A										
Blank (4I03008-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4I03008-BS1)										
Mercury	0.00499	0.000200	mg/l	0.00500		99.8	80-120			
LCS Dup (4I03008-BSD1)										
Mercury	0.00503	0.000200	mg/l	0.00500		101	80-120	0.798	20	
Matrix Spike (4I03008-MS1)					**Source: B4I0052-01**					
Mercury	0.00494	0.000200	mg/l	0.00500	0.0000608	97.6	70-130			
Matrix Spike (4I03008-MS2)					**Source: B4H0689-01**					
Mercury	0.00485	0.000200	mg/l	0.00500	0.0000812	95.4	70-130			
Matrix Spike Dup (4I03008-MSD1)					**Source: B4I0052-01**					
Mercury	0.00497	0.000200	mg/l	0.00500	0.0000608	98.2	70-130	0.605	20	
Matrix Spike Dup (4I03008-MSD2)					**Source: B4H0689-01**					
Mercury	0.00468	0.000200	mg/l	0.00500	0.0000812	92.0	70-130	3.57	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethene	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							
Carbon tetrachloride	ND	0.200	"							

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
Chlorobenzene	ND	0.200	ug/l							
Chloroethane	ND	1.00	"							
Chloroform	ND	0.200	"							
Chloromethane	ND	1.00	"							
cis-1,2-Dichloroethene	ND	0.200	"							
cis-1,3-Dichloropropene	ND	0.200	"							
Dibromochloromethane	ND	0.200	"							
Dibromomethane	ND	0.200	"							
Dichlorodifluoromethane	ND	0.500	"							
Ethylbenzene	ND	0.200	"							
Hexachlorobutadiene	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
m,p-Xylene	ND	0.500	"							
Methyl tert-butyl ether	ND	1.00	"							
Methylene chloride	ND	2.00	"							
n-Butylbenzene	ND	0.200	"							
n-Propylbenzene	ND	0.500	"							
Naphthalene	ND	0.500	"							
o-Xylene	ND	0.250	"							
p-Isopropyltoluene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
Styrene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Tetrachloroethene	ND	0.200	"							
Toluene	ND	0.200	"							
trans-1,2-Dichloroethene	ND	0.200	"							
trans-1,3-Dichloropropene	ND	0.200	"							
Trichloroethene	ND	0.200	"							
Trichlorofluoromethane	ND	0.500	"							
Vinyl chloride	ND	0.200	"							
Surrogate: 1,2-DCA-d4	*4.04*		"	*4.00*		*101*	*70-130*			
Surrogate: Toluene-d8	*4.05*		"	*4.00*		*101*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
1,1,1,2-Tetrachloroethane	4.24	0.200	ug/l	4.00		106	80-120			
1,1,1-Trichloroethane	3.98	0.200	"	4.00		99.5	80-120			
1,1,2,2-Tetrachloroethane	4.42	0.500	"	4.00		110	80-120			
1,1,2-Trichloroethane	4.23	0.200	"	4.00		106	80-120			
1,1-Dichloroethane	4.13	0.200	"	4.00		103	80-120			
1,1-Dichloroethene	3.98	0.200	"	4.00		99.5	80-120			
1,1-Dichloropropene	4.08	0.200	"	4.00		102	80-120			
1,2,3-Trichlorobenzene	4.91	0.200	"	4.00		123	80-120			X
1,2,3-Trichloropropane	4.20	0.500	"	4.00		105	80-120			
1,2,4-Trichlorobenzene	4.72	0.200	"	4.00		118	80-120			
1,2,4-Trimethylbenzene	4.17	0.200	"	4.00		104	80-120			
1,2-Dibromo-3-chloropropane	4.38	0.500	"	4.00		110	80-120			
1,2-Dibromoethane	4.27	0.200	"	4.00		107	80-120			
1,2-Dichlorobenzene	4.24	0.200	"	4.00		106	80-120			
1,2-Dichloroethane	3.85	0.200	"	4.00		96.2	80-120			
1,2-Dichloropropane	4.02	0.200	"	4.00		100	80-120			
1,3,5-Trimethylbenzene	4.23	0.500	"	4.00		106	80-120			
1,3-Dichlorobenzene	4.25	0.200	"	4.00		106	80-120			
1,3-Dichloropropane	4.18	0.200	"	4.00		104	80-120			
1,4-Dichlorobenzene	4.22	0.200	"	4.00		106	80-120			
2,2-Dichloropropane	4.20	0.500	"	4.00		105	80-120			
2-Butanone	43.5	2.00	"	40.0		109	80-120			
2-Chlorotoluene	3.99	0.500	"	4.00		99.8	80-120			
2-Hexanone	42.0	2.00	"	40.0		105	80-120			
4-Chlorotoluene	3.81	0.500	"	4.00		95.2	80-120			
4-Methyl-2-pentanone	43.1	2.00	"	40.0		108	80-120			
Acetone	44.3	10.0	"	40.0		111	80-120			
Benzene	4.04	0.200	"	4.00		101	80-120			
Bromobenzene	4.11	0.500	"	4.00		103	80-120			
Bromochloromethane	4.46	0.200	"	4.00		112	80-120			
Bromodichloromethane	4.10	0.200	"	4.00		102	80-120			
Bromoform	4.40	0.200	"	4.00		110	80-120			
Bromomethane	5.85	2.00	"	4.00		146	80-120			X
Carbon disulfide	4.10	0.500	"	4.00		102	80-120			
Carbon tetrachloride	4.03	0.200	"	4.00		101	80-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
Chlorobenzene	4.24	0.200	ug/l	4.00		106	80-120			
Chloroethane	4.07	1.00	"	4.00		102	80-120			
Chloroform	3.95	0.200	"	4.00		98.8	80-120			
Chloromethane	4.08	1.00	"	4.00		102	80-120			
cis-1,2-Dichloroethene	4.21	0.200	"	4.00		105	80-120			
cis-1,3-Dichloropropene	4.09	0.200	"	4.00		102	80-120			
Dibromochloromethane	4.40	0.200	"	4.00		110	80-120			
Dibromomethane	4.07	0.200	"	4.00		102	80-120			
Dichlorodifluoromethane	3.92	0.500	"	4.00		98.0	80-120			
Ethylbenzene	4.19	0.200	"	4.00		105	80-120			
Hexachlorobutadiene	4.42	0.500	"	4.00		110	80-120			
Isopropylbenzene	4.20	0.500	"	4.00		105	80-120			
m,p-Xylene	8.33	0.500	"	8.00		104	80-120			
Methyl tert-butyl ether	4.12	1.00	"	4.00		103	80-120			
Methylene chloride	4.04	2.00	"	4.00		101	80-120			
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120			
n-Propylbenzene	4.16	0.500	"	4.00		104	80-120			
Naphthalene	5.00	0.500	"	4.00		125	80-120			X
o-Xylene	4.22	0.250	"	4.00		106	80-120			
p-Isopropyltoluene	4.23	0.200	"	4.00		106	80-120			
sec-Butylbenzene	4.17	0.200	"	4.00		104	80-120			
Styrene	4.38	0.500	"	4.00		110	80-120			
tert-Butylbenzene	4.16	0.500	"	4.00		104	80-120			
Tetrachloroethene	4.15	0.200	"	4.00		104	80-120			
Toluene	4.12	0.200	"	4.00		103	80-120			
trans-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120			
trans-1,3-Dichloropropene	4.28	0.200	"	4.00		107	80-120			
Trichloroethene	4.01	0.200	"	4.00		100	80-120			
Trichlorofluoromethane	3.94	0.500	"	4.00		98.5	80-120			
Vinyl chloride	3.84	0.200	"	4.00		96.0	80-120			
Surrogate: 1,2-DCA-d4	*3.85*		"	*4.00*		*96.2*	*70-130*			
Surrogate: Toluene-d8	*3.96*		"	*4.00*		*99.0*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
1,1,1,2-Tetrachloroethane	4.18	0.200	ug/l	4.00		104	80-120	1.43	30	
1,1,1-Trichloroethane	4.12	0.200	"	4.00		103	80-120	3.46	30	
1,1,2,2-Tetrachloroethane	4.36	0.500	"	4.00		109	80-120	1.37	30	
1,1,2-Trichloroethane	4.12	0.200	"	4.00		103	80-120	2.63	30	
1,1-Dichloroethane	4.18	0.200	"	4.00		104	80-120	1.20	30	
1,1-Dichloroethene	4.18	0.200	"	4.00		104	80-120	4.90	30	
1,1-Dichloropropene	4.22	0.200	"	4.00		106	80-120	3.37	30	
1,2,3-Trichlorobenzene	3.96	0.200	"	4.00		99.0	80-120	21.4	30	
1,2,3-Trichloropropane	3.89	0.500	"	4.00		97.2	80-120	7.66	30	
1,2,4-Trichlorobenzene	4.11	0.200	"	4.00		103	80-120	13.8	30	
1,2,4-Trimethylbenzene	4.15	0.200	"	4.00		104	80-120	0.481	30	
1,2-Dibromo-3-chloropropane	3.89	0.500	"	4.00		97.2	80-120	11.9	30	
1,2-Dibromoethane	4.15	0.200	"	4.00		104	80-120	2.85	30	
1,2-Dichlorobenzene	4.02	0.200	"	4.00		100	80-120	5.33	30	
1,2-Dichloroethane	4.11	0.200	"	4.00		103	80-120	6.53	30	
1,2-Dichloropropane	4.11	0.200	"	4.00		103	80-120	2.21	30	
1,3,5-Trimethylbenzene	4.14	0.500	"	4.00		104	80-120	2.15	30	
1,3-Dichlorobenzene	4.10	0.200	"	4.00		102	80-120	3.59	30	
1,3-Dichloropropane	4.11	0.200	"	4.00		103	80-120	1.69	30	
1,4-Dichlorobenzene	4.11	0.200	"	4.00		103	80-120	2.64	30	
2,2-Dichloropropane	3.85	0.500	"	4.00		96.2	80-120	8.70	30	
2-Butanone	38.0	2.00	"	40.0		95.0	80-120	13.5	30	
2-Chlorotoluene	4.26	0.500	"	4.00		106	80-120	6.55	30	
2-Hexanone	36.6	2.00	"	40.0		91.5	80-120	13.7	30	
4-Chlorotoluene	4.02	0.500	"	4.00		100	80-120	5.36	30	
4-Methyl-2-pentanone	40.3	2.00	"	40.0		101	80-120	6.71	30	
Acetone	39.5	10.0	"	40.0		98.8	80-120	11.5	30	
Benzene	4.08	0.200	"	4.00		102	80-120	0.985	30	
Bromobenzene	4.15	0.500	"	4.00		104	80-120	0.969	30	
Bromochloromethane	4.46	0.200	"	4.00		112	80-120	0.00	30	
Bromodichloromethane	4.24	0.200	"	4.00		106	80-120	3.36	30	
Bromoform	3.90	0.200	"	4.00		97.5	80-120	12.0	30	
Bromomethane	6.47	2.00	"	4.00		162	80-120	10.1	30	X
Carbon disulfide	4.31	0.500	"	4.00		108	80-120	4.99	30	
Carbon tetrachloride	4.12	0.200	"	4.00		103	80-120	2.21	30	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
Chlorobenzene	4.15	0.200	ug/l	4.00		104	80-120	2.15	30	
Chloroethane	4.16	1.00	"	4.00		104	80-120	2.19	30	
Chloroform	3.92	0.200	"	4.00		98.0	80-120	0.762	30	
Chloromethane	4.20	1.00	"	4.00		105	80-120	2.90	30	
cis-1,2-Dichloroethene	4.35	0.200	"	4.00		109	80-120	3.27	30	
cis-1,3-Dichloropropene	4.08	0.200	"	4.00		102	80-120	0.245	30	
Dibromochloromethane	4.27	0.200	"	4.00		107	80-120	3.00	30	
Dibromomethane	4.16	0.200	"	4.00		104	80-120	2.19	30	
Dichlorodifluoromethane	4.10	0.500	"	4.00		102	80-120	4.49	30	
Ethylbenzene	4.12	0.200	"	4.00		103	80-120	1.68	30	
Hexachlorobutadiene	4.14	0.500	"	4.00		104	80-120	6.54	30	
Isopropylbenzene	4.16	0.500	"	4.00		104	80-120	0.957	30	
m,p-Xylene	8.29	0.500	"	8.00		104	80-120	0.481	30	
Methyl tert-butyl ether	4.34	1.00	"	4.00		108	80-120	5.20	30	
Methylene chloride	4.04	2.00	"	4.00		101	80-120	0.00	30	
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120	0.00	30	
n-Propylbenzene	4.20	0.500	"	4.00		105	80-120	0.957	30	
Naphthalene	3.91	0.500	"	4.00		97.8	80-120	24.5	30	
o-Xylene	4.15	0.250	"	4.00		104	80-120	1.67	30	
p-Isopropyltoluene	4.18	0.200	"	4.00		104	80-120	1.19	30	
sec-Butylbenzene	4.19	0.200	"	4.00		105	80-120	0.478	30	
Styrene	4.26	0.500	"	4.00		106	80-120	2.78	30	
tert-Butylbenzene	4.25	0.500	"	4.00		106	80-120	2.14	30	
Tetrachloroethene	4.08	0.200	"	4.00		102	80-120	1.70	30	
Toluene	4.11	0.200	"	4.00		103	80-120	0.243	30	
trans-1,2-Dichloroethene	4.25	0.200	"	4.00		106	80-120	4.82	30	
trans-1,3-Dichloropropene	4.22	0.200	"	4.00		106	80-120	1.41	30	
Trichloroethene	4.10	0.200	"	4.00		102	80-120	2.22	30	
Trichlorofluoromethane	4.10	0.500	"	4.00		102	80-120	3.98	30	
Vinyl chloride	4.01	0.200	"	4.00		100	80-120	4.33	30	
Surrogate: 1,2-DCA-d4	*3.84*		"	*4.00*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*3.98*		"	*4.00*		*99.5*	*70-130*			
Surrogate: 4-BFB	*4.02*		"	*4.00*		*100*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
1,1,1,2-Tetrachloroethane	3.90	0.200	ug/l	4.00	ND	97.5	70-130			
1,1,1-Trichloroethane	4.04	0.200	"	4.00	ND	101	70-130			
1,1,2,2-Tetrachloroethane	3.92	0.500	"	4.00	ND	98.0	70-130			
1,1,2-Trichloroethane	3.85	0.200	"	4.00	ND	96.2	70-130			
1,1-Dichloroethane	3.99	0.200	"	4.00	ND	99.8	70-130			
1,1-Dichloroethene	4.14	0.200	"	4.00	ND	104	59-158			
1,1-Dichloropropene	4.09	0.200	"	4.00	ND	102	70-130			
1,2,3-Trichlorobenzene	3.24	0.200	"	4.00	ND	81.0	70-130			
1,2,3-Trichloropropane	3.69	0.500	"	4.00	ND	92.2	70-130			
1,2,4-Trichlorobenzene	3.37	0.200	"	4.00	ND	84.2	70-130			
1,2,4-Trimethylbenzene	3.80	0.200	"	4.00	ND	95.0	70-130			
1,2-Dibromo-3-chloropropane	3.29	0.500	"	4.00	ND	82.2	70-130			
1,2-Dibromoethane	3.76	0.200	"	4.00	ND	94.0	70-130			
1,2-Dichlorobenzene	3.71	0.200	"	4.00	ND	92.8	70-130			
1,2-Dichloroethane	3.91	0.200	"	4.00	ND	97.8	70-130			
1,2-Dichloropropane	3.82	0.200	"	4.00	ND	95.5	70-130			
1,3,5-Trimethylbenzene	3.92	0.500	"	4.00	ND	98.0	70-130			
1,3-Dichlorobenzene	3.79	0.200	"	4.00	ND	94.8	70-130			
1,3-Dichloropropane	3.77	0.200	"	4.00	ND	94.2	70-130			
1,4-Dichlorobenzene	3.75	0.200	"	4.00	ND	93.8	70-130			
2,2-Dichloropropane	3.62	0.500	"	4.00	ND	90.5	70-130			
2-Butanone	35.8	2.00	"	40.0	ND	89.5	70-130			
2-Chlorotoluene	3.98	0.500	"	4.00	ND	99.5	70-130			
2-Hexanone	33.8	2.00	"	40.0	ND	84.5	70-130			
4-Chlorotoluene	3.88	0.500	"	4.00	ND	97.0	70-130			
4-Methyl-2-pentanone	36.3	2.00	"	40.0	ND	90.8	70-130			
Acetone	38.0	10.0	"	40.0	ND	95.0	70-130			
Benzene	3.92	0.200	"	4.00	ND	98.0	63-148			
Bromobenzene	3.77	0.500	"	4.00	ND	94.2	70-130			
Bromochloromethane	4.01	0.200	"	4.00	ND	100	70-130			
Bromodichloromethane	3.92	0.200	"	4.00	ND	98.0	70-130			
Bromoform	3.74	0.200	"	4.00	ND	93.5	70-130			
Bromomethane	4.07	2.00	"	4.00	ND	102	70-130			
Carbon disulfide	4.22	0.500	"	4.00	ND	106	70-130			
Carbon tetrachloride	4.26	0.200	"	4.00	ND	106	70-130			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
Chlorobenzene	3.88	0.200	ug/l	4.00	ND	97.0	80-128			
Chloroethane	4.14	1.00	"	4.00	ND	104	70-130			
Chloroform	3.72	0.200	"	4.00	ND	93.0	70-130			
Chloromethane	3.75	1.00	"	4.00	ND	93.8	70-130			
cis-1,2-Dichloroethene	3.96	0.200	"	4.00	ND	99.0	70-130			
cis-1,3-Dichloropropene	3.66	0.200	"	4.00	ND	91.5	70-130			
Dibromochloromethane	3.81	0.200	"	4.00	ND	95.2	70-130			
Dibromomethane	3.84	0.200	"	4.00	ND	96.0	70-130			
Dichlorodifluoromethane	4.10	0.500	"	4.00	ND	102	70-130			
Ethylbenzene	3.95	0.200	"	4.00	ND	98.8	70-130			
Hexachlorobutadiene	3.82	0.500	"	4.00	ND	95.5	70-130			
Isopropylbenzene	4.05	0.500	"	4.00	ND	101	70-130			
m,p-Xylene	7.87	0.500	"	8.00	ND	98.4	70-130			
Methyl tert-butyl ether	3.66	1.00	"	4.00	ND	91.5	70-130			
Methylene chloride	3.77	2.00	"	4.00	ND	94.2	70-130			
n-Butylbenzene	3.89	0.200	"	4.00	ND	97.2	70-130			
n-Propylbenzene	3.98	0.500	"	4.00	ND	99.5	70-130			
Naphthalene	3.21	0.500	"	4.00	ND	80.2	70-130			
o-Xylene	3.89	0.250	"	4.00	ND	97.2	70-130			
p-Isopropyltoluene	4.02	0.200	"	4.00	ND	100	70-130			
sec-Butylbenzene	4.08	0.200	"	4.00	ND	102	70-130			
Styrene	3.93	0.500	"	4.00	ND	98.2	70-130			
tert-Butylbenzene	3.95	0.500	"	4.00	ND	98.8	70-130			
Tetrachloroethene	4.01	0.200	"	4.00	ND	100	70-130			
Toluene	3.92	0.200	"	4.00	ND	98.0	72-127			
trans-1,2-Dichloroethene	4.04	0.200	"	4.00	ND	101	70-130			
trans-1,3-Dichloropropene	3.80	0.200	"	4.00	ND	95.0	70-130			
Trichloroethene	3.98	0.200	"	4.00	ND	99.5	80-126			
Trichlorofluoromethane	4.30	0.500	"	4.00	ND	108	70-130			
Vinyl chloride	3.91	0.200	"	4.00	ND	97.8	70-130			
Surrogate: 1,2-DCA-d4	*4.09*		"	*4.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*4.01*		"	*4.00*		*100*	*70-130*			
Surrogate: 4-BFB	*3.93*		"	*4.00*		*98.2*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:15

Notes and Definitions

X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

09 September 2004

Gary Zimmerman
Golder Associates Inc.
18300 NE Union Hill Rd, Suite 200
Redmond, WA/USA 98052-3333

RE: Landsburg Mine

Enclosed are the results of analyses for samples received by the laboratory on 08/26/04 11:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager

CASE NARRATIVE for B4H0700

Client: Golder Associates Inc.
Project Manager: Gary Zimmerman
Project Name: Landsburg Mine
Project Number: 923-1000-002

1.0 DESCRIPTION OF CASE

One (1) water sample and one Trip Blank was submitted for the analysis of:

- Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
- Dissolved Metals by EPA 6000/7000 Series Methods
- Volatile Organic Compounds by EPA 8260B

2.0 COMMENTS ON SAMPLE RECEIPT

The sample was received 26th August 2004 at a temperature of 6.0°C and logged in 26th August 2004.

3.0 PREPARATION AND ANALYSIS

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Dissolved Metals by EPA 6000/7000 Series Methods
No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Volatile Organic Compounds by EPA 8260B
The percent recovery for spike compounds 1,2,3-Trichlorobenzene and Naphthalene was above the method established control limit in the analytical batch Blank Spike (BS). The spike recovery for these compounds in the Blank Spike Duplicate (BSD) was within control limits as was the relative percent difference (RPD). The percent recovery for spike compound Bromomethane was above the method established control limit in the analytical batch BS and BSD. The RPD was within control limits. Since the spike recoveries were above control limits and the all project samples were non-detect for 1,2,3-Trichlorobenzene, Bromomethane and Naphthalene no further action was deemed necessary. No additional anomalies or discrepancies were associated with this analysis other than those already qualified in the data.

Amar Gill
Project Manager
North Creek Analytical

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508 425-420-9200 FAX 420-9210
11115 E Montgomery Suite B, Spokane, WA 99206-4776 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave, Beaverton, OR 97008-7132 503-906-9200 FAX 906-9210
20332 Empire Ave Suite F-1, Bend, OR 99701-5711 541-383-9310 FAX 382-7588
3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4H0070

CLIENT: Golder Associates, Inc.

REPORT TO: Gary Zimmerman
ADDRESS: 18300 NE Union Hill Rd. Ste. 200
Redmond, WA 98052
PHONE: 883-0777 FAX: 882-5498

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Landsberg
PROJECT NUMBER: 923-1000.002
SAMPLED BY: Ryan Vannier

TURNAROUND REQUEST
in Business Days *

Organic & Inorganic Analyses: 10 (STD.) | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 (STD.) | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl | HNO3 | HCl

REQUESTED ANALYSES: VOCs 8260 | Metals | MTBE HCID

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	VOCs 8260	Metals	MTBE HCID	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	LMW7-82504	08/25/04 1420	X	X	X	W	6		
2									
3									
4									
5									
6									
7									
8									
9									
10									

RELEASED BY:		DATE: 08/25/04	RECEIVED BY: Demittardman		DATE: 8-26-04
PRINT NAME: Ryan Vannier	FIRM: Golder	TIME: 1600	PRINT NAME: Demittardman	FIRM: NCA	TIME: 11:30
RELEASED BY:		DATE:	RECEIVED BY:		DATE:
PRINT NAME:	FIRM:	TIME:	PRINT NAME:	FIRM:	TIME:

ADDITIONAL REMARKS: Metals sample was field filtered

WCS

TEMP: 6.0

COC REV 1/03

PAGE 1 OF 1

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LMW7-82504	B4H0700-01	Water	08/25/04 14:20	08/26/04 11:30

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW7-82504 (B4H0700-01) Water Sampled: 08/25/04 14:20 Received: 08/26/04 11:30									
Gx Range Hydrocarbons	ND	0.250	mg/l	1	4H28004	08/28/04	08/31/04	NWTPH-HCID	
Kerosene Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Diesel Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Insulating Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Lube Oil Range Hydrocarbons	ND	0.630	"	"	"	"	"	"	
Surrogate: 2-FBP	*108 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*122 %*	*50-150*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW7-82504 (B4H0700-01) Water Sampled: 08/25/04 14:20 Received: 08/26/04 11:30									
Silver	ND	0.00100	mg/l	1	4H27002	08/27/04	08/27/04	EPA 6020	
Arsenic	**0.00186**	0.00100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Iron	**0.941**	0.150	"	"	4H31004	08/31/04	08/31/04	EPA 6010B	
Mercury	ND	0.000200	"	"	4I03008	09/03/04	09/03/04	EPA 7470A	
Manganese	**0.114**	0.0100	"	"	4H27002	08/27/04	08/27/04	EPA 6020	
Nickel	ND	0.00100	"	"	"	"	"	"	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	"	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Thallium	ND	0.00100	"	"	"	"	"	"	
Zinc	ND	0.0100	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW7-82504 (B4H0700-01) Water Sampled: 08/25/04 14:20 Received: 08/26/04 11:30									
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
1,1,1-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.500	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.500	"	"	"	"	"	"	
2-Butanone	ND	2.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
2-Hexanone	ND	2.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.500	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	2.00	"	"	"	"	"	"	
Acetone	ND	10.0	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Bromobenzene	ND	0.500	"	"	"	"	"	"	
Bromochloromethane	ND	0.200	"	"	"	"	"	"	
Bromodichloromethane	ND	0.200	"	"	"	"	"	"	
Bromoform	ND	0.200	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
Carbon disulfide	ND	0.500	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.200	"	"	"	"	"	"	
Chlorobenzene	ND	0.200	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	0.200	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
LMW7-82504 (B4H0700-01) Water Sampled: 08/25/04 14:20 Received: 08/26/04 11:30									
Chloromethane	ND	1.00	ug/l	1	4H26018	08/30/04	08/31/04	EPA 8260B	
cis-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Dibromochloromethane	ND	0.200	"	"	"	"	"	"	
Dibromomethane	ND	0.200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	2.00	"	"	"	"	"	"	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
Styrene	ND	0.500	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Tetrachloroethene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.200	"	"	"	"	"	"	
Trichloroethene	ND	0.200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	0.500	"	"	"	"	"	"	
Vinyl chloride	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*104 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*101 %*	*70-130*			"	"	"	"	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Hydrocarbon Identification by Washington DOE Method NWTPH-HCID - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H28004: Prepared 08/28/04 Using EPA 3520C										
Blank (4H28004-BLK1)										
Gx Range Hydrocarbons	ND	0.250	mg/l							
Kerosene Range Hydrocarbons	ND	0.630	"							
Diesel Range Hydrocarbons	ND	0.630	"							
Insulating Oil Range Hydrocarbons	ND	0.630	"							
Heavy Fuel Oil Range Hydrocarbons	ND	0.630	"							
Lube Oil Range Hydrocarbons	ND	0.630	"							
Surrogate: 2-FBP	*DET*		"	*0.270*		*98.1*	*50-150*			
Surrogate: Octacosane	*DET*		"	*0.115*		*123*	*50-150*			
LCS (4H28004-BS1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		77.0	0-200			
Surrogate: 2-FBP	*DET*		"	*0.270*		*97.8*	*50-150*			
LCS Dup (4H28004-BSD1)										
Diesel Range Hydrocarbons	DET	0.630	mg/l	2.00		85.5	0-200	10.5	200	
Surrogate: 2-FBP	*DET*		"	*0.270*		*115*	*50-150*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
Blank (4H27002-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Manganese	ND	0.0100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Thallium	ND	0.00100	"							
Zinc	ND	0.0100	"							
LCS (4H27002-BS1)										
Silver	0.199	0.00100	mg/l	0.200		99.5	80-120			
Arsenic	0.200	0.00100	"	0.200		100	80-120			
Beryllium	0.204	0.00100	"	0.200		102	80-120			
Cadmium	0.202	0.00100	"	0.200		101	80-120			
Chromium	0.200	0.00100	"	0.200		100	80-120			
Copper	0.200	0.00100	"	0.200		100	80-120			
Manganese	0.200	0.0100	"	0.200		100	80-120			
Nickel	0.200	0.00100	"	0.200		100	80-120			
Lead	0.199	0.00100	"	0.200		99.5	80-120			
Antimony	0.0519	0.00300	"	0.0500		104	80-120			
Selenium	0.201	0.00100	"	0.200		100	80-120			
Thallium	0.199	0.00100	"	0.200		99.5	80-120			
Zinc	0.200	0.0100	"	0.200		100	80-120			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
LCS Dup (4H27002-BSD1)										
Silver	0.199	0.00100	mg/l	0.200		99.5	80-120	0.00	20	
Arsenic	0.201	0.00100	"	0.200		100	80-120	0.499	20	
Beryllium	0.204	0.00100	"	0.200		102	80-120	0.00	20	
Cadmium	0.202	0.00100	"	0.200		101	80-120	0.00	20	
Chromium	0.202	0.00100	"	0.200		101	80-120	0.995	20	
Copper	0.200	0.00100	"	0.200		100	80-120	0.00	20	
Manganese	0.200	0.0100	"	0.200		100	80-120	0.00	20	
Nickel	0.200	0.00100	"	0.200		100	80-120	0.00	20	
Lead	0.200	0.00100	"	0.200		100	80-120	0.501	20	
Antimony	0.0519	0.00300	"	0.0500		104	80-120	0.00	20	
Selenium	0.200	0.00100	"	0.200		100	80-120	0.499	20	
Thallium	0.200	0.00100	"	0.200		100	80-120	0.501	20	
Zinc	0.201	0.0100	"	0.200		100	80-120	0.499	20	
Matrix Spike (4H27002-MS1)					**Source: B4H0700-01**					
Silver	0.0726	0.00100	mg/l	0.100	ND	72.6	43-124			
Arsenic	0.105	0.00100	"	0.100	0.00186	103	70-138			
Beryllium	0.0981	0.00100	"	0.100	ND	98.1	80-125			
Cadmium	0.0921	0.00100	"	0.100	ND	92.1	80-125			
Chromium	0.0927	0.00100	"	0.100	0.000810	91.9	76-125			
Copper	0.0885	0.00100	"	0.101	0.000290	87.3	71-125			
Manganese	0.204	0.0100	"	0.100	0.114	90.0	54-158			
Nickel	0.0880	0.00100	"	0.0995	0.000750	87.7	73-125			
Lead	0.0900	0.00100	"	0.0995	ND	90.5	78-125			
Antimony	0.0423	0.00300	"	0.0500	ND	84.6	63-126			
Selenium	0.106	0.00100	"	0.100	0.000600	105	61-156			
Thallium	0.0912	0.00100	"	0.100	ND	91.2	78-125			
Zinc	0.0970	0.0100	"	0.0995	0.00346	94.0	70-127			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H27002: Prepared 08/27/04 Using EPA 3005A										
Matrix Spike Dup (4H27002-MSD1)					**Source: B4H0700-01**					
Silver	0.0657	0.00100	mg/l	0.100	ND	65.7	43-124	9.98	50	
Arsenic	0.105	0.00100	"	0.100	0.00186	103	70-138	0.00	20	
Beryllium	0.100	0.00100	"	0.100	ND	100	80-125	1.92	20	
Cadmium	0.0939	0.00100	"	0.100	ND	93.9	80-125	1.94	20	
Chromium	0.0933	0.00100	"	0.100	0.000810	92.5	76-125	0.645	20	
Copper	0.0895	0.00100	"	0.101	0.000290	88.3	71-125	1.12	20	
Manganese	0.204	0.0100	"	0.100	0.114	90.0	54-158	0.00	20	
Nickel	0.0885	0.00100	"	0.0995	0.000750	88.2	73-125	0.567	20	
Lead	0.0902	0.00100	"	0.0995	ND	90.7	78-125	0.222	20	
Antimony	0.0451	0.00300	"	0.0500	ND	90.2	63-126	6.41	20	
Selenium	0.106	0.00100	"	0.100	0.000600	105	61-156	0.00	20	
Thallium	0.0918	0.00100	"	0.100	ND	91.8	78-125	0.656	20	
Zinc	0.0984	0.0100	"	0.0995	0.00346	95.4	70-127	1.43	20	
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Blank (4H31004-BLK1)										
Iron	ND	0.150	mg/l							
LCS (4H31004-BS1)										
Iron	4.92	0.150	mg/l	5.00		98.4	80-120			
LCS Dup (4H31004-BSD1)										
Iron	4.96	0.150	mg/l	5.00		99.2	80-120	0.810	20	
Matrix Spike (4H31004-MS1)					**Source: B4H0535-01**					
Iron	5.47	0.150	mg/l	5.00	ND	109	80-120			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H31004: Prepared 08/31/04 Using EPA 3005A										
Matrix Spike Dup (4H31004-MSD1)					**Source: B4H0535-01**					
Iron	5.37	0.150	mg/l	5.00	ND	107	80-120	1.85	20	
Batch 4I03008: Prepared 09/03/04 Using EPA 7470A										
Blank (4I03008-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4I03008-BS1)										
Mercury	0.00499	0.000200	mg/l	0.00500		99.8	80-120			
LCS Dup (4I03008-BSD1)										
Mercury	0.00503	0.000200	mg/l	0.00500		101	80-120	0.798	20	
Matrix Spike (4I03008-MS1)					**Source: B4I0052-01**					
Mercury	0.00494	0.000200	mg/l	0.00500	0.0000608	97.6	70-130			
Matrix Spike (4I03008-MS2)					**Source: B4H0689-01**					
Mercury	0.00485	0.000200	mg/l	0.00500	0.0000812	95.4	70-130			
Matrix Spike Dup (4I03008-MSD1)					**Source: B4I0052-01**					
Mercury	0.00497	0.000200	mg/l	0.00500	0.0000608	98.2	70-130	0.605	20	
Matrix Spike Dup (4I03008-MSD2)					**Source: B4H0689-01**					
Mercury	0.00468	0.000200	mg/l	0.00500	0.0000812	92.0	70-130	3.57	20	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethene	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							
Carbon tetrachloride	ND	0.200	"							

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Blank (4H26018-BLK1)										
Chlorobenzene	ND	0.200	ug/l							
Chloroethane	ND	1.00	"							
Chloroform	ND	0.200	"							
Chloromethane	ND	1.00	"							
cis-1,2-Dichloroethene	ND	0.200	"							
cis-1,3-Dichloropropene	ND	0.200	"							
Dibromochloromethane	ND	0.200	"							
Dibromomethane	ND	0.200	"							
Dichlorodifluoromethane	ND	0.500	"							
Ethylbenzene	ND	0.200	"							
Hexachlorobutadiene	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
m,p-Xylene	ND	0.500	"							
Methyl tert-butyl ether	ND	1.00	"							
Methylene chloride	ND	2.00	"							
n-Butylbenzene	ND	0.200	"							
n-Propylbenzene	ND	0.500	"							
Naphthalene	ND	0.500	"							
o-Xylene	ND	0.250	"							
p-Isopropyltoluene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
Styrene	ND	0.500	"							
tert-Butylbenzene	ND	0.500	"							
Tetrachloroethene	ND	0.200	"							
Toluene	ND	0.200	"							
trans-1,2-Dichloroethene	ND	0.200	"							
trans-1,3-Dichloropropene	ND	0.200	"							
Trichloroethene	ND	0.200	"							
Trichlorofluoromethane	ND	0.500	"							
Vinyl chloride	ND	0.200	"							
Surrogate: 1,2-DCA-d4	*4.04*		"	*4.00*		*101*	*70-130*			
Surrogate: Toluene-d8	*4.05*		"	*4.00*		*101*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
1,1,1,2-Tetrachloroethane	4.24	0.200	ug/l	4.00		106	80-120			
1,1,1-Trichloroethane	3.98	0.200	"	4.00		99.5	80-120			
1,1,2,2-Tetrachloroethane	4.42	0.500	"	4.00		110	80-120			
1,1,2-Trichloroethane	4.23	0.200	"	4.00		106	80-120			
1,1-Dichloroethane	4.13	0.200	"	4.00		103	80-120			
1,1-Dichloroethene	3.98	0.200	"	4.00		99.5	80-120			
1,1-Dichloropropene	4.08	0.200	"	4.00		102	80-120			
1,2,3-Trichlorobenzene	4.91	0.200	"	4.00		123	80-120			X
1,2,3-Trichloropropane	4.20	0.500	"	4.00		105	80-120			
1,2,4-Trichlorobenzene	4.72	0.200	"	4.00		118	80-120			
1,2,4-Trimethylbenzene	4.17	0.200	"	4.00		104	80-120			
1,2-Dibromo-3-chloropropane	4.38	0.500	"	4.00		110	80-120			
1,2-Dibromoethane	4.27	0.200	"	4.00		107	80-120			
1,2-Dichlorobenzene	4.24	0.200	"	4.00		106	80-120			
1,2-Dichloroethane	3.85	0.200	"	4.00		96.2	80-120			
1,2-Dichloropropane	4.02	0.200	"	4.00		100	80-120			
1,3,5-Trimethylbenzene	4.23	0.500	"	4.00		106	80-120			
1,3-Dichlorobenzene	4.25	0.200	"	4.00		106	80-120			
1,3-Dichloropropane	4.18	0.200	"	4.00		104	80-120			
1,4-Dichlorobenzene	4.22	0.200	"	4.00		106	80-120			
2,2-Dichloropropane	4.20	0.500	"	4.00		105	80-120			
2-Butanone	43.5	2.00	"	40.0		109	80-120			
2-Chlorotoluene	3.99	0.500	"	4.00		99.8	80-120			
2-Hexanone	42.0	2.00	"	40.0		105	80-120			
4-Chlorotoluene	3.81	0.500	"	4.00		95.2	80-120			
4-Methyl-2-pentanone	43.1	2.00	"	40.0		108	80-120			
Acetone	44.3	10.0	"	40.0		111	80-120			
Benzene	4.04	0.200	"	4.00		101	80-120			
Bromobenzene	4.11	0.500	"	4.00		103	80-120			
Bromochloromethane	4.46	0.200	"	4.00		112	80-120			
Bromodichloromethane	4.10	0.200	"	4.00		102	80-120			
Bromoform	4.40	0.200	"	4.00		110	80-120			
Bromomethane	5.85	2.00	"	4.00		146	80-120			X
Carbon disulfide	4.10	0.500	"	4.00		102	80-120			
Carbon tetrachloride	4.03	0.200	"	4.00		101	80-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS (4H26018-BS1)										
Chlorobenzene	4.24	0.200	ug/l	4.00		106	80-120			
Chloroethane	4.07	1.00	"	4.00		102	80-120			
Chloroform	3.95	0.200	"	4.00		98.8	80-120			
Chloromethane	4.08	1.00	"	4.00		102	80-120			
cis-1,2-Dichloroethene	4.21	0.200	"	4.00		105	80-120			
cis-1,3-Dichloropropene	4.09	0.200	"	4.00		102	80-120			
Dibromochloromethane	4.40	0.200	"	4.00		110	80-120			
Dibromomethane	4.07	0.200	"	4.00		102	80-120			
Dichlorodifluoromethane	3.92	0.500	"	4.00		98.0	80-120			
Ethylbenzene	4.19	0.200	"	4.00		105	80-120			
Hexachlorobutadiene	4.42	0.500	"	4.00		110	80-120			
Isopropylbenzene	4.20	0.500	"	4.00		105	80-120			
m,p-Xylene	8.33	0.500	"	8.00		104	80-120			
Methyl tert-butyl ether	4.12	1.00	"	4.00		103	80-120			
Methylene chloride	4.04	2.00	"	4.00		101	80-120			
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120			
n-Propylbenzene	4.16	0.500	"	4.00		104	80-120			
Naphthalene	5.00	0.500	"	4.00		125	80-120			X
o-Xylene	4.22	0.250	"	4.00		106	80-120			
p-Isopropyltoluene	4.23	0.200	"	4.00		106	80-120			
sec-Butylbenzene	4.17	0.200	"	4.00		104	80-120			
Styrene	4.38	0.500	"	4.00		110	80-120			
tert-Butylbenzene	4.16	0.500	"	4.00		104	80-120			
Tetrachloroethene	4.15	0.200	"	4.00		104	80-120			
Toluene	4.12	0.200	"	4.00		103	80-120			
trans-1,2-Dichloroethene	4.05	0.200	"	4.00		101	80-120			
trans-1,3-Dichloropropene	4.28	0.200	"	4.00		107	80-120			
Trichloroethene	4.01	0.200	"	4.00		100	80-120			
Trichlorofluoromethane	3.94	0.500	"	4.00		98.5	80-120			
Vinyl chloride	3.84	0.200	"	4.00		96.0	80-120			
Surrogate: 1,2-DCA-d4	*3.85*		"	*4.00*		*96.2*	*70-130*			
Surrogate: Toluene-d8	*3.96*		"	*4.00*		*99.0*	*70-130*			
Surrogate: 4-BFB	*3.99*		"	*4.00*		*99.8*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
1,1,1,2-Tetrachloroethane	4.18	0.200	ug/l	4.00		104	80-120	1.43	30	
1,1,1-Trichloroethane	4.12	0.200	"	4.00		103	80-120	3.46	30	
1,1,2,2-Tetrachloroethane	4.36	0.500	"	4.00		109	80-120	1.37	30	
1,1,2-Trichloroethane	4.12	0.200	"	4.00		103	80-120	2.63	30	
1,1-Dichloroethane	4.18	0.200	"	4.00		104	80-120	1.20	30	
1,1-Dichloroethene	4.18	0.200	"	4.00		104	80-120	4.90	30	
1,1-Dichloropropene	4.22	0.200	"	4.00		106	80-120	3.37	30	
1,2,3-Trichlorobenzene	3.96	0.200	"	4.00		99.0	80-120	21.4	30	
1,2,3-Trichloropropane	3.89	0.500	"	4.00		97.2	80-120	7.66	30	
1,2,4-Trichlorobenzene	4.11	0.200	"	4.00		103	80-120	13.8	30	
1,2,4-Trimethylbenzene	4.15	0.200	"	4.00		104	80-120	0.481	30	
1,2-Dibromo-3-chloropropane	3.89	0.500	"	4.00		97.2	80-120	11.9	30	
1,2-Dibromoethane	4.15	0.200	"	4.00		104	80-120	2.85	30	
1,2-Dichlorobenzene	4.02	0.200	"	4.00		100	80-120	5.33	30	
1,2-Dichloroethane	4.11	0.200	"	4.00		103	80-120	6.53	30	
1,2-Dichloropropane	4.11	0.200	"	4.00		103	80-120	2.21	30	
1,3,5-Trimethylbenzene	4.14	0.500	"	4.00		104	80-120	2.15	30	
1,3-Dichlorobenzene	4.10	0.200	"	4.00		102	80-120	3.59	30	
1,3-Dichloropropane	4.11	0.200	"	4.00		103	80-120	1.69	30	
1,4-Dichlorobenzene	4.11	0.200	"	4.00		103	80-120	2.64	30	
2,2-Dichloropropane	3.85	0.500	"	4.00		96.2	80-120	8.70	30	
2-Butanone	38.0	2.00	"	40.0		95.0	80-120	13.5	30	
2-Chlorotoluene	4.26	0.500	"	4.00		106	80-120	6.55	30	
2-Hexanone	36.6	2.00	"	40.0		91.5	80-120	13.7	30	
4-Chlorotoluene	4.02	0.500	"	4.00		100	80-120	5.36	30	
4-Methyl-2-pentanone	40.3	2.00	"	40.0		101	80-120	6.71	30	
Acetone	39.5	10.0	"	40.0		98.8	80-120	11.5	30	
Benzene	4.08	0.200	"	4.00		102	80-120	0.985	30	
Bromobenzene	4.15	0.500	"	4.00		104	80-120	0.969	30	
Bromochloromethane	4.46	0.200	"	4.00		112	80-120	0.00	30	
Bromodichloromethane	4.24	0.200	"	4.00		106	80-120	3.36	30	
Bromoform	3.90	0.200	"	4.00		97.5	80-120	12.0	30	
Bromomethane	6.47	2.00	"	4.00		162	80-120	10.1	30	X
Carbon disulfide	4.31	0.500	"	4.00		108	80-120	4.99	30	
Carbon tetrachloride	4.12	0.200	"	4.00		103	80-120	2.21	30	

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
LCS Dup (4H26018-BSD1)										
Chlorobenzene	4.15	0.200	ug/l	4.00		104	80-120	2.15	30	
Chloroethane	4.16	1.00	"	4.00		104	80-120	2.19	30	
Chloroform	3.92	0.200	"	4.00		98.0	80-120	0.762	30	
Chloromethane	4.20	1.00	"	4.00		105	80-120	2.90	30	
cis-1,2-Dichloroethene	4.35	0.200	"	4.00		109	80-120	3.27	30	
cis-1,3-Dichloropropene	4.08	0.200	"	4.00		102	80-120	0.245	30	
Dibromochloromethane	4.27	0.200	"	4.00		107	80-120	3.00	30	
Dibromomethane	4.16	0.200	"	4.00		104	80-120	2.19	30	
Dichlorodifluoromethane	4.10	0.500	"	4.00		102	80-120	4.49	30	
Ethylbenzene	4.12	0.200	"	4.00		103	80-120	1.68	30	
Hexachlorobutadiene	4.14	0.500	"	4.00		104	80-120	6.54	30	
Isopropylbenzene	4.16	0.500	"	4.00		104	80-120	0.957	30	
m,p-Xylene	8.29	0.500	"	8.00		104	80-120	0.481	30	
Methyl tert-butyl ether	4.34	1.00	"	4.00		108	80-120	5.20	30	
Methylene chloride	4.04	2.00	"	4.00		101	80-120	0.00	30	
n-Butylbenzene	4.18	0.200	"	4.00		104	80-120	0.00	30	
n-Propylbenzene	4.20	0.500	"	4.00		105	80-120	0.957	30	
Naphthalene	3.91	0.500	"	4.00		97.8	80-120	24.5	30	
o-Xylene	4.15	0.250	"	4.00		104	80-120	1.67	30	
p-Isopropyltoluene	4.18	0.200	"	4.00		104	80-120	1.19	30	
sec-Butylbenzene	4.19	0.200	"	4.00		105	80-120	0.478	30	
Styrene	4.26	0.500	"	4.00		106	80-120	2.78	30	
tert-Butylbenzene	4.25	0.500	"	4.00		106	80-120	2.14	30	
Tetrachloroethene	4.08	0.200	"	4.00		102	80-120	1.70	30	
Toluene	4.11	0.200	"	4.00		103	80-120	0.243	30	
trans-1,2-Dichloroethene	4.25	0.200	"	4.00		106	80-120	4.82	30	
trans-1,3-Dichloropropene	4.22	0.200	"	4.00		106	80-120	1.41	30	
Trichloroethene	4.10	0.200	"	4.00		102	80-120	2.22	30	
Trichlorofluoromethane	4.10	0.500	"	4.00		102	80-120	3.98	30	
Vinyl chloride	4.01	0.200	"	4.00		100	80-120	4.33	30	
Surrogate: 1,2-DCA-d4	*3.84*		"	*4.00*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*3.98*		"	*4.00*		*99.5*	*70-130*			
Surrogate: 4-BFB	*4.02*		"	*4.00*		*100*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
1,1,1,2-Tetrachloroethane	3.90	0.200	ug/l	4.00	ND	97.5	70-130			
1,1,1-Trichloroethane	4.04	0.200	"	4.00	ND	101	70-130			
1,1,2,2-Tetrachloroethane	3.92	0.500	"	4.00	ND	98.0	70-130			
1,1,2-Trichloroethane	3.85	0.200	"	4.00	ND	96.2	70-130			
1,1-Dichloroethane	3.99	0.200	"	4.00	ND	99.8	70-130			
1,1-Dichloroethene	4.14	0.200	"	4.00	ND	104	59-158			
1,1-Dichloropropene	4.09	0.200	"	4.00	ND	102	70-130			
1,2,3-Trichlorobenzene	3.24	0.200	"	4.00	ND	81.0	70-130			
1,2,3-Trichloropropane	3.69	0.500	"	4.00	ND	92.2	70-130			
1,2,4-Trichlorobenzene	3.37	0.200	"	4.00	ND	84.2	70-130			
1,2,4-Trimethylbenzene	3.80	0.200	"	4.00	ND	95.0	70-130			
1,2-Dibromo-3-chloropropane	3.29	0.500	"	4.00	ND	82.2	70-130			
1,2-Dibromoethane	3.76	0.200	"	4.00	ND	94.0	70-130			
1,2-Dichlorobenzene	3.71	0.200	"	4.00	ND	92.8	70-130			
1,2-Dichloroethane	3.91	0.200	"	4.00	ND	97.8	70-130			
1,2-Dichloropropane	3.82	0.200	"	4.00	ND	95.5	70-130			
1,3,5-Trimethylbenzene	3.92	0.500	"	4.00	ND	98.0	70-130			
1,3-Dichlorobenzene	3.79	0.200	"	4.00	ND	94.8	70-130			
1,3-Dichloropropane	3.77	0.200	"	4.00	ND	94.2	70-130			
1,4-Dichlorobenzene	3.75	0.200	"	4.00	ND	93.8	70-130			
2,2-Dichloropropane	3.62	0.500	"	4.00	ND	90.5	70-130			
2-Butanone	35.8	2.00	"	40.0	ND	89.5	70-130			
2-Chlorotoluene	3.98	0.500	"	4.00	ND	99.5	70-130			
2-Hexanone	33.8	2.00	"	40.0	ND	84.5	70-130			
4-Chlorotoluene	3.88	0.500	"	4.00	ND	97.0	70-130			
4-Methyl-2-pentanone	36.3	2.00	"	40.0	ND	90.8	70-130			
Acetone	38.0	10.0	"	40.0	ND	95.0	70-130			
Benzene	3.92	0.200	"	4.00	ND	98.0	63-148			
Bromobenzene	3.77	0.500	"	4.00	ND	94.2	70-130			
Bromochloromethane	4.01	0.200	"	4.00	ND	100	70-130			
Bromodichloromethane	3.92	0.200	"	4.00	ND	98.0	70-130			
Bromoform	3.74	0.200	"	4.00	ND	93.5	70-130			
Bromomethane	4.07	2.00	"	4.00	ND	102	70-130			
Carbon disulfide	4.22	0.500	"	4.00	ND	106	70-130			
Carbon tetrachloride	4.26	0.200	"	4.00	ND	106	70-130			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4H26018: Prepared 08/30/04 Using EPA 5030B										
Matrix Spike (4H26018-MS1)					**Source: B4H0535-01**					
Chlorobenzene	3.88	0.200	ug/l	4.00	ND	97.0	80-128			
Chloroethane	4.14	1.00	"	4.00	ND	104	70-130			
Chloroform	3.72	0.200	"	4.00	ND	93.0	70-130			
Chloromethane	3.75	1.00	"	4.00	ND	93.8	70-130			
cis-1,2-Dichloroethene	3.96	0.200	"	4.00	ND	99.0	70-130			
cis-1,3-Dichloropropene	3.66	0.200	"	4.00	ND	91.5	70-130			
Dibromochloromethane	3.81	0.200	"	4.00	ND	95.2	70-130			
Dibromomethane	3.84	0.200	"	4.00	ND	96.0	70-130			
Dichlorodifluoromethane	4.10	0.500	"	4.00	ND	102	70-130			
Ethylbenzene	3.95	0.200	"	4.00	ND	98.8	70-130			
Hexachlorobutadiene	3.82	0.500	"	4.00	ND	95.5	70-130			
Isopropylbenzene	4.05	0.500	"	4.00	ND	101	70-130			
m,p-Xylene	7.87	0.500	"	8.00	ND	98.4	70-130			
Methyl tert-butyl ether	3.66	1.00	"	4.00	ND	91.5	70-130			
Methylene chloride	3.77	2.00	"	4.00	ND	94.2	70-130			
n-Butylbenzene	3.89	0.200	"	4.00	ND	97.2	70-130			
n-Propylbenzene	3.98	0.500	"	4.00	ND	99.5	70-130			
Naphthalene	3.21	0.500	"	4.00	ND	80.2	70-130			
o-Xylene	3.89	0.250	"	4.00	ND	97.2	70-130			
p-Isopropyltoluene	4.02	0.200	"	4.00	ND	100	70-130			
sec-Butylbenzene	4.08	0.200	"	4.00	ND	102	70-130			
Styrene	3.93	0.500	"	4.00	ND	98.2	70-130			
tert-Butylbenzene	3.95	0.500	"	4.00	ND	98.8	70-130			
Tetrachloroethene	4.01	0.200	"	4.00	ND	100	70-130			
Toluene	3.92	0.200	"	4.00	ND	98.0	72-127			
trans-1,2-Dichloroethene	4.04	0.200	"	4.00	ND	101	70-130			
trans-1,3-Dichloropropene	3.80	0.200	"	4.00	ND	95.0	70-130			
Trichloroethene	3.98	0.200	"	4.00	ND	99.5	80-126			
Trichlorofluoromethane	4.30	0.500	"	4.00	ND	108	70-130			
Vinyl chloride	3.91	0.200	"	4.00	ND	97.8	70-130			
Surrogate: 1,2-DCA-d4	*4.09*		"	*4.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*4.01*		"	*4.00*		*100*	*70-130*			
Surrogate: 4-BFB	*3.93*		"	*4.00*		*98.2*	*70-130*			

www.ncalabs.com

Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane 11922 E. 1st Avenue, Spokane Valley, WA 99206-5302
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

Golder Associates Inc.	Project: Landsburg Mine	
18300 NE Union Hill Rd, Suite 200	Project Number: 923-1000.002	**Reported:**
Redmond, WA/USA 98052-3333	Project Manager: Gary Zimmerman	09/09/04 16:17

Notes and Definitions

X	See case narrative.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference