

Preliminary Assessment and Site Inspection Report for Travers Park Landfill

Bonner County



**State of Idaho
Department of Environmental Quality**

January 2013



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Bonner County

January 2013



**Prepared by
Idaho Department of Environmental Quality
Mine Waste Program
1410 N. Hilton
Boise, Idaho 83706**

Acknowledgments

DEQ would like to thank the City of Sandpoint for permitting access to the landfill site.



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, ID 83706 • (208) 373-0502

C. L. "Butch" Otter, Governor
Curt Fransen, Director

January 24, 2013

Mr. Ken Marcy
U.S. Environmental Protection Agency
12928 SW 276th Street
Vashon, WA 98070

Subject: Preliminary Assessment and Site Inspection (PA/SI) Report for the Travers Park
Landfill in Bonner County, Idaho

Dear Mr. Marcy:

The Idaho Department of Environmental Quality (DEQ) has a cooperative agreement with Region 10 of the United States Environmental Protection Agency (EPA) to provide technical support for completion of preliminary assessments at various industrial sites on private or state lands. Travers Park Landfill was closed and capped in the 1960s. It is in the public ownership of the City of Sandpoint, Bonner County, Idaho and currently serves as a public park.

Generally speaking, toxicological risks to human and ecological receptors are unlikely, except for barium interference with invertebrate reproduction in the pond. No other contaminants were found in detectable levels except barium. The barium concentrations found were not at a level of human health risk. The possibility exists that barium is present in the ground water at levels above the maximum concentration level (MCL), but ground water use in this area of Sandpoint is precluded by the extremely low yield of water wells. Barium in the concentration measured is an ecological risk to invertebrate reproduction. The risk is likely limited to the pond.

Based on existing conditions and uses, historic information, data observations made during the site visit, analysis of water samples, potential pathways of contaminants to receptors, and potential exposures to ecological and human receptors, **DEQ has made a No Remedial Action Planned (NRAP) determination for the Travers Park Landfill.**

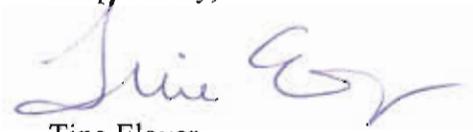
A link to the Preliminary Assessment and Site Inspection Report for the site can also be found on DEQ's Preliminary Assessment Web page at:

<http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/mining-preliminary-assessments.aspx>

Mr. Ken Marcy
January 24, 2012
Page 2

If you have any questions about this site, the report, or DEQ's recommendations, please do not hesitate to call me at (208) 373-0563.

Respectfully,

A handwritten signature in blue ink, appearing to read "Tina Elayer", is written over a light gray rectangular background.

Tina Elayer
Mine Waste Specialist

attachments

cc: City of Sandpoint
Travers Park Landfill PA File

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List of Acronyms

bgs	below ground surface
CWA	Clean Water Act
DEQ	Idaho Department of Environmental Quality
DQO	data quality objective
EPA	United States Environmental Protection Agency
HRS	Hazard Ranking Score
IDFG	Idaho Department of Fish and Game
IDTLs	initial default target levels
MCL	maximum contaminant level
mg/L	milligrams per liter
mL	milliliters
µg/L	micrograms per liter
NAIP	National Agriculture Imagery Program
NRAP	No Remedial Action Planned
ORNL	Oak Ridge National Labs
PA	preliminary assessment
PPE	probable point of entry
QA/QC	quality assurance/quality control
RMP	risk management plan
SI	site inspection
SVL	SVL Analytical, Inc.
TDL	target distance limit
TMDL	total maximum daily load
TOT	time of travel
UPRR	Union Pacific Railroad

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1 Introduction

This report presents the results of the preliminary assessment and site inspection (PA/SI) for the Travers Park Landfill. The United States Environmental Protection Agency (EPA) Region 10 has a cooperative agreement with the Idaho Department of Environmental Quality (DEQ) to provide technical support for completing preliminary assessments at various industrial sites on private, state, or mixed ownership (public and private) lands. DEQ also completes site assessments in response to complaints or information about sites possibly contaminated with hazardous waste. These sites include abandoned mines, rural airfields that have served as bases for aerial spraying, old landfills, illegal dumps, and abandoned industrial facilities with known or suspected releases.

In February 2002, DEQ initiated a Preliminary Assessment Program to evaluate and prioritize assessment of such potentially contaminated sites. Due to accessibility and funding considerations, priority is given to sites where potential contamination poses the most substantial threat to human health or the environment. In past year, this priority focuses DEQ's efforts in areas where residential and recreational developments are encroaching on historic industrial sites.

See the following webpage for additional information about DEQ's Preliminary Assessment Program: <http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/mining-preliminary-assessments.aspx>.

The Travers Park Landfill is located in Sandpoint, Bonner County, Idaho in Township 57 North, Range 2 West, Section 21 (Figure 1). On October 18, 2012, DEQ visited the site and performed a site assessment. The landfill was closed and capped in the 1960s prior to the promulgation of any solid waste regulations by the state in 1974. The site received household waste from city residents over a seventy year period. The site is located adjacent to Chuck Slough which receives surface and ground water drainage from the area around it including roughly half of the city. Chuck Slough discharges to the Pend Oreille River.

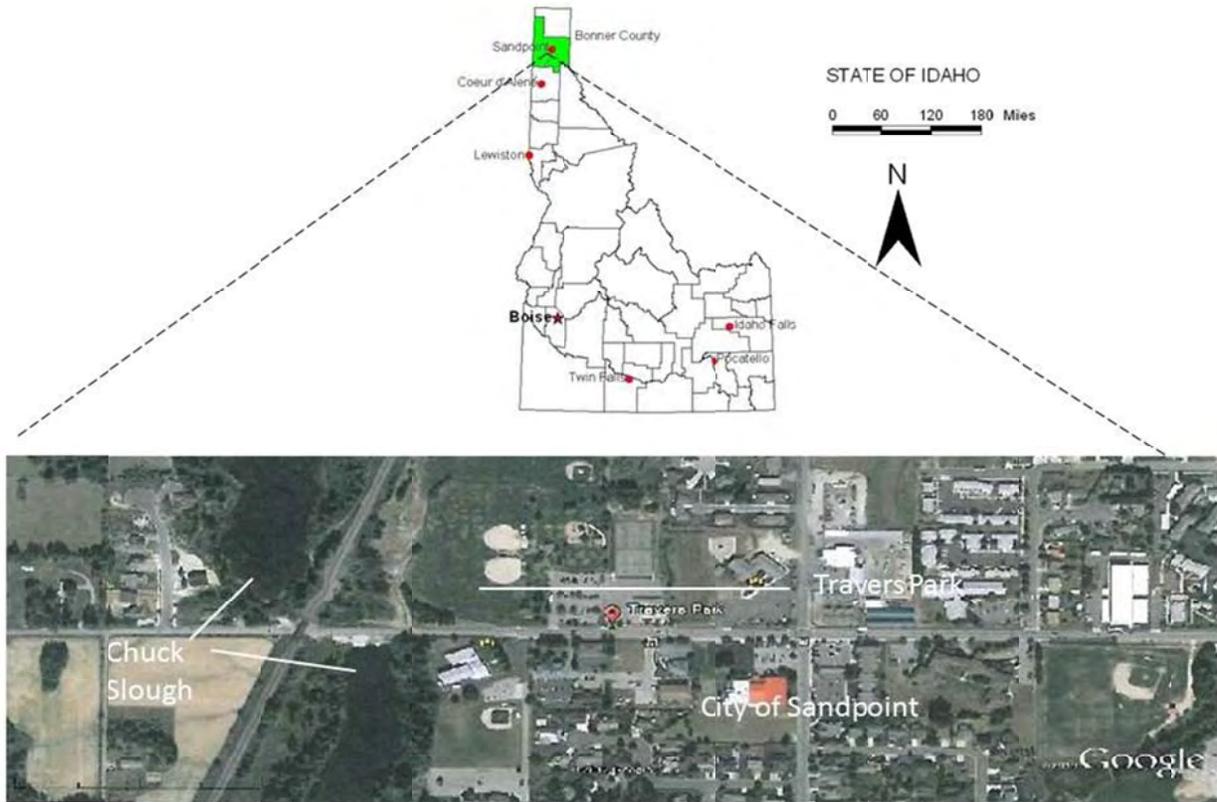


Figure 1. Topographic overview map of the Travers Park Landfill.

(Source: Google Earth)

2 Ownership

Travers Park is in the public ownership of the City of Sandpoint, Bonner County, Idaho and serves as a public park.

For the ownership described below, the *Partial Determination* is meant to convey a very brief summary of DEQ’s assessment of individual parcels relative to human health and ecological risk factors associated with toxicological responses to potential wastes. A determination of *No Remedial Action Planned*, or NRAP, means that based on current conditions at the site, DEQ did not find any significant evidence indicating the potential of adverse toxicological effects to human or ecological receptors on the parcel of land and no additional work is necessary to manage those potential effects. This determination says nothing about risks associated with physical.

A *Calculate HRS* determination indicates that DEQ has found sufficient evidence to warrant a Hazard Ranking System (HRS) score calculation by EPA’s contractors. It also indicates that DEQ has concluded and recommended that additional site assessment and/or remedial actions

are necessary to prevent adverse effects to human or ecological receptors. The conclusions and recommendations for the Travers Park Landfill are in Section 11 of this report.

Owner	Parcel Number	Partial Determination
City of Sandpoint 1123 Lake Street Sandpoint, ID 83864	RPS00000214302A	NRAP

3 Location

DEQ notified the City of Sandpoint that a preliminary assessment would be completed on the former landfill underlying Travers Park. The data and observations made during the site visit were used to come to specific conclusions regarding this property.

Travers Park and its underlying landfill are located near the western edge of Sandpoint along Chuck Slough, a broad slow moving waterway conveying a few ephemeral streams to the Pend Oreille River and likely a local expression of the ground water surface. Access to the park is from west Pine Street (Figure 2).

4 Site History

DEQ uses historical research for several purposes. Initially, historical information highlights potential contaminants of concern, the magnitude of waste sites, and potentially dangerous physical hazards such as wastes landfilled. DEQ also uses the information to properly identify landfill boundaries, unravel inconsistencies that may exist in property boundaries and ownership, and identify historical land uses that coincide with current land use.

To prepare for site assessment field work the historical information helped DEQ understand the relative levels of materials landfilled. As indicated in the history, the landfill beneath Travers Park encompassed roughly the park area.

Local historical sources were used during the “desktop” research prior to visiting the site. The sources were primarily the unpublished oral history of long time Sandpoint residents. DEQ could not improve or expand upon these reports by writing additional historical or geological text.



Figure 2. Aerial photograph overlain by Bonner County parcel data for the City of Sandpoint.
(Source: 2009 Natural Color 1-meter National Agriculture Imagery Program [NAIP] Idaho)

5 Climatology

The climatology of the area was summarized in the City of Sandpoint, Lake Pend Oreille Water Treatment Plant Expansion and Upgrade:

Sandpoint “lies on Lake Pend Oreille and the climate is influenced by the lake, the Selkirk Mountain range that dominates the western side of Bonner County, and the Cabinet Mountains that border the County on the east. The closest weather station is located at Sandpoint’s Experimental Station (108137) and would be representative of” Sandpoint. (CH2M Hill 2010, p. 11)

The Experimental Station (108137) is approximately 1.6 air miles from the Travers Park Landfill. The Experimental Station (108137) is at an elevation of 2,121 feet, while the landfill is at approximately 2,100 feet.

Average annual maximum and minimum temperatures range from 56.6 to 34.4°F. Annual precipitation averages 31.96 inches a year, with an average of 70.4 inches of snow (Sandpoint Experiment Station, Idaho, Period of Record Monthly Climate Summary). (CH2M Hill 2010, page 11)

6 General Geology

The following information was used to identify the composition of geology and lithology for the area:

Sandpoint is located in the Purcell Trench, which is bordered by the Selkirk Mountains to the west and the Cabinet Mountains to the east. The Sandpoint Lowland is a broad part of the Purcell Trench north of Lake Pend Oreille. This lowland is generally underlain by lake deposits of clay, silt and fine-grained sand. Lake bed deposits normally are composed of alternating layers of silty sand and silty clay, each a few inches to a few feet thick. These deposits can extend to depth of more than 200 feet below ground surface (bgs). The water-bearing formations in the Sandpoint valley are the lake beds and the shallow sand and gravel along bottomlands. Domestic wells constructed in these deposits usually have shallow depths and generally low yields, except where gravel is encountered. Groundwater is usually encountered at depth of less than 60 feet bgs or less in areas where there is perched groundwater (Savage 1967, Walker 1964). The shallow groundwater around the Sandpoint sites has been noted to occur at depths of 1 to 4 feet bgs and to flow in a southwest direction at an estimated gradient of 22 feet per mile (E&E 1986). Table 4-1 (Table 1) shows the underlying geologic strata defined in area wells.

Table 4-1 (1)
Subsurface Stratigraphy of North Sandpoint-
SW1/4, SW1/4, Section 15, Township 57 North, Range 2 West

Depth Interval (feet bgs)	Lithology	Water-Bearing Units
0 to 5	Clay and rock	No water encountered
5 to 21	Decomposed granite	No water encountered
21 to 37	Soft granite	No water encountered
37 to 52	Decomposed granite	Water encountered
52 to 148	Granite	No water encountered
148 to 165	Granite softer	Water encountered
165 to 302	Granite with soft spots	No water encountered

(URS Consultants Inc. 1996, pp. 4-1 & 4-2)

The vertical lithology of the area is confirmed by the well logs of the closest ground water well to Travers Park (Figure 3). The wells indicate fine clay surface soils with interspersed soft granitic lenses to a depth of 300 feet where solid granitic bedrock is contacted. The clay lenses at five feet depth or one quite similar retards ground water penetration over a wide area of north and western Sandpoint. The ground water flows along this southwest boundary into Chuck Slough. Part of this discharge passes through the landfill beneath Travers Park. Figure 4 is a map of the major lithology in the vicinity of the Travers Park Landfill.

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR
BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

N

<p>1. WELL OWNER</p> <p>Name <u>Mark L. + Donna D. Cowdrey</u> Address <u>2155 Sandpoint, Idaho Pinecrest Loop RD.</u> Owner's Permit No. <u>96-90-N-25</u></p> <p>2. NATURE OF WORK</p> <p><input checked="" type="checkbox"/> New well <input type="checkbox"/> Deepened <input type="checkbox"/> Replacement <input type="checkbox"/> Well diameter increase <input type="checkbox"/> Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)</p> <p>3. PROPOSED USE</p> <p><input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test <input type="checkbox"/> Municipal <input type="checkbox"/> Industrial <input type="checkbox"/> Stock <input type="checkbox"/> Waste Disposal or Injection <input type="checkbox"/> Other _____ (specify type)</p> <p>4. METHOD DRILLED</p> <p><input checked="" type="checkbox"/> Rotary <input checked="" type="checkbox"/> Air <input type="checkbox"/> Hydraulic <input type="checkbox"/> Reverse rotary <input type="checkbox"/> Cable <input type="checkbox"/> Dug <input type="checkbox"/> Other _____</p> <p>5. WELL CONSTRUCTION</p> <p>Casing schedule: <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Other <u>PVC</u></p> <table border="0" style="width: 100%;"> <tr> <td>Thickness</td> <td>Diameter</td> <td>From</td> <td>To</td> </tr> <tr> <td><u>250</u> inches</td> <td><u>6"</u> inches</td> <td><u>1</u> feet</td> <td><u>59</u> feet</td> </tr> <tr> <td><u>160 PSI</u> inches</td> <td><u>4"</u> inches</td> <td><u>52</u> feet</td> <td><u>302</u> feet</td> </tr> <tr> <td><u>PVC</u> inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Was casing drive shoe used? <input type="checkbox"/> Yes <input type="checkbox"/> No Was a packer or seal used? <input type="checkbox"/> Yes <input type="checkbox"/> No Perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No How perforated? <input type="checkbox"/> Factory <input type="checkbox"/> Knife <input type="checkbox"/> Torch <input type="checkbox"/> Gun Size of perforation <u>3/8</u> inches by <u>6"</u> inches <input checked="" type="checkbox"/> SAW</p> <table border="0" style="width: 100%;"> <tr> <td>Number</td> <td>From</td> <td>To</td> </tr> <tr> <td><u>48</u> perforations</td> <td><u>264</u> feet</td> <td><u>295</u> feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </table> <p>Well screen installed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Manufacturer's name _____ Type _____ Model No. _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth <u>18+</u> Material used in seal: <input type="checkbox"/> Cement grout <input checked="" type="checkbox"/> Bentonite <input type="checkbox"/> Puddling clay <input type="checkbox"/> _____ Sealing procedure used: <input type="checkbox"/> Slurry pit <input type="checkbox"/> Temp. surface casing <input checked="" type="checkbox"/> Overbore to seal depth Method of joining casing: <input type="checkbox"/> Threaded <input checked="" type="checkbox"/> Welded <input checked="" type="checkbox"/> Solvent Weld <input type="checkbox"/> Cemented between strata</p> <p>Describe access port _____</p>	Thickness	Diameter	From	To	<u>250</u> inches	<u>6"</u> inches	<u>1</u> feet	<u>59</u> feet	<u>160 PSI</u> inches	<u>4"</u> inches	<u>52</u> feet	<u>302</u> feet	<u>PVC</u> inches	_____ inches	_____ feet	_____ feet	Number	From	To	<u>48</u> perforations	<u>264</u> feet	<u>295</u> feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	<p>7. WATER LEVEL</p> <p>Static water level <u>Est 50</u> feet below land surface. Flowing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: <input type="checkbox"/> Valve <input type="checkbox"/> Cap <input type="checkbox"/> Plug Temperature _____ of. Quality _____ Describe artesian or temperature zones below.</p> <p>8. WELL TEST DATA</p> <p><input type="checkbox"/> Pump <input type="checkbox"/> Baller <input checked="" type="checkbox"/> Air <input type="checkbox"/> Other _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> <tr> <td><u>Est 3 GPM'S</u></td> <td></td> <td></td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table> <p>9. LITHOLOGIC LOG</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th colspan="2">Water</th> </tr> <tr> <th>From</th> <th>To</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>3"</td> <td>0</td> <td>5</td> <td>Clay + Rock</td> <td></td> <td></td> </tr> <tr> <td>"</td> <td>5</td> <td>21</td> <td>Decomposed Granite</td> <td></td> <td></td> </tr> <tr> <td>"</td> <td>21</td> <td>37</td> <td>Soft Granite</td> <td></td> <td></td> </tr> <tr> <td>"</td> <td>37</td> <td>52</td> <td>Decomposed Granite</td> <td><input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>"</td> <td>52</td> <td>59</td> <td>Granite</td> <td></td> <td></td> </tr> <tr> <td>"</td> <td>59</td> <td>148</td> <td>Granite</td> <td></td> <td></td> </tr> <tr> <td>"</td> <td>148</td> <td>165</td> <td>Granite softer</td> <td><input checked="" type="checkbox"/></td> <td></td> </tr> <tr> <td>"</td> <td>165</td> <td>302</td> <td>Granite w/ soft spots</td> <td></td> <td></td> </tr> </tbody> </table> <div style="text-align: center; border: 2px solid black; padding: 5px; margin: 10px 0;"> <p>RECEIVED MAY 29 1990 Department of Water Resources</p> </div> <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>RECEIVED MAY 23 1990 NORTHERN REGION IDWR</p> </div>	Discharge G.P.M.	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<p>6. LOCATION OF WELL</p> <p>Sketch map location <u>must</u> agree with written location.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">N</td> <td colspan="2"></td> </tr> <tr> <td style="text-align: center;">W</td> <td style="text-align: center;">E</td> <td style="text-align: center;">S</td> </tr> </table> <p>Subdivision Name <u>AG 13 1500</u> Lot No. _____ Block No. _____ County <u>Bonner</u> <u>SW</u> <input checked="" type="checkbox"/> <u>SW</u> <input checked="" type="checkbox"/> Sec. <u>15</u> T. <u>57</u> N. <input checked="" type="checkbox"/> S. <input type="checkbox"/> R. <u>2</u> E. <input checked="" type="checkbox"/> W. <input checked="" type="checkbox"/></p>	N			W	E	S	<p>10. Work started <u>4-21-90</u> finished <u>4-23-90</u></p> <p>11. DRILLERS CERTIFICATION <u>DL</u></p> <p>I/We certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>AQUA Drilling + Exploration Inc.</u> Firm No. <u>163</u> Address <u>P.O. Box 225 COA ID</u> Date <u>4-24-90</u> Signed by (Firm Official) <u>Scott M. Beaman</u> and (Operator) <u>Scott M. Beaman</u></p>																																																																																												
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Figure 3. Well log image showing the major lithology of the closest ground water well in the vicinity of Travers Park Landfill.

(Source: IDWR)



Figure 4. Map of major lithology in the vicinity of the Travers Park Landfill.

(Source: ArcSDE.deqgis83.DBO.major lithology)

7 Current and Potential Future Land Uses

The former landfill site is a City of Sandpoint park that includes tennis courts and ball fields. The site is likely to remain a city park for the foreseeable future.

8 Site Conditions

The following photographs and descriptions were gathered and observed during DEQ's field visit on October 18, 2012.

The park surface is relatively flat likely from filling, capping, and grading the surface of the former landfill. Photo 1 illustrates the typical cap and finish grade covering the old landfill. The cap extends to the tree line and then drops steeply 30 to 35 feet to native topography and remnants of Chuck Slough. The pond is at the base of this fill.



Photo 1. Looking south-southwest from the western perimeter of Travers Park.

Precipitation and snow melt percolate through the landfill. Attempts were made to mitigate seasonal surface water as indicated by Photo 2. This storm drain captures surface water and redirects it under the paved jogging path. The water is then discharged onto the cap again where it continues to percolate through the landfill. The soil typically becomes saturated resulting in surface water flowing to the edge of the cap and emptying into a pond at the base of the landfill. The pond discharges into Chuck Slough.



Photo 2. Storm drain next to the paved jogging path on the western perimeter of Travers Park.

The fill falls off into a pond and wetland area on the park's southwestern perimeter (Photo 3). The pond and wetland area were partially filled by the landfill. This pond and wetland area was cut off from Chuck Slough by construction of the Union Pacific Railroad (UPRR) early in the twentieth century.



Photo 3. South/southwestern view along a berm installed to create a buffer and define the western boundary of Travers Park.

A small pond and wetland area are located at the toe of the landfill between Travers Park on the east and the UPRR grade on the west. Chuck Slough is located on the south side of Pine Street. In Photo 4 the pond and wetland area are in the forefront, the UPRR grade is on the far right, Pine Street is mid-photo, and Chuck Slough is in the background beyond Pine Street.



Photo 4. View from the southwest corner of Travers Park looking south.

Photo 5 shows the wetland vegetative swath between Pine Street and the pond. The abrupt elevation change on the right side of the photo is the edge of the landfill. The elevation change on the left side is the 30-35 foot fill for the UPRR grade.



Photo 5. Looking north from Pine Street the vegetation surrounding the pond appears healthy with no signs of stress.



Photo 6. Close-up view of vegetative swath between Pine Street and the pond.

Photo 7 shows the culvert that goes under Pine Street to Chuck Slough. It is the outlet for the wetland area and small pond.



Photo 7. Culvert that goes under Pine Street to Chuck Slough.



Photo 8. View of the small pond and the steep gradient of the landfill where it encroaches on the pond.

Surface water samples TP-1 and TP-2 (duplicate) were collected from the pond as close as possible to the landfill area. The surface water samples were analyzed for fifteen 40 CFR 258 Appendix 1 metals and forty-four 40 CFR 258 Appendix 1 organic compounds.



Photo 9. Close-up view of vegetation and overhanging debris at the toe of the landfill.

Garbage was “stacked” at the edge of the landfill as it encroached into the pond. The garbage was thinly covered with a soil veneer allowing vegetative growth but because of the steep slope and thin veneer garbage is also visible and continues to “work its way out” from the landfill scarp. Old car frames are submerged in the pond and garbage is observed in the landfill scarp.



Photo 10. View of the frame of an old car submerged in the pond.



Photo 11. Close-up view of the frame of an old car submerged in the pond.



Photo 12. View looking north where the UPRR fill on the left and the landfill on the right meet.

The pond discharges an estimated 1 to 2 feet per second of water through a culvert under the grade into Chuck Slough. The discharge is sustained at this level despite over two months with minimal precipitation and no surface runoff. Even in the dry months the flow doesn't stop. Any contaminants entering the pond from the ground water are transported to Chuck Slough which discharges to the Pend Oreille River. Any contaminants from the landfill should be detectable in

the pond water. Photo 13 shows the outlet channel into Chuck Slough and Photo 14 shows the culvert discharging water under Pine Street into Chuck Slough.



Photo 13. Close-up view of the outlet channel into Chuck Slough.



Photo 14. Close-up view of the culvert discharging water under Pine Street into Chuck Slough.

9 Sample Collection and Analysis

The following section discusses the types of samples collected and the results from the analysis. This section also includes how data quality objectives (DQOs) were achieved.

9.1 Collection

Two surface water samples were collected from the pond at the toe of Travers Park Landfill. One field trip blank was carried throughout the assessment:

- Surface water sample (TP-1)—pond water sample consisting of 250 milliliters (mL) sample for metals and two 40 mL volatile organic analyte (VOA) samples for organic constituents.
- Surface water sample (TP-2)—duplicate pond water sample consisting of 250 mL sample for metals and two 40 mL VOA samples for organic constituents.
- Field trip blank (FBTP)—distilled water trip blank consisting of 250 mL sample for metals and two 40 mL VOA samples for organic constituents.

No soil or sediment samples were collected

Prior to collecting field samples for water quality analysis, a gloved technician labeled and triple rinsed laboratory-prepared 250 mL sample bottles before filling the bottles with grab samples. The bottles were acidified with 10 mL of nitric acid, closed, dried, and placed in a cooler with ice. Two additional triple rinsed laboratory-prepared 40 mL VOA samples were filled with the grab samples. The bottles were acidified with 10 mL of hydrochloric acid, closed, dried, and placed in a cooler with ice. Both water samples TP-1 and TP-2 (duplicate) were collected from the pond as close as possible to the landfill area.

In accordance with EPA chain-of-custody procedures, DEQ submitted the surface water samples to SVL Analytical, Inc. (SVL) in Coeur d'Alene, Idaho, for analysis of the fifteen 40 CFR 258 Appendix 1 metals and forty-four 40 CFR 258 Appendix 1 organic compounds. SVL sent the samples to Anatek Labs, Inc. in Moscow, Idaho for further analysis. A summary of the laboratory results is included in Table 1 in Section 9.2. A copy of the laboratory reports is included as Appendix A. Figure 5 shows the surface water sample locations.

In accordance with EPA chain-of-custody procedures, DEQ submitted the surface water samples to SVL in Kellogg, Idaho, for analysis of the RCRA suite of eight heavy metals along with copper, zinc, manganese, iron, and antimony. A copy of the laboratory report is included as Appendix A. A summary of the laboratory results is included in the tables in sections 9.2 and 9.3. Figure 5 shows the soil and surface water sample locations.



Figure 5. Sample location and features of the Travers Park Landfill.

(Source: Google Earth)

9.2 Water Sample Analysis

Significant interaction occurs between surface water and ground water systems. In this case where regional ground water is discharging to surface water (Chuck Slough), through a potentially contaminated subsurface area and into a small pond receiving no surface runoff, ground water quality directly determines the surface water quality.

Water quality samples were uniformly below detection limits for all fifteen 40 CFR 258 metals with the exception of barium which was present at 22.9 micrograms per liter ($\mu\text{g/L}$) and 22.3 $\mu\text{g/L}$ in the pond water. Since the trip blank was below detection for all metals, the result appears correct. All of the 44 organic constituents were below the level of detection in both the sample and duplicate. The absence of detectable constituents of typical solid waste leachate indicates the landfill under Travers Park is having only a small effect on water quality in the pond or Chuck Slough.

The single constituent detected is barium. Since barium is rarely encountered in surface and ground water, it is probable that its origin is the landfill. Biological decay of drywall material using barite as the fill material is a possible origin. Barium concentration is not at a level or in a location of great immediate concern. Idaho has no cold water biota standard (acute or chronic) for barium. Oak Ridge National Lab (ORNL) has developed a conservative, secondary chronic value for protection of aquatic life. The criterion is 4 $\mu\text{g/L}$, and is based on study of *Daphnia magna*. Barium concentration of 4 $\mu\text{g/L}$ results in 16 percent impairment in reproduction. EPA Region 3 cites this value, as does Oregon. Oregon has also derived values from ORNL for protection of birds and mammals ingesting surface water that are much higher: 150 milligrams per liter (mg/L) for birds and 39 mg/L for mammals (Suter and Tsao 1996).

Based on these values the water in the pond may impact invertebrate reproduction, but would not adversely affect birds or mammals consuming the water. The 22 $\mu\text{g/L}$ concentration leaving the pond is diluted first by the water in Chuck Slough and then by the Pend Oreille River. Barium

detection in the slough is unlikely and barium would not be detectable in the river due to dilution.

The toxicity of barium is based on its chemical competition with and replacement of calcium in processes normally mediated by calcium, particularly those relating to the release of adrenal catechol amines and neurotransmitters, such as acetylcholine and noradrenaline. The drinking water maximum concentration level (MCL) for barium is 2 mg/L. Barium causes increase in blood pressure in humans. The water in the pond is not a known domestic water supply and is two orders of magnitude lower concentration than the MCL. However, the pond water is a composite of all the ground water discharge from the area. It is possible that local ground water within the confines of the landfill footprint may be above the MCL.

Table 1 summarizes laboratory analytical results for the soil samples collected.

Table 1. Total recoverable metals analysis for Travers Park. (Concentrations expressed in milligrams per liter [mg/L] unless otherwise noted.)

Description	DEQ Ground Water Standard(T)	DEQ Drinking Water Standard MCL	DEQ Cold Water Biota Standard Acute	DEQ Cold Water Biota Standard Chronic	Surface Water Sample TP-1	Surface Water Sample TP-2 (Duplicate)	Field Trip Blank Sample
Aluminum	0.2 ^a	0.05-0.2	—	—	n/a	n/a	n/a
Antimony	0.006	0.006	—	—	<0.020	<0.020	<0.020
Arsenic	0.05	0.01	0.34	0.15	<0.025	<0.025	<0.025
Barium	2	2	—	—	0.0229	0.0223	<0.0020
Beryllium	0.004	—	—	—	0.0229	0.0223	<0.0020
Cadmium	0.005	0.005	0.00013 (H)	0.0006 (H)	<0.0020	<0.0020	<0.0020
Calcium	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chromium (Total)	0.1	0.1	—	—	<0.0060	<0.0060	<0.0060
Cobalt	n/a	n/a	n/a	n/a	<0.0060	<0.0060	<0.0060
Copper	1.3 ^a	1.3 ^b	0.017 (H)	0.0011 (H)	<0.010	<0.010	<0.010
Iron	0.3 ^a	0.3 ^a	—	—	n/a	n/a	n/a
Lead	0.015	0.15	0.065 (H)	0.00025 (H)	<0.0075	<0.0075	<0.0075
Magnesium	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Manganese	0.05	0.05 ^a	—	—	n/a	n/a	n/a
Mercury	0.002	0.002	—	—	n/a	n/a	n/a
Nickel	n/a	n/a	0.47 (H)	0.052 (H)	<0.010	<0.010	<0.010
Selenium	0.05	0.05	0.02 (T)	0.005 (T)	<0.040	<0.040	<0.040
Silver	0.1 ^a	0.1 ^a	0.0034 (H)	—	<0.0050	<0.0050	<0.0050
Sodium	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Thallium	0.002	n/a	n/a	n/a	<0.015	<0.015	<0.015
Vanadium	n/a	n/a	n/a	n/a	<0.0050	<0.0050	<0.0050
Zinc	5 ^a	5 ^a	0.12 (H)	0.12 (H)	<0.0100	<0.0100	<0.0100

Note: (T)—Standard in Total, (H)—Hardness dependent Cd, Cu, Pb, Ag, Zn at 100 mg/L

^a Secondary Standard MCL – non-enforceable guideline.

^b Action level.

^c No units apply.

^d §141.13(a) One turbidity unit (TU), as determined by a monthly average pursuant to §141.22, except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the State that the higher turbidity does not do any of the following:

- (1) Interfere with disinfection;
- (2) Prevent maintenance of an effective disinfectant agent throughout the distribution system; or
- (3) Interfere with microbiological determinations.

§141.13(b) Five turbidity units based on an average for two consecutive days pursuant to §141.22.

9.3 Quality Assurance/Quality Control

Water trip blank sample FBTP was transported with the water samples. Duplicate surface water sample TP-2 was collected for the surface water sampling effort. The quality assurance/quality control (QA/QC) samples were submitted to SVL by DEQ staff in conjunction with the surface water sample. The analytical results of duplicate surface water sample TP-2 were comparable to the results of the original surface water sample TP-1 (Table 2).

Table 2. Surface water sample TP-1 compared to surface water sample TP-2.

Analyte	Surface Water Sample TP-1 (mg/L)	Surface Water Sample TP-2 (mg/L) (Duplicate)
Barium	0.0229	0.0223

The field trip blank (FBTP) was not collected in conjunction with surface water sampling activities at the Travers Park site and did not exhibit concentrations of target compounds or analytes.

10 Pathways and Receptors

The purpose of a PA/SI is to identify sources of contamination, like waste dumps, industrial areas, and mine adits or mills with contaminated water penetrating to ground water and/or discharging into a surface water pathway. Four types of pathways exist: ground water, surface water, air, and soil. These types of pathways may lead to receptors, which may be human or ecological.

The following sections identify environmental hazards as they pertain to pathways and types of exposures to the receptors.

10.1 Ground Water Pathways

Landfills can release contaminants through the chemical breakdown of the landfilled materials. The breakdown of materials can dissolve in the ground water and be transported with the ground water flow into an underlying aquifer or the surface expression of the ground water. Early landfills like that underlying Travers Park were located in low areas. In the case of Travers Park it is evident that a part of Chuck Slough separated by construction of the UPRR grade to the west provided a convenient location for landfilling. The site would have high ground water characteristics given that the lithology of Sandpoint in general is composed of silts and fine-grained sands underlain by clay lenses limiting the downward migration of water. As a result, the ground water in northwest Sandpoint drains to Chuck Slough. The ground water pathway brings ground water through the area of the former landfill and into the pond at the foot of the fill. Since it is less compact and may have void areas due to decomposition, the landfill may provide a preferential flow path for the ground water that it intercepts. The ground water passing through the landfill material surfaces immediately beyond the fill slope into the pond.

10.2 Surface Water Pathways

The pond located at the base of the Travers Park fill is an expression of the surfacing of ground water in the low area. At the time of the October 18, 2012 inspection of the site, little

precipitation had occurred for a three month period. In spite of the dry conditions, 1-2 cubic feet per second discharge was occurring from the pond through a culvert beneath Pine Street into Chuck Slough. The emerging ground water flows from the pond to Chuck Slough which in turn discharges to the Pend Oreille River.

The surface water migration pathway target distance limit (TDL) begins at the probable point of entry (PPE) of surface water runoff from a site to a surface water body and extends downstream for 15 miles. The surface water TDL for the Travers Park Landfill is presented in Figure 6.

10.3 Domestic Wells and Public Water Supplies

The closest domestic water well is located two-thirds mile northwest of Travers Park (Figure 6). The low transmissivity and fairly shallow nature of the upper aquifer(s) of the Sandpoint area are not conducive to yield water sufficient for domestic use. The city secures its domestic water supply from Little Sand Creek. Thus, no domestic wells are located in a manner that the ground water below Travers Park would be part of the wells source water.

The following information was collected from the Source Water Assessment for the City of Sandpoint (PWS 1090121). The Sandpoint Water Department serves a community of approximately 8,000 people. Most of these people reside within the city of Sandpoint, which is located on the north end of Lake Pend Oreille, in Bonner County, Idaho. The Sandpoint Water Department public drinking water system is comprised of two drinking water intakes. Sandpoint Water Department recently completed upgrades to the drinking water system, bringing both intakes into compliance with the Surface Water Treatment Rule. In recent years surface water intakes in the drinking water system have not encountered any significant water quality problems.

The Source Area delineation process establishes the physical area around a well or surface water intake that becomes the focal point of the source water assessment. The process includes mapping the boundaries of the zone of contribution (the area contributing water to the well or to the surface water intake) into time of travel zones (TOT) indicating the number of years necessary for a particle of water to reach a well or surface water intake (DEQ 2000). The size and shape of the source water assessment area depend on the delineation method used, local hydrogeology, and volume of water pumped from the well or surface water intake.

The delineated source water assessment area for the Little Sand Creek intake can best be described as a shield-like shape extending from the intake on Little Sand Creek to the watershed boundary on all sides. The delineated source water area for the Lake Pend Oreille intake encompasses the entire Lake Pend Oreille watershed, extending well into the state of Montana.

DEQ used a refined computer model approved by EPA to determine the 3-year (Zone 1B), 6-year (Zone 2), and 10-year (Zone 3) TOT associated with the Gem Valley - Gentile Valley Aquifer and its sources (DEQ 2000). There is a three year TOT for Lake Pend Oreille. This information is illustrated in Figure 6.

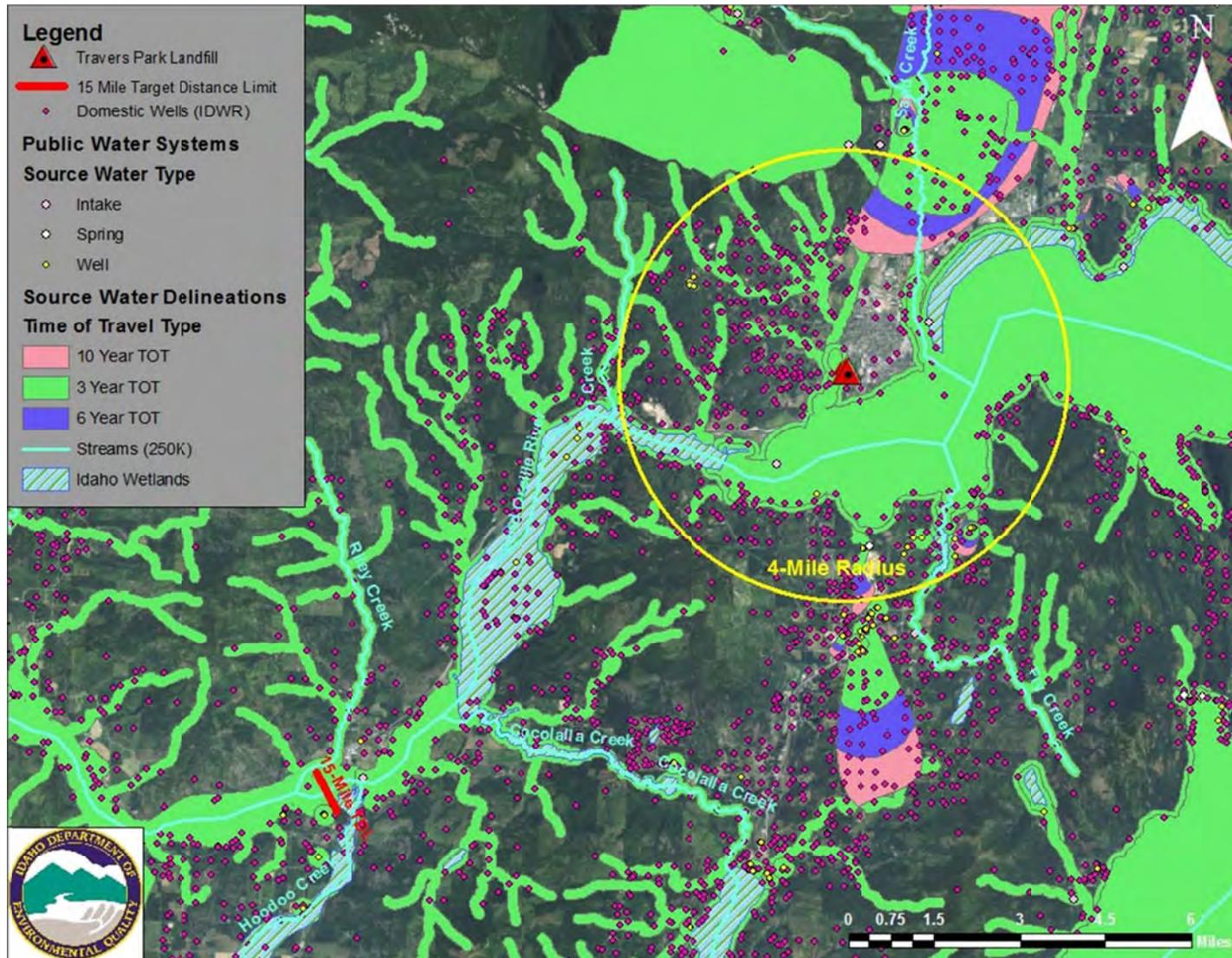


Figure 6. Map of the source water delineation, including the 15-mile surface water TDL for the Travers Park Landfill.

(Source: Idaho DEQ GIS ArcSDE 9.2 Geodatabase, 2009 Natural Color 1-meter NAIP Idaho.)

10.4 Air Quality Pathways

The landfill was capped many years ago precluding any air pathway.

10.5 Soil Exposures

According to DEQ's Risk Evaluation Manual, if pathways are determined to be "complete" or if pathways are anticipated to become complete as a result of future uses, and the initial default target levels (IDTLs) are exceeded for any constituents, two options should be considered:

1. Adopt the IDTLs as the cleanup levels and develop a *Risk Management Plan* (RMP).
2. Perform a more detailed, site-specific evaluation, which includes developing site-specific background concentrations for comparative purposes.

Capping of the landfill limited all soil exposure.

10.6 Residences, Schools, and Day Care Facilities

Residences are within 450 feet of the former landfill. The nearest school is a half mile distant. Day care facilities are likely within a half mile radius. The pathway of contaminants to any of these features is by air which is broken by the capping of the former landfill.

10.7 Wetlands

The area of the pond receiving the ground water discharge is a wetland. There are two significant wetlands located within the four mile radius. The largest wetland is approximately 1640.672 hectares.

10.8 Sensitive, Rare, and Threatened Plant and Animal Species

The measured barium concentration is below the levels of concern used by Oregon for birds and mammals. In addition, the sensitive species have huge ranges that likely only abut the urban interface occupied by Travers Park. Due to the size of those ranges, these species would not receive significant exposure time or doses to barium in the pond.

Since barium is a natural constituent of soils, it is unlikely that barium in the concentrations measured would have an effect on plants. Seven rare or sensitive plant species are documented to exist within the 4-mile radius of the Travers Park Landfill (Figure 7):

- No status:
 - Bulb-bearing water hemlock (*Cicuta bulbifera*)
 - Arrowleaf coltsfoot (*Petasites sagittatus*)
 - Northern bog clubmoss (*Lycopodiella inundata*)
 - Purple meadow-rue (*Thalictrum dasycarpum*)
 - Blueflag (*Iris versicolor*)
 - Black snake-root (*Sanicula marilandica*)
 - Holy grass (*Hierochloa odorata*)

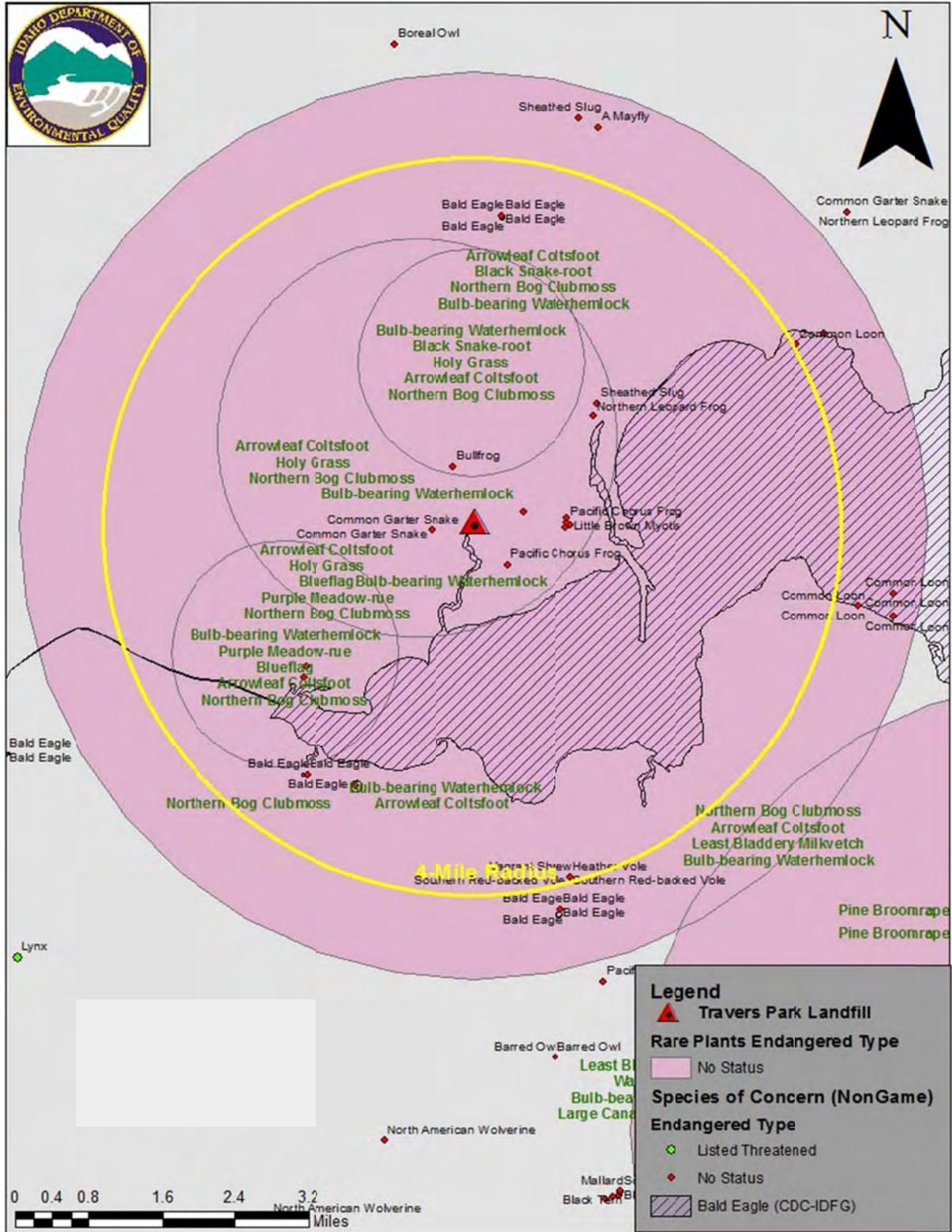


Figure 7. Sensitive plant and animal species in and around the Travers Park Landfill.

(Sources: Spatial Database Engine Feature Dataset, Animal Conservation Database; Idaho DEQ GIS ArcSDE 9.2 Geodatabase)

Below is a list of animals of concern listed within the 4-mile radius of the Travers Park Landfill. The nongame animals are listed as “species of concern” and have no status. However, due to the lack of tailing impoundments, presence of well-vegetated dumps, and unremarkable water chemistry results, a significant source for exposure is unlikely (Figure 7).

- No status:
 - Bald eagle (*Haliaeetus leucocephalus*)
 - Northern leopard frog (*Rana pipiens*)
 - Sheathed slug (*Zacoleus idahoensis*)
 - Bullfrog (*Rana catesbeiana*)
 - Northern alligator lizard (*Elgaria coerulea*)
 - Common garter snake (*Thamnophis sirtalis*)
 - Pacific chorus frog (*Pseudacris regilla*)
 - Little brown myotis (*Myotis lucifugus*)
 - Long-toed salamander (*Ambystoma macrodactylum*)
 - Cinereus or masked shrew (*Sorex cinereus*)

10.9 Fisheries

The following fish species have been observed by Idaho Department of Fish and Game (IDFG) within the 4-mile radius of the Travers Park Landfill (Figure 8).

- Westslope cutthroat trout (*Oncorhynchus clarkii lewisi*)
- Bull trout (*Salvelinus confluentus*)

Since there is no DEQ cold water biota standard (acute or chronic) for barium, an impact on aquatic biota does not appear to occur. No fish were observed in the pond or the slough at the time of the assessment.

10.10 Sensitive Waterways

The Clean Water Act (CWA) requires the state to prepare a report, listing (1) the current conditions of all state waters and (2) those waters that are impaired and need a total maximum daily load (TMDL). The first list is called the §305(b) list and the second is the §303(d) list. Both lists are named in accordance with the sections of the CWA where they are defined; together they are known as the Integrated Report. Although they are maintained as separate lists and presented separately in the Integrated Report, impaired waters are just some of the state’s waters, so waters on the §303(d) list are actually a subset of those on the §305(b) list.

Syringa Creek (AU ID17010214PN002_03a) is part of the Pend Oreille Lake subbasin and has not been assessed. The Pend Oreille river (ID17010214PN002_08) stretch from Pend Oreille Lake to Priest River has been assessed and was found to be “not supporting” for cold water aquatic life. The causes are because of the following findings: dissolved gas supersaturation, temperature, and water. Figure 9 illustrates the §305(b)-listed streams in the area.

10.11 Livestock Receptors

No livestock grazing occurs in the area around Travers Park.

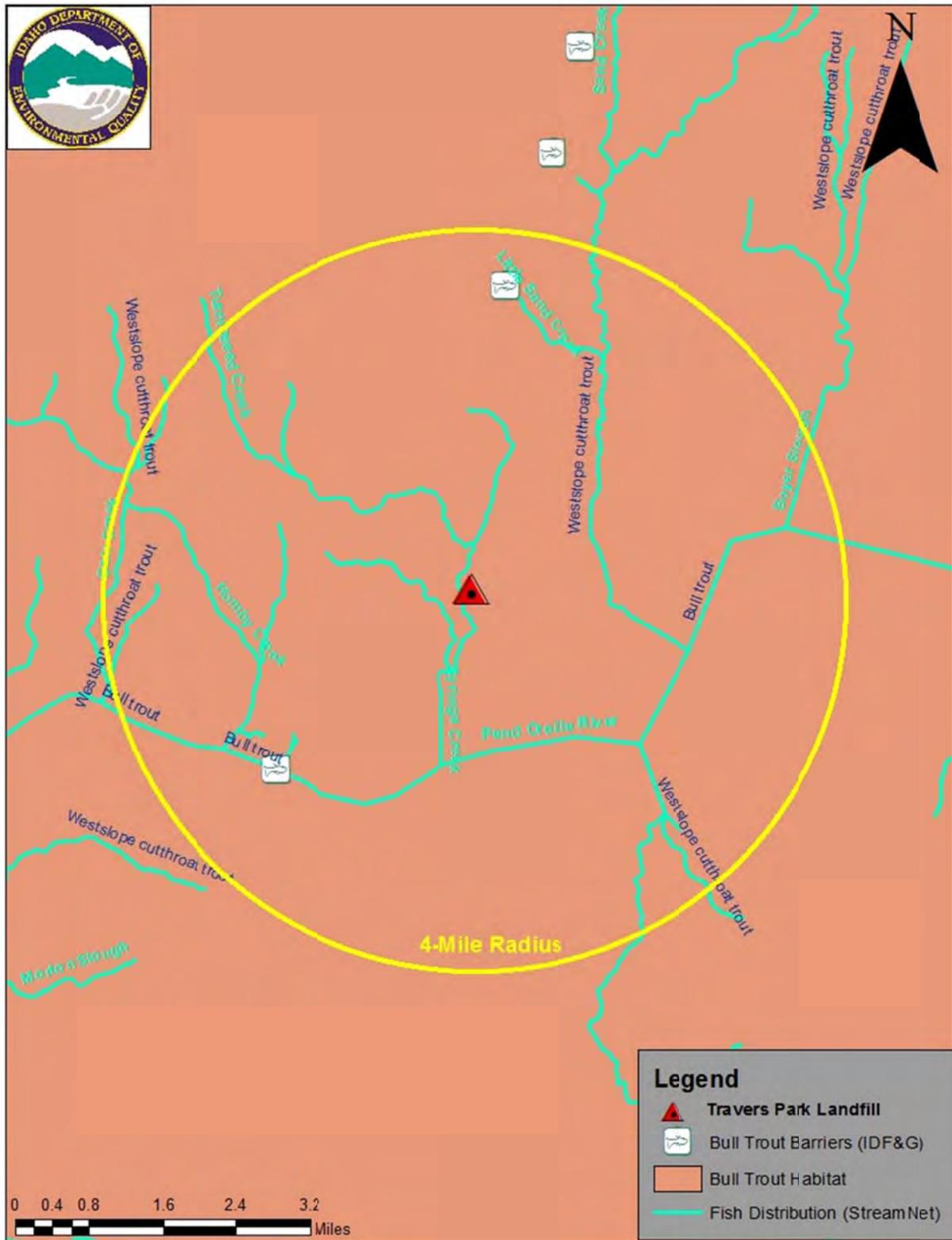


Figure 8. Fisheries within a 4-mile radius and in the vicinity of the Travers Park Landfill.

(Source: Idaho DEQ GIS ArcSDE 9.3.1 Geodatabase)

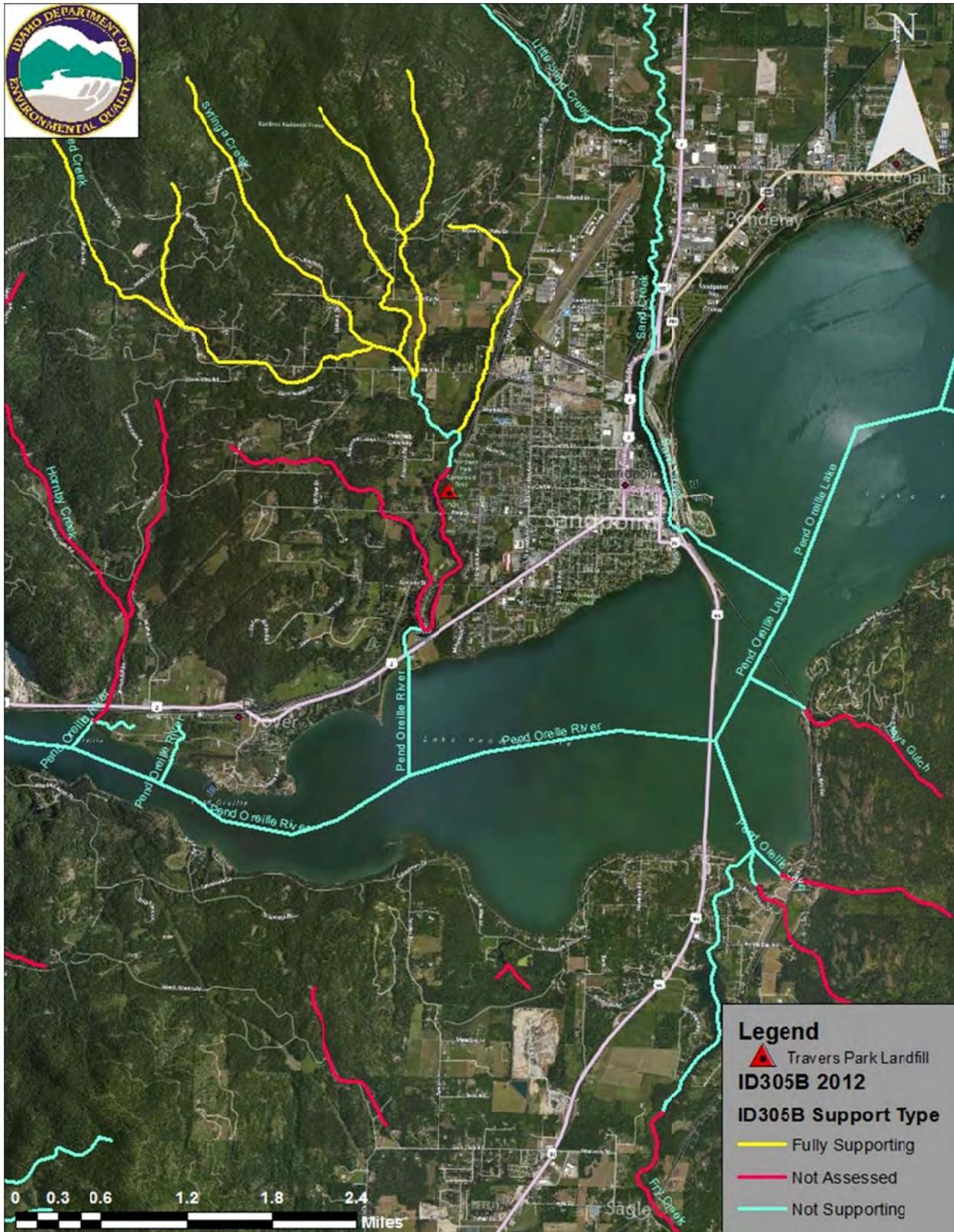


Figure 9. State of Idaho §305(b) map for impaired waters.
The Pend Oreille River is listed as not supporting cold water aquatic life and salmonid spawning.
 (Source: DEQ.GIS.ArcSDE 9.3 Geodatabase, Microsoft Virtual Earth Aerial with Labels ©2009 Microsoft Corporation)

11 Summary and Conclusions

Generally speaking, toxicological risks to human and ecological receptors are unlikely, except for barium interference with invertebrate reproduction in the pond. No other contaminants were found in detectable levels except barium. The barium concentrations found were not at a level of human health risk. The possibility exists that barium is present in the ground water at levels above the MCL, but ground water use in this area of Sandpoint is precluded by the extremely low yield of water wells. Barium in the concentration measured is an ecological risk to invertebrate reproduction. The risk is likely limited to the pond.

Based on existing conditions and uses, historic information, data observations made during the site visit, analysis of water samples, potential pathways of contaminants to receptors, and potential exposures to ecological and human receptors, DEQ has made a no remedial action planned (NRAP) determination for the Travers Park Landfill.

12 References

- CH2M HILL. 2010. City of Sandpoint, Lake Pend Oreille Water Treatment Plant Expansion and Upgrade.
- DEQ (Idaho Department of Environmental Quality). 2000. Sandpoint Water Department (ID1090121) Source Water Assessment. Boise, ID: DEQ.
- DEQ (Idaho Department of Environmental Quality). 2011. *Idaho's 2010 Integrated Report*. Boise, ID: DEQ. Available at:
<http://www.deq.idaho.gov/water-quality/surface-water/monitoring-assessment/integrated-report.aspx#2012-IR>.
- DEQ (Idaho Department of Environmental Quality). 2011. Safe Drinking Water Information System (SDWIS).
- Suter, G.W. II and C.L. Tsao. 1996. Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Aquatic Biota: 1996 Revision. ES/ER/TM-96/R2.
- URS Consultants, Inc. 1996. Site Inspection Report for North Sandpoint Wood Treating Facilities Sandpoint, Idaho. CERCLIS I.D. No. ID 0001411321 1100 Olive Way, Suite 200, Seattle, WA 98101 (URS DCN 62760.37.20.1192.47.b1).

12.1 GIS Coverages

- Animal Conservation Database. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Google. October 2012. *Google Earth Maps*. Map Sandpoint, Idaho.
- IDFG (Idaho Department of Fish and Game). 2002. Fisheries information GIS layer.
- IDWR (Idaho Department of Water Resources). 1997. COVERAGE IDOWN—Idaho Surface Ownership.
- IDWR (Idaho Department of Water Resources). 2010. GIS shapefile of well database.
- Major Lithology (DEQGIS83.DBO). Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- Microsoft Virtual Earth Aerial with Labels © 2009 Microsoft Corporation Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.
- NAIP (National Agricultural Imagery Program). 2009. Using: ArcMap GIS. Version 10. Redlands, CA: Environmental Systems Research Institute, Inc., 1992–1999.

Appendix A. Laboratory Sample Reports

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CHAIN OF CUSTODY RECORD

SVL Analytical, Inc. • One Government Gulch • Kellogg, ID 83837 • (208) 714-1258 • FAX: (208) 783-0891

Page 1 of 1

W2J0545

FOR SVL USE ONLY
SVL JOB #

TEMP on Receipt 4°C

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinse, 5 = Fill
6 = Waste, 7 = Other

Report to Company: DER
Contact: Rob Eason
Address: 2110 Ironwood Parkway
Coeur d'Alene, Id
Phone Number: (208) 764-1422
FAX Number:
E-mail: rob.eason@deridaho.com

Invoice Sent To: DER
Contact: Fay Bellac
Address: 2110 Ironwood Parkway
Coeur d'Alene, Id
Phone Number: (208) 764-1422
FAX Number:
POB:

Project Name: Travers Park
Sampler's Signature: Rob Eason

Indicate State of sample origination: Idaho USACE? Yes No

Sample ID	Collection		Misc. No. of Containers	Preservative(s)						Other (Specify)	Analyses Required	Comments
	Date	Time		Collected by: (init.)	Matrix Type (from Table 1)	Unpreserved	HNO ₃ Filtered	HNO ₃ Unfiltered	HCl VDA			
TP1	10/23/12	1:33 PM	1.3		/	2					VOC B260B G010B See attached list	Trip Blank
TP2	10/23/12	1:33 PM	1.3		/	2						
FBTP	10/23/12	1:21 PM	1.3		/	2						

Relinquished by: Rob Eason Date: 10/23/12 Time: 1:54
 Acquired by: Johanna Date: 10/24/12 Time: 8:05
 Received by: Johanna Date: 10/23/12 Time: 1:54

* Sample Reject: Return Dispose Store (30 Days)

LABORATORY Yellow: CUSTOMER COPY 10/24/12 11:10 SVL-COC 1/05

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

Date of acceptance: 10/23/12

By: Opham

SVL Work No: W2 J0545

SW

Item	Description	V	VC	NV	NA	Comments
1	Client or project name	✓				Travers Park
2	Date and time of receipt at lab	✓				IDFO CDA Rob Bachon
3	Received by	✓				10/23/12 @ 1540 Opham
4	Temperature blank or cooler temperature	✓				Temp. 4 oc
5	Were the sample(s) received on ice	✓				Y
6	Custody tape/bottle seals	✓				
7	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓				
8	Sample numbers/IDs agree with COC	✓				
9	Sample date & time agree with COC	✓				
10	Number of containers for each sample	✓				
11	The correct preservative for the analysis requested	✓				HCl 40ml VOA used by client HNO ₃ pres by client
12	Did an SVL employee preserve sample(s) upon receipt	✓				
12	Type of container for each sample / volume received	✓				
13	Analysis requested for each sample	✓				
14	Sample matrix description	✓				
15	COC properly completed & legible	✓				
16	Corrections properly made (initials & date)				✓	
17	Additional comments or records of sample condition or treatment (unlisted or missing samples at laboratory, aliquot taken, sample hold, samples subcontracted, communications between client and laboratory)	✓				3 samples { VOCs § 8260B Metals - see attached list 6010B Trip Blank
18	Shipper's air bill				✓	

V- Verified VC- Verified Corrections Made NV- Not Verified NA- Not Applicable

Additional Comments: _____

Bill dieut

Faye beller



One Government Gulch - PO Box 929

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

IDEQ Coeur d'Alene Regional Office
2110 N. Ironwood Pkwy.
Coeur d'Alene, ID 83814

Project Name: No Project
Work Order: **W2J0545**
Reported: 05-Nov-12 12:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
TP 1	W2J0545-01	Surface Water	23-Oct-12 13:33	RE	23-Oct-2012
TP 2	W2J0545-02	Surface Water	23-Oct-12 13:33	RE	23-Oct-2012
FBTP	W2J0545-03	Surface Water	23-Oct-12 13:21	RE	23-Oct-2012

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.



IDEQ Coeur d'Alene Regional Office
2110 N. Ironwood Pkwy.
Coeur d'Alene, ID 83814

Project Name: No Project
Work Order: **W2J0545**
Reported: 05-Nov-12 12:03

Client Sample ID: **TP 1**

SVL Sample ID: **W2J0545-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 23-Oct-12 13:33
Received: 23-Oct-12
Sampled By: RE

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.009		W244012	AS	11/04/12 12:33	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.007		W244012	AS	11/04/12 12:33	
EPA 6010B	Barium	0.0229	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:33	
EPA 6010B	Beryllium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:33	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:33	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0015		W244012	AS	11/04/12 12:33	
EPA 6010B	Cobalt	< 0.0060	mg/L	0.0060	0.0014		W244012	AS	11/04/12 12:33	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:33	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0027		W244012	AS	11/04/12 12:33	
EPA 6010B	Nickel	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:33	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.011		W244012	AS	11/04/12 12:33	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0014		W244012	AS	11/04/12 12:33	
EPA 6010B	Thallium	< 0.015	mg/L	0.015	0.004		W244012	AS	11/04/12 12:33	
EPA 6010B	Vanadium	< 0.0050	mg/L	0.0050	0.0015		W244012	AS	11/04/12 12:33	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0026		W244012	AS	11/04/12 12:33	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director



IDEQ Coeur d'Alene Regional Office
2110 N. Ironwood Pkwy.
Coeur d'Alene, ID 83814

Project Name: No Project
Work Order: **W2J0545**
Reported: 05-Nov-12 12:03

Client Sample ID: **TP 2**

SVL Sample ID: **W2J0545-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 23-Oct-12 13:33
Received: 23-Oct-12
Sampled By: RE

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.009		W244012	AS	11/04/12 12:44	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.007		W244012	AS	11/04/12 12:44	
EPA 6010B	Barium	0.0223	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:44	
EPA 6010B	Beryllium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:44	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:44	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0015		W244012	AS	11/04/12 12:44	
EPA 6010B	Cobalt	< 0.0060	mg/L	0.0060	0.0014		W244012	AS	11/04/12 12:44	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:44	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0027		W244012	AS	11/04/12 12:44	
EPA 6010B	Nickel	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:44	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.011		W244012	AS	11/04/12 12:44	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0014		W244012	AS	11/04/12 12:44	
EPA 6010B	Thallium	< 0.015	mg/L	0.015	0.004		W244012	AS	11/04/12 12:44	
EPA 6010B	Vanadium	< 0.0050	mg/L	0.0050	0.0015		W244012	AS	11/04/12 12:44	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0026		W244012	AS	11/04/12 12:44	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director



IDEQ Coeur d'Alene Regional Office
2110 N. Ironwood Pkwy.
Coeur d'Alene, ID 83814

Project Name: No Project
Work Order: **W2J0545**
Reported: 05-Nov-12 12:03

Client Sample ID: **FBTP**

SVL Sample ID: **W2J0545-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 23-Oct-12 13:21
Received: 23-Oct-12
Sampled By: RE

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	Antimony	< 0.020	mg/L	0.020	0.009		W244012	AS	11/04/12 12:48	
EPA 6010B	Arsenic	< 0.025	mg/L	0.025	0.007		W244012	AS	11/04/12 12:48	
EPA 6010B	Barium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:48	
EPA 6010B	Beryllium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:48	
EPA 6010B	Cadmium	< 0.0020	mg/L	0.0020	0.0006		W244012	AS	11/04/12 12:48	
EPA 6010B	Chromium	< 0.0060	mg/L	0.0060	0.0015		W244012	AS	11/04/12 12:48	
EPA 6010B	Cobalt	< 0.0060	mg/L	0.0060	0.0014		W244012	AS	11/04/12 12:48	
EPA 6010B	Copper	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:48	
EPA 6010B	Lead	< 0.0075	mg/L	0.0075	0.0027		W244012	AS	11/04/12 12:48	
EPA 6010B	Nickel	< 0.010	mg/L	0.010	0.003		W244012	AS	11/04/12 12:48	
EPA 6010B	Selenium	< 0.040	mg/L	0.040	0.011		W244012	AS	11/04/12 12:48	
EPA 6010B	Silver	< 0.0050	mg/L	0.0050	0.0014		W244012	AS	11/04/12 12:48	
EPA 6010B	Thallium	< 0.015	mg/L	0.015	0.004		W244012	AS	11/04/12 12:48	
EPA 6010B	Vanadium	< 0.0050	mg/L	0.0050	0.0015		W244012	AS	11/04/12 12:48	
EPA 6010B	Zinc	< 0.0100	mg/L	0.0100	0.0026		W244012	AS	11/04/12 12:48	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director



IDEQ Coeur d'Alene Regional Office
 2110 N. Ironwood Pkwy.
 Coeur d'Alene, ID 83814

Project Name: No Project
 Work Order: **W2J0545**
 Reported: 05-Nov-12 12:03

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total Recoverable)								
EPA 6010B	Antimony	mg/L	<0.020	0.009	0.020	W244012	04-Nov-12	
EPA 6010B	Arsenic	mg/L	<0.025	0.007	0.025	W244012	04-Nov-12	
EPA 6010B	Barium	mg/L	<0.0020	0.0006	0.0020	W244012	04-Nov-12	
EPA 6010B	Beryllium	mg/L	<0.0020	0.0006	0.0020	W244012	04-Nov-12	
EPA 6010B	Cadmium	mg/L	<0.0020	0.0006	0.0020	W244012	04-Nov-12	
EPA 6010B	Chromium	mg/L	<0.0060	0.0015	0.0060	W244012	04-Nov-12	
EPA 6010B	Cobalt	mg/L	<0.0060	0.0014	0.0060	W244012	04-Nov-12	
EPA 6010B	Copper	mg/L	<0.010	0.003	0.010	W244012	04-Nov-12	
EPA 6010B	Lead	mg/L	<0.0075	0.0027	0.0075	W244012	04-Nov-12	
EPA 6010B	Nickel	mg/L	<0.010	0.003	0.010	W244012	04-Nov-12	
EPA 6010B	Selenium	mg/L	<0.040	0.011	0.040	W244012	04-Nov-12	
EPA 6010B	Silver	mg/L	<0.0050	0.0014	0.0050	W244012	04-Nov-12	
EPA 6010B	Thallium	mg/L	<0.015	0.004	0.015	W244012	04-Nov-12	
EPA 6010B	Vanadium	mg/L	<0.0050	0.0015	0.0050	W244012	04-Nov-12	
EPA 6010B	Zinc	mg/L	<0.0100	0.0026	0.0100	W244012	04-Nov-12	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable)									
EPA 6010B	Antimony	mg/L	0.975	1.00	97.5	80 - 120	W244012	04-Nov-12	
EPA 6010B	Arsenic	mg/L	1.01	1.00	101	80 - 120	W244012	04-Nov-12	
EPA 6010B	Barium	mg/L	0.982	1.00	98.2	80 - 120	W244012	04-Nov-12	
EPA 6010B	Beryllium	mg/L	1.01	1.00	101	80 - 120	W244012	04-Nov-12	
EPA 6010B	Cadmium	mg/L	1.02	1.00	102	80 - 120	W244012	04-Nov-12	
EPA 6010B	Chromium	mg/L	1.00	1.00	100	80 - 120	W244012	04-Nov-12	
EPA 6010B	Cobalt	mg/L	0.992	1.00	99.2	80 - 120	W244012	04-Nov-12	
EPA 6010B	Copper	mg/L	0.949	1.00	94.9	80 - 120	W244012	04-Nov-12	
EPA 6010B	Lead	mg/L	0.993	1.00	99.3	80 - 120	W244012	04-Nov-12	
EPA 6010B	Nickel	mg/L	0.989	1.00	98.9	80 - 120	W244012	04-Nov-12	
EPA 6010B	Selenium	mg/L	1.01	1.00	101	80 - 120	W244012	04-Nov-12	
EPA 6010B	Silver	mg/L	0.0529	0.0500	106	80 - 120	W244012	04-Nov-12	
EPA 6010B	Thallium	mg/L	0.985	1.00	98.5	80 - 120	W244012	04-Nov-12	
EPA 6010B	Vanadium	mg/L	1.00	1.00	100	80 - 120	W244012	04-Nov-12	
EPA 6010B	Zinc	mg/L	1.06	1.00	106	80 - 120	W244012	04-Nov-12	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	Antimony	mg/L	0.992	<0.020	1.00	99.2	75 - 125	W244012	04-Nov-12	
EPA 6010B	Arsenic	mg/L	1.03	<0.025	1.00	103	75 - 125	W244012	04-Nov-12	
EPA 6010B	Barium	mg/L	1.03	0.0229	1.00	100	75 - 125	W244012	04-Nov-12	
EPA 6010B	Beryllium	mg/L	1.03	<0.0020	1.00	103	75 - 125	W244012	04-Nov-12	
EPA 6010B	Cadmium	mg/L	1.03	<0.0020	1.00	103	75 - 125	W244012	04-Nov-12	
EPA 6010B	Chromium	mg/L	1.03	<0.0060	1.00	103	75 - 125	W244012	04-Nov-12	
EPA 6010B	Cobalt	mg/L	1.01	<0.0060	1.00	101	75 - 125	W244012	04-Nov-12	
EPA 6010B	Copper	mg/L	0.979	<0.010	1.00	97.9	75 - 125	W244012	04-Nov-12	
EPA 6010B	Lead	mg/L	1.01	<0.0075	1.00	101	75 - 125	W244012	04-Nov-12	
EPA 6010B	Nickel	mg/L	1.01	<0.010	1.00	101	75 - 125	W244012	04-Nov-12	

SVL holds the following certifications:

AZ:0538, CA:2080, FL(NELAC):E87993, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, WA:1268



IDEQ Coeur d'Alene Regional Office
 2110 N. Ironwood Pkwy.
 Coeur d'Alene, ID 83814

Project Name: No Project
 Work Order: **W2J0545**
 Reported: 05-Nov-12 12:03

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total Recoverable) (Continued)										
EPA 6010B	Selenium	mg/L	1.02	<0.040	1.00	102	75 - 125	W244012	04-Nov-12	
EPA 6010B	Silver	mg/L	0.0538	<0.0050	0.0500	108	75 - 125	W244012	04-Nov-12	
EPA 6010B	Thallium	mg/L	1.01	<0.015	1.00	101	75 - 125	W244012	04-Nov-12	
EPA 6010B	Vanadium	mg/L	1.03	<0.0050	1.00	103	75 - 125	W244012	04-Nov-12	
EPA 6010B	Zinc	mg/L	1.08	<0.0100	1.00	107	75 - 125	W244012	04-Nov-12	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total Recoverable)										
EPA 6010B	Antimony	mg/L	1.02	0.992	1.00	2.4	20	W244012	04-Nov-12	
EPA 6010B	Arsenic	mg/L	1.05	1.03	1.00	2.3	20	W244012	04-Nov-12	
EPA 6010B	Barium	mg/L	1.04	1.03	1.00	1.1	20	W244012	04-Nov-12	
EPA 6010B	Beryllium	mg/L	1.05	1.03	1.00	2.1	20	W244012	04-Nov-12	
EPA 6010B	Cadmium	mg/L	1.04	1.03	1.00	0.8	20	W244012	04-Nov-12	
EPA 6010B	Chromium	mg/L	1.04	1.03	1.00	0.9	20	W244012	04-Nov-12	
EPA 6010B	Cobalt	mg/L	1.02	1.01	1.00	1.1	20	W244012	04-Nov-12	
EPA 6010B	Copper	mg/L	0.993	0.979	1.00	1.4	20	W244012	04-Nov-12	
EPA 6010B	Lead	mg/L	1.02	1.01	1.00	1.6	20	W244012	04-Nov-12	
EPA 6010B	Nickel	mg/L	1.02	1.01	1.00	1.0	20	W244012	04-Nov-12	
EPA 6010B	Selenium	mg/L	1.04	1.02	1.00	1.8	20	W244012	04-Nov-12	
EPA 6010B	Silver	mg/L	0.0546	0.0538	0.0500	1.5	20	W244012	04-Nov-12	
EPA 6010B	Thallium	mg/L	1.01	1.01	1.00	0.2	20	W244012	04-Nov-12	
EPA 6010B	Vanadium	mg/L	1.04	1.03	1.00	1.3	20	W244012	04-Nov-12	
EPA 6010B	Zinc	mg/L	1.04	1.08	1.00	3.7	20	W244012	04-Nov-12	

Notes and Definitions

- LCS Laboratory Control Sample (Blank Spike)
- RPD Relative Percent Difference
- UDL A result is less than the detection limit
- R > 4S % recovery not applicable, sample concentration more than four times greater than spike level
- <RL A result is less than the reporting limit
- MRL Method Reporting Limit
- MDL Method Detection Limit
- N/A Not Applicable

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-001 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 1 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-01
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,1-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2,3-Trichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromoethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,3-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,4-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-hexanone	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Acetone	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Acrylonitrile	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Benzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromodichloromethane	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Bromoform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-001 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 1 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-01
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Bromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Carbon disulfide	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Carbon Tetrachloride	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Chlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,2-dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dichlorodifluoromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Ethylbenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Iodomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
m+p-Xylene	ND	ug/L	1	10/29/2012	TGT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methylene chloride	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
o-Xylene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Styrene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Tetrachloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Toluene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,2-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ **Batch #:** 121025023
Address: 2110 IRONWOOD PARKWAY **Project Name:** SVL #W2J0545 TRAVERS PARK
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Analytical Results Report

Sample Number 121025023-001 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 1 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-01
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
trans-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichlorofluoromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichlorotrifluoroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl acetate	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl Chloride	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

Surrogate Data

Sample Number 121025023-001

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	100.0	70-130
4-Bromofluorobenzene	EPA 8260C	99.2	70-130
Toluene-d8	EPA 8260C	98.4	70-130

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-002 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 2 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,1-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2,3-Trichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromoethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,3-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,4-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-hexanone	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Acetone	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Acrylonitrile	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Benzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromodichloromethane	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Bromoform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-002 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 2 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Carbon disulfide	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Carbon Tetrachloride	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Chlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,2-dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dichlorodifluoromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Ethylbenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Iodomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
m+p-Xylene	ND	ug/L	1	10/29/2012	TGT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methylene chloride	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
o-Xylene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Styrene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Tetrachloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Toluene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,2-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ **Batch #:** 121025023
Address: 2110 IRONWOOD PARKWAY **Project Name:** SVL #W2J0545 TRAVERS PARK
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Analytical Results Report

Sample Number 121025023-002 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TP 2 **Sampling Time** 1:33 PM
Matrix Water **Sample Location** W2J0545-02
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroflouromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichlorotrifluoroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl acetate	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl Chloride	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

Surrogate Data

Sample Number 121025023-002

Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	100.0	70-130
4-Bromofluorobenzene	EPA 8260C	98.8	70-130
Toluene-d8	EPA 8260C	98.0	70-130

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-003 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID FPTP **Sampling Time** 1:21 PM
Matrix Water **Sample Location** W2J0545-03
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,1-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2,3-Trichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromoethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,3-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,4-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-hexanone	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Acetone	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Acrylonitrile	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Benzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromodichloromethane	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Bromoform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-003 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID FPTP **Sampling Time** 1:21 PM
Matrix Water **Sample Location** W2J0545-03
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Carbon disulfide	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Carbon Tetrachloride	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Chlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,2-dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dichlorodifluoromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Ethylbenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Iodomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
m+p-Xylene	ND	ug/L	1	10/29/2012	TGT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methylene chloride	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
o-Xylene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Styrene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Tetrachloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Toluene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,2-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ **Batch #:** 121025023
Address: 2110 IRONWOOD PARKWAY **Project Name:** SVL #W2J0545 TRAVERS PARK
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Analytical Results Report

Sample Number	121025023-003	Sampling Date	10/23/2012	Date/Time Received	10/25/2012 11:53 AM
Client Sample ID	FFTP	Sampling Time	1:21 PM		
Matrix	Water	Sample Location	W2J0545-03		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroflouromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichlorotrifluoroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl acetate	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl Chloride	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

Surrogate Data

Sample Number	121025023-003		
Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	100.8	70-130
4-Bromofluorobenzene	EPA 8260C	99.6	70-130
Toluene-d8	EPA 8260C	99.2	70-130

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-004 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TRIP BLANK **Sampling Time**
Matrix Water **Sample Location** W2J0545-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,1-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1,2-Trichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,1-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2,3-Trichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dibromoethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,2-Dichloropropane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,3-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
1,4-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-Chloroethyl vinyl ether	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
2-hexanone	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Acetone	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Acrylonitrile	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Benzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromodichloromethane	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Bromoform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Bromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report

Sample Number 121025023-004 **Sampling Date** 10/23/2012 **Date/Time Received** 10/25/2012 11:53 AM
Client Sample ID TRIP BLANK **Sampling Time**
Matrix Water **Sample Location** W2J0545-04
Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Carbon disulfide	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Carbon Tetrachloride	ND	ug/L	0.3	10/29/2012	TGT	EPA 8260C	
Chlorobenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloroform	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Chloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,2-dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
cis-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromochloromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dibromomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Dichlorodifluoromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Ethylbenzene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Iodomethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
m+p-Xylene	ND	ug/L	1	10/29/2012	TGT	EPA 8260C	
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
Methylene chloride	ND	ug/L	2.5	10/29/2012	TGT	EPA 8260C	
o-Xylene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Styrene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Tetrachloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Toluene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,2-Dichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
trans-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

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Client: IDEQ **Batch #:** 121025023
Address: 2110 IRONWOOD PARKWAY **Project Name:** SVL #W2J0545 TRAVERS PARK
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Analytical Results Report

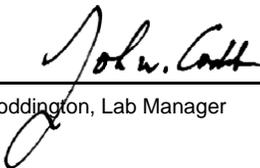
Sample Number	121025023-004	Sampling Date	10/23/2012	Date/Time Received	10/25/2012 11:53 AM
Client Sample ID	TRIP BLANK	Sampling Time			
Matrix	Water	Sample Location	W2J0545-04		
Comments					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroethene	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichloroflouromethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Trichlorotrifluoroethane	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl acetate	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	
Vinyl Chloride	ND	ug/L	0.5	10/29/2012	TGT	EPA 8260C	

Surrogate Data

Sample Number	121025023-004		
Surrogate Standard	Method	Percent Recovery	Control Limits
1,2-Dichlorobenzene-d4	EPA 8260C	99.2	70-130
4-Bromofluorobenzene	EPA 8260C	98.0	70-130
Toluene-d8	EPA 8260C	99.6	70-130

Authorized Signature


John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level
ND Not Detected
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.
The results reported relate only to the samples indicated.
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

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COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report Quality Control Data

Lab Control Sample

Parameter	LCS Result	Units	LCS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
Trichloroethene	9.76	ug/L	10	97.6	72-125	10/29/2012	10/29/2012
Toluene	9.67	ug/L	10	96.7	76-123	10/29/2012	10/29/2012
Tetrachloroethene	9.92	ug/L	10	99.2	78-119	10/29/2012	10/29/2012
o-Xylene	10.0	ug/L	10	100.0	83-117	10/29/2012	10/29/2012
Ethylbenzene	9.76	ug/L	10	97.6	84-115	10/29/2012	10/29/2012
Chlorobenzene	9.71	ug/L	10	97.1	85-115	10/29/2012	10/29/2012
Benzene	9.74	ug/L	10	97.4	75-125	10/29/2012	10/29/2012
1,1-Dichloroethene	10	ug/L	10	100.0	68-127	10/29/2012	10/29/2012

Matrix Spike

Sample Number	Parameter	Sample Result	MS Result	Units	MS Spike	%Rec	AR %Rec	Prep Date	Analysis Date
121025023-001	Trichloroethene	ND	10.5	ug/L	10	105.0	71-143	10/29/2012	10/29/2012
121025023-001	Toluene	ND	9.53	ug/L	10	95.3	78-136	10/29/2012	10/29/2012
121025023-001	Tetrachloroethene	ND	10.6	ug/L	10	106.0	69-149	10/29/2012	10/29/2012
121025023-001	o-Xylene	ND	7.99	ug/L	10	79.9	68-134	10/29/2012	10/29/2012
121025023-001	Ethylbenzene	ND	9.53	ug/L	10	95.3	70-137	10/29/2012	10/29/2012
121025023-001	Chlorobenzene	ND	10.5	ug/L	10	105.0	79-136	10/29/2012	10/29/2012
121025023-001	Benzene	ND	10.7	ug/L	10	107.0	76-139	10/29/2012	10/29/2012
121025023-001	1,1-Dichloroethene	ND	10.5	ug/L	10	105.0	74-144	10/29/2012	10/29/2012

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,1,1-Trichloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,1,2-Trichloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,1-Dichloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,1-Dichloroethene	ND	ug/L	0.5	10/29/2012	10/29/2012
1,2,3-Trichloropropane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,2-Dibromo-3-chloropropane(DBCP)	ND	ug/L	0.5	10/29/2012	10/29/2012
1,2-Dibromoethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,2-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	10/29/2012

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
Certifications held by Anatek Labs WA: EPA:WA00169; ID:WA00169; WA:C585; MT:Cert0095

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Client: IDEQ
Address: 2110 IRONWOOD PARKWAY
COEUR D'ALENE, ID 83814
Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
1,2-Dichloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,2-Dichloropropane	ND	ug/L	0.5	10/29/2012	10/29/2012
1,3-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	10/29/2012
1,4-Dichlorobenzene	ND	ug/L	0.5	10/29/2012	10/29/2012
2-Chloroethyl vinyl ether	ND	ug/L	0.5	10/29/2012	10/29/2012
2-hexanone	ND	ug/L	0.5	10/29/2012	10/29/2012
Acetone	ND	ug/L	2.5	10/29/2012	10/29/2012
Acrylonitrile	ND	ug/L	0.5	10/29/2012	10/29/2012
Benzene	ND	ug/L	0.5	10/29/2012	10/29/2012
Bromochloromethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Bromodichloromethane	ND	ug/L	0.3	10/29/2012	10/29/2012
Bromoform	ND	ug/L	0.5	10/29/2012	10/29/2012
Bromomethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Carbon disulfide	ND	ug/L	0.5	10/29/2012	10/29/2012
Carbon Tetrachloride	ND	ug/L	0.3	10/29/2012	10/29/2012
Chlorobenzene	ND	ug/L	0.5	10/29/2012	10/29/2012
Chloroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Chloroform	ND	ug/L	0.5	10/29/2012	10/29/2012
Chloromethane	ND	ug/L	0.5	10/29/2012	10/29/2012
cis-1,2-dichloroethene	ND	ug/L	0.5	10/29/2012	10/29/2012
cis-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	10/29/2012
Dibromochloromethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Dibromomethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Dichlorodifluoromethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Ethylbenzene	ND	ug/L	0.5	10/29/2012	10/29/2012
Iodomethane	ND	ug/L	0.5	10/29/2012	10/29/2012
m+p-Xylene	ND	ug/L	1	10/29/2012	10/29/2012
Methyl ethyl ketone (MEK)	ND	ug/L	2.5	10/29/2012	10/29/2012
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.5	10/29/2012	10/29/2012
Methylene chloride	ND	ug/L	2.5	10/29/2012	10/29/2012
o-Xylene	ND	ug/L	0.5	10/29/2012	10/29/2012
Styrene	ND	ug/L	0.5	10/29/2012	10/29/2012
Tetrachloroethene	ND	ug/L	0.5	10/29/2012	10/29/2012
Toluene	ND	ug/L	0.5	10/29/2012	10/29/2012
trans-1,2-Dichloroethene	ND	ug/L	0.5	10/29/2012	10/29/2012
trans-1,3-Dichloropropene	ND	ug/L	0.5	10/29/2012	10/29/2012
trans-1-4-Dichloro-2-butene	ND	ug/L	0.5	10/29/2012	10/29/2012

Comments:

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Attn: ROB EACHON

Batch #: 121025023
Project Name: SVL #W2J0545 TRAVERS
PARK

Analytical Results Report Quality Control Data

Method Blank

Parameter	Result	Units	PQL	Prep Date	Analysis Date
Trichloroethene	ND	ug/L	0.5	10/29/2012	10/29/2012
Trichloroflouromethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Trichlorotrifluoroethane	ND	ug/L	0.5	10/29/2012	10/29/2012
Vinyl acetate	ND	ug/L	0.5	10/29/2012	10/29/2012
Vinyl Chloride	ND	ug/L	0.5	10/29/2012	10/29/2012

AR Acceptable Range
ND Not Detected
PQL Practical Quantitation Limit
RPD Relative Percentage Difference

Comments:

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595
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Login Report

Customer Name: IDEQ

Order ID: 121025023

2110 IRONWOOD PARKWAY

Order Date: 10/25/2012

COEUR D'ALENE

ID

83814

Contact Name: ROB EACHON

Project Name: SVL #W2J0545

Comment:

Sample #: 121025023-001 **Customer Sample #:** TP 1

Recv'd:

Collector:

Date Collected: 10/23/201

Quantity: 2

Matrix: Water

Date Received: 10/25/2012 11:53:00

Comment:

Test	Lab	Method	Due Date	Priority
VOLATILE WA LANDFILL	M	EPA 8260C	11/6/2012	<u>Normal (6-10 Days)</u>

Sample #: 121025023-002 **Customer Sample #:** TP 2

Recv'd:

Collector:

Date Collected: 10/23/201

Quantity: 2

Matrix: Water

Date Received: 10/25/2012 11:53:00

Comment:

Test	Lab	Method	Due Date	Priority
VOLATILE WA LANDFILL	M	EPA 8260C	11/6/2012	<u>Normal (6-10 Days)</u>

Sample #: 121025023-003 **Customer Sample #:** FFTP

Recv'd:

Collector:

Date Collected: 10/23/201

Quantity: 2

Matrix: Water

Date Received: 10/25/2012 11:53:00

Comment:

Test	Lab	Method	Due Date	Priority
VOLATILE WA LANDFILL	M	EPA 8260C	11/6/2012	<u>Normal (6-10 Days)</u>

Customer Name: IDEQ
2110 IRONWOOD PARKWAY
COEUR D'ALENE ID 83814

Order ID: 121025023
Order Date: 10/25/2012

Contact Name: ROB EACHON

Project Name: SVL #W2J0545

Comment:

Sample #: 121025023-004 **Customer Sample #:** TRIP BLANK

Recv'd: **Collector:** **Date Collected:** 10/23/2011
Quantity: 1 **Matrix:** Water **Date Received:** 10/25/2012 11:53:00

Comment:

Test	Lab	Method	Due Date	Priority
VOLATILE WA LANDFILL	M	EPA 8260C	11/6/2012	<u>Normal (6-10 Days)</u>

SAMPLE CONDITION RECORD

Samples received in a cooler?	Yes
Samples received intact?	Yes
What is the temperature inside the cooler?	5.1
Samples received with a COC?	Yes
Samples received within holding time?	Yes
Are all sample bottles properly preserved?	Yes
Are VOC samples free of headspace?	Yes
Is there a trip blank to accompany VOC samples?	Yes
Labels and chain agree?	Yes