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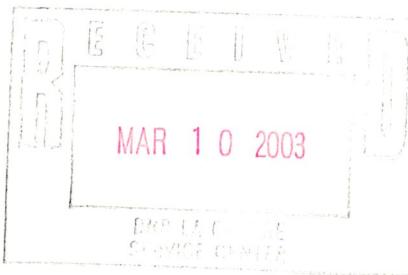
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March 7, 2003

ENSR Project No.: 09413-114



Mr. Dave Carper  
Wisconsin Department of Natural Resources  
3550 Morrow Coulee Road, Room 104  
LaCrosse, Wisconsin 54601

**Re: Semi-Annual Report For the Former Town of Onalaska Landfill,  
Onalaska, Wisconsin**

Dear Mr. Carper:

ENSR is pleased to submit this first semi-annual report for the activities completed at the Former Town of Onalaska Landfill. These activities were completed in accordance with ENSR proposal dated July 30, 2002 (Proposal) and includes natural attenuation (NA) monitoring and operation and maintenance (O&M) of the groundwater extraction and treatment system (system).

This report is inclusive of site activities conducted by ENSR during this reporting period (December 1, 2003 through February 21, 2003).

In summary, ENSR performed the required NA monitoring and O&M of the system. The results from the December 2002 sampling event will provide a baseline for the natural attenuation monitoring for the future site. Routine O&M activities occurred on a bi-monthly basis and included monthly "bumping of the system". There were no non-routine or reportable occurrences at this site during this reporting period.

The following paragraphs discuss the activities completed at this site during this reporting period and are discussed in the same order as presented in the Proposal.

### **Completed Work**

#### Task 100: Quality Assurance Plan

No changes to the QAPP were required during this reporting period.

#### Task 200: Site Work Plan/Site Health and Safety Plan

The Proposal details the work items required for this project. The Proposal will constitute the work plan for this site unless otherwise advised.



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ENSR developed a Health and Safety Plan (HASP) to protect its employees while performing on-site activities. A copy of the site specific HASP is kept onsite at all times and one copy remains with the each the WDNR and ENSR Project Managers.

A Health and Safety tailgate meeting was completed on December 11, 2002 with ENSR and WDNR personal. During this meeting, the general health and safety issues for site activities were reviewed.

**Task 300: O&M of the Groundwater Treatment System**

ENSR performed routine O&M activities and followed the Groundwater Treatment Facility Shutdown/Restart Plan, Onalaska Landfill dated December 7, 2001, and the O&M Summary Manual for the Onalaska Treatment System dated May 1997, as prepared by CH2M Hill for the USEPA.

Currently, Bill Wood, the primary operator, indicated that he is onsite approximately 6 hours per month to complete routine O&M activities. A summary of Mr. Wood's activities is presented below.

December 11, 2002. ENSR and WDNR staff meet onsite to review the O&M of the system and to "bump" start the system. Each of the five extraction wells were independently turned on and the pumped water was directed to the clear well prior to being pumped to the 12,000 gallon AST sludge tank for storage. Each well was pumped approximately 2 to 3 minutes.

January 9, 2003. Mr. Wood bumped the system and performed routine maintenance and general housekeeping.

January 30, 2003. Mr. Wood performed routine maintenance and completed a quick inspection on various components of the system.

February 13, 2003. Mr. Wood bumped the system and performed routine maintenance and general housekeeping. To date, approximately 2,000 gallons of groundwater has been pumped from the system since December 11, 2002.

The current monthly schedule for Mr. Wood is to complete the bumping of the system and general housekeeping mid-month and perform routine maintenance and general housekeeping at the end of the month.

During the monthly operation of the groundwater extraction and treatment system, the influent was directed to the clear well then pumped to the sludge AST for storage. No groundwater was discharged to the environment during this reporting period.

The influent/effluent will be sampled prior to being discharged to the environment for the parameters required in the Effluent Limits and Monitoring Requirements for this site. The sample collected immediately prior to discharge will represent the influent concentrations as well as the effluent concentrations of the pumped groundwater.

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Discharge to the effluent will occur as needed. It is estimated that effluent will be discharged once a year, around October 15. The influent/effluent will be collected as a grab sample and tested prior to discharge to ensure effluent limitations are not exceeded prior to discharge. Analytical results will be submitted to the Department's Project Manager annually (with the Annual Report) on ASCII 3 Y2 inch IBM (MSDOS) formatted diskettes in a data format supplied by the WDNR.

ENSR procured items needed to keep the groundwater collection and treatment system in operating condition to allow start-up and operation of the system should environmental conditions warrant it. These items included (but not limited to):

- Housekeeping
- Propane
- Electricity
- Sewage removal
- Telephone service
- Miscellaneous supplies

#### Task 400: Groundwater Natural Attenuation Monitoring

On December 11 and 12, 2002, twenty-four groundwater monitoring wells were sampled in accordance with the "Natural Attenuation Plan, Onalaska Landfill dated December 4, 2001, and the Sampling and Analysis Plan; Onalaska Municipal Landfill" dated July 1997. Groundwater samples were collected from all scheduled monitoring wells except for the two residential wells. The residential wells were not available for sampling during the December 2002 sampling event and thus will be added to the spring 2003 sampling event. The location of the wells is provided on **Figure 1**.

**Table 1** presents the groundwater-monitoring schedule and **Table 2** lists the required analysis. The December 2002 sampling event included Group 1 and 2 wells. For the December 2002 sampling event, a one-time analysis for both filtered and unfiltered metals was performed for all well sampled.

Before sampling, the depth to groundwater in each well was gauged, and then each well was purged of a minimum of three well volumes of groundwater. During this sampling event one of three purging techniques was employed. Each well was either purged with a dedicated Whaler pump and tubing, a peristaltic pump and disposable tubing or a single use disposable bailer. Groundwater samples were then collected using the respective purging equipment and directly placed in laboratory supplied containers. The samples were stored on ice in a cooler and sent overnight under chain-of-custody to Severn Trent Laboratories in Canton, Ohio. Twenty-seven Whaler pumps were purchased for this project. The Whaler pumps were used as dedicated pumps for a majority of the wells sampled.

The groundwater analytical results are summarized in **Table 3, Summary of Groundwater Analytical Results**. The abbreviated laboratory reports and chain-of-custody forms are included in **Attachment A, Groundwater Laboratory Analytical Reports**. The complete analytical data package is in ENSR's St. Louis Park office and a CD-ROM of all analytical data will be presented to the WDNR in the Annual Report.

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The following is a summary of the analytical results from the December 2002 sampling event.

- The most common VOC contaminants detected were acetone and methylene chloride. Methylene chloride was found in most wells sampled and in the two trip blanks. It is inferred that the methylene chloride is a laboratory artifact. Methylene chloride and Trimethylbenzene (1,2,4 & 1,3,5) were the only VOCs that exceeded the WDNR Enforcement Standards (ES). Methylene chloride exceeded the ES in AW-25 and Trimethylbenze exceeded the ES in MW-4S.
- Of the 37 VOCs analyzed, only 13 VOCs were detected. The following is a list of detected VOCs.

1,2,4-Trimethylbenzene	Naphthalene	1,1-Dichloroethane
1,3,5-Trimethylbenzene	Toluene	1,1-Dichloroethane
Acetone	Benzene	cis-1,2-Dichloroethene
Methylene chloride	Chlorobenzene	
Xylenes (total)	Ethylbenzene	

- Concentrations of metals were detected in wells. For this sampling event, a one time analyses was performed for both filtered (dissolved) and unfiltered (total) metals. Generally, the total metals analysis yielded slightly higher concentration of metals.
- Manganese and iron are the only metals that exceeded the ES. The concentrations of manganese and iron detected at the site are within a general range of background levels of manganese and iron in the shallow groundwater in Wisconsin.
- Preliminary inspection of the natural attenuation parameters indicates that the subsurface conditions are conducive to NA.

The annual monitoring report will have an expanded discussion on the groundwater analytical results and a discussion on the NA environment.

#### Task 500: Semi-Annual Reporting

This report is the first semi-annual report completed under the contract between ENSR and the WDNR. The format for future semi-annual reports may be modified as needed or as directed by the WDNR Project Manager.

#### Task 600: Emergency Response or "Out of Scope" Items

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No Emergency or Out of Scope items occurred during this reporting period. However, as directed by the WDNR, ENSR is preparing a cost estimate to have the monitoring wells and site surveyed. The purpose of the survey will be to generate a site map and to determine monitoring well top of casing elevations. This information will be used in future reports.

Task 700: Annual Reporting

The first annual report will be submitted by July 1, 2003 summarizing the operation and maintenance work performed for the previous year, and providing a summary of groundwater quality trends.

Task 800: Data Validation

ENSR will perform complete data validation on 10% of the groundwater samples. The data validation will include VOC and metals analysis. Results of the data validation will be provided in the annual reports. The first round of data validation will occur on samples collected during the 2003 Annual sampling event scheduled for April/May 2003.

Task 900: Project Management

Project Management activities completed during this reporting period included invoicing, scheduling, contracting, and other project coordinating activities. This task includes labor associated with processing other invoices (e.g. equipment purchases, supplies, and subcontracts) and preparing project invoices in accordance with WDNR requirements.

**Closing**

If you have any questions regarding this report or would like to discuss future activities at the site please call Peter Moore or Steve Nalefski at (952) 924-0117.

Sincerely,

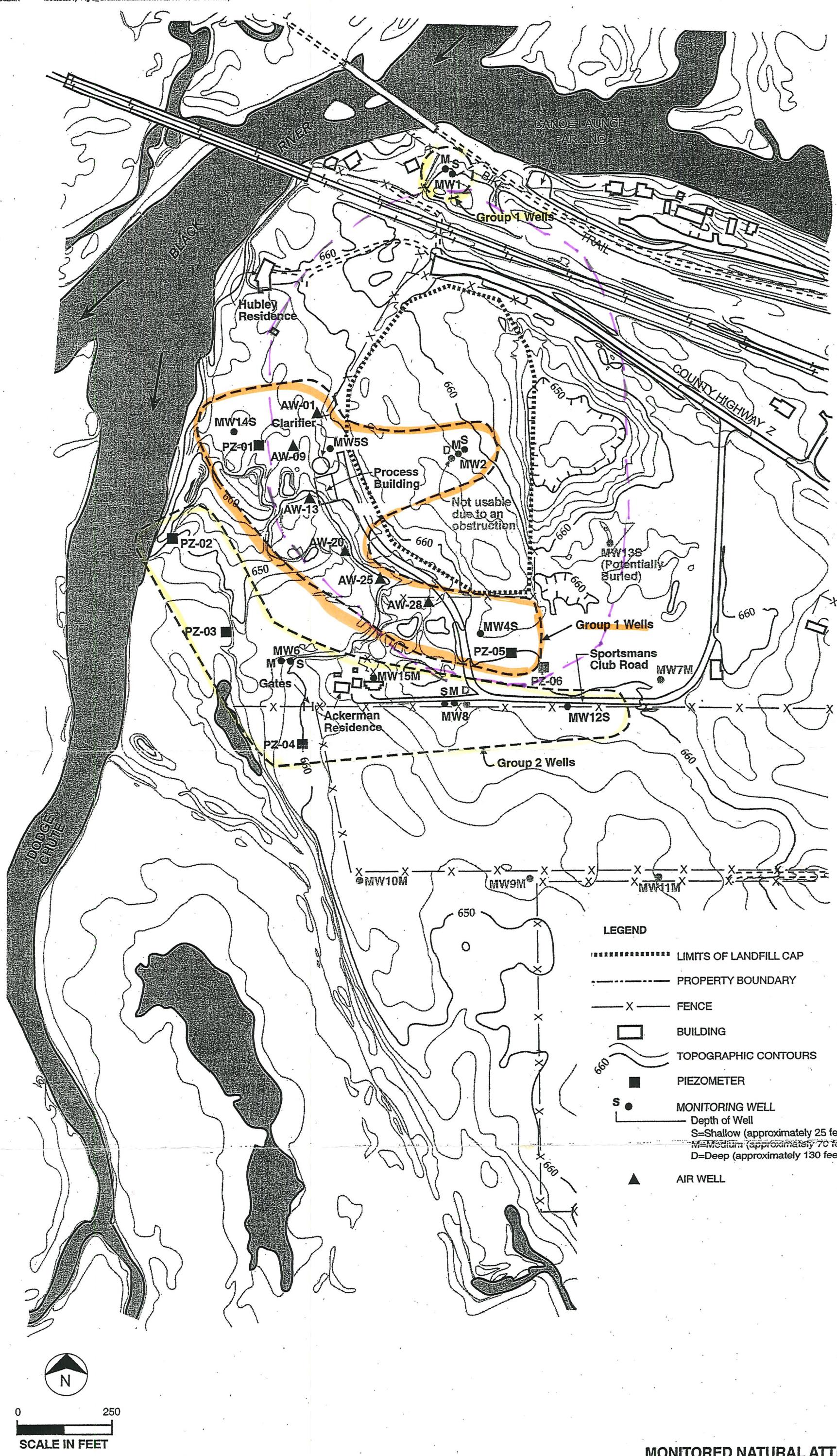


Peter J. Moore, P.G.  
Hydrogeologist



Stephan L. Nalefski, P.G.  
Vice President, Client Service Manager

Attachments:    Tables  
                    Figure  
                    Analytical Results



**FIGURE 3**  
**MONITORED NATURAL ATTENUATION**  
**GROUNDWATER MONITORING NETWORK**  
 ONALASKA LANDFILL

**TABLE 1**  
**Groundwater Monitoring Schedule**  
**Wells Listed by Group**  
**Former Onalaska Landfill**

<b>Group 1 Wells</b>			<b>Group 2 Wells</b>	
MW-1S	MW-5S	AW-9	MW-6S	MW-15-M
MW-1M	MW-14S	AW-13	MW-6M	PZ-2
MW-2S	PZ-1	AW-20	MW-8S	PZ-3
MW-2M	PZ-5	AW-25	MW-8M	PZ-4
MW-4S	AW-1	AW-28	MW-12S	<sup>a</sup>

Notes:

Group 1 Wells (15 wells) will be sampled semi-annually and Group 2 Wells (9 wells) will be sampled annually.

a = Residential wells (2 wells) will be sampled annually for VOCs and metals only.

Source: Table 1 of CH2M Hills' December 4, 2001 Natural Attenuation Plan.

**Table 2**  
**Summary of Analyzed Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

1,1,1-Trichloroethane  
 1,1,2,2-Tetrachloroethane  
 1,1,2-Trichloroethane  
 1,1-Dichloroethane  
 1,1-Dichloroethene  
 1,2,4-Trimethylbenzene  
 1,2-Dichloroethane  
 1,2-Dichloropropane  
 1,3,5-Trimethylbenzene  
 2-Butanone  
 2-Hexanone  
 4-Methyl-2-pentanone  
 Acetone  
 Benzene  
 Bromodichloromethane  
 Bromoform  
 Bromomethane  
 Carbon disulfide  
 Carbon tetrachloride  
 Chlorobenzene  
 Chloroethane  
 Chloroform  
 Chloromethane  
 cis-1,2-Dichloroethene  
 cis-1,3-Dichloropropene  
 Dibromochloromethane  
 Ethylbenzene  
 Methylene chloride  
 Naphthalene  
 Styrene  
 Tetrachloroethene  
 Toluene  
 trans-1,2-Dichloroethene  
 trans-1,3-Dichloropropene  
 Trichloroethene  
 Vinyl chloride  
 Xylenes (total)

**Metals, mg/L**

Arsenic  
 Arsenic-DISS  
 Barium  
 Barium-DISS  
 Cadmium  
 Cadmium-DISS  
 Cobalt  
 Cobalt-DISS  
 Iron  
 Iron-DISS  
 Lead  
 Lead-DISS  
 Manganese  
 Manganese-DISS  
 Mercury  
 Mercury-DISS  
 Vanadium  
 Vanadium-DISS

**Dissolved Gases, ug/L**

Ethane  
 Ethene  
 Methane

**Natural Attenuation  
Parameters, mg/L**

Chloride  
 Nitrate as N  
 Sulfate  
 Total Alkalinity  
 Total Organic Carbon

**Table 3**  
**AW-1**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	25	96	480
1,3,5-Trimethylbenzene	22	96	480
Acetone	6	200	1000
Methylene chloride	3.8	0.5	5
Xylenes (total)	4	1,000	10,000

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.25	0.4	2
Barium-DISS	0.21	0.4	2
Cadmium	0.0032	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0043	0.008	0.04
Cobalt-DISS	0.0045	0.008	0.04
Iron	4.5	0.15	0.3
Iron-DISS	2.9	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	6	0.025	0.05
Manganese-DISS	5.3	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	1500		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	2.1	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	9.1	125	250
Total Alkalinity	290		
Total Organic Carbon	6		

**Table 3**  
**AW-9**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	1.6	96	480
Acetone	2.9	200	1000
Methylene chloride	3.8	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.072	0.4	2
Barium-DISS	0.064	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	0.067	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	0.041	0.025	0.05
Manganese-DISS	0.04	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	260		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	3.1	125	250
Nitrate as N	0.42	2	10
Sulfate	3.5	125	250
Total Alkalinity	220		
Total Organic Carbon	1		

**Table 3**  
**AW-13**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

Volatile Organic Compounds (VOC), ug/L	12/12/02	Duplicate 12/12/2002	PAL	ES
1,2,4-Trimethylbenzene	2	1.8	96	480
1,3,5-Trimethylbenzene	< 0.4	1.1	96	480
Acetone	2.5	5.9	200	1000
Methylene chloride	3.6	3.6	0.5	5

**Metals, mg/L**

Arsenic	0.0033	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	< 0.0021	0.005	0.05
Barium	0.28	0.27	0.4	2
Barium-DISS	0.22	0.23	0.4	2
Cadmium	< 0.00028	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	< 0.00028	0.0005	0.005
Cobalt	0.0043	0.0044	0.008	0.04
Cobalt-DISS	0.0045	0.0043	0.008	0.04
Iron	<b>4.7</b>	<b>5.1</b>	0.15	0.3
Iron-DISS	< 0.042	0.062	0.15	0.3
Lead	< 0.0016	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	< 0.0016	0.0015	0.015
Manganese	<b>24.3</b>	<b>23.7</b>	0.025	0.05
Manganese-DISS	<b>21.1</b>	<b>22.1</b>	0.025	0.05
Mercury	< 0.000087	< 0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 1.5	< 0.6		
Ethene	< 1.4	< 0.58		
Methane	300	340		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	2.6	2.3	125	250
Nitrate as N	0.2	0.28	2	10
Sulfate	3.1	2.7	125	250
Total Alkalinity	550	550		
Total Organic Carbon	5	4		

**Table 3**  
**AW-20**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	22	96	480
1,3,5-Trimethylbenzene	17	96	480
Acetone	3.6	200	1000
Methylene chloride	3.4	0.5	5
Naphthalene	0.64	8	40
Xylenes (total)	1.1	1,000	10,000

**Metals, mg/L**

Arsenic	0.0088	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.29	0.4	2
Barium-DISS	0.16	0.4	2
Cadmium	0.00037	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.011	0.008	0.04
Cobalt-DISS	0.011	0.008	0.04
Iron	<b>23.3</b>	0.15	0.3
Iron-DISS	<b>3.3</b>	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>17</b>	0.025	0.05
Manganese-DISS	<b>14.1</b>	0.025	0.05
Mercury	0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	1600		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	1.8	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	1.1	125	250
Total Alkalinity	600		
Total Organic Carbon	15		

**Table 3**  
**AW-25**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	240	96	480
1,3,5-Trimethylbenzene	38	96	480
Methylene chloride	<b>5.1</b>	0.5	5
Naphthalene	4.5	8	40
Xylenes (total)	5.6	1,000	10,000

**Metals, mg/L**

Arsenic	0.0034	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.43	0.4	2
Barium-DISS	0.3	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0049	0.008	0.04
Cobalt-DISS	0.0044	0.008	0.04
Iron	<b>13.8</b>	0.15	0.3
Iron-DISS	<b>1.8</b>	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>6.6</b>	0.025	0.05
Manganese-DISS	<b>5.5</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	570		

**Natural Attenuation**

**Parameters, mg/L**

Chloride		125	250
Nitrate as N	0.97	2	10
Sulfate	4.4	125	250
Total Alkalinity	520		
Total Organic Carbon	7		

**Table 3**  
**AW-28**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	45	96	480
1,3,5-Trimethylbenzene	21	96	480
Acetone	5.4	200	1000
Methylene chloride	4.6	0.5	5
Toluene	0.83	200	1,000
Xylenes (total)	2.9	1,000	10,000

**Metals, mg/L**

Arsenic	0.0026	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.26	0.4	2
Barium-DISS	0.21	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0064	0.008	0.04
Cobalt-DISS	0.0063	0.008	0.04
Iron	<b>9.8</b>	0.15	0.3
Iron-DISS	<b>2.3</b>	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>5</b>	0.025	0.05
Manganese-DISS	<b>4.6</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.000096	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	1200		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	10.8	125	250
Nitrate as N	1.1	2	10
Sulfate	1.4	125	250
Total Alkalinity	370		
Total Organic Carbon	9		

**Table 3**  
**MW-4S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

Volatile Organic Compounds (VOC), ug/L	12/12/02	Duplicate 12/12/2002	PAL	ES
1,2,4-Trimethylbenzene	540	570	96	480
1,3,5-Trimethylbenzene	120	130	96	480
Ethylbenzene	10	< 10	140	700
Xylenes (total)	29	27	1,000	10,000

Metals, mg/L				
Arsenic	0.0089	0.009	0.005	0.05
Arsenic-DISS	0.0028	0.0024	0.005	0.05
Barium	0.3	0.32	0.4	2
Barium-DISS	0.23	0.25	0.4	2
Cadmium	< 0.00028	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.00029	0.0005	0.005
Cobalt	< 0.00074	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.00095	0.008	0.04
Iron	16.9	17.2	0.15	0.3
Iron-DISS	2.9	3.9	0.15	0.3
Lead	< 0.0016	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	< 0.0016	0.0015	0.015
Manganese	2.1	2.1	0.025	0.05
Manganese-DISS	2.1	2	0.025	0.05
Mercury	< 0.000087	< 0.000087	0.0002	0.002
Mercury-DISS	0.000088	0.00018	0.0002	0.002
Vanadium	< 0.00067	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	< 0.00067	0.006	0.03

Dissolved Gases, ug/L				
Ethane	< 3	< 3		
Ethene	< 2.9	< 2.9		
Methane	1200	750		

Natural Attenuation Parameters, mg/L				
Chloride	13.5	13.5	125	250
Nitrate as N	< 0.0076	< 0.0076	2	10
Sulfate	0.98	0.92	125	250
Total Alkalinity	280	280		
Total Organic Carbon	5	6		

**Table 3**  
**MW-5S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	210	96	480
1,3,5-Trimethylbenzene	47	96	480
Ethylbenzene	6.2	140	700
Methylene chloride	3.9	0.5	5
Naphthalene	6.2	8	40
Xylenes (total)	12	1,000	10,000

**Metals, mg/L**

Arsenic	0.0098	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.18	0.4	2
Barium-DISS	0.15	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0025	0.008	0.04
Cobalt-DISS	0.0026	0.008	0.04
Iron	<b>10.2</b>	0.15	0.3
Iron-DISS	<b>2.2</b>	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>1.6</b>	0.025	0.05
Manganese-DISS	<b>1.6</b>	0.025	0.05
Mercury	0.000088	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	130		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	5.8	125	250
Nitrate as N	0.1	2	10
Sulfate	0.34	125	250
Total Alkalinity	140		
Total Organic Carbon	5		

**Table 3**  
**PZ-1**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
Methylene chloride	3.4	0.5	5

**Metals, mg/L**

Arsenic	0.0029	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.024	0.4	2
Barium-DISS	0.022	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	< 0.042	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>0.19</b>	0.025	0.05
Manganese-DISS	<b>0.18</b>	0.025	0.05
Mercury	0.000091	0.0002	0.002
Mercury-DISS	0.0001	0.0002	0.002
Vanadium	0.0013	0.006	0.03
Vanadium-DISS	0.0011	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	6.6		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	9.4	125	250
Nitrate as N	0.23	2	10
Sulfate	1.6	125	250
Total Alkalinity	120		
Total Organic Carbon	3		

**Table 3**  
**PZ-5**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
Acetone	3	200	1000
Methylene chloride	2.5	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.091	0.4	2
Barium-DISS	0.086	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	0.13	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>0.18</b>	0.025	0.05
Manganese-DISS	<b>0.08</b>	0.025	0.05
Mercury	0.000098	0.0002	0.002
Mercury-DISS	0.00011	0.0002	0.002
Vanadium	0.0011	0.006	0.03
Vanadium-DISS	0.00078	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.6		
Ethene	< 0.58		
Methane	130		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	9.7	125	250
Nitrate as N	0.48	2	10
Sulfate	5.7	125	250
Total Alkalinity	260		
Total Organic Carbon	2		

**Table 3**  
**MW-1S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	3.7	200	1000
Methylene chloride	2.4	0.5	5

**Metals, mg/L**

Arsenic	0.0029	0.005	0.05
Arsenic-DISS	0.003	0.005	0.05
Barium	0.034	0.4	2
Barium-DISS	0.027	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	0.00032	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	0.00079	0.008	0.04
Iron	0.15	0.15	0.3
Iron-DISS	0.053	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>0.86</b>	0.025	0.05
Manganese-DISS	<b>0.34</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	< 0.000087	0.0002	0.002
Vanadium	0.00088	0.006	0.03
Vanadium-DISS	0.00099	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	18		

**Natural Attenuation  
Parameters, mg/L**

Chloride	5.5	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	19.7	125	250
Total Alkalinity	120		
Total Organic Carbon	4		

**Table 3**  
**MW-1M**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	3.4	200	1000
Methylene chloride	2.4	0.5	5

**Metals, mg/L**

Arsenic	0.014	0.005	0.05
Arsenic-DISS	0.0024	0.005	0.05
Barium	0.32	0.4	2
Barium-DISS	0.22	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	0.00029	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	<b>8.7</b>	0.15	0.3
Iron-DISS	0.1	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>1.7</b>	0.025	0.05
Manganese-DISS	<b>1.5</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.00011	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	9.9		

**Natural Attenuation  
Parameters, mg/L**

Chloride	7.8	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	5.2	125	250
Total Alkalinity	76		
Total Organic Carbon	4		

**Table 3**  
**MW-2S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	3.8	200	1000
Benzene	0.91	0.5	5
Chlorobenzene	19		
Methylene chloride	2.8	0.5	5

**Metals, mg/L**

Arsenic	0.012	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.17	0.4	2
Barium-DISS	0.13	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.008	0.008	0.04
Cobalt-DISS	0.0014	0.008	0.04
Iron	29.5	0.15	0.3
Iron-DISS	14	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	1.9	0.025	0.05
Manganese-DISS	1.9	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.0001	0.0002	0.002
Vanadium	0.00084	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 1.5		
Ethene	< 1.4		
Methane	520		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	26.1	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	< 0.11	125	250
Total Alkalinity	180		
Total Organic Carbon	6		

**Table 3**  
**MW-2M**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	5.5	200	1000
Methylene chloride	3.1	0.5	5

**Metals, mg/L**

Arsenic	0.019	0.005	0.05
Arsenic-DISS	0.0083	0.005	0.05
Barium	0.37	0.4	2
Barium-DISS	0.28	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	5	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	0.41	0.025	0.05
Manganese-DISS	0.38	0.025	0.05
Mercury	0.000092	0.0002	0.002
Mercury-DISS	0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	22		

**Natural Attenuation  
Parameters, mg/L**

Chloride	4.8	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	0.13	125	250
Total Alkalinity	100		
Total Organic Carbon	4		

**Table 3**  
**MW-6S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,1-Dichloroethane	0.55	85	850
Acetone	2.6	200	1000
Methylene chloride	2.2	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.17	0.4	2
Barium-DISS	0.13	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0022	0.008	0.04
Cobalt-DISS	0.0013	0.008	0.04
Iron	0.065	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>2.7</b>	0.025	0.05
Manganese-DISS	<b>1.6</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.00009	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	2.9		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	6.7	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	4	125	250
Total Alkalinity	160		
Total Organic Carbon	6		

**Table 3**  
**MW-6M**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
Acetone	2.1	200	1000
Methylene chloride	2.1	0.5	5

**Metals, mg/L**

Arsenic	0.0024	0.005	0.05
Arsenic-DISS	0.0034	0.005	0.05
Barium	0.75	0.4	2
Barium-DISS	0.71	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	0.00078	0.008	0.04
Iron	< 0.042	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	1.7	0.025	0.05
Manganese-DISS	1.6	0.025	0.05
Mercury	0.000097	0.0002	0.002
Mercury-DISS	0.00009	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	1.1		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	6	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	0.42	125	250
Total Alkalinity	100		
Total Organic Carbon	4		

**Table 3**  
**MW-8S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	2.2	200	1000
Methylene chloride	2.6	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.088	0.4	2
Barium-DISS	0.081	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	0.052	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>0.59</b>	0.025	0.05
Manganese-DISS	<b>0.5</b>	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.000087	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	0.58		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	9.5	125	250
Nitrate as N	1.5	2	10
Sulfate	12.3	125	250
Total Alkalinity	190		
Total Organic Carbon	0.9		

**Table 3**  
**MW-8M**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	2.9	200	1000
Methylene chloride	3.2	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	0.0024	0.005	0.05
Barium	0.68	0.4	2
Barium-DISS	0.66	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	< 0.042	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	2.7	0.025	0.05
Manganese-DISS	2.5	0.025	0.05
Mercury	0.00009	0.0002	0.002
Mercury-DISS	0.00009	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	2		

**Natural Attenuation  
Parameters, mg/L**

Chloride	2.6	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	5.7	125	250
Total Alkalinity	220		
Total Organic Carbon	2		

**Table 3**  
**MW-12S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	3	200	1000
Methylene chloride	2.7	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.021	0.4	2
Barium-DISS	0.022	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	< 0.00074	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	< 0.042	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	0.0034	0.0015	0.015
Lead-DISS	0.014	0.0015	0.015
Manganese	0.0023	0.025	0.05
Manganese-DISS	< 0.00068	0.025	0.05
Mercury	< 0.000087	0.0002	0.002
Mercury-DISS	0.00013	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	0.0011	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	< 0.39		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	24.3	125	250
Nitrate as N	1.6	2	10
Sulfate	7.2	125	250
Total Alkalinity	170		
Total Organic Carbon	1		

**Table 3**  
**MW-14S**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,2,4-Trimethylbenzene	1.7	96	480
1,3,5-Trimethylbenzene	0.64	96	480
Acetone	4.3	200	1000
Methylene chloride	2.1	0.5	5
Naphthalene	5	8	40
Xylenes (total)	1.4	1,000	10,000

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.18	0.4	2
Barium-DISS	0.15	0.4	2
Cadmium	0.00045	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0052	0.008	0.04
Cobalt-DISS	0.0052	0.008	0.04
Iron	<b>11.6</b>	0.15	0.3
Iron-DISS	<b>4.9</b>	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>3.7</b>	0.025	0.05
Manganese-DISS	<b>3.4</b>	0.025	0.05
Mercury	0.000088	0.0002	0.002
Mercury-DISS	0.000095	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 3		
Ethene	< 2.9		
Methane	450		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	5	125	250
Nitrate as N	0.01	2	10
Sulfate	3	125	250
Total Alkalinity	210		
Total Organic Carbon	14		

**Table 3**  
**MW-15M**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
1,1-Dichloroethane	1	85	850
cis-1,2-Dichloroethene	0.56	7	70
Methylene chloride	3	0.5	5

**Metals, mg/L**

Arsenic	0.0054	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.86	0.4	2
Barium-DISS	0.84	0.4	2
Cadmium	0.00031	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.0012	0.008	0.04
Cobalt-DISS	0.00082	0.008	0.04
Iron	1.1	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	0.0049	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	3.6	0.025	0.05
Manganese-DISS	3.6	0.025	0.05
Mercury	0.000092	0.0002	0.002
Mercury-DISS	0.000095	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	12		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	5.2	125	250
Nitrate as N	0.03	2	10
Sulfate	2.4	125	250
Total Alkalinity	240		
Total Organic Carbon	3		

**Table 3**  
**PZ-02**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	2.6	200	1000
Methylene chloride	2.4	0.5	5

**Metals, mg/L**

Arsenic	<b>0.056</b>	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	<b>0.66</b>	0.4	2
Barium-DISS	0.037	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	<b>0.011</b>	0.008	0.04
Cobalt-DISS	0.0069	0.008	0.04
Iron	<b>98.8</b>	0.15	0.3
Iron-DISS	<b>0.43</b>	0.15	0.3
Lead	0.0062	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>5.2</b>	0.025	0.05
Manganese-DISS	<b>4.2</b>	0.025	0.05
Mercury	0.00013	0.0002	0.002
Mercury-DISS	0.000092	0.0002	0.002
Vanadium	<b>0.026</b>	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.6		
Ethene	< 0.58		
Methane	98		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	8.6	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	2.4	125	250
Total Alkalinity	160		
Total Organic Carbon	15		

**Table 3**  
**PZ-03**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/11/02	PAL	ES
Acetone	3.1	200	1000
Methylene chloride	2.5	0.5	5

**Metals, mg/L**

Arsenic	0.0038	0.005	0.05
Arsenic-DISS	0.0023	0.005	0.05
Barium	0.097	0.4	2
Barium-DISS	0.069	0.4	2
Cadmium	0.00099	0.0005	0.005
Cadmium-DISS	0.00074	0.0005	0.005
Cobalt	0.0018	0.008	0.04
Cobalt-DISS	0.0019	0.008	0.04
Iron	<b>1.2</b>	0.15	0.3
Iron-DISS	0.1	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	< 0.0016	0.0015	0.015
Manganese	<b>2.7</b>	0.025	0.05
Manganese-DISS	<b>2.5</b>	0.025	0.05
Mercury	0.00012	0.0002	0.002
Mercury-DISS	0.000096	0.0002	0.002
Vanadium	0.0028	0.006	0.03
Vanadium-DISS	0.0015	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	2.4		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	6.3	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	1.2	125	250
Total Alkalinity	160		
Total Organic Carbon			

**Table 3**  
**PZ-4**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

**Volatile Organic  
Compounds (VOC), ug/L**

	12/12/02	PAL	ES
Acetone	3.5	200	1000
Methylene chloride	2.6	0.5	5

**Metals, mg/L**

Arsenic	< 0.0021	0.005	0.05
Arsenic-DISS	< 0.0021	0.005	0.05
Barium	0.12	0.4	2
Barium-DISS	0.063	0.4	2
Cadmium	< 0.00028	0.0005	0.005
Cadmium-DISS	< 0.00028	0.0005	0.005
Cobalt	0.001	0.008	0.04
Cobalt-DISS	< 0.00074	0.008	0.04
Iron	< 0.042	0.15	0.3
Iron-DISS	< 0.042	0.15	0.3
Lead	< 0.0016	0.0015	0.015
Lead-DISS	0.0016	0.0015	0.015
Manganese	<b>2.6</b>	0.025	0.05
Manganese-DISS	<b>1.3</b>	0.025	0.05
Mercury	0.000088	0.0002	0.002
Mercury-DISS	0.00009	0.0002	0.002
Vanadium	< 0.00067	0.006	0.03
Vanadium-DISS	< 0.00067	0.006	0.03

**Dissolved Gases, ug/L**

Ethane	< 0.3		
Ethene	< 0.29		
Methane	< 0.39		

**Natural Attenuation**

**Parameters, mg/L**

Chloride	5.5	125	250
Nitrate as N	< 0.0076	2	10
Sulfate	4.2	125	250
Total Alkalinity	130		
Total Organic Carbon	5		

**Table 3**  
**TRIP1**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

<b>Volatile Organic Compounds (VOC), ug/L</b>	<b>12/12/02</b>	<b>PAL</b>	<b>ES</b>
Methylene chloride	1.9	0.5	5

**Table 3**  
**TRIP2**  
**Summary of Detected Compounds**  
**Former Onalaska Landfill**

<b>Volatile Organic Compounds (VOC), ug/L</b>	<b>12/12/02</b>	<b>PAL</b>	<b>ES</b>
Methylene chloride	2	0.5	5

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE      2		
Lot #: A2L130219	Date Reported: 2/25/03			
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-1M**

Sample #: 001    Date Sampled: 12/11/02 13:10    Date Received: 12/13/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>2.4</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.4 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA  PARAMETER	PAGE 3  Date Reported: 2/25/03  REPORTING  RESULT	ANALYTICAL  LIMIT UNITS  METHOD
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Client Sample ID: MW-1M

Sample #: 001 Date Sampled: 12/11/02 13:10 Date Received: 12/13/02 Matrix: WATER

Inorganic Analysis	Reviewed			
Alkalinity	76	5.0	mg/L	MCAWW 310.1
Chloride	7.8	1.0	mg/L	MCAWW 300.0A
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A
Sulfate	5.2	1.0	mg/L	MCAWW 300.0A
Total Organic Carbon	4	1	mg/L	MCAWW 415.1

Client Sample ID: MW-1S

Sample #: 002 Date Sampled: 12/11/02 13:35 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals	Reviewed			
Arsenic	0.0029 B	0.010	mg/L	SW846 6010B
Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	ND	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	0.00088 B	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	0.0030 B	0.010	mg/L SW846 6010B
Cadmium	Dissolved	0.00032 B	0.0020	mg/L SW846 6010B
Cobalt	Dissolved	0.00079 B	0.0070	mg/L SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L SW846 6010B
Vanadium	Dissolved	0.00099 B	0.0070	mg/L SW846 6010B

Inductively Coupled Plasma (ICP) Metals	Reviewed			
Barium	0.034 B	0.20	mg/L	SW846 6010B
Iron	0.15	0.10	mg/L	SW846 6010B
Manganese	0.86	0.015	mg/L	SW846 6010B
Barium	Dissolved	0.027 B	0.20	mg/L SW846 6010B
Iron	Dissolved	0.053 B	0.10	mg/L SW846 6010B
Manganese	Dissolved	0.34	0.015	mg/L SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)	Reviewed			
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved	ND	0.00020	mg/L SW846 7470A

B Estimated result. Result is less than RL.

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 4 <b>Date Reported:</b> 2/25/03			
	REPORTING	ANALYTICAL			
	PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: MW-1S**

Sample #: 002 Date Sampled: 12/11/02 13:35 Date Received: 12/13/02 Matrix: WATER

<b>Dissolved Gases in Water</b>					Reviewed
Ethane	ND	0.50	ug/L	RSK SOP-175	
Ethene	ND	0.50	ug/L	RSK SOP-175	
<b>Methane</b>	<b>18</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>	

<b>Volatile Organics by GC/MS</b>					Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>2.4</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.7 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u>	PAGE 5 Date Reported: 2/25/03 ANALYTICAL <u>METHOD</u>
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**Client Sample ID: MW-1S**  
 Sample #: 002    Date Sampled: 12/11/02 13:35    Date Received: 12/13/02    Matrix: WATER

Volatile Organics by GC/MS	Reviewed
cis-1,3-Dichloropropene	ND      1.0      ug/L      SW846 8260B
trans-1,3-Dichloropropene	ND      1.0      ug/L      SW846 8260B
2-Hexanone	ND      10      ug/L      SW846 8260B
4-Methyl-2-pentanone	ND      10      ug/L      SW846 8260B
Styrene	ND      1.0      ug/L      SW846 8260B
1,1,2,2-Tetrachloroethane	ND      1.0      ug/L      SW846 8260B
1,1,2-Trichloroethane	ND      1.0      ug/L      SW846 8260B

J Estimated result. Result is less than RL.

Inorganic Analysis	Reviewed
Alkalinity	120      5.0      mg/L      MCAWW 310.1
Chloride	5.5      1.0      mg/L      MCAWW 300.0A
Nitrate as N	ND      0.10      mg/L      MCAWW 300.0A
Sulfate	19.7      1.0      mg/L      MCAWW 300.0A
Total Organic Carbon	4      1      mg/L      MCAWW 415.1

**Client Sample ID: PZ-02**  
 Sample #: 003    Date Sampled: 12/11/02 15:35    Date Received: 12/13/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals	Reviewed
Arsenic	0.056      0.010      mg/L      SW846 6010B
Cadmium	ND      0.0020      mg/L      SW846 6010B
Cobalt	0.011      0.0070      mg/L      SW846 6010B
Lead	0.0062      0.0030      mg/L      SW846 6010B
Vanadium	0.026      0.0070      mg/L      SW846 6010B
Arsenic	Dissolved ND      0.010      mg/L      SW846 6010B
Cadmium	Dissolved ND      0.0020      mg/L      SW846 6010B
Cobalt	Dissolved 0.0069 B      0.0070      mg/L      SW846 6010B
Lead	Dissolved ND      0.0030      mg/L      SW846 6010B
Vanadium	Dissolved ND      0.0070      mg/L      SW846 6010B

Inductively Coupled Plasma (ICP) Metals	Reviewed
Barium	0.66      0.20      mg/L      SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING <hr/> PARAMETER                    RESULT                    LIMIT                    UNITS                    METHOD	PAGE 6 Date Reported: 2/25/03
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Client Sample ID: PZ-02  
 Sample #: 003      Date Sampled: 12/11/02 15:35      Date Received: 12/13/02      Matrix: WATER

Iron	98.8	0.10	mg/L	SW846 6010B
Manganese	5.2	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.037	B 0.20	mg/L	SW846 6010B
Iron	Dissolved 0.43	0.10	mg/L	SW846 6010B
Manganese	Dissolved 4.2	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
Mercury	0.00013	B 0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.000092	B 0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				Reviewed
Ethane	ND	1.0	ug/L	RSK SOP-175
Ethene	ND	1.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>98</b>	<b>1.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Volatile Organics by GC/MS				Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>2.4</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219  Project Number: ONALASKA  <u>PARAMETER</u>	ENSR Consulting & Engineering ONALASKA LANDFILL REPORTING <u>RESULT</u>	PAGE 7 Date Reported: 2/25/03 ANALYTICAL <u>LIMIT</u> <u>UNITS</u> <u>METHOD</u>
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**Client Sample ID: PZ-02**

Sample #: 003      Date Sampled: 12/11/02 15:35      Date Received: 12/13/02      Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>2.6 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	160	5.0	mg/L	MCAWW 310.1	
Chloride	8.6	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	2.4	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	15	1	mg/L	MCAWW 415.1	

**Client Sample ID: PZ-03**

Sample #: 004      Date Sampled: 12/11/02 16:10      Date Received: 12/13/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	0.0038 B	0.010	mg/L	SW846 6010B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> <b>ONALASKA LANDFILL</b> Project Number: ONALASKA	<b>PAGE</b> 8 <b>Date Reported:</b> 2/25/03
	<b>REPORTING</b> <u>PARAMETER</u> <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u> <u>ANALYTICAL METHOD</u>	

**Client Sample ID: PZ-03**

Sample #: 004 Date Sampled: 12/11/02 16:10 Date Received: 12/13/02 Matrix: WATER

Cadmium	0.00099	B	0.0020	mg/L	SW846 6010B	
Cobalt	0.0018	B	0.0070	mg/L	SW846 6010B	
Lead	ND		0.0030	mg/L	SW846 6010B	
Vanadium	0.0028	B	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	0.0023	B	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	0.00074	B	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0019	B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND		0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	0.0015	B	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals						
Barium	0.097	B	0.20	mg/L	SW846 6010B	
Iron	1.2		0.10	mg/L	SW846 6010B	
Manganese	2.7		0.015	mg/L	SW846 6010B	
Barium	Dissolved	0.069	B	0.20	mg/L	SW846 6010B
Iron	Dissolved	0.10		0.10	mg/L	SW846 6010B
Manganese	Dissolved	2.5		0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)						
Mercury	0.00012	B	0.00020	mg/L	Reviewed SW846 7470A	
Mercury	Dissolved	0.000096	B	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water					
Ethane	ND		0.50	ug/L	Reviewed RSK SOP-175
Ethene	ND		0.50	ug/L	RSK SOP-175
Methane	2.4		0.50	ug/L	RSK SOP-175

Volatile Organics by GC/MS					
Benzene	ND		1.0	ug/L	Reviewed SW846 8260B
1,1-Dichloroethane	ND		1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND		0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND		0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND		1.0	ug/L	SW846 8260B
Ethylbenzene	ND		1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 9 Date Reported: 2/25/03		
	REPORTING	ANALYTICAL		
PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: PZ-03**

Sample #: 004 Date Sampled: 12/11/02 16:10 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
<b>Methylene chloride</b>	2.5	1.0	ug/L	SW846 8260B	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.1 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis	Reviewed
<b>Alkalinity</b>	160 5.0 mg/L MCAWW 310.1

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE    10		
Lot #: A2L130219	Date Reported: 2/25/03			
	REPORTING	ANALYTICAL		
PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: PZ-03**

Sample #: 004      Date Sampled: 12/11/02 16:10      Date Received: 12/13/02      Matrix: WATER

Chloride				Reviewed
Chloride	6.3	1.0	mg/L	MCAWW 300.0A
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A
Sulfate	1.2	1.0	mg/L	MCAWW 300.0A

**Client Sample ID: MW-2M**

Sample #: 005      Date Sampled: 12/11/02 17:05      Date Received: 12/13/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	0.019	0.010	mg/L	SW846 6010B
Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	ND	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved 0.0083 B	0.010	mg/L	SW846 6010B
Cadmium	Dissolved ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved ND	0.0070	mg/L	SW846 6010B
Lead	Dissolved ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals				Reviewed
Barium	0.37	0.20	mg/L	SW846 6010B
Iron	5.0	0.10	mg/L	SW846 6010B
Manganese	0.41	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.28	0.20	mg/L	SW846 6010B
Iron	Dissolved ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved 0.38	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
Mercury	0.000092 B	0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.000087 B	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				Reviewed
Ethane	ND	0.50	ug/L	RSK SOP-175

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE    11  Date Reported: 2/25/03
Lot #: A2L130219	REPORTING	
	PARAMETER	ANALYTICAL
	RESULT	LIMIT    UNITS    METHOD

**Client Sample ID: MW-2M**

Sample #: 005    Date Sampled: 12/11/02 17:05    Date Received: 12/13/02    Matrix: WATER

Dissolved Gases in Water

Ethene	ND	0.50	ug/L	RSK SOP-175	Reviewed
<b>Methane</b>	<b>22</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>	

Volatile Organics by GC/MS

Benzene	ND	1.0	ug/L	SW846 8260B	Reviewed
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>3.1</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>5.5 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219  Project Number: ONALASKA LANDFILL	<b>ENSR Consulting &amp; Engineering</b>  REPORTING	PAGE 12  Date Reported: 2/25/03  ANALYTICAL METHOD		
<u>PARAMETER</u>		<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>

**Client Sample ID: MW-2M**

Sample #: 005      Date Sampled: 12/11/02 17:05    Date Received: 12/13/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	100	5.0	mg/L	MCAWW 310.1	
Chloride	4.8	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	0.13 B	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	4	1	mg/L	MCAWW 415.1	

B Estimated result. Result is less than RL.

**Client Sample ID: MW-2S**

Sample #: 006      Date Sampled: 12/11/02 17:20    Date Received: 12/13/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	0.012	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	0.0080	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	0.00084 B	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0014 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					Reviewed
Barium	0.17 B	0.20	mg/L	SW846 6010B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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**ENSR Consulting & Engineering** PAGE 13  
**ONALASKA LANDFILL**  
**Project Number: ONALASKA**  
**REPORTING** Date Reported: 2/25/03  
**ANALYTICAL**  
PARAMETER RESULT LIMIT UNITS METHOD

**Client Sample ID: MW-2S**

Sample #: 006 Date Sampled: 12/11/02 17:20 Date Received: 12/13/02 Matrix: WATER

Iron	29.5	0.10	mg/L	SW846 6010B
Manganese	1.9	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.13	B 0.20	mg/L	SW846 6010B
Iron	Dissolved 14.0	0.10	mg/L	SW846 6010B
Manganese	Dissolved 1.9	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
Mercury	ND	0.00020	mg/L	SW846 7470A	
Mercury	Dissolved 0.00010	B 0.00020	mg/L	SW846 7470A	

B Estimated result. Result is less than RL.

Dissolved Gases in Water					Reviewed
Ethane	ND	2.5	ug/L	RSK SOP-175	
Ethene	ND	2.5	ug/L	RSK SOP-175	
Methane	520	2.5	ug/L	RSK SOP-175	

Volatile Organics by GC/MS					Reviewed
Benzene	0.91 J	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
Methylene chloride	2.8	1.0	ug/L	SW846 8260B	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 14		
		<b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-2S**

Sample #: 006 Date Sampled: 12/11/02 17:20 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.8 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
<b>Chlorobenzene</b>	<b>19</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
<b>Alkalinity</b>	<b>180</b>	<b>5.0</b>	<b>mg/L</b>	<b>MCAWW 310.1</b>	
<b>Chloride</b>	<b>26.1</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	ND	1.0	mg/L	MCAWW 300.0A	
<b>Total Organic Carbon</b>	<b>6</b>	<b>1</b>	<b>mg/L</b>	<b>MCAWW 415.1</b>	

**Client Sample ID: MW-8S**

Sample #: 007 Date Sampled: 12/11/02 19:00 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING	PAGE 15 Date Reported: 2/25/03
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PARAMETER	RESULT	LIMIT	UNITS	ANALYTICAL METHOD
<b>Client Sample ID: MW-8S</b>				
Sample #: 007      Date Sampled: 12/11/02 19:00      Date Received: 12/13/02      Matrix: WATER				
Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	ND	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	ND	0.010	mg/L SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L SW846 6010B
Cobalt	Dissolved	ND	0.0070	mg/L SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L SW846 6010B
Inductively Coupled Plasma (ICP) Metals				
Barium	0.088 B	0.20	mg/L	SW846 6010B
Iron	0.052 B	0.10	mg/L	SW846 6010B
Manganese	0.59	0.015	mg/L	SW846 6010B
Barium	Dissolved	0.081 B	0.20	mg/L SW846 6010B
Iron	Dissolved	ND	0.10	mg/L SW846 6010B
Manganese	Dissolved	0.50	0.015	mg/L SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved	0.000087 B	0.00020	mg/L SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water		Reviewed
Ethane	ND	0.50 ug/L RSK SOP-175
Ethene	ND	0.50 ug/L RSK SOP-175
<b>Methane</b>	<b>0.58</b>	<b>0.50 ug/L RSK SOP-175</b>
<b>Volatile Organics by GC/MS</b>		
Benzene	ND	1.0 ug/L SW846 8260B
1,1-Dichloroethane	ND	1.0 ug/L SW846 8260B
cis-1,2-Dichloroethene	ND	0.50 ug/L SW846 8260B
trans-1,2-Dichloroethene	ND	0.50 ug/L SW846 8260B
1,1-Dichloroethene	ND	1.0 ug/L SW846 8260B
Ethylbenzene	ND	1.0 ug/L SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 16		
		<b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-8S**

Sample #: 007 Date Sampled: 12/11/02 19:00 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
<b>Methylene chloride</b>	2.6	1.0	ug/L	SW846 8260B	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>2.2 J</b>	10	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

<b>Inorganic Analysis</b>		Reviewed
<b>Alkalinity</b>	190	5.0
	mg/L	MCAWW 310.1

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING	PAGE 17 Date Reported: 2/25/03	
		ANALYTICAL METHOD	
<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>

**Client Sample ID: MW-8S**

Sample #: 007    Date Sampled: 12/11/02 19:00    Date Received: 12/13/02    Matrix: WATER

Chloride <b>Chloride</b> <b>Nitrate as N</b> <b>Sulfate</b> <b>Total Organic Carbon</b>	<b>9.5</b> <b>1.5</b> <b>12.3</b> <b>0.9 B</b>	<b>1.0</b> <b>0.10</b> <b>1.0</b> <b>1</b>	<b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b>	<b>MCAWW 300.0A</b> <b>MCAWW 300.0A</b> <b>MCAWW 300.0A</b> <b>MCAWW 415.1</b>
Reviewed				

B Estimated result. Result is less than RL.

**Client Sample ID: MW-8M**

Sample #: 008    Date Sampled: 12/11/02 19:10    Date Received: 12/13/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals <b>Arsenic</b> <b>Cadmium</b> <b>Cobalt</b> <b>Lead</b> <b>Vanadium</b> <b>Arsenic</b> <b>Cadmium</b> <b>Cobalt</b> <b>Lead</b> <b>Vanadium</b>	<b>Dissolved</b> <b>ND</b> <b>ND</b> <b>ND</b> <b>ND</b> <b>Dissolved</b> <b>ND</b> <b>ND</b> <b>ND</b> <b>ND</b>	<b>0.0024 B</b> <b>0.010</b> <b>0.0020</b> <b>0.0070</b> <b>0.0030</b> <b>0.010</b> <b>0.0020</b> <b>0.0070</b> <b>0.0030</b> <b>0.0070</b>	<b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b>	<b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b>
Reviewed				

Inductively Coupled Plasma (ICP) Metals <b>Barium</b> <b>Iron</b> <b>Manganese</b> <b>Barium</b> <b>Iron</b> <b>Manganese</b>	<b>Dissolved</b> <b>ND</b> <b>2.7</b> <b>Dissolved</b> <b>Dissolved</b> <b>Dissolved</b>	<b>0.68</b> <b>0.20</b> <b>0.015</b> <b>0.66</b> <b>ND</b> <b>2.5</b>	<b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b> <b>mg/L</b>	<b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b> <b>SW846 6010B</b>
Reviewed				

Mercury in Liquid Waste (Manual Cold-Vapor) <b>Mercury</b> <b>Mercury</b>	<b>ND</b> <b>Dissolved</b>	<b>0.000090 B</b> <b>0.00020</b>	<b>mg/L</b> <b>mg/L</b>	<b>SW846 7470A</b> <b>SW846 7470A</b>
Reviewed				

B Estimated result. Result is less than RL.

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b>	A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b>	18		
			<b>Date Reported:</b>	2/25/03		
		<b>REPORTING</b>	<b>ANALYTICAL</b>			
		<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-8M**

Sample #: 008      Date Sampled: 12/11/02 19:10    Date Received: 12/13/02    Matrix: WATER

Dissolved Gases in Water

Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
<b>Methane</b>	<b>2.0</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Reviewed

Volatile Organics by GC/MS

Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>3.2</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
<b>Acetone</b>	<b>2.9 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B

Reviewed

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219  Project Number: ONALASKA LANDFILL	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING	PAGE 19 Date Reported: 2/25/03  ANALYTICAL METHOD
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**Client Sample ID: MW-8M**  
 Sample #: 008 Date Sampled: 12/11/02 19:10 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
Alkalinity	220	5.0	mg/L	MCAWW 310.1	
Chloride	2.6	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	5.7	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	2	1	mg/L	MCAWW 415.1	

**Client Sample ID: MW-12S**  
 Sample #: 009 Date Sampled: 12/11/02 18:20 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
Arsenic	ND	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	0.0034	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved ND	0.010	mg/L	SW846 6010B	
Cadmium	Dissolved ND	0.0020	mg/L	SW846 6010B	
Cobalt	Dissolved ND	0.0070	mg/L	SW846 6010B	
Lead	Dissolved 0.014	0.0030	mg/L	SW846 6010B	
Vanadium	Dissolved 0.0011 B	0.0070	mg/L	SW846 6010B	

Inductively Coupled Plasma (ICP) Metals					Reviewed
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
Barium	0.021 B	0.20	mg/L	SW846 6010B	

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 20
		<b>Date Reported:</b> 2/25/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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**Client Sample ID: MW-12S**

Sample #: 009 Date Sampled: 12/11/02 18:20 Date Received: 12/13/02 Matrix: WATER

Iron	ND	0.10	mg/L	SW846 6010B
Manganese	0.0023 B	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.022 B	0.20	mg/L	SW846 6010B
Iron	Dissolved ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved ND	0.015	mg/L	SW846 6010B

**Mercury in Liquid Waste (Manual Cold-Vapor)**

Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.00013 B	0.00020	mg/L	SW846 7470A

Reviewed

B Estimated result. Result is less than RL.

**Dissolved Gases in Water**

Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
Methane	ND	0.50	ug/L	RSK SOP-175

Reviewed

**Volatile Organics by GC/MS**

Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>2.7</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B

Reviewed

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE    21 Date Reported: 2/25/03
Lot #: A2L130219	REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT      UNITS      METHOD

**Client Sample ID: MW-12S**

Sample #: 009      Date Sampled: 12/11/02 18:20      Date Received: 12/13/02      Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.0 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	170	5.0	mg/L	MCAWW 310.1	
Chloride	24.3	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	1.6	0.10	mg/L	MCAWW 300.0A	
Sulfate	7.2	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	1	1	mg/L	MCAWW 415.1	

**Client Sample ID: MW-4S**

Sample #: 010      Date Sampled: 12/12/02 09:30      Date Received: 12/13/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	0.0089 B	0.010	mg/L	SW846 6010B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 22			
		<b>Date Reported:</b> 2/25/03			
		<b>REPORTING</b>	<b>ANALYTICAL</b>		
	<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-4S**

Sample #: 010 Date Sampled: 12/12/02 09:30 Date Received: 12/13/02 Matrix: WATER

Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
<b>Arsenic</b>	<b>Dissolved</b>	<b>0.0028 B</b>	<b>0.010</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	ND	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					
Barium	0.30	0.20	mg/L	SW846 6010B	
Iron	16.9	0.10	mg/L	SW846 6010B	
Manganese	2.1	0.015	mg/L	SW846 6010B	
Barium	Dissolved	0.23	0.20	mg/L	SW846 6010B
Iron	Dissolved	2.9	0.10	mg/L	SW846 6010B
Manganese	Dissolved	2.1	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)					
Mercury	ND	0.00020	mg/L	SW846 7470A	
<b>Mercury</b>	<b>Dissolved</b>	<b>0.000088 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>1200</b>	<b>5.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Volatile Organics by GC/MS				
Benzene	ND	25	ug/L	SW846 8260B
1,1-Dichloroethane	ND	25	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	12	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	12	ug/L	SW846 8260B
1,1-Dichloroethene	ND	25	ug/L	SW846 8260B
<b>Ethylbenzene</b>	<b>10 J</b>	<b>25</b>	<b>ug/L</b>	<b>SW846 8260B</b>

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 23		
	REPORTING	<b>Date Reported:</b> 2/25/03		
		<b>ANALYTICAL</b>		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-4S**

Sample #: 010 Date Sampled: 12/12/02 09:30 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Methylene chloride	ND	25	ug/L	SW846 8260B	
Naphthalene	ND	25	ug/L	SW846 8260B	
Tetrachloroethene	ND	25	ug/L	SW846 8260B	
Toluene	ND	25	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	25	ug/L	SW846 8260B	
Trichloroethene	ND	25	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	540	25	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	120	25	ug/L	SW846 8260B	
Vinyl chloride	ND	25	ug/L	SW846 8260B	
Xylenes (total)	29	25	ug/L	SW846 8260B	
Chloromethane	ND	25	ug/L	SW846 8260B	
Bromomethane	ND	25	ug/L	SW846 8260B	
Chloroethane	ND	25	ug/L	SW846 8260B	
Acetone	ND	250	ug/L	SW846 8260B	
Carbon disulfide	ND	25	ug/L	SW846 8260B	
Chloroform	ND	25	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	25	ug/L	SW846 8260B	
2-Butanone	ND	250	ug/L	SW846 8260B	
Carbon tetrachloride	ND	25	ug/L	SW846 8260B	
Bromodichloromethane	ND	25	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	25	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	25	ug/L	SW846 8260B	
Dibromochloromethane	ND	25	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	25	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	25	ug/L	SW846 8260B	
Bromoform	ND	25	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	250	ug/L	SW846 8260B	
2-Hexanone	ND	250	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	25	ug/L	SW846 8260B	
Chlorobenzene	ND	25	ug/L	SW846 8260B	
Styrene	ND	25	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis		Reviewed
<b>Alkalinity</b>	280	5.0
		mg/L
		MCAWW 310.1

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 24 Date Reported: 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-4S**

Sample #: 010 Date Sampled: 12/12/02 09:30 Date Received: 12/13/02 Matrix: WATER

Chloride				Reviewed
Chloride	13.5	1.0	mg/L	MCAWW 300.0A
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A
Sulfate	0.98 B	1.0	mg/L	MCAWW 300.0A
Total Organic Carbon	5	1	mg/L	MCAWW 415.1

B Estimated result. Result is less than RL.

**Client Sample ID: MW-4S DUP**

Sample #: 011 Date Sampled: 12/12/02 09:35 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	0.0090 B	0.010	mg/L	SW846 6010B
Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	ND	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved 0.0024 B	0.010	mg/L	SW846 6010B
Cadmium	Dissolved 0.00029 B	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved 0.00095 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals				Reviewed
Barium	0.32	0.20	mg/L	SW846 6010B
Iron	17.2	0.10	mg/L	SW846 6010B
Manganese	2.1	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.25	0.20	mg/L	SW846 6010B
Iron	Dissolved 3.9	0.10	mg/L	SW846 6010B
Manganese	Dissolved 2.0	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.00018 B	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

(Continued on next page)

# SEVERN TRENT LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #:	A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE 25
			Date Reported: 2/25/03
		REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT	UNITS METHOD

**Client Sample ID: MW-4S DUP**

Sample #: 011 Date Sampled: 12/12/02 09:35 Date Received: 12/13/02 Matrix: WATER

Reviewed				
Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>750</b>	<b>5.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Reviewed				
Volatile Organics by GC/MS				
Benzene	ND	25	ug/L	SW846 8260B
1,1-Dichloroethane	ND	25	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	12	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	12	ug/L	SW846 8260B
1,1-Dichloroethene	ND	25	ug/L	SW846 8260B
Ethylbenzene	ND	25	ug/L	SW846 8260B
Methylene chloride	ND	25	ug/L	SW846 8260B
Naphthalene	ND	25	ug/L	SW846 8260B
Tetrachloroethene	ND	25	ug/L	SW846 8260B
Toluene	ND	25	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	25	ug/L	SW846 8260B
Trichloroethene	ND	25	ug/L	SW846 8260B
<b>1,2,4-Trimethylbenzene</b>	<b>570</b>	<b>25</b>	<b>ug/L</b>	<b>SW846 8260B</b>
<b>1,3,5-Trimethylbenzene</b>	<b>130</b>	<b>25</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Vinyl chloride	ND	25	ug/L	SW846 8260B
<b>Xylenes (total)</b>	<b>27</b>	<b>25</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Bromomethane	ND	25	ug/L	SW846 8260B
Chloroethane	ND	25	ug/L	SW846 8260B
Chloromethane	ND	25	ug/L	SW846 8260B
Acetone	ND	250	ug/L	SW846 8260B
Bromodichloromethane	ND	25	ug/L	SW846 8260B
Bromoform	ND	25	ug/L	SW846 8260B
2-Butanone	ND	250	ug/L	SW846 8260B
Carbon disulfide	ND	25	ug/L	SW846 8260B
Carbon tetrachloride	ND	25	ug/L	SW846 8260B
Chlorobenzene	ND	25	ug/L	SW846 8260B
Dibromochloromethane	ND	25	ug/L	SW846 8260B
Chloroform	ND	25	ug/L	SW846 8260B
1,2-Dichloroethane	ND	25	ug/L	SW846 8260B
1,2-Dichloropropane	ND	25	ug/L	SW846 8260B

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE 26 Date Reported: 2/25/03
		REPORTING      ANALYTICAL PARAMETER      RESULT      LIMIT      UNITS      METHOD

Client Sample ID: MW-4S DUP

Sample #: 011 Date Sampled: 12/12/02 09:35 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
	RESULT	LIMIT	UNITS	METHOD	
cis-1,3-Dichloropropene	ND	25	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	25	ug/L	SW846 8260B	
2-Hexanone	ND	250	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	250	ug/L	SW846 8260B	
Styrene	ND	25	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	25	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	25	ug/L	SW846 8260B	

Inorganic Analysis

Inorganic Analysis					Reviewed
	RESULT	LIMIT	UNITS	METHOD	
Alkalinity	280	5.0	mg/L	MCAWW 310.1	
Chloride	13.5	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	0.92 B	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	6	1	mg/L	MCAWW 415.1	

B Estimated result. Result is less than RL.

Client Sample ID: MW-15M

Sample #: 012 Date Sampled: 12/12/02 11:10 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
	RESULT	LIMIT	UNITS	METHOD	
Arsenic	0.0054 B	0.010	mg/L	SW846 6010B	
Cadmium	0.00031 B	0.0020	mg/L	SW846 6010B	
Cobalt	0.0012 B	0.0070	mg/L	SW846 6010B	
Lead	0.0049	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved ND	0.010	mg/L	SW846 6010B	
Cadmium	Dissolved ND	0.0020	mg/L	SW846 6010B	
Cobalt	Dissolved 0.00082 B	0.0070	mg/L	SW846 6010B	
Lead	Dissolved ND	0.0030	mg/L	SW846 6010B	
Vanadium	Dissolved ND	0.0070	mg/L	SW846 6010B	

Inductively Coupled Plasma (ICP) Metals					Reviewed
	RESULT	LIMIT	UNITS	METHOD	
Barium	0.86	0.20	mg/L	SW846 6010B	

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  <b>PARAMETER</b>	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING	PAGE 27 Date Reported: 2/25/03 <b>ANALYTICAL</b> <b>METHOD</b>
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**Client Sample ID: MW-15M**

Sample #: 012 Date Sampled: 12/12/02 11:10 Date Received: 12/13/02 Matrix: WATER

Iron	1.1	0.10	mg/L	SW846 6010B
Manganese	3.6	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.84	0.20	mg/L	SW846 6010B
Iron	Dissolved ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved 3.6	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)

Mercury	0.000092 B 0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.000095 B 0.00020	mg/L	SW846 7470A

Reviewed

B Estimated result. Result is less than RL.

Dissolved Gases in Water

Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
<b>Methane</b>	<b>12</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Reviewed

Volatile Organics by GC/MS

Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	1.0	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	0.56	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>3.0</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B

Reviewed

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 28		
		<b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-15M**

Sample #: 012 Date Sampled: 12/12/02 11:10 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
Acetone	ND	10	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

Inorganic Analysis					Reviewed
Alkalinity	240	5.0	mg/L	MCAWW 310.1	
Chloride	5.2	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.030 B	0.10	mg/L	MCAWW 300.0A	
Sulfate	2.4	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	3	1	mg/L	MCAWW 415.1	

B Estimated result. Result is less than RL.

**Client Sample ID: MW-6M**

Sample #: 013 Date Sampled: 12/12/02 12:05 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals	Reviewed
Arsenic 0.0024 B 0.010 mg/L	SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 29		
		<b>Date Reported:</b> 2/25/03		
	<b>REPORTING</b>	<b>ANALYTICAL</b>		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-6M**

Sample #: 013 Date Sampled: 12/12/02 12:05 Date Received: 12/13/02 Matrix: WATER

Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
<b>Arsenic</b>	<b>Dissolved</b>	<b>0.0034 B</b>	<b>0.010</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
<b>Cobalt</b>	<b>Dissolved</b>	<b>0.00078 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					
<b>Barium</b>	<b>0.75</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Iron	ND	0.10	mg/L	SW846 6010B	
<b>Manganese</b>	<b>1.7</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
<b>Barium</b>	<b>Dissolved</b>	<b>0.71</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Iron	Dissolved	ND	0.10	mg/L	SW846 6010B
<b>Manganese</b>	<b>Dissolved</b>	<b>1.6</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>

Mercury in Liquid Waste (Manual Cold-Vapor)					
<b>Mercury</b>	<b>0.000097 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>	
<b>Mercury</b>	<b>Dissolved</b>	<b>0.000090 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
<b>Methane</b>	<b>1.1</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Volatile Organics by GC/MS				
Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #:	A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE    30
			Date Reported: 2/25/03
		REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT	UNITS    METHOD

Client Sample ID: MW-6M

Sample #: 013      Date Sampled: 12/12/02 12:05      Date Received: 12/13/02      Matrix: WATER

Volatile Organics by GC/MS					Reviewed
<b>Methylene chloride</b>	2.1	1.0	ug/L	SW846 8260B	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	2.1 J	10	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis	Reviewed
Alkalinity	100                5.0                mg/L                MCAWW 310.1

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 31 <b>Date Reported:</b> 2/25/03			
	REPORTING	ANALYTICAL			
	PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: MW-6M**

Sample #: 013 Date Sampled: 12/12/02 12:05 Date Received: 12/13/02 Matrix: WATER

<b>Chloride</b>	<b>Chloride</b>	<b>6.0</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	<b>Reviewed</b>
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A		
Sulfate	<b>0.42 B</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>		
Total Organic Carbon	<b>4</b>	<b>1</b>	<b>mg/L</b>	<b>MCAWW 415.1</b>		

B Estimated result. Result is less than RL.

**Client Sample ID: MW-6S**

Sample #: 014 Date Sampled: 12/12/02 12:20 Date Received: 12/13/02 Matrix: WATER

<b>Trace Inductively Coupled Plasma (ICP) Metals</b>					<b>Reviewed</b>
Arsenic	ND	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	<b>0.0022 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	mg/L	SW846 6010B	
Cadmium	Dissolved	ND	mg/L	SW846 6010B	
Cobalt	Dissolved	<b>0.0013 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Lead	Dissolved	ND	mg/L	SW846 6010B	
Vanadium	Dissolved	ND	mg/L	SW846 6010B	

<b>Inductively Coupled Plasma (ICP) Metals</b>					<b>Reviewed</b>
Barium	<b>0.17 B</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Iron	<b>0.065 B</b>	<b>0.10</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Manganese	<b>2.7</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Barium	Dissolved	<b>0.13 B</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Iron	Dissolved	ND	mg/L	SW846 6010B	
Manganese	Dissolved	<b>1.6</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>

<b>Mercury in Liquid Waste (Manual Cold-Vapor)</b>					<b>Reviewed</b>
Mercury	ND	0.00020	mg/L	SW846 7470A	
Mercury	Dissolved	<b>0.000090 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>

B Estimated result. Result is less than RL.

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING ANALYTICAL	PAGE      32  Date Reported: 2/25/03			
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

Client Sample ID: MW-6S

Sample #: 014      Date Sampled: 12/12/02 12:20      Date Received: 12/13/02      Matrix: WATER

Dissolved Gases in Water					Reviewed
Ethane	ND	0.50	ug/L	RSK SOP-175	
Ethene	ND	0.50	ug/L	RSK SOP-175	
<b>Methane</b>	<b>2.9</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>	

Volatile Organics by GC/MS					Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B	
<b>1,1-Dichloroethane</b>	<b>0.55 J</b>	1.0	<b>ug/L</b>	<b>SW846 8260B</b>	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>2.2</b>	1.0	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>2.6 J</b>	10	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE    33  Date Reported: 2/25/03
Lot #: A2L130219	REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT    UNITS    METHOD

**Client Sample ID: MW-6S**

Sample #: 014    Date Sampled: 12/12/02 12:20    Date Received: 12/13/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J = Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
<b>Alkalinity</b>	<b>160</b>	<b>5.0</b>	<b>mg/L</b>	<b>MCAWW 310.1</b>	
<b>Chloride</b>	<b>6.7</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
<b>Sulfate</b>	<b>4.0</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
<b>Total Organic Carbon</b>	<b>6</b>	<b>1</b>	<b>mg/L</b>	<b>MCAWW 415.1</b>	

**Client Sample ID: PZ-4**

Sample #: 015    Date Sampled: 12/12/02 13:00    Date Received: 12/13/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
<b>Cobalt</b>	<b>0.0010 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	ND	0.0070	mg/L	SW846 6010B
<b>Lead</b>	<b>Dissolved</b>	<b>0.0016 B</b>	<b>0.0030</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					Reviewed
<b>Barium</b>	<b>0.12 B</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>	

(Continued on next page)

# SEVERN TRENT LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #:	A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE 34
			Date Reported: 2/25/03
		REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT	UNITS METHOD

**Client Sample ID: PZ-4**

Sample #: 015 Date Sampled: 12/12/02 13:00 Date Received: 12/13/02 Matrix: WATER

Iron	ND	0.10	mg/L	SW846 6010B
Manganese	2.6	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.063	B 0.20	mg/L	SW846 6010B
Iron	Dissolved ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved 1.3	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)

Reviewed

Mercury	0.000088	B 0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.000090	B 0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water

Reviewed

Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
Methane	ND	0.50	ug/L	RSK SOP-175

Volatile Organics by GC/MS

Reviewed

Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Methylene chloride	2.6	1.0	ug/L	SW846 8260B
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #:	A2L130219	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING	ANALYTICAL			
			PAGE 35	Date Reported: 2/25/03			
			PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: PZ-4**

Sample #: 015 Date Sampled: 12/12/02 13:00 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.5 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	130	5.0	mg/L	MCAWW 310.1	
Chloride	5.5	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	4.2	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	5	1	mg/L	MCAWW 415.1	

**Client Sample ID: PZ-5**

Sample #: 016 Date Sampled: 12/12/02 10:25 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b>	A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b>	36
		REPORTING	<b>Date Reported:</b>	2/25/03
		UNITS	<b>ANALYTICAL</b>	
<b>PARAMETER</b>		<b>RESULT</b>	<b>LIMIT</b>	<b>METHOD</b>

**Client Sample ID: PZ-5**

Sample #: 016 Date Sampled: 12/12/02 10:25 Date Received: 12/13/02 Matrix: WATER

Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
<b>Vanadium</b>	<b>0.0011 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	ND	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
<b>Vanadium</b>	<b>Dissolved</b>	<b>0.00078 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>

Inductively Coupled Plasma (ICP) Metals					
Barium	0.091 B	0.20	mg/L	SW846 6010B	
Iron	0.13	0.10	mg/L	SW846 6010B	
Manganese	0.18	0.015	mg/L	SW846 6010B	
Barium	Dissolved	0.086 B	0.20	mg/L	SW846 6010B
Iron	Dissolved	ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved	0.080	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	0.000098 B	0.00020	mg/L	Reviewed SW846 7470A
Mercury	Dissolved	0.00011 B	0.00020	mg/L SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	1.0	ug/L	Reviewed RSK SOP-175
Ethene	ND	1.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>130</b>	<b>1.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Volatile Organics by GC/MS				
Benzene	ND	1.0	ug/L	Reviewed SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 37 <b>Date Reported:</b> 2/25/03
	<b>REPORTING</b> <u>PARAMETER</u> <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u>	<b>ANALYTICAL</b> <u>METHOD</u>

Client Sample ID: PZ-5

Sample #: 016 Date Sampled: 12/12/02 10:25 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
<b>Methylene chloride</b>	2.5	1.0	ug/L	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	<b>SW846 8260B</b>	
Tetrachloroethene	ND	1.0	ug/L	<b>SW846 8260B</b>	
Toluene	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,1,1-Trichloroethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
Trichloroethene	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	<b>SW846 8260B</b>	
Vinyl chloride	ND	1.0	ug/L	<b>SW846 8260B</b>	
Xylenes (total)	ND	1.0	ug/L	<b>SW846 8260B</b>	
Bromomethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
Chloroethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
Chloromethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
<b>Acetone</b>	<b>3.0 J</b>	10	ug/L	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
Bromoform	ND	1.0	ug/L	<b>SW846 8260B</b>	
2-Butanone	ND	10	ug/L	<b>SW846 8260B</b>	
Carbon disulfide	ND	1.0	ug/L	<b>SW846 8260B</b>	
Carbon tetrachloride	ND	1.0	ug/L	<b>SW846 8260B</b>	
Chlorobenzene	ND	1.0	ug/L	<b>SW846 8260B</b>	
Dibromochloromethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
Chloroform	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,2-Dichloroethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,2-Dichloropropane	ND	1.0	ug/L	<b>SW846 8260B</b>	
cis-1,3-Dichloropropene	ND	1.0	ug/L	<b>SW846 8260B</b>	
trans-1,3-Dichloropropene	ND	1.0	ug/L	<b>SW846 8260B</b>	
2-Hexanone	ND	10	ug/L	<b>SW846 8260B</b>	
4-Methyl-2-pentanone	ND	10	ug/L	<b>SW846 8260B</b>	
Styrene	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	<b>SW846 8260B</b>	
1,1,2-Trichloroethane	ND	1.0	ug/L	<b>SW846 8260B</b>	

J Estimated result. Result is less than RL.

Inorganic Analysis		Reviewed <b>MCAWW 310.1</b>
Alkalinity	260	5.0 mg/L

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b>	A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b>	38		
			<b>Date Reported:</b>	2/25/03		
		REPORTING	ANALYTICAL			
		PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: PZ-5**

Sample #: 016 Date Sampled: 12/12/02 10:25 Date Received: 12/13/02 Matrix: WATER

Chloride				Reviewed
Chloride	9.7	1.0	mg/L	MCAWW 300.0A
Nitrate as N	0.48	0.10	mg/L	MCAWW 300.0A
Sulfate	5.7	1.0	mg/L	MCAWW 300.0A
Total Organic Carbon	2	1	mg/L	MCAWW 415.1

**Client Sample ID: MW-5S**

Sample #: 017 Date Sampled: 12/12/02 14:15 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	0.0098 B	0.010	mg/L	SW846 6010B
Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	0.0025 B	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	ND	mg/L	SW846 6010B
Cadmium	Dissolved	ND	mg/L	SW846 6010B
Cobalt	Dissolved	0.0026 B	0.0070	mg/L SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L SW846 6010B

Inductively Coupled Plasma (ICP) Metals				Reviewed
Barium	0.18 B	0.20	mg/L	SW846 6010B
Iron	10.2	0.10	mg/L	SW846 6010B
Manganese	1.6	0.015	mg/L	SW846 6010B
Barium	Dissolved	0.15 B	0.20	mg/L SW846 6010B
Iron	Dissolved	2.2	0.10	mg/L SW846 6010B
Manganese	Dissolved	1.6	0.015	mg/L SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
Mercury	0.000088 B	0.00020	mg/L	SW846 7470A
Mercury	Dissolved	ND	0.00020	mg/L SW846 7470A

B Estimated result. Result is less than RL.

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b>	A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b>	39
			<b>Date Reported:</b>	2/25/03
		REPORTING	ANALYTICAL	
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-5S**

Sample #: 017      Date Sampled: 12/12/02 14:15    Date Received: 12/13/02    Matrix: WATER

<b>Dissolved Gases in Water</b>				
Ethane	ND	5.0	ug/L	Reviewed RSK SOP-175
Ethene	ND	5.0	ug/L	Reviewed RSK SOP-175
<b>Methane</b>	<b>130</b>	<b>5.0</b>	<b>ug/L</b>	<b>Reviewed RSK SOP-175</b>

<b>Volatile Organics by GC/MS</b>				
Benzene	ND	7.7	ug/L	Reviewed SW846 8260B
1,1-Dichloroethane	ND	7.7	ug/L	Reviewed SW846 8260B
cis-1,2-Dichloroethene	ND	3.8	ug/L	Reviewed SW846 8260B
trans-1,2-Dichloroethene	ND	3.8	ug/L	Reviewed SW846 8260B
1,1-Dichloroethene	ND	7.7	ug/L	Reviewed SW846 8260B
<b>Ethylbenzene</b>	<b>6.2 J</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
<b>Methylene chloride</b>	<b>3.9 J</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
<b>Naphthalene</b>	<b>6.2 J</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
Tetrachloroethene	ND	7.7	ug/L	Reviewed SW846 8260B
Toluene	ND	7.7	ug/L	Reviewed SW846 8260B
1,1,1-Trichloroethane	ND	7.7	ug/L	Reviewed SW846 8260B
Trichloroethene	ND	7.7	ug/L	Reviewed SW846 8260B
<b>1,2,4-Trimethylbenzene</b>	<b>210</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
<b>1,3,5-Trimethylbenzene</b>	<b>47</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
Vinyl chloride	ND	7.7	ug/L	Reviewed SW846 8260B
<b>Xylenes (total)</b>	<b>12</b>	<b>7.7</b>	<b>ug/L</b>	<b>Reviewed SW846 8260B</b>
Bromomethane	ND	7.7	ug/L	Reviewed SW846 8260B
Chloroethane	ND	7.7	ug/L	Reviewed SW846 8260B
Chloromethane	ND	7.7	ug/L	Reviewed SW846 8260B
Acetone	ND	77	ug/L	Reviewed SW846 8260B
Bromodichloromethane	ND	7.7	ug/L	Reviewed SW846 8260B
Bromoform	ND	7.7	ug/L	Reviewed SW846 8260B
2-Butanone	ND	77	ug/L	Reviewed SW846 8260B
Carbon disulfide	ND	7.7	ug/L	Reviewed SW846 8260B
Carbon tetrachloride	ND	7.7	ug/L	Reviewed SW846 8260B
Chlorobenzene	ND	7.7	ug/L	Reviewed SW846 8260B
Dibromochloromethane	ND	7.7	ug/L	Reviewed SW846 8260B
Chloroform	ND	7.7	ug/L	Reviewed SW846 8260B
1,2-Dichloroethane	ND	7.7	ug/L	Reviewed SW846 8260B
1,2-Dichloropropane	ND	7.7	ug/L	Reviewed SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 40		
		<b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-5S**

Sample #: 017 Date Sampled: 12/12/02 14:15 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
cis-1,3-Dichloropropene	ND	7.7	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	7.7	ug/L	SW846 8260B	
2-Hexanone	ND	77	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	77	ug/L	SW846 8260B	
Styrene	ND	7.7	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	7.7	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	7.7	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

**Inorganic Analysis**

					Reviewed
Alkalinity	140	5.0	mg/L	MCAWW 310.1	
Chloride	5.8	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.10	0.10	mg/L	MCAWW 300.0A	
Sulfate	0.34 B	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	5	1	mg/L	MCWW 415.1	

B Estimated result. Result is less than RL.

**Client Sample ID: TRIP**

Sample #: 018 Date Sampled: 12/12/02 14:15 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>2.0</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING  ANALYTICAL	PAGE 41  Date Reported: 2/25/03
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PARAMETER	RESULT	LIMIT	UNITS	METHOD
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**Client Sample ID: TRIP**

Sample #: 018      Date Sampled: 12/12/02 14:15    Date Received: 12/13/02    Matrix: WATER

Volatile Organics by GC/MS	Reviewed
1,2,4-Trimethylbenzene	ND      1.0      ug/L      SW846 8260B
1,3,5-Trimethylbenzene	ND      1.0      ug/L      SW846 8260B
Vinyl chloride	ND      1.0      ug/L      SW846 8260B
Xylenes (total)	ND      1.0      ug/L      SW846 8260B
Bromomethane	ND      1.0      ug/L      SW846 8260B
Chloroethane	ND      1.0      ug/L      SW846 8260B
Chloromethane	ND      1.0      ug/L      SW846 8260B
Acetone	ND      10      ug/L      SW846 8260B
Bromodichloromethane	ND      1.0      ug/L      SW846 8260B
Bromoform	ND      1.0      ug/L      SW846 8260B
2-Butanone	ND      10      ug/L      SW846 8260B
Carbon disulfide	ND      1.0      ug/L      SW846 8260B
Carbon tetrachloride	ND      1.0      ug/L      SW846 8260B
Chlorobenzene	ND      1.0      ug/L      SW846 8260B
Dibromochloromethane	ND      1.0      ug/L      SW846 8260B
Chloroform	ND      1.0      ug/L      SW846 8260B
1,2-Dichloroethane	ND      1.0      ug/L      SW846 8260B
1,2-Dichloropropane	ND      1.0      ug/L      SW846 8260B
cis-1,3-Dichloropropene	ND      1.0      ug/L      SW846 8260B
trans-1,3-Dichloropropene	ND      1.0      ug/L      SW846 8260B
2-Hexanone	ND      10      ug/L      SW846 8260B
4-Methyl-2-pentanone	ND      10      ug/L      SW846 8260B
Styrene	ND      1.0      ug/L      SW846 8260B
1,1,2,2-Tetrachloroethane	ND      1.0      ug/L      SW846 8260B
1,1,2-Trichloroethane	ND      1.0      ug/L      SW846 8260B

**Client Sample ID: MW-14S**

Sample #: 019      Date Sampled: 12/12/02 15:00    Date Received: 12/13/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals	Reviewed
Arsenic	ND      0.010      mg/L      SW846 6010B
Cadmium	0.00045 B      0.0020      mg/L      SW846 6010B
Cobalt	0.0052 B      0.0070      mg/L      SW846 6010B
Lead	ND      0.0030      mg/L      SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> <b>ONALASKA LANDFILL</b> Project Number: ONALASKA	PAGE 42 <b>Date Reported:</b> 2/25/03
	<b>REPORTING</b> <u>PARAMETER</u> <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u> <u>METHOD</u>	

**Client Sample ID: MW-14S**

Sample #: 019 Date Sampled: 12/12/02 15:00 Date Received: 12/13/02 Matrix: WATER

Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0052 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals				
Barium	0.18 B	0.20	mg/L	SW846 6010B
Iron	11.6	0.10	mg/L	SW846 6010B
Manganese	3.7	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.15 B	0.20	mg/L	SW846 6010B
Iron	Dissolved 4.9	0.10	mg/L	SW846 6010B
Manganese	Dissolved 3.4	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	0.000088 B	0.00020	mg/L	Reviewed SW846 7470A
Mercury	Dissolved 0.000095 B	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	Reviewed RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>450</b>	<b>5.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Volatile Organics by GC/MS				
Benzene	ND	1.0	ug/L	Reviewed SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>2.1</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
<b>Naphthalene</b>	<b>5.0</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 43 <b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: MW-14S**

Sample #: 019 Date Sampled: 12/12/02 15:00 Date Received: 12/13/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	1.7	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	0.64 J	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	1.4	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
Acetone	4.3 J	10	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	210	5.0	mg/L	MCAWW 310.1	
Chloride	5.0	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.010 B	0.10	mg/L	MCAWW 300.0A	
Sulfate	3.0	1.0	mg/L	MCAWW 300.0A	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 44 <b>Date Reported:</b> 2/25/03		
	REPORTING	ANALYTICAL		
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: MW-14S**

Sample #: 019 Date Sampled: 12/12/02 15:00 Date Received: 12/13/02 Matrix: WATER

Total Organic Carbon				Reviewed
<b>Total Organic Carbon</b>	<b>14</b>	<b>1</b>	<b>mg/L</b>	<b>MCAWW 415.1</b>

B Estimated result. Result is less than RL.

**Client Sample ID: PZ-1**

Sample #: 020 Date Sampled: 12/12/02 15:30 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed	
<b>Arsenic</b>	<b>0.0029 B</b>	<b>0.010</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
<b>Vanadium</b>	<b>0.0013 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>	
Arsenic	Dissolved	ND	mg/L	SW846 6010B	
Cadmium	Dissolved	ND	mg/L	SW846 6010B	
Cobalt	Dissolved	ND	mg/L	SW846 6010B	
Lead	Dissolved	ND	mg/L	SW846 6010B	
<b>Vanadium</b>	<b>Dissolved</b>	<b>0.0011 B</b>	<b>0.0070</b>	<b>mg/L</b>	<b>SW846 6010B</b>

Inductively Coupled Plasma (ICP) Metals				Reviewed
<b>Barium</b>	<b>0.024 B</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Iron	ND	0.10	mg/L	SW846 6010B
<b>Manganese</b>	<b>0.19</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>
<b>Barium</b>	<b>Dissolved 0.022 B</b>	<b>0.20</b>	<b>mg/L</b>	<b>SW846 6010B</b>
Iron	Dissolved ND	0.10	mg/L	SW846 6010B
<b>Manganese</b>	<b>Dissolved 0.18</b>	<b>0.015</b>	<b>mg/L</b>	<b>SW846 6010B</b>

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
<b>Mercury</b>	<b>0.000091 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>
<b>Mercury</b>	<b>Dissolved 0.00010 B</b>	<b>0.00020</b>	<b>mg/L</b>	<b>SW846 7470A</b>

B Estimated result. Result is less than RL.

Dissolved Gases in Water				Reviewed
Ethane	ND	0.50	ug/L	RSK SOP-175

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 45 <b>Date Reported:</b> 2/25/03
	REPORTING	ANALYTICAL
	<u>PARAMETER</u>	<u>RESULT</u> <u>LIMIT</u> <u>UNITS</u> <u>METHOD</u>

**Client Sample ID: PZ-1**

Sample #: 020      Date Sampled: 12/12/02 15:30      Date Received: 12/13/02      Matrix: WATER

Dissolved Gases in Water	Reviewed
Ethene	ND            0.50            ug/L            RSK SOP-175
<b>Methane</b>	<b>6.6</b> <b>0.50</b> <b>ug/L</b> <b>RSK SOP-175</b>

Volatile Organics by GC/MS	Reviewed
Benzene	ND            1.0            ug/L            SW846 8260B
1,1-Dichloroethane	ND            1.0            ug/L            SW846 8260B
cis-1,2-Dichloroethene	ND            0.50            ug/L            SW846 8260B
trans-1,2-Dichloroethene	ND            0.50            ug/L            SW846 8260B
1,1-Dichloroethene	ND            1.0            ug/L            SW846 8260B
Ethylbenzene	ND            1.0            ug/L            SW846 8260B
<b>Methylene chloride</b>	<b>3.4</b> <b>1.0</b> <b>ug/L</b> <b>SW846 8260B</b>
Naphthalene	ND            1.0            ug/L            SW846 8260B
Tetrachloroethene	ND            1.0            ug/L            SW846 8260B
Toluene	ND            1.0            ug/L            SW846 8260B
1,1,1-Trichloroethane	ND            1.0            ug/L            SW846 8260B
Trichloroethene	ND            1.0            ug/L            SW846 8260B
1,2,4-Trimethylbenzene	ND            1.0            ug/L            SW846 8260B
1,3,5-Trimethylbenzene	ND            1.0            ug/L            SW846 8260B
Vinyl chloride	ND            1.0            ug/L            SW846 8260B
Xylenes (total)	ND            1.0            ug/L            SW846 8260B
Bromomethane	ND            1.0            ug/L            SW846 8260B
Chloroethane	ND            1.0            ug/L            SW846 8260B
Chloromethane	ND            1.0            ug/L            SW846 8260B
Acetone	ND            10            ug/L            SW846 8260B
Bromodichloromethane	ND            1.0            ug/L            SW846 8260B
Bromoform	ND            1.0            ug/L            SW846 8260B
2-Butanone	ND            10            ug/L            SW846 8260B
Carbon disulfide	ND            1.0            ug/L            SW846 8260B
Carbon tetrachloride	ND            1.0            ug/L            SW846 8260B
Chlorobenzene	ND            1.0            ug/L            SW846 8260B
Dibromochloromethane	ND            1.0            ug/L            SW846 8260B
Chloroform	ND            1.0            ug/L            SW846 8260B
1,2-Dichloroethane	ND            1.0            ug/L            SW846 8260B
1,2-Dichloropropane	ND            1.0            ug/L            SW846 8260B
cis-1,3-Dichloropropene	ND            1.0            ug/L            SW846 8260B
trans-1,3-Dichloropropene	ND            1.0            ug/L            SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L130219	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 46 <b>Date Reported:</b> 2/25/03			
	REPORTING	ANALYTICAL			
	<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>

**Client Sample ID:** PZ-1

**Sample #:** 020      **Date Sampled:** 12/12/02 15:30    **Date Received:** 12/13/02    **Matrix:** WATER

<b>Volatile Organics by GC/MS</b>					<b>Reviewed</b>
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

<b>Inorganic Analysis</b>					<b>Reviewed</b>
Alkalinity	120	5.0	mg/L	MCAWW 310.1	
Chloride	9.4	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.23	0.10	mg/L	MCAWW 300.0A	
Sulfate	1.6	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	3	1	mg/L	MCAWW 415.1	

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING ANALYTICAL	PAGE 1  Date Reported: 2/25/03			
<b>PARAMETER</b>	<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

Client Sample ID: AW-13

Sample #: 001    Date Sampled: 12/12/02 19:00    Date Received: 12/14/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	0.0033	B	0.010	mg/L	SW846 6010B
Cadmium	ND		0.0020	mg/L	SW846 6010B
Cobalt	0.0043	B	0.0070	mg/L	SW846 6010B
Lead	ND		0.0030	mg/L	SW846 6010B
Vanadium	ND		0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0045	B	0.0070	mg/L
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B
Inductively Coupled Plasma (ICP) Metals					Reviewed
Barium	0.28		0.20	mg/L	SW846 6010B
Iron	4.7		0.10	mg/L	SW846 6010B
Manganese	24.3		0.015	mg/L	SW846 6010B
Barium	Dissolved	0.22	0.20	mg/L	SW846 6010B
Iron	Dissolved	ND	0.10	mg/L	SW846 6010B
Manganese	Dissolved	21.1	0.015	mg/L	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
Mercury	ND		0.00020	mg/L	SW846 7470A
Mercury	Dissolved	ND	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water					Reviewed
Ethane	ND		2.5	ug/L	RSK SOP-175
Ethene	ND		2.5	ug/L	RSK SOP-175
<b>Methane</b>	<b>300</b>		<b>2.5</b>	<b>ug/L</b>	<b>RSK SOP-175</b>
Volatile Organics by GC/MS					Reviewed
Benzene	ND		1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND		1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND		0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND		0.50	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #:	A2L140130	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE      2
		REPORTING	Date Reported: 2/25/03
		PARAMETER	RESULT      LIMIT      UNITS      METHOD

**Client Sample ID: AW-13**

Sample #: 001    Date Sampled: 12/12/02 19:00    Date Received: 12/14/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
	RESULT	LIMIT	UNITS	METHOD	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>3.6</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
<b>1,2,4-Trimethylbenzene</b>	<b>2.0</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>2.5 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING	PAGE 3 Date Reported: 2/25/03	
		ANALYTICAL UNITS METHOD	
<u>PARAMETER</u>		<u>RESULT</u>	<u>LIMIT</u>

**Client Sample ID: AW-13**

Sample #: 001      Date Sampled: 12/12/02 19:00    Date Received: 12/14/02    Matrix: WATER

Inorganic Analysis					Reviewed
Alkalinity	550	5.0	mg/L	MCAWW 310.1	
Chloride	2.6	2.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.20	0.10	mg/L	MCAWW 300.0A	
Sulfate	3.1	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	5	1	mg/L	MCAWW 415.1	

**Client Sample ID: AW-13 DUP**

Sample #: 002      Date Sampled: 12/12/02 19:05    Date Received: 12/14/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	0.0044 B	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	mg/L	SW846 6010B	
Cadmium	Dissolved	ND	mg/L	SW846 6010B	
Cobalt	Dissolved	0.0043 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					Reviewed
Barium	0.27	0.20	mg/L	SW846 6010B	
Iron	5.1	0.10	mg/L	SW846 6010B	
Manganese	23.7	0.015	mg/L	SW846 6010B	
Barium	Dissolved	0.23	0.20	mg/L	SW846 6010B
Iron	Dissolved	0.062 B	0.10	mg/L	SW846 6010B
Manganese	Dissolved	22.1	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
Mercury	ND	0.00020	mg/L	SW846 7470A	
Mercury	Dissolved	ND	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE 4 Date Reported: 2/25/03
	REPORTING <u>PARAMETER</u> <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u>	ANALYTICAL <u>METHOD</u>

Client Sample ID: AW-13 DUP  
 Sample #: 002    Date Sampled: 12/12/02 19:05    Date Received: 12/14/02    Matrix: WATER

Dissolved Gases in Water					Reviewed
	ND	1.0	ug/L	RSK SOP-175	
Ethane	ND	1.0	ug/L	RSK SOP-175	
Ethene	ND	1.0	ug/L	RSK SOP-175	
<b>Methane</b>	<b>340</b>	<b>1.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>	

Volatile Organics by GC/MS					Reviewed
	ND	1.0	ug/L	SW846 8260B	
Benzene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>3.6</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
<b>1,2,4-Trimethylbenzene</b>	<b>1.8</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
<b>1,3,5-Trimethylbenzene</b>	<b>1.1</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>5.9 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L140130  Project Number: ONALASKA	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL  REPORTING	PAGE 5  Date Reported: 2/25/03  ANALYTICAL			
<b>PARAMETER</b>		<b>RESULT</b>	<b>LIMIT</b>	<b>UNITS</b>	<b>METHOD</b>

**Client Sample ID: AW-13 DUP**

Sample #: 002      Date Sampled: 12/12/02 19:05      Date Received: 12/14/02      Matrix: WATER

Volatile Organics by GC/MS					Reviewed
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	550	5.0	mg/L	MCAWW 310.1	
Chloride	2.3	2.0	mg/L	MCAWW 300.0A	
Nitrate as N	0.28	0.10	mg/L	MCAWW 300.0A	
Sulfate	2.7	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	4	1	mg/L	MCAWW 415.1	

**Client Sample ID: AW-28**

Sample #: 003      Date Sampled: 12/12/02 20:00      Date Received: 12/14/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	0.0026 B	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	0.0064 B	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0063 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals					Reviewed
Barium	0.26	0.20	mg/L	SW846 6010B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING ANALYTICAL	PAGE 6  Date Reported: 2/25/03
PARAMETER <hr/> Client Sample ID: AW-28 Sample #: 003 Date Sampled: 12/12/02 20:00 Date Received: 12/14/02 Matrix: WATER	RESULT LIMIT UNITS METHOD

Client Sample ID: AW-28  
 Sample #: 003 Date Sampled: 12/12/02 20:00 Date Received: 12/14/02 Matrix: WATER

Iron	9.8	0.10	mg/L	SW846 6010B
Manganese	5.0	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.21	0.20	mg/L	SW846 6010B
Iron	Dissolved 2.3	0.10	mg/L	SW846 6010B
Manganese	Dissolved 4.6	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved 0.000096 B	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
Methane	1200	5.0	ug/L	RSK SOP-175

Volatile Organics by GC/MS				
Benzene	ND	1.2	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.2	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.62	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.62	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.2	ug/L	SW846 8260B
Ethylbenzene	ND	1.2	ug/L	SW846 8260B
Methylene chloride	4.6	1.2	ug/L	SW846 8260B
Naphthalene	ND	1.2	ug/L	SW846 8260B
Tetrachloroethene	ND	1.2	ug/L	SW846 8260B
Toluene	0.83 J	1.2	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.2	ug/L	SW846 8260B
Trichloroethene	ND	1.2	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	45	1.2	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	21	1.2	ug/L	SW846 8260B
Vinyl chloride	ND	1.2	ug/L	SW846 8260B
Xylenes (total)	2.9	1.2	ug/L	SW846 8260B
Bromomethane	ND	1.2	ug/L	SW846 8260B
Chloroethane	ND	1.2	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L140130  Project Number: ONALASKA	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL REPORTING	PAGE 7 Date Reported: 2/25/03 ANALYTICAL UNITS METHOD
<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>

**Client Sample ID: AW-28**

Sample #: 003      Date Sampled: 12/12/02 20:00      Date Received: 12/14/02      Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.2	ug/L	SW846 8260B	
<b>Acetone</b>	<b>5.4 J</b>	<b>12</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.2	ug/L	SW846 8260B	
Bromoform	ND	1.2	ug/L	SW846 8260B	
2-Butanone	ND	12	ug/L	SW846 8260B	
Carbon disulfide	ND	1.2	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.2	ug/L	SW846 8260B	
Chlorobenzene	ND	1.2	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.2	ug/L	SW846 8260B	
Chloroform	ND	1.2	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.2	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.2	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.2	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.2	ug/L	SW846 8260B	
2-Hexanone	ND	12	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	12	ug/L	SW846 8260B	
Styrene	ND	1.2	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.2	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.2	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	370	5.0	mg/L	MCAWW 310.1	
Chloride	10.8	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	1.1	0.10	mg/L	MCAWW 300.0A	
Sulfate	1.4	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	9	1	mg/L	MCAWW 415.1	

**Client Sample ID: AW-25**

Sample #: 004      Date Sampled: 12/12/02 17:20      Date Received: 12/14/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals	0.0034 B	0.010	Reviewed
Arsenic			SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 8 Date Reported: 2/25/03
	REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT UNITS METHOD

Client Sample ID: AW-25

Sample #: 004 Date Sampled: 12/12/02 17:20 Date Received: 12/14/02 Matrix: WATER

Cadmium	ND	0.0020	mg/L	SW846 6010B
Cobalt	<b>0.0049 B</b>	<b>0.0070</b>	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	ND	mg/L	SW846 6010B
Cadmium	Dissolved	ND	mg/L	SW846 6010B
Cobalt	<b>Dissolved 0.0044 B</b>	<b>0.0070</b>	mg/L	SW846 6010B
Lead	Dissolved	ND	mg/L	SW846 6010B
Vanadium	Dissolved	ND	mg/L	SW846 6010B

Reviewed				
Inductively Coupled Plasma (ICP) Metals				
Barium	0.43	0.20	mg/L	SW846 6010B
Iron	13.8	0.10	mg/L	SW846 6010B
Manganese	6.6	0.015	mg/L	SW846 6010B
Barium	<b>Dissolved 0.30</b>	0.20	mg/L	SW846 6010B
Iron	<b>Dissolved 1.8</b>	0.10	mg/L	SW846 6010B
Manganese	<b>Dissolved 5.5</b>	0.015	mg/L	SW846 6010B

Reviewed				
Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved	ND	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Reviewed				
Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
<b>Methane</b>	<b>570</b>	<b>5.0</b>	ug/L	RSK SOP-175

Reviewed				
Volatile Organics by GC/MS				
Benzene	ND	7.8	ug/L	SW846 8260B
1,1-Dichloroethane	ND	7.8	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	3.9	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	3.9	ug/L	SW846 8260B
1,1-Dichloroethene	ND	7.8	ug/L	SW846 8260B
Ethylbenzene	ND	7.8	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #:	A2L140130	ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	PAGE      9
		Date Reported:	2/25/03
		REPORTING	ANALYTICAL
PARAMETER	RESULT	LIMIT	UNITS METHOD

Client Sample ID: AW-25

Sample #: 004    Date Sampled: 12/12/02 17:20    Date Received: 12/14/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
Methylene chloride	5.1 J	7.8	ug/L	SW846 8260B	
Naphthalene	4.5 J	7.8	ug/L	SW846 8260B	
Tetrachloroethene	ND	7.8	ug/L	SW846 8260B	
Toluene	ND	7.8	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	7.8	ug/L	SW846 8260B	
Trichloroethene	ND	7.8	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	240	7.8	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	38	7.8	ug/L	SW846 8260B	
Vinyl chloride	ND	7.8	ug/L	SW846 8260B	
Xylenes (total)	5.6 J	7.8	ug/L	SW846 8260B	
Bromomethane	ND	7.8	ug/L	SW846 8260B	
Chloroethane	ND	7.8	ug/L	SW846 8260B	
Chloromethane	ND	7.8	ug/L	SW846 8260B	
Acetone	ND	78	ug/L	SW846 8260B	
Bromodichloromethane	ND	7.8	ug/L	SW846 8260B	
Bromoform	ND	7.8	ug/L	SW846 8260B	
2-Butanone	ND	78	ug/L	SW846 8260B	
Carbon disulfide	ND	7.8	ug/L	SW846 8260B	
Carbon tetrachloride	ND	7.8	ug/L	SW846 8260B	
Chlorobenzene	ND	7.8	ug/L	SW846 8260B	
Dibromochloromethane	ND	7.8	ug/L	SW846 8260B	
Chloroform	ND	7.8	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	7.8	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	7.8	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	7.8	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	7.8	ug/L	SW846 8260B	
2-Hexanone	ND	78	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	78	ug/L	SW846 8260B	
Styrene	ND	7.8	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	7.8	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	7.8	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	520	5.0	mg/L	MCAWW 310.1	

(Continued on next page)

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING ANALYTICAL	PAGE 10  Date Reported: 2/25/03			
PARAMETER	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>

**Client Sample ID: AW-25**

Sample #: 004      Date Sampled: 12/12/02 17:20      Date Received: 12/14/02      Matrix: WATER

Chloride				Reviewed
Chloride	2.1	2.0	mg/L	MCAWW 300.0A
Nitrate as N	0.97	0.10	mg/L	MCAWW 300.0A
Sulfate	4.4	1.0	mg/L	MCAWW 300.0A
Total Organic Carbon	7	1	mg/L	MCAWW 415.1

**Client Sample ID: AW-20**

Sample #: 005      Date Sampled: 12/12/02 17:30      Date Received: 12/14/02      Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	0.0088 B	0.010	mg/L	SW846 6010B
Cadmium	0.00037 B	0.0020	mg/L	SW846 6010B
Cobalt	0.011	0.0070	mg/L	SW846 6010B
Lead	ND	0.0030	mg/L	SW846 6010B
Vanadium	ND	0.0070	mg/L	SW846 6010B
Arsenic	Dissolved	ND	mg/L	SW846 6010B
Cadmium	Dissolved	ND	mg/L	SW846 6010B
Cobalt	Dissolved	0.011	mg/L	SW846 6010B
Lead	Dissolved	ND	mg/L	SW846 6010B
Vanadium	Dissolved	ND	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals				Reviewed
Barium	0.29	0.20	mg/L	SW846 6010B
Iron	23.3	0.10	mg/L	SW846 6010B
Manganese	17.0	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.16 B	0.20	mg/L	SW846 6010B
Iron	Dissolved 3.3	0.10	mg/L	SW846 6010B
Manganese	Dissolved 14.1	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				Reviewed
Mercury	0.000087 B	0.00020	mg/L	SW846 7470A
Mercury	Dissolved ND	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA REPORTING <u>PARAMETER</u>	PAGE 11  Date Reported: 2/25/03  <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u> <u>METHOD</u>
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Client Sample ID: AW-20

Sample #: 005      Date Sampled: 12/12/02 17:30      Date Received: 12/14/02      Matrix: WATER

Dissolved Gases in Water					Reviewed
Ethane	ND	5.0	ug/L	RSK SOP-175	
Ethene	ND	5.0	ug/L	RSK SOP-175	
<b>Methane</b>	<b>1600</b>	<b>5.0</b>	<b>ug/L</b>	<b>RSK SOP-175</b>	

Volatile Organics by GC/MS					Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B	
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B	
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B	
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	
<b>Methylene chloride</b>	<b>3.4</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
<b>Naphthalene</b>	<b>0.64 J</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
<b>1,2,4-Trimethylbenzene</b>	<b>22</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
<b>1,3,5-Trimethylbenzene</b>	<b>17</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
<b>Xylenes (total)</b>	<b>1.1</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>3.6 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130  Project Number: ONALASKA  PARAMETER	ENSR Consulting & Engineering ONALASKA LANDFILL REPORTING <u>RESULT</u>	PAGE 12 Date Reported: 2/25/03 ANALYTICAL <u>LIMIT</u> <u>UNITS</u> <u>METHOD</u>
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**Client Sample ID: AW-20**

Sample #: 005    Date Sampled: 12/12/02 17:30    Date Received: 12/14/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
Alkalinity	600	5.0	mg/L	MCAWW 310.1	
Chloride	1.8	1.0	mg/L	MCAWW 300.0A	
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	
Sulfate	1.1	1.0	mg/L	MCAWW 300.0A	
Total Organic Carbon	15	1	mg/L	MCWW 415.1	

**Client Sample ID: AW-9**

Sample #: 006    Date Sampled: 12/12/02 18:00    Date Received: 12/14/02    Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	mg/L	SW846 6010B	
Cadmium	Dissolved	ND	mg/L	SW846 6010B	
Cobalt	Dissolved	ND	mg/L	SW846 6010B	
Lead	Dissolved	ND	mg/L	SW846 6010B	
Vanadium	Dissolved	ND	mg/L	SW846 6010B	

Inductively Coupled Plasma (ICP) Metals					Reviewed
Barium	0.072 B	0.20	mg/L	SW846 6010B	

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING  ANALYTICAL	PAGE 13  Date Reported: 2/25/03
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PARAMETER	RESULT	LIMIT	UNITS	METHOD
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Client Sample ID: AW-9

Sample #: 006      Date Sampled: 12/12/02 18:00      Date Received: 12/14/02      Matrix: WATER

Iron	0.067	B	0.10	mg/L	SW846 6010B	
Manganese	0.041		0.015	mg/L	SW846 6010B	
Barium	Dissolved	0.064	B	0.20	mg/L	SW846 6010B
Iron	Dissolved	ND	0.10	mg/L	SW846 6010B	
Manganese	Dissolved	0.040		0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)

Mercury	ND	0.00020	mg/L	SW846 7470A	
Mercury	Dissolved	ND	0.00020	mg/L	SW846 7470A

Reviewed

B Estimated result. Result is less than RL.

Dissolved Gases in Water

Ethane	ND	0.50	ug/L	RSK SOP-175
Ethene	ND	0.50	ug/L	RSK SOP-175
<b>Methane</b>	<b>260</b>	<b>0.50</b>	<b>ug/L</b>	<b>RSK SOP-175</b>

Reviewed

Volatile Organics by GC/MS

Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>3.8</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
<b>1,2,4-Trimethylbenzene</b>	<b>1.6</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B

Reviewed

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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<b>Lot #:</b> A2L140130	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	<b>PAGE</b> 14 <b>Date Reported:</b> 2/25/03			
	REPORTING	ANALYTICAL			
	PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: AW-9**

Sample #: 006 Date Sampled: 12/12/02 18:00 Date Received: 12/14/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Chloromethane	ND	1.0	ug/L	SW846 8260B	
<b>Acetone</b>	<b>2.9 J</b>	<b>10</b>	<b>ug/L</b>	<b>SW846 8260B</b>	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis					Reviewed
<b>Alkalinity</b>	<b>220</b>	<b>5.0</b>	<b>mg/L</b>	<b>MCAWW 310.1</b>	
<b>Chloride</b>	<b>3.1</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
<b>Nitrate as N</b>	<b>0.42</b>	<b>0.10</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
<b>Sulfate</b>	<b>3.5</b>	<b>1.0</b>	<b>mg/L</b>	<b>MCAWW 300.0A</b>	
<b>Total Organic Carbon</b>	<b>1</b>	<b>1</b>	<b>mg/L</b>	<b>MCAWW 415.1</b>	

**Client Sample ID: AW-1**

Sample #: 007 Date Sampled: 12/12/02 18:00 Date Received: 12/14/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals				Reviewed
Arsenic	ND	0.010	mg/L	SW846 6010B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130	<b>ENSR Consulting &amp; Engineering</b> <b>ONALASKA LANDFILL</b> Project Number: ONALASKA	<b>PAGE</b> 15 <b>Date Reported:</b> 2/25/03			
	REPORTING	ANALYTICAL			
	PARAMETER	RESULT	LIMIT	UNITS	METHOD

Client Sample ID: AW-1

Sample #: 007    Date Sampled: 12/12/02 18:00    Date Received: 12/14/02    Matrix: WATER

Cadmium	0.0032	0.0020	mg/L	SW846 6010B	
Cobalt	0.0043 B	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
Arsenic	Dissolved	ND	0.010	mg/L	SW846 6010B
Cadmium	Dissolved	ND	0.0020	mg/L	SW846 6010B
Cobalt	Dissolved	0.0045 B	0.0070	mg/L	SW846 6010B
Lead	Dissolved	ND	0.0030	mg/L	SW846 6010B
Vanadium	Dissolved	ND	0.0070	mg/L	SW846 6010B

Inductively Coupled Plasma (ICP) Metals				
Barium	0.25	0.20	mg/L	SW846 6010B
Iron	4.5	0.10	mg/L	SW846 6010B
Manganese	6.0	0.015	mg/L	SW846 6010B
Barium	Dissolved 0.21	0.20	mg/L	SW846 6010B
Iron	Dissolved 2.9	0.10	mg/L	SW846 6010B
Manganese	Dissolved 5.3	0.015	mg/L	SW846 6010B

Mercury in Liquid Waste (Manual Cold-Vapor)				
Mercury	ND	0.00020	mg/L	SW846 7470A
Mercury	Dissolved ND	0.00020	mg/L	SW846 7470A

B Estimated result. Result is less than RL.

Dissolved Gases in Water				
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175
Methane	1500	5.0	ug/L	RSK SOP-175

Volatile Organics by GC/MS				
Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

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Lot #: A2L140130  ENSR Consulting & Engineering ONALASKA LANDFILL Project Number: ONALASKA	REPORTING  <u>PARAMETER</u> <u>RESULT</u> <u>LIMIT</u> <u>UNITS</u>	PAGE 16  Date Reported: 2/25/03  ANALYTICAL <u>METHOD</u>
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Client Sample ID: AW-1

Sample #: 007    Date Sampled: 12/12/02 18:00    Date Received: 12/14/02    Matrix: WATER

Volatile Organics by GC/MS					Reviewed
Methylene chloride	3.8	1.0	ug/L	SW846 8260B	
Naphthalene	ND	1.0	ug/L	SW846 8260B	
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	
Toluene	ND	1.0	ug/L	SW846 8260B	
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	
Trichloroethene	ND	1.0	ug/L	SW846 8260B	
1,2,4-Trimethylbenzene	25	1.0	ug/L	SW846 8260B	
1,3,5-Trimethylbenzene	22	1.0	ug/L	SW846 8260B	
Vinyl chloride	ND	1.0	ug/L	SW846 8260B	
Xylenes (total)	4.0	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
Acetone	6.0 J	10	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

J Estimated result. Result is less than RL.

Inorganic Analysis Alkalinity	290	mg/L	Reviewed MCAWW 310.1
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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L140130	<b>ENSR Consulting &amp; Engineering</b> ONALASKA LANDFILL Project Number: ONALASKA	PAGE 17 Date Reported: 2/25/03		
	REPORTING	ANALYTICAL		
PARAMETER	RESULT	LIMIT	UNITS	METHOD

**Client Sample ID: AW-1**

Sample #: 007 Date Sampled: 12/12/02 18:00 Date Received: 12/14/02 Matrix: WATER

Chloride				Reviewed
Chloride	2.1	1.0	mg/L	MCAWW 300.0A
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A
Sulfate	9.1	1.0	mg/L	MCAWW 300.0A
Total Organic Carbon	6	1	mg/L	MCAWW 415.1

**Client Sample ID: TRIP**

Sample #: 008 Date Sampled: 12/12/02 18:00 Date Received: 12/14/02 Matrix: WATER

Volatile Organics by GC/MS				Reviewed
Benzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	0.50	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
<b>Methylene chloride</b>	<b>1.9</b>	<b>1.0</b>	<b>ug/L</b>	<b>SW846 8260B</b>
Naphthalene	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B

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**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

ENSR Consulting & Engineering PAGE 18  
ONALASKA LANDFILL Date Reported: 2/25/03  
Project Number: ONALASKA  
REPORTING ANALYTICAL  
PARAMETER RESULT LIMIT UNITS METHOD

Client Sample ID: TRIP

Sample #: 008 Date Sampled: 12/12/02 18:00 Date Received: 12/14/02 Matrix: WATER

Volatile Organics by GC/MS					Reviewed
	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B	
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B	
2-Hexanone	ND	10	ug/L	SW846 8260B	
4-Methyl-2-pentanone	ND	10	ug/L	SW846 8260B	
Styrene	ND	1.0	ug/L	SW846 8260B	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	

**SEVERN TRENT LABORATORIES, INC.**  
**PRELIMINARY DATA SUMMARY**

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A2L130219	<b>ENSR Consulting &amp; Engineering</b> <b>ONALASKA LANDFILL</b> Project Number: ONALASKA REPORTING	PAGE 1 <b>Date Reported:</b> 2/25/03
		<b>ANALYTICAL</b> UNITS
		<b>METHOD</b>
PARAMETER	RESULT	LIMIT

Client Sample ID: MW-1M

Sample #: 001 Date Sampled: 12/11/02 13:10 Date Received: 12/13/02 Matrix: WATER

Trace Inductively Coupled Plasma (ICP) Metals					Reviewed
<b>Arsenic</b>	<b>0.014</b>	0.010	mg/L	SW846 6010B	
Cadmium	ND	0.0020	mg/L	SW846 6010B	
Cobalt	ND	0.0070	mg/L	SW846 6010B	
Lead	ND	0.0030	mg/L	SW846 6010B	
Vanadium	ND	0.0070	mg/L	SW846 6010B	
<b>Arsenic</b>	<b>Dissolved 0.0024 B</b>	0.010	mg/L	SW846 6010B	
<b>Cadmium</b>	<b>Dissolved 0.00029 B</b>	0.0020	mg/L	SW846 6010B	
Cobalt	Dissolved ND	0.0070	mg/L	SW846 6010B	
Lead	Dissolved ND	0.0030	mg/L	SW846 6010B	
Vanadium	Dissolved ND	0.0070	mg/L	SW846 6010B	

Inductively Coupled Plasma (ICP) Metals					Reviewed
<b>Barium</b>	<b>0.32</b>	0.20	mg/L	SW846 6010B	
<b>Iron</b>	8.7	0.10	mg/L	SW846 6010B	
<b>Manganese</b>	1.7	0.015	mg/L	SW846 6010B	
<b>Barium</b>	<b>Dissolved 0.22</b>	0.20	mg/L	SW846 6010B	
<b>Iron</b>	<b>Dissolved 0.10</b>	0.10	mg/L	SW846 6010B	
<b>Manganese</b>	<b>Dissolved 1.5</b>	0.015	mg/L	SW846 6010B	

Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
<b>Mercury</b>	ND	0.00020	mg/L	SW846 7470A	
<b>Mercury</b>	<b>Dissolved 0.00011 B</b>	0.00020	mg/L	SW846 7470A	

B Estimated result. Result is less than RL.

Dissolved Gases in Water					Reviewed
<b>Ethane</b>	ND	0.50	ug/L	RSK SOP-175	
<b>Ethene</b>	ND	0.50	ug/L	RSK SOP-175	
<b>Methane</b>	<b>9.9</b>	0.50	ug/L	RSK SOP-175	

Volatile Organics by GC/MS					Reviewed
<b>Benzene</b>	ND	1.0	ug/L	SW846 8260B	
<b>1,1-Dichloroethane</b>	ND	1.0	ug/L	SW846 8260B	
<b>cis-1,2-Dichloroethene</b>	ND	0.50	ug/L	SW846 8260B	
<b>trans-1,2-Dichloroethene</b>	ND	0.50	ug/L	SW846 8260B	

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**Chain of  
Custody Record**

**SEVERN**

**TRENT**

**SERVICES**

**Severn Trent Laboratories, Inc.**

STL-4124 (0901)

Client <b>ENSR</b>			Project Manager <b>Peter Moore</b>			Date <b>12-11-02</b>	Chain of Custody Number <b>118612</b>									
Address <b>4500 Park Glen Road</b>			Telephone Number (Area Code)/Fax Number <b>952-924-6117 952-924-0312</b>			Lab Number	Page <b>1</b> of <b>2</b>									
City <b>St Louis Park</b>	State <b>MN</b>	Zip Code <b>55416</b>	Site Contact <b>Peter Moore</b>	Lab Contact <b>Dave Hocken</b>	Analysis (Attach list if more space is needed)											
Project Name and Location (State) <b>Canal Park Landfill</b>			Carrier/Waybill Number <b>Fed Ex 828099703465</b>													
Contract/Purchase Order/Quote No.			Matrix		Containers & Preservatives				Special Instructions/ Conditions of Receipt  <b>- Nitrate Sample LAs 418 Landfill</b>  <b>- Please Filter Dissolved Metal Sample</b>  <b>NO TOC on PZ-3</b>							
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4		HNO3	HCl	NaOH	ZnCl2 NaOH	Vols(Full/1/2) Total/Partial	Dissolved Metals Sulfide Alk. Alkaline Metals Acidic Metals	TOC
MW-1M	12-11-02	13:10		X			2	2		1	5			X X X X X X		
MW-1S		13:35					1	1		1	1			1 1 1 1 1 1		
PZ-02		15:35														
PZ-03		16:10														
MW-2M		17:05														
MW-2S		17:20														
MW-8S		19:00														
MW-8M		19:10														
MW-12S		18:20														
MW-4S	12-11-02	18:30		X			2	2	1	5			X X X X X X			
MW-4S Dup		18					1	1	1	1			1 1 1 1			
MW-4S MS		18					1	1	1	1			1 1 1 1			
Possible Hazard Identification			Sample Disposal										(A fee may be assessed if samples are retained longer than 1 month)			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months															

Turn Around Time Required  
**N/A**

24 Hours  48 Hours  7 Days  14 Days  21 Days  Other **24 hours**

QC Requirements (Specify)

1. Relinquished By <b>Peter Moore</b>	Date <b>12/12/02</b>	Time <b>12:00</b>	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments **Some of the 40ml vials were initially mislabeled but corrected. Please pay attention to any changes on label.**

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy



**Chain of  
Custody Record**

**SEVERN  
TRENT  
SERVICES**

**Severn Trent Laboratories, Inc.**

STL-4124 (0901)

Client <b>ENSR</b>			Project Manager <i>Peter Moore</i>			Date <b>12-12-02</b>	Chain of Custody Number <b>118616</b>												
Address <b>4500 Park Glen Rd, Suite 210</b>			Telephone Number (Area Code)/Fax Number <b>952-924-0117/952-924-0317</b>			Lab Number	Page <b>1</b> of <b>1</b>												
City <b>St Louis Park</b>		State <b>Minn</b>	Zip Code <b>55416</b>	Site Contact <i>Peter Moore</i>	Lab Contact <i>Dave Heakin</i>	Analysis (Attach list if more space is needed)													
Project Name and Location (State) <b>On Ainsta Landfill</b>			Carrier/Waybill Number <b>828099703476</b>			Special Instructions/ Conditions of Receipt													
Contract/Purchase Order/Quote No.			Matrix					Containers & Preservatives											
Sample I.D. No. and Description (Containers for each sample may be combined on one line)		Date <b>12-12-02</b>	Time <b>19:00</b>	Air <input checked="" type="checkbox"/>	Aqueous <input type="checkbox"/>	Sed. <input type="checkbox"/>	Soil <input type="checkbox"/>	Unpres. <input type="checkbox"/>	H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/>	HNO <sub>3</sub> <input type="checkbox"/>	HCl <input type="checkbox"/>	NaOH <input type="checkbox"/>	ZnAc/ NaOH <input type="checkbox"/>	Vols (liters)	Total pH (15)	Dissolved Metals Chloride, Nitrate, Sulfate, TAN	Organic Solvents (BS)	TAC	
<b>AW-13</b>				X															<i>private Sample has 48 hour TAT</i>
<b>AW-13 Dup</b>		<b>12-12-02</b>	<b>19:05</b>																
<b>AW-28</b>			<b>20:00</b>																<i>Please F.I.L.</i>
<b>AW-25</b>			<b>12:20</b>																<i>Dissolved Metal Sample</i>
<b>AW-20</b>			<b>12:30</b>																
<b>AW-9</b>			<b>18:00</b>																
<b>AW-1</b>		<b>↓</b>	<b>18:00</b>																
<b>TRIP</b>														X					
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						Sample Disposal <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						(A fee may be assessed if samples are retained longer than 1 month)							
Turn Around Time Required <i>24 hours</i>						QC Requirements (Specify) <i>Peter Moore 15</i>													
<input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input checked="" type="checkbox"/> Other <i>24 hours</i>																			
1. Relinquished By <i>P. Dutton</i>		Date <b>12/13/02</b>	Time <b>12:00</b>	1. Received By						Date	Time								
2. Relinquished By		Date	Time	2. Received By						Date	Time								
3. Relinquished By		Date	Time	3. Received By						Date	Time								
Comments																			

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy