Envirocare of Utah, Inc.

Revised Hydrogeologic Report for the Envirocare Waste Disposal Facility Clive, Utah

August, 2004
Version 2.0

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

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1. Introduction

Envirocare of Utah, Inc. (Envirocare), operates a commercial landfill near Clive, Utah to dispose of Low Activity Radioactive Waste (LARW), Class A Radioactive Waste (Class A), 11e.(2) waste (uranium mill tailings), and mixed radioactive and hazardous waste (Mixed Waste).

The purpose of this report is to provide hydrogeologic information relevant to the renewal of Envirocare's Ground Water Discharge Permit UGW450005 issued by the State of Utah, Department of Public Health, Division of Water Quality (DWQ).

This report includes updated geologic information for the area adjacent to the facility, hydrogeologic cross-sections, ground water elevation contour maps, and structure and isopach maps. The focus of this report is to evaluate current hydrogeologic conditions at the facility. References to previously submitted non-time-dependent information are included as appropriate.

2. Previous Studies

A number of hydrogeologic studies have been conducted for the facility. The following is a summary of major documents supporting the preparation of this report which have been previously submitted to regulatory agencies. Additional references are provided in Section 7.

1991 - Hydrogeologic Report (Bingham Environmental): Initial hydrogeologic report for the Ground Water Discharge Permit.

1993 - As-Built for Suction Lysimeters and Soil Resistivity Instruments (Bingham Environmental): In situ moisture content, bulk density, grain size analysis, laboratory hydraulic conductivity, and soil pore fluid analyses.

1993 - Laboratory Analysis and Soil Hydraulic Properties of TP-1-4B and TP-2-4W Soil Samples (D.B. Stephens): Moisture content, bulk density, porosity, and hydraulic conductivity.

1995 - Additional Information: Suction Lysimeters and Soil Resistivity Instruments (Bingham Environmental): In situ moisture content, bulk density, grain size analysis, laboratory hydraulic conductivity, soil pore fluid analyses, and as-built installation diagrams.

1996 - Revised Hydrogeologic Report (Bingham Environmental): Hydrogeologic information and interpretation.

1997 - Final Slug Test Results, Envirocare of Utah South Clive Facility, Tooele County, Utah (Adrian Brown Consultants): Hydraulic conductivity measurements, methodology, and results.

1999 - Compilation and Analysis of Envirocare Groundwater Quality Data (Mayo and Associates): Time-series plots, contour maps, well logs, and statistical analyses of data from compliance wells.

1999 - Final Report for Slug Withdrawal Testing at Envirocare's Clive, Utah Facility, (EarthFax): Hydraulic conductivity measurements from bail tests.

1999 - Differential Leveling Survey for Envirocare of Utah, (Pentacore Resources): Well head elevation survey.

2000 – Revised Hydrogeologic Report for the Envirocare Waste Disposal Facility Clive, Utah (Pentacore Resources): Hydrogeologic information and interpretation.

In addition, other reports and technical memoranda have been prepared for the Clive, Utah facility. These documents include quarterly and semiannual monitoring reports, periodic ground water quality reports, and regional geologic and hydrogeologic studies.

3. Site Description

The Envirocare facility is sited in Section 32, T1S, R11W near Clive, Utah approximately 80 miles west of Salt Lake City. Envirocare began waste disposal at the facility in 1988. At present, waste is placed in one of four disposal embankments: (1) Mixed Waste, (2) LARW, (3) 11e.(2), or (4) Class A. The Mixed Waste embankment is currently being expanded to the north, the LARW embankment is nearing final cover and completion, the Class A embankment is being expanded west and north, and the 11e.(2) embankment is being expanded to the west. In the northeast part of the facility, the U.S. Department of Energy (DOE) disposed of the Vitro uranium mill tailings; this area is owned and monitored by the DOE.

The facility is one square mile in size, encompassing all of Section 32. Figure 1 shows the disposal cells and major man-made and topographic features at the facility. The facility is located at an average elevation of approximately 4270 feet above mean seal level (amsl). The natural topography slopes slightly toward the southwest with approximately 10 feet of relief. The area is semi-arid, with an average precipitation of approximately 7.8inches per year and average panevaporation of 49.5 inches per year (MSI, 2003).

The locations of monitoring wells, boreholes, piezometers, and lysimeters are shown on Figure 2, and a data summary for these installations is presented as Table 1. Table 1 includes information on location, completion depth, well abandonment, and hydraulic tests.

4. Geology

The facility is located in the eastern margin of the Great Salt Lake Desert, part of the Basin and Range Province. This province is characterized by north-south trending mountain ranges with discontinuous alluvium-filled valleys found between the ranges. The mountains are mainly Paleozoic-age sedimentary and metamorphic rock, but can also be comprised of volcanic rocks. The intermountain troughs are primarily filled with unconsolidated alluvial, lacustrine, fluvial, and evaporite deposits; but pyroclastics, aeolian sediments, and basalt flows also occur (Bingham Environmental, 1996; Dames & Moore, 1982, 1987; Stephens, 1974). Sediments near the mountains are predominately colluvial and alluvial, and are generally coarser grained than the lacustrine deposits found in the center of the valleys.

A geologic map of Section 32 and adjacent sections is presented as Figure 3, based on information in Solomon (1993). Figure 3 also shows major man-made features in the area that may affect ground water recharge. The facility is situated on Quaternary-age lacustrine lake bed deposits associated with the former Lake Bonneville. These surficial lacustrine deposits are generally comprised of low permeability silty clay. Surficial sand and gravel outcrops are mapped in the sections adjacent to the facility. The impact of these deposits on ground water movement beneath the facility is unknown.

Beneath the facility, the sediments consist predominantly of interbedded silt, sand, and clay with occasional gravel lenses. The depth of the valley fill beneath the facility is unknown. The deepest borehole at the facility well (well SC-1) was drilled to a depth of 250 feet below ground surface (bgs) without encountering bedrock. An exploratory borehole for a potential water-supply well on Section 29 north of Envirocare did not encounter bedrock at a depth of 700 bgs (Shrum, 1999).

The Grayback Hills begin approximately four miles north of the facility and are composed mainly of basalt flows and pyroclastics. The Cedar Mountains are found about 10 miles to the east-southeast and consist primarily of limestone, dolomite, and shale (Stephens, 1974).

A more complete description of the regional geology is given in the Pentacore (2000) Report.

5. Hydrogeology

5.1 Regional hydrogeology

Ground water recharge to alluvium-filled valleys in the Basin and Range Province occurs primarily through the alluvial fan deposits along the flanks of the adjoining mountains. Because of the low precipitation and high evapotranspiration, direct infiltration of water into shallow aquifers is probably negligible. The regional ground water flow direction is presumably toward the Great Salt Lake to the east-northeast.

As the ground water flows through the valleys, the salinity of the water increases due to dissolution of evaporate deposits, and in shallow aquifers by concentration of salts due to evapotranspiration. A potential water-supply well installed on Section 29 did not encounter fresh water to a depth of 700 feet (Shrum, 1999).

5.2 Site hydrogeology

5.2.1 Hydrostratigraphic units

Four hydrostratigraphic units are defined beneath the Envirocare facility:

Unit 4: This uppermost unit is comprised of silt and clay. Unit 4 extends from the ground surface to a depth of 6 to 16.5 feet bgs, averaging approximately 10 feet in thickness. An isopach map showing the thickness of Unit 4 is presented as Figure 4. This Unit is used as the lower liner and radon barrier for waste disposal cells at the facility. Unit 4 is unsaturated beneath the facility.

Unit 3: Unit 4 is underlain by Unit 3, composed predominantly of silty sand with interbedded silt and clay layers. Unit 3 ranges from 7 to 25 feet in thickness, averaging approximately 15 feet. The lower portion of Unit 3 is saturated beneath much of the western portion of the facility. The unconfined water-bearing zone occurring in Unit 3 (and the upper part of Unit 2) has been designated as the "shallow aquifer".

Unit 2: Unit 2 underlies Unit 3, and is typically composed of clay with occasional silty sand interbeds. Unit 2 ranges in thickness from 2.5 to 25 feet, averaging 15 feet. A structure contour map of the top of Unit 2 is shown as Figure 5. The upper part of Unit 2 is saturated beneath the facility, and along with the lower part of Unit 3, comprises the shallow aquifer.

Unit 1: The deepest hydrostratigraphic unit identified beneath the facility, Unit 1 typically consists of silty sand interbedded with clay and silt layers. Few borings penetrate this unit, and the thickness has not been determined. Unit 1 is saturated beneath the facility, and contains a locally confined aquifer, designated as the "deep aquifer".

Seven hydrogeologic cross-sections were constructed using stratigraphic information from well, borehole, piezometer, and lysimeter soil classification logs. The locations of these cross-sections are shown on Figure 6. The cross-sections are presented as Figures 7 through 13. Logs and completion diagrams for all monitor wells, boreholes, and lysimeters at the facility are included as Appendix A. Logs and completion diagrams for wells installed since the Pentacore 2000 report was completed, are included in Appendix A and in Table 1.

The stratigraphic contact elevation and unit thickness data used to construct the Unit 4 isopach map, Unit 2 structure contour map, and the hydrogeologic cross-sections are shown in Table 2.

Where several monitoring wells, boreholes, or lysimeters are located within a small area, a single log was selected to represent all logs in the immediate vicinity. The representative log was chosen based on log detail, quality, and total depth. Logs not included on the cross-sections, Unit 4 isopach map, or Unit 2 structure contour map are referenced to representative logs in Table 2.

On Figures 8 through 13 (cross-sections B-B' through G-G'), the saline ground water phreatic surface elevation is shown using water level data from August 4-6, 1999. On Figure 7 (cross-section A-A'), August 1999 water levels are not available for any of the wells in the line of section, but a pre-abandonment water level in well GW-8 measured on November 1, 1999, is shown. Water levels for the deep aquifer are essentially identical and are not shown.

The cross-sections and Unit 2 structure contour map indicate that the stratigraphic contacts generally dip gently toward the west. There is little variation in the thickness of the units beneath the facility, nor are there evident lateral trends in the attitude or thickness of the units. What variability in thickness occurs is more likely due to inconsistencies and uncertainties in soil classification during borehole logging, rather than to actual changes in thickness. Soil descriptions in many of the older boreholes were performed at 5-foot intervals, in contrast to more recent boreholes which were continuously cored.

The stratigraphy and structure presented in this report are consistent with interpretations presented in previous hydrogeologic reports (Bingham Environmental, 1991, 1996; Pentacore, 2000).

5.2.2. Hydraulic conductivity

Hydraulic tests were conducted on 100 wells completed in the shallow aquifer(Adrian Brown Consultants, 1997; EarthFax, 1999). These tests were performed by bailing a known volume of water from the well and monitoring ground water level recovery. In the shallow aquifer, coefficient of hydraulic conductivity values estimated from these tests ranged from 0.01 to 44 ft/day, averaging approximately 7.45 ft/day. Table 3 summarizes these data. The data shown represent the average hydraulic conductivity value for all tests on a given well since 1997.There are no evident lateral trends in hydraulic conductivity.

In general, the hydraulic conductivity measurements included in this report should not be compared to values given in earlier hydrogeologic reports, due to changes in hydraulic testing methodology. Prior to 1997, hydraulic tests were performed by inducing a rise in water levels in the test wells (slug-in tests). Corrections for the resulting increase in saturated thickness of the aquifer were not made and the tests were redone.

5.2.3. Methods of performing fresh water equivalent head adjustments

Envirocare currently adjusts ground water elevations measured in the field to account for differences in salinity between monitor wells. This methodology involves calculating a fresh water equivalent head elevation for each well, which is then used to determine horizontal ground water flow direction and velocity and to calculate vertical hydraulic gradients at well pairs. In Sections 5.2.4 and 5.2.5, horizontal and vertical ground water flow direction, gradient, and velocity estimates beneath the facility are evaluated and compared using different methodologies.

5.2.4. Horizontal ground water flow

5.2.4.1 Shallow aquifer

Ground water in the shallow aquifer beneath the facility flows generally toward the northeast. An unadjusted saline and fresh water equivalent head surface elevation contour map for the shallow aquifer using data from February 2004 is presented as Figure 14. A similar map for the deep aquifer is shown as Figure 15. Ground water elevation data used to construct these maps are shown in Table 4. At the Envirocare facility, the differences between the elevation of the unadjusted saline water phreatic surface elevation and the calculated fresh water equivalent head elevation at the midpoints of the saturated filter packs are relatively minor, averaging 0.15 feet. Similarly, the ground water flow directions and gradients as seen on the ground water elevation contour maps are essentially identical. Further discussion of this topic was provided in the Updated Specific Gravity Report sent to the Division of Water Quality on June 9, 2004 under transmittal number CD04-0287.

Shallow ground water flow is affected by recent infiltration of water from the surface water retention pond in the southwest corner of the facility near wells GW-19A and GW-19B in the spring of 1999. Surface water drainage to the pond has since been rerouted, eliminating the possibility of future overflow and resultant infiltration of storm water (Shrum, 1999).

From March 1993 to spring 1997 a borrow pit was excavated near the 11e.(2) cells to provide low permeability clay for adjacent disposal cell construction. The pit occasionally filled with rain water and the resulting infiltration resulted in a ground water mound near wells GW-37 and GW-38. The mound reached its greatest height at that time, and has diminished since. Little evidence of the mound can be observed at the present (Pentacore, 2000).

Horizontal ground water gradients in the shallow aquifer range from 6.77E-06 to 4.49E-03. The sitewide average gradient is 5.77E-04. Horizontal ground water flow velocity was calculated by multiplying the gradient by the hydraulic conductivity and dividing by the porosity. Hydraulic conductivity values are presented in Table 3. The porosity was assumed to be 0.30. In order to illustrate the range of ground water flow velocity at the site, areas of highest hydraulic gradient and hydraulic conductivity were

chosen, as well as lowest gradient. These ranges are show in Table 5. The velocity in the area of lowest hydraulic conductivity was not included because the calculated velocity is intermediate to the velocity extremes. Using gradients based on the unadjusted phreatic saline ground water elevation, horizontal velocity averaged1.48E-06 ft/day. The velocity calculated using sitewide average gradient and hydraulic conductivity is 0.09 ft/day. Detailed information on ground water gradient and velocity are provided to the DRC in semi-annual reports.

Velocity estimates using the midpoint of the saturated filter pack method of determining hydraulic gradients are essentially identical to those estimated using the unadjusted saline water elevations, and are well within the anticipated range of variability due to uncertainties in porosity and hydraulic conductivity. In particular, hydraulic conductivity values calculated from single-well hydraulic tests cannot be expected to be more accurate than one-half an order of magnitude, especially considering the heterogeneous nature of the sediments beneath the facility.

Ground water flow direction, gradient, and velocity are generally comparable to those presented in earlier hydrogeologic reports (Bingham Environmental, 1991, 1996). Fresh water equivalent head adjustments were not made in the 1991 report. Except for the local recharge events note above, there are no evident time-related trends in ground water flow in the shallow aquifer.

5.2.4.2 Deep aquifer

Ground water flow direction, gradient, and velocity are generally comparable to those presented in earlier hydrogeologic reports (Bingham Environmental, 1991, 1996; Pentacore, 2000). There are no evident time-related trends in ground water flow in the deep aquifer.

5.2.5. Vertical ground water flow

Vertical ground water gradient and velocity were estimated by comparing the potential head between monitor wells completed in the shallow and deep aquifers: (1) at the midpoint of the saturated filter packs (the current method), and (2) the midpoint of intervening Unit 2. The vertical hydraulic conductivity was assumed to be 0.00283 ft/day (10^{-6} cm/sec), and the porosity to be 0.30, for consistency with previous estimates (Pentacore, 2000). Vertical hydraulic gradient and velocity calculations are shown in Table 6. Both methods resulted in a downward vertical gradient near well pair GW-19A/GW-19B, located in the southwest corner of the facility, and an upward gradient near wells I-3-30/I-3-100, north of the Mixed Waste Landfill. Calculating differences in fresh water equivalent head using the midpoints of the saturated filter packs resulted in a slight downward vertical gradient at well pairs GW-27/GW-27D and a slight upward vertical gradient at I-1-30/I-1-100. Because of the difficulties in comparing fresh water equivalent head between the midpoints of the saturated filter packs discussed in Section 5.2.3, using the midpoint of Unit 2 as the reference datum is more appropriate.

The magnitude of the downward gradient near the GW-19A/GW-19B well pair is likely artificially enhanced by the infiltration of overflow from the surface water retention pond in the southwest corner of the site, and by the past ground water mound near wells GW-37 and GW-38. These influxes of water may also have caused or increased the downward gradient at the other well pairs, and may diminish over time. The low magnitude of the vertical gradient elsewhere beneath the facility indicates that the two aquifers are likely subsets of a continuous aquifer system separated by low conductivity clay strata, and that vertical flow is not significant either upward or downward.

Except for the current downward gradient in the southwest portion of the facility caused by infiltration of water from: (1) the area near GW-37 and GW-38, and (2) the surface water retention pond, vertical gradients are comparable to those presented in previous reports (Bingham Environmental, 1991, 1996; Pentacore, 2000). There are no other evident time-related trends in vertical ground water gradient or velocity.

5.2.6. Ground water chemistry

Ground water at the site is extremely saline. In the shallow aquifer, the average Total Dissolved Solids (TDS) concentration ranges from approximately 24,000 to 53,000 mg/L. The sitewide average is 40,500 mg/L. Average TDS from 1991 to March 2004 for wells completed in the shallow aquifer is included as Table 7, and the spatial distribution is shown on Figure 16. TDS data from wells GW-3, GW-11, GW-12, GW-13, GW-16, and GW-67 are not considered in contouring because these wells are completed at a relatively deep depth and may not be representative of the shallow aquifer. Few TDS data are available for the deep aquifer. Mayo (1999) and Bingham Environmental (1996) indicate that the TDS of the deep aquifer is less than that of the shallow aquifer, but is greater than 20,000 mg/L. Specific gravity is also an indicator of the relative salinity of ground water samples. In the shallow aquifer, specific gravity ranges from 1.018 to 1.056 g/cm^3, averaging 1.033 g/cm^3. Specific gravity in the deep aquifer is somewhat lower, and ranges from 1.016 to 1.022 g/cm^3 with an average of 1.019 g/cm^3. Specific gravity data for March 2004 are included in Table 4. The higher salinity of the shallow aquifer is likely due to: (1) concentration of salts through evapotranspiration, and/or (2) localized dissolution of evaporate deposits in the unsaturated soil in areas of local vertical recharge to the ground surface (such as near GW-19A in response to infiltration of water that overflowed from the surface water retention pond). TDS and specific gravity measurements are comparable to those presented in previous reports (Bingham Environmental, 1991, 1996; Pentacore, 2000), except at those monitoring wells affected by local infiltration. There are no other evident lateral or time-related trends in TDS or salinity across the facility.

Sodium and chloride dominate the major ion composition of shallow ground water beneath the facility. On average, sodium typically constitutes up to about 90 percent of the total cations by weight, with lesser amounts of calcium, potassium, and magnesium. Chloride comprises approximately 86 percent of the anions; the remainder is primarily sulfate. Carbonate and bicarbonate are negligible (Mayo, 1999). A review of major ion data collected since the previous revised Hydrogeologic Report (Bingham

Environmental, 1996) revealed no significant time-related changes since 1996. There are no evident lateral or time-related trends in major ion chemistry across the facility.

Bingham Environmental (1996) performed an analysis of stable and unstable isotope data to characterize ground water recharge sources, ground water age, and ground water geochemical evolution. The evaluation indicated that ground water in the shallow aquifer beneath the south central, southwestern, and west central margins of the facility (wells GW-3, GW-18, and GW-19A) appears to have been subjected to excessive evaporation prior to recharge. Bingham Environmental concluded that recharge of surface water that had been concentrated by evaporation most likely occurred at some distance from the facility, except for local recharge near wells GW-37 and GW-38. Ground water age dating using tritium indicated that most ground water beneath the facility was recharged prior to 1953. The geochemical evolution study evaluated major ions primarily using Piper and Stiff diagrams, and found that except for TDS, the ionic composition of the shallow and deep aquifers were comparable. The study also indicated that the ionic composition of ground water at the facility was consistent with very slow horizontal flow rates.

Ground water beneath the facility is classified as a Class IV aquifer under the State of Utah Groundwater Quality Protection Regulations standards for TDS (exceeding 10,000 mg/L). Concentrations of many naturally-occurring parameters exceed EPA drinking water standards (Mayo, 1999; Bingham Environmental, 1996).

6. Summary and Conclusions

Envirocare of Utah, Inc. (Envirocare) operates a commercial landfill near Clive, Utah to dispose of Low Activity Radioactive Waste (LARW), Class A Waste (Class A), 11e.(2) waste (uranium mill tailings), and mixed radioactive and hazardous waste. The facility is located in Section 32, T1S, R11W near Clive, Utah, approximately 80 miles east of Salt Lake City. At present, the waste is placed in one of three cells: (1) Mixed Waste, (2) LARW, (3) 11e.(2), and (4) Class A. All four disposal areas are currently being expanded.

The facility is situated on Quaternary-age lacustrine lake bed deposits associated with the former Lake Bonneville. These surficial lacustrine deposits are generally comprised of low permeability silty clay. Four hydrostratigraphic units are defined beneath the Envirocare facility, in order of increasing depth:

Unit 4: Predominantly silt and clay, Unit 4 is used as the lower liner and radon barrier for waste disposal cells at the facility. Unit 4 is unsaturated beneath the facility.

Unit 3: Predominantly silty sand. The unconfined water-bearing zone occurring in Unit 3 (and the upper part of Unit 2) has been designated as the "shallow aquifer".

Unit 2: Predominantly clay. The upper part of Unit 2 is typically saturated beneath the facility, and along with the lower part of Unit 3, comprises the shallow aquifer.

Unit 1: Predominantly silty sand. Unit 1 is saturated beneath the facility, and contains a locally confined aquifer, designated as the "deep aquifer".

All stratigraphic unit contacts dip slightly toward the west. There is little variability in the thickness of the units.

Hydraulic tests were conducted on 68 wells completed in the shallow aquifer(Adrian Brown Consultants, 1997; EathFax, 1999). Coefficient of hydraulic conductivity values estimated from these tests ranged from 0.01 to 44 ft/day, averaging approximately 7.45 ft/day.

Ground water in the shallow aquifer beneath the facility flows generally toward the northeast. The differences between the elevation of the unadjusted saline water phreatic surface elevation and the calculated fresh water equivalent head elevation at the midpoints of the saturated filter packs are relatively minor, averaging 0.15 feet. Shallow ground water flow is affected by recent infiltration of water from the surface water retention pond in the southwest corner of the facility near wells GW-19A and GW-19B. From March 1993 to spring 1997 a borrow pit excavated near the 11e.(2) cells to provide low permeability clay for adjacent disposal cell construction occasionally filled with rain water, and the resulting infiltration resulted in a ground water mound near wells GW-37 and GW-38. The mound reached its greatest height in 1995, and has diminished since. Little evidence of the mound can be observed at the present.

The velocity calculated using sitewide average gradient and hydraulic conductivity is 0.09 ft/day. Velocity estimates using the midpoint of the saturated filter pack method of determining hydraulic gradients are essentially identical to those calculated using unadjusted gradients, and are well within the anticipated range of variability due to uncertainties in porosity and hydraulic conductivity.

Ground water flow direction, gradient, and velocity in the deep aquifer are generally comparable to those presented in earlier hydrogeologic reports (Bingham Environmental, 1991, 1996; Pentacore, 2000). There are no evident time-related trends in ground water flow in the deep aquifer.

Vertical ground water gradient and velocity were estimated by comparing the potential head between monitor wells completed in the shallow and deep aquifers: (1) at the midpoints of the saturated filter packs (the current method), and (2) at the midpoint of intervening Unit 2. Both approaches resulted in a downward vertical gradient near well pair GW-19A/GW19-B, located in the southwest corner of the facility, and an upward gradient near wells I-3-30/I-3-100, north of the Mixed Waste Landfill embankment. Calculating differences in fresh water equivalent head using the midpoints of the saturated filter packs resulted in a slight downward vertical gradient at well pairs GW-27/GW-27D and slight upward vertical gradient at I-3-30/I-3-100.

Except for the local and time-related variations in ground water flow resulting from artificial recharge in the southwestern part of the facility, the ground water flow regime is comparable to that described in previous hydrogeologic reports.

Total Dissolved Solids and specific gravity are higher in the shallow aquifer than in the deep aquifer. Sodium and chloride dominate the major ion composition of shallow ground water beneath the facility. On average across the facility, sodium typically constitutes up to about 90 percent of the total cations by weight, with lesser amounts of calcium, potassium, and magnesium. Similarly, chloride comprises approximately 86 percent of the anions; the remainder is primarily sulfate. Carbonate and bicarbonate are negligible. There are no evident lateral or time-related trends in TDS, specific gravity, or major ion chemistry, except those resulting from artificial recharge in the southwestern part of the facility.

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TABLES

TABLE 1
SUMMARY OF MONITORING WELL, BOREHOLE AND LYSIMETER INFORMATION
ENVIROCARE OF UTAH, INC.

Location		Type		Date Installed		Date Abandoned		Northing (ft)		Easting (ft)		Ground surface elev. (ft amsl)		Measurement Point elev. (ft amsl)		Total depth of boring (ft)		Depth to top of filter pack (ft)		Depth to bottom of filter pack (ft)		Depth to top of screened interval (ft)		Depth to bottom of screened interval (ft)		Well/boring log?		Hydraulic test?	
I-1-30	(a)	Monitoring well	(a)	5/10/90	(a)	na		859236.92	(e)	1553995.12	(e)	4277.29	(c)	4279.39	(c)	35.0	(a)	24.0	(a)	35.0	(a)	25.0	(a)	35.0	(a)	Yes	(a)	Yes	(dj)
I-1-50	(a)	Monitoring well	(a)	5/14/90	(a)	na		859236.58	(e)	1553990.25	(e)	4277.17	(c)	4279.15	(c)	49.5	(a)	37.0	(a)	49.5	(a)	39.0	(a)	49.5	(a)	Yes	(a)	No	
I-1-100	(a)	Monitoring well	(a)	5/2/90	(a)	na		859232.60	(e)	1553993.21	(e)	4277.29	(c)	4279.15	(c)	101.5	(a)	72.0	(a)	101.5	(a)	90.0	(a)	100.0	(a)	Yes	(a)	No	
I-2-30	(a)	Monitoring well	(a)	6/11/90	(a)	na		860484.50	(e)	1553712.45	(e)	4277.78	(c)	4279.92	(c)	37.4	(d)	24.0	(a)	37.4	(a)	25.0	(a)	37.4	(a)	Yes	(a)	Yes	(dj)
I-2-50	(a)	Monitoring well	(a)	5/23/90	(a)	na		860489.37	(e)	1553714.87	(e)	4277.75	(c)	4279.86	(c)	51.0	(a)	40.0	(a)	51.0	(a)	41.0	(a)	51.0	(a)	Yes	(a)	No	
I-3-30	(a)	Monitoring well	(a)	5/9/90	(a)	na		861259.10	(e)	1554388.66	(e)	4278.50	(c)	4281.37	(c)	35.0	(a)	23.0	(a)	35.0	(a)	24.5	(a)	34.5	(a)	Yes	(a)	Yes	(dj)
I-3-50	(a)	Monitoring well	(a)	5/9/90	(a)	na		861261.35	(e)	1554392.95	(e)	4278.63	(c)	4281.41	(c)	55.0	(a)	44.0	(a)	55.0	(a)	45.0	(a)	55.0	(a)	Yes	(a)	No	
I-3-100	(a)	Monitoring well	(a)	5/2/90	(a)	na		861264.26	(e)	1554388.79	(e)	4278.78	(c)	4281.50	(c)	101.5	(a)	84.0	(a)	101.5	(a)	90.0	(a)	100.0	(a)	Yes	(a)	No	
I-4-30	(a)	Monitoring well	(a)	5/15/90	(a)	June-July 1994	(d)	859925.70	(d)	1554725.50	(d)	4277.60	(d)	4280.67	(d)	35.0	(a)	24.0	(a)	35.0	(a)	25.0	(a)	35.0	(a)	Yes	(a)	Yes	(d)
I-4-50	(a)	Monitoring well	(a)	5/16/90	(a)	June-July 1994	(d)	859926.30	(d)	1554720.60	(d)	4277.70	(d)	4280.72	(d)	52.5	(a)	41.0	(a)	52.5	(a)	42.0	(a)	52.0	(a)	Yes	(a)	No	
SC-1	(a)	Piezometer	(a)	8/23/81	(a)	Nov. 1-2, 1999	(k)	861926.20	(d)	1552264.50	(d)	4275.40	(d)	4278.88	(d)	250.3	(a)	100.0	(d)	229.8	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-2	(a)	Piezometer	(a)	8/28/81	(a)	Nov. 1-2, 1999	(k)	859552.00	(d)	1549899.60	(d)	4268.70	(d)	4272.08	(d)	50.0	(a)	16.0	(d)	48.5	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-3	(a)	Piezometer	(a)	8/28/81	(a)	June-July 1994	(d)	859445.60	(d)	1554613.90	(d)	4277.10	(d)	4280.35	(d)	50.5	(a)	23.0	(d)	50.5	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-4	(a)	Piezometer	(a)	8/29/81	(a)	Oct. 2000		864211.50	(d)	1554800.30	(d)	4280.50	(d)	4284.53	(d)	51.5	(a)	29.5	(d)	51.5	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-5	(a)	Piezometer	(a)	8/31/81	(a)	Oct. 2000		864273.40	(d)	1554949.90	(d)	4273.50	(d)	4276.10	(d)	51.5	(a)	29.0	(d)	51.5	(d)	31.0	(a)	51.0	(a)	Yes	(a)	na	
SC-6	(a)	Piezometer	(a)	2/16/82	(a)	Nov. 1-2, 1999	(k)	862919.10	(d)	1549841.60	(d)	4272.50	(d)	4276.96	(d)	45.3	(a)	30.0	(d)	46.0	(d)	30.0	(a)	45.0	(a)	Yes	(a)	na	
SC-7	(a)	Piezometer	(a)	2/17/82	(a)	na		Not available		Not available		4270.12	(a)	Not available		43.5	(a)	32.0	(a)	55.0	(a)	43.0	(a)	55.0	(a)	Yes	(a)	na	
SC-7A	(d)	Not available		1981-1982	(d)	na		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		No		No	
SC-7B	(d)	Not available		1981-1982	(d)	na		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		No		No	
SC-8	(a)	Piezometer	(a)	2/18/82	(a)	na		Not available		Not available		4277.80	(a)	Not available		52.5	(a)	Not available		Not available		Not available	(a)	Not available	(a)	Yes	(a)	No	
SC-8A	(d)	Not available		1981-1982	(d)	na		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		No		No	
SC-8B	(d)	Not available		1981-1982	(d)	na		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		No		No	
SC-9	(a)	Piezometer	(a)	2/19/82	(a)	na		862992.00	(d)	1553137.10	(d)	4278.80	(d)	4283.20	(d)	45.5	(a)	28.5	(d)	45.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-10	(a)	Piezometer	(a)	2/22/82	(a)	Nov. 1-2, 1999	(k)	864206.80	(d)	1553152.20	(d)	4279.80	(d)	4284.41	(d)	48.0	(a)	32.5	(d)	48.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-11	(a)	Piezometer	(a)	2/23/82	(a)	October 23, 2000		864278.40	(d)	1551419.80	(d)	4275.80	(d)	4280.81	(d)	45.0	(a)	29.0	(d)	45.0	(d)	30.0	(a)	45.0	(a)	Yes	(a)	na	
SC-12	(a)	Piezometer	(a)	2/24/82	(a)	Nov. 1-2, 1999	(k)	862912.70	(d)	1551480.30	(d)	4274.90	(d)	4277.50	(d)	58.0	(a)	47.5	(d)	58.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SC-13	(a)	Piezometer	(a)	2/25/82	(a)	Nov. 1-2, 1999	(k)	861449.10	(d)	1551546.70	(d)	4274.10	(d)	4277.08	(d)	56.0	(a)	45.5	(d)	55.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	na	
SLC-201	(a)	Monitoring well	(a)	2/3/84	(a)	Nov. 1-2, 1999	(k)	863094.60	(d)	1550650.20	(d)	4274.00	(d)	4275.69	(d)	50.0	(a)	36.5	(d)	52.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
SLC-202	(a)	Monitoring well	(a)	2/3/84	(a)	Nov. 1-2, 1999	(k)	863032.60	(d)	1551125.50	(d)	4274.40	(d)	4275.81	(d)	50.0	(a)	36.5	(d)	52.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
SLC-203	(a)	Monitoring well	(a)	2/2/84	(a)	Nov. 1-2, 1999	(k)	862914.00	(d)	1552014.80	(d)	4276.00	(d)	4277.42	(d)	50.0	(a)	37.5	(d)	52.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
SLC-204	(a)	Monitoring well	(a)	2/1/84	(a)	Nov. 1-2, 1999	(k)	861565.20	(d)	1550447.40	(d)	4271.80	(d)	4273.21	(d)	50.0	(a)	34.5	(d)	52.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
SLC-205	(a)	Monitoring well	(a)	2/2/84	(a)	Nov. 1-2, 1999	(k)	861560.70	(d)	1551051.10	(d)	4273.80	(d)	4275.45	(d)	50.0	(a)	35.0	(d)	52.5	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
SLC-206	(a)	Monitoring well	(a)	2/3/84	(a)	Nov. 1-2, 1999	(k)	861655.20	(d)	1551988.80	(d)	4274.80	(d)	4275.94	(d)	50.0	(a)	37.5	(d)	52.0	(d)	Not available	(a)	Not available	(a)	Yes	(a)	No	
DH-16A	(a)	Exploratory hole	(a)	1/15/92	(a)	Jan. 1992	(a)	861335.70	(d)	1553741.50	(d)	4277.60	(d)	na		41.0	(a)	NA	(a)	NA	(a)	na	(a)	na	(a)	Yes	(a)	na	
DH-30	(a)	Exploratory hole	(a)	11/27/91	(a)	Nov. 1991	(a)	859402.90	(d)	1553573.00	(d)	4276.30	(d)	na		34.5	(a)	NA	(a)	NA	(a)	na	(a)	na	(a)	Yes	(a)	na	
DH-31	(a)	Piezometer	(a)	12/9/91	(a)	na		861255.00	(d)	1554402.10	(d)	4278.30	(d)	4280.95	(d)	32.0	(a)	24.8	(d)	32.0	(a)	27.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
DH-32	(a)	Piezometer	(a)	12/10/91	(a)	na		859949.50	(d)	1553703.10	(d)	4276.70	(d)	4278.46	(d)	32.0	(a)	25.0	(a)	32.0	(a)	27.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
DH-33	(a)	Piezometer	(a)	12/10/91	(a)	Sep. 1997		860518.60	(d)	1554624.40	(d)	4277.90	(d)	4280.23	(d)	32.0	(a)	26.0	(a)	32.0	(a)	27.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
DH-34	(a)	Piezometer	(a)	12/11/91	(a)	June-July 1994	(d)	859445.70	(d)	1554630.60	(d)	4277.30	(d)	4279.88	(d)	32.0	(a)	25.6	(d)	32.0	(a)	27.0	(a)	31.5	(a)	Yes	(a)	Yes	(d)
DH-47	(a)	Exploratory hole	(a)	1/12/92	(a)	Jan. 1992	(a)	862031.50	(d)	1549956.00	(d)	4271.00	(d)	na		46.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-48	(a)	Exploratory hole	(a)	2/10/92	(a)	Feb. 1992	(a)	859609.00	(d)	1553855.20	(d)	4277.00	(d)	na		29.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-49	(a)	Exploratory hole	(a)	2/10/92	(a)	Feb. 1992	(a)	859598.90	(d)	1554641.20	(d)	4276.90	(d)	na		28.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-50	(a)	Exploratory hole	(a)	2/10/92	(a)	Feb. 1992	(a)	859986.50	(d)	1553863.00	(d)	4277.00	(d)	na		30.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-51	(a)	Exploratory hole	(a)	2/11/92	(a)	Feb. 1992	(a)	859985.50	(d)	1554677.80	(d)	4277.80	(d)	na		28.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-52	(a)	Exploratory hole	(a)	2/11/92	(a)	Feb. 1992	(a)	859241.50	(d)	1553692.00	(d)	4276.30	(d)	na		28.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-53	(a)	Exploratory hole	(a)	2/19/92	(a)	Feb. 1992	(a)	859600.80	(d)	1554314.90	(d)	4277.00	(d)	na		28.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-54	(a)	Exploratory hole	(a)	2/19/92	(a)	Feb. 1992	(a)	859212.20	(d)	1554698.70	(d)	4277.10	(d)	na		28.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
DH-59	(a)	Piezometer	(a)	2/3/93	(a)	na		859307.60	(d)	1550721.70	(d)	4270.20	(d)	4272.06	(d)	25.0	(a)	16.5	(a)	25.0	(a)	20.0	(a)	24.5	(a)	Yes	(a)	Yes	(j)
DH-61	(a)	Piezometer	(a)	2/2/93	(a)	June-July 1994	(d)	859965.80	(d)	1551626.00	(d)	4273.50	(d)	4275.49	(d)	27.0	(a)	20.0	(a)	27.0	(a)	22.0	(a)	26.5	(a)	Yes	(a)	na	
DH-62	(a)	Piezometer	(a)	2/1/93	(a)	June 2000		860708.30	(d)	1551616.20	(d)	4270.80	(d)	4272.98	(d)	26.0	(a)	19.0	(a)	26.0	(a)	21.0	(a)	25.5	(a)	Yes	(a)	Yes	(j)
DH-65	(a)	Exploratory hole	(a)	9/28/93	(a)	9/28/93	(a)	859942.70	(d)	1553703.00	(d)	4276.70	(d)	na	(d)	43.0	(a)	na		na		na	(a)	na	(a)	Yes	(a)	na	
GW-1	(a)	Monitoring well	(a)	3/3/88	(a)	na		859278.50	(d)	1551641.10	(d)	4273.00	(d)	4275.06	(d)	41.5	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-2	(a)	Monitoring well	(a)	3/4/88	(a)	October 23, 2000		860773.50	(d)	1554887.20	(d)	4277.90	(d)	4279.98	(d)	41.5	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-3	(a)	Monitoring well	(a)	3/2/88	(a)	na		862016.50	(d)	1549956.00	(d)	4271.00	(d)	4273.14	(d)	41.5	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	Yes	(d)
GW-4	(a)	Monitoring well	(a)	6/10/05	(d)	prior to 1989	(a)	861292.90	(d)	1552841.80	(d)	4274.30	(d)	4276.57	(d)	40.0	(g)	18.0	(d)	40.0	(d)	20.0	(a)	40.0	(a)	No		No	
GW-5	(a)	Monitoring well	(a)	3/8/88	(a)	Nov. 1-2, 1999	(k)	862724.70	(d)	1552330.50	(d)	4276.60	(d)	4278.64	(d)	41.5	(e)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	Yes	(d)
GW-6	(a)	Monitoring well	(a)	3/4/88	(a)	Oct. 2000		863088.90	(d)	1554967.40	(d)	4279.80	(d)	4282.01	(d)	41.5	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-7	(a)	Monitoring well	(a)	Not available		prior to 1989	(a)	Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		Not available		No		No	
GW-8	(a)	Monitoring well	(a)	3/8/88	(a)	Nov. 1-2, 1999	(k)	864417.60	(d)	1553081.70	(d)	4280.00	(d)	4282.03	(d)	41.5	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-9	(a)	Monitoring well	(a)	6/9/88	(a)	na		864027.40	(d)	1552466.30	(d)	4278.80	(d)	4281.47	(d)	40.0	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-10	(a)	Monitoring well	(a)	6/1/88	(a)	prior to 1989	(a)	Not available		Not available		Not available		Not available		40.0	(a)	18.0	(a)	40.0	(a)	20.0	(a)	40.0	(a)	Yes	(a)	No	
GW-11	(a)	Monitoring well	(d)	1988, 1990	(d)	June-July 1994	(d)	859935.80	(d)	1553702.90	(d)	4276.60	(d)	4280.17	(d)	55.0	(g)	44.0	(d)	55.0	(d)	Not available		Not available		No		Yes	(d)
GW-12	(d)	Monitoring well	(d)	1988, 1990	(d)	June-July 1994	(d)	859977.90	(d)	1553892.10	(d)	4276.90	(d)	4279.95	(d)	55.0	(g)	44.0	(d)	55.0	(d)	Not available		Not available		No		Yes	(d)

TABLE 1
SUMMARY OF MONITORING WELL, BOREHOLE AND LYSIMETER INFORMATION
ENVIROCARE OF UTAH, INC.

Location		Type		Date Installed		Date Abandoned		Northing (ft)		Easting (ft)		Ground surface elev. (ft amsl)		Measurement Point elev. (ft amsl)		Total depth of boring (ft)		Depth to top of filter pack (ft)		Depth to bottom of filter pack (ft)		Depth to top of screened interval (ft)		Depth to bottom of screened interval (ft)		Well/boring log?		Hydraulic test?	
GW-13	(d)	Monitoring well	(d)	1988, 1990	(d)	June-July 1994	(d)	859962.00	(d)	1554214.30	(d)	4277.20	(d)	4280.11	(d)	55.0	(g)	44.0	(d)	55.0	(d)	Not available		Not available		No		Yes	(d)
GW-16	(a)	Monitoring well	(a)	2/12/91	(a)	na		861349.80	(d)	1553727.40	(d)	4277.60	(d)	4279.76	(d)	41.0	(a)	20.3	(d)	41.0	(d)	23.5	(a)	38.0	(a)	Yes	(a)	Yes	(d)
GW-16R	(a)	Monitoring well	(a)	2/4/93	(a)	na		861223.02	(e)	1553727.83	(e)	4279.64	(c)	4281.08	(c)	36.0	(a,h)	20.0	(a)	36.0	(a,h)	Not available		Not available		Yes	(a)	Yes	(j)
GW-17A	(a)	Monitoring well	(a)	2/8/91	(a)	na		861507.20	(d)	1552426.10	(d)	4276.50	(d)	4278.64	(d)	34.5	(a)	18.8	(d)	34.5	(d)	23.5	(a)	32.5	(a)	Yes	(a)	Yes	(dj)
GW-18	(d)	Monitoring well	(d)	2/9/91	(d)	Nov. 1-2, 1999	(k)	859283.10	(d)	1552418.20	(d)	4274.30	(d)	4276.61	(d)	39.2	(g)	18.5	(d)	39.2	(d)	23.5	(a)	37.5	(a)	Yes	(a)	Yes	(d)
GW-19A	(a)	Monitoring well	(a)	2/7/91	(a)	na		859343.47	(e)	1549663.47	(e)	4269.37	(c)	4270.84	(c)	31.5	(a)	14.8	(d)	31.5	(d)	18.0	(a)	27.5	(a)	Yes	(a)	Yes	(dj)
GW-19B	(a)	Monitoring well	(a)	2/6/91	(a)	na		859335.65	(e)	1549663.13	(e)	4269.14	(c)	4270.76	(c)	102.0	(a)	75.0	(a)	102.0	(a)	78.5	(a)	97.5	(a)	Yes	(a)	Yes	(d)
GW-20	(a)	Monitoring well	(a)	12/2/91	(a)	na		860324.77	(e)	1552416.02	(e)	4275.29	(c)	4276.60	(c)	35.0	(a)	21.0	(a)	35.0	(a)	25.0	(a)	34.5	(a)	Yes	(a)	Yes	(dj)
GW-21	(a)	Monitoring well	(a)	2/13/91	(a)	na		864463.30	(d)	1555001.00	(d)	4280.50	(d)	4283.23	(d)	44.5	(a)	21.0	(a)	42.0	(a)	27.0	(a)	41.5	(a)	Yes	(a)	Yes	(dj)
GW-22	(a)	Monitoring well	(a)	12/5/91	(a)	na		861266.20	(e)	1553261.74	(e)	4276.39	(c)	4277.23	(c)	32.0	(a)	19.0	(a)	32.0	(a)	22.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
GW-23	(a)	Monitoring well	(a)	12/5/91	(a)	na		861271.09	(e)	1552851.65	(e)	4275.31	(c)	4276.63	(c)	32.0	(a)	18.0	(a)	32.0	(a)	22.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
GW-24	(a)	Monitoring well	(a)	12/3/91	(a)	na		861174.24	(e)	1552435.30	(e)	4275.50	(c)	4276.70	(c)	31.8	(d)	20.2	(d)	31.8	(d)	22.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
GW-25	(a)	Monitoring well	(a)	12/19/91	(a)	na		861399.29	(e)	1551452.26	(e)	4274.52	(c)	4276.20	(c)	34.0	(a)	22.0	(a)	34.0	(a)	24.0	(a)	33.5	(a)	Yes	(a)	Yes	(dj)
GW-26	(a)	Monitoring well	(a)	12/20/91	(a)	na		861412.36	(e)	1550713.42	(e)	4272.91	(c)	4274.60	(c)	30.0	(a)	18.0	(a)	30.0	(a)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-27	(a)	Monitoring well	(e)	12/11/91	(a)	na		861432.06	(e)	1549878.50	(e)	4270.72	(c)	4272.42	(c)	32.0	(a)	18.2	(d)	30.1	(d)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-27D	(e)	Monitoring well	(a)	12/29/98	(a)	na		861407.39	(e)	1549877.80	(e)	4270.88	(c)	4273.67	(c)	100.0	(a)	81.0	(a)	100.0	(a)	85.0	(a)	100.0	(a)	Yes	(a)	No	
GW-28	(a)	Monitoring well	(a)	12/17/91	(a)	na		860488.38	(e)	1549863.30	(e)	4269.91	(c)	4271.29	(c)	30.0	(a)	18.0	(a)	30.0	(a)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-29	(a)	Monitoring well	(a)	11/26/91	(a)	na		859435.90	(e)	1552401.15	(e)	4274.71	(c)	4276.29	(c)	32.0	(a)	19.8	(d)	32.0	(d)	22.0	(a)	31.5	(a)	Yes	(a)	Yes	(dj)
GW-36	(a)	Monitoring well	(a)	12/23/91	(a)	na		859978.64	(e)	1550498.23	(e)	4270.25	(c)	4271.97	(c)	30.0	(a)	18.0	(a)	30.0	(a)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-37	(a)	Monitoring well	(a)	12/17/91	(a)	na		860361.86	(e)	1551055.11	(e)	4269.30	(c)	4271.02	(c)	32.0	(a)	17.2	(d)	29.8	(d)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-38	(a)	Monitoring well	(a)	12/24/91	(a)	June 2000		860723.04	(e)	1551623.93	(e)	4271.34	(c)	4273.42	(c)	32.0	(a)	18.0	(d)	29.8	(d)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(dj)
GW-41	(a)	Monitoring well	(a)	2/12/92	(a)	na		859717.09	(e)	1554662.19	(e)	4277.58	(c)	4279.56	(c)	38.0	(a)	18.5	(a)	36.0	(a)	20.5	(a)	35.0	(a)	Yes	(a)	Yes	(dj)
GW-42	(a)	Monitoring well	(a)	2/13/92	(a)	na		859856.43	(e)	1554665.05	(e)	4278.16	(d)	4279.34	(c)	36.0	(c)	18.0	(a)	36.0	(a)	20.5	(a)	34.5	(a)	Yes	(a)	Yes	(dj)
GW-43	(a)	Monitoring well	(a)	2/14/92	(a)	Sep. 1997		859974.88	(d)	1554549.70	(d)	4278.20	(d)	4280.42	(d)	38.0	(a)	18.5	(a)	36.0	(a)	21.0	(a)	35.5	(a)	Yes	(a)	Yes	(dj)
GW-44	(a)	Monitoring well	(a)	2/17/92	(a)	Sep. 1997		859967.80	(d)	1554370.70	(d)	4277.30	(d)	4279.14	(d)	38.0	(a)	18.0	(a)	36.0	(a)	20.5	(a)	35.0	(a)	Yes	(a)	Yes	(dj)
GW-45	(a)	Monitoring well	(a)	2/18/92	(a)	May. 2000		859970.86	(e)	1554221.19	(e)	4277.74	(c)	4279.50	(c)	36.0	(a)	18.5	(a)	36.0	(a)	20.5	(a)	35.0	(a)	Yes	(a)	Yes	(dj)
GW-46	(a)	Monitoring well	(a)	2/25/92	(a)	May. 2000		859978.22	(e)	1554075.48	(e)	4277.65	(c)	4279.50	(c)	36.0	(a)	18.0	(a)	36.0	(a)	20.5	(a)	35.0	(a)	Yes	(a)	Yes	(dj)
GW-55	(a)	Monitoring well	(a)	2/26/92	(a)	na		859892.55	(e)	1553858.80	(e)	4278.20	(c)	4279.95	(c)	25.0	(a)	18.0	(a)	25.0	(a)	20.0	(a)	24.5	(a)	Yes	(a)	No	
GW-56	(a)	Monitoring well	(a)	3/16/92	(a)	June-July 1994	(d)	860914.20	(d)	1553834.90	(d)	4275.90	(d)	4278.05	(d)	34.0	(a)	18.6	(d)	34.0	(d)	24.0	(a)	33.5	(a)	Yes	(a)	No	
GW-56R	(a)	Monitoring well	(a)	2/5/93	(a)	na		860827.90	(e)	1553751.48	(e)	4277.63	(c)	4279.16	(c)	35.0	(a)	18.0	(a)	34.0	(a)	24.0	(a)	34.5	(a)	Yes	(a)	Yes	(j)
GW-57	(a)	Monitoring well	(a)	3/18/92	(a)	na		860964.79	(e)	1549871.14	(e)	4269.97	(c)	4271.92	(c)	30.0	(a)	17.4	(d)	35.0	(d)	25.0	(a)	34.5	(a)	Yes	(a)	Yes	(j)
GW-58	(a)	Monitoring well	(a)	3/19/92	(a)	na		860015.26	(e)	1549883.25	(e)	4269.65	(c)	4271.15	(c)	30.0	(a)	18.5	(d)	30.0	(d)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(j)
GW-60	(a)	Monitoring well	(a)	2/2/93	(a)	na		859278.94	(e)	1551630.83	(e)	4273.03	(c)	4274.65	(c)	28.0	(a)	19.5	(a)	30.0	(d)	20.0	(a)	29.5	(a)	Yes	(a)	Yes	(j)
GW-63	(a)	Monitoring well	(a)	7/7/93	(a)	na		859306.89	(e)	1550735.80	(e)	4270.22	(c)	4272.00	(c)	30.0	(a)	17.5	(a)	28.0	(a)	22.5	(a)	27.0	(a)	Yes	(a)	Yes	(j)
GW-64	(a)	Monitoring well	(a)	9/29/93	(a)	na		859959.31	(e)	1553703.11	(e)	4277.26	(c)	4278.85	(c)	35.0	(a)	22.0	(a)	30.0	(a)	20.0	(a)	29.0	(a)	Yes	(a)	Yes	(j)
GW-66	(a)	Monitoring well	(a)	6/15/94	(a)	na		859584.98	(e)	1553967.23	(e)	4277.51	(c)	4279.62	(c)	35.0	(a)	16.5	(a)	35.0	(a)	25.0	(a)	34.5	(a)	Yes	(a)	Yes	(j)
GW-67	(a)	Monitoring well	(a)	9/24/96	(a)	na		860018.97	(e)	1554673.12	(e)	4278.15	(c)	4282.23	(c)	39.0	(a)	20.0	(a)	35.0	(a)	19.5	(a)	34.5	(a)	Yes	(a)	Yes	(j)
GW-67R	(a)	Monitoring well	(a)	11/14/98	(a)	na		860013.28	(e)	1554679.67	(e)	4278.19	(c)	4281.49	(c)	39.0	(a)	27.0	(a)	39.0	(a)	22.0	(a)	37.0	(a)	Yes	(a)	Yes	(ij)
GW-68	(a)	Monitoring well	(a)	9/23/96	(a)	na		860167.33	(e)	1554676.54	(e)	4279.27	(c)	4282.40	(c)	39.0	(a)	22.0	(a)	39.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-68R	(a)	Monitoring well	(a)	11/14/98	(a)	na		860162.97	(e)	1554682.86	(e)	4279.29	(c)	4282.25	(c)	39.0	(a)	22.0	(a)	39.0	(a)	24.0	(a)	38.5	(a)	Yes	(a)	Yes	(ij)
GW-69	(a)	Monitoring well	(a)	9/20/96	(a)	na		860317.59	(e)	1554680.14	(e)	4277.99	(c)	4281.64	(c)	37.5	(a)	25.0	(a)	39.0	(a)	24.0	(a)	39.0	(a)	Yes	(a)	Yes	(ij)
GW-69R	(a)	Monitoring well	(a)	11/15/98	(a)	na		860310.43	(e)	1554686.87	(e)	4278.69	(c)	4281.59	(c)	39.0	(a)	22.0	(a)	37.5	(a)	27.0	(a)	37.0	(a)	Yes	(a)	Yes	(ij)
GW-70	(a)	Monitoring well	(e)	9/19/96	(a)	na		860468.68	(e)	1554684.24	(e)	4278.76	(c)	4281.58	(c)	40.0	(a)	27.0	(a)	39.0	(a)	24.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-71	(a)	Monitoring well	(e)	9/20/96	(a)	April 2003		860577.67	(e)	1553709.50	(a)	4278.44	(c)	4281.70	(c)	40.0	(a)	23.0	(a)	40.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(j)
GW-75	(a)	Monitoring well	(a)	4/23/97	(a)	January 1998	(f)	859343.70	(e)	1553082.20	(a)	4276.25	(a)	4279.01	(a)	31.3	(a)	18.0	(a)	40.0	(a)	25.0	(a)	39.0	(a)	Yes	(a)	Yes	(ij)
GW-76	(a)	Monitoring well	(a)	4/23/97	(a)	January 1998	(f)	859320.40	(e)	1553696.71	(e)	4274.94	(a)	4278.01	(a)	33.1	(a)	20.0	(a)	31.3	(a)	21.3	(a)	30.8	(a)	Yes	(a)	Yes	(ij)
GW-77	(a)	Monitoring well	(a)	1/23/98	(a)	na		859405.32	(e)	1553082.13	(e)	4279.54	(c)	4282.97	(c)	40.0	(a)	27.0	(a)	33.1	(a)	23.1	(a)	32.6	(a)	Yes	(a)	Yes	(j)
GW-78	(a)	Monitoring well	(a)	1/23/98	(a)	Nov. 1-2, 1999	(k)	859399.88	(e)	1554276.63	(e)	4278.37	(c)	4281.41	(c)	40.0	(a)	26.9	(a)	40.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-79	(a)	Monitoring well	(a)	7/20/98	(a)	April 2003		860591.98	(e)	1554100.07	(e)	4277.10	(c)	4279.85	(c)	34.0	(a)	17.0	(a)	40.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-80	(a)	Monitoring well	(a)	7/20/98	(a)	April 2003		860598.72	(e)	1550242.17	(e)	4273.58	(c)	4275.85	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-81	(a)	Monitoring well	(a)	7/14/98	(a)	na		862999.31	(e)	1550573.37	(e)	4274.18	(c)	4276.70	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-82	(a)	Monitoring well	(a)	7/13/98	(a)	na		862992.28	(e)	1550902.77	(e)	4274.35	(c)	4276.72	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-83	(a)	Monitoring well	(a)	7/13/98	(a)	na		862985.98	(e)	1551235.63	(e)	4274.51	(c)	4276.82	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-84	(a)	Monitoring well	(a)	7/13/98	(a)	na		862979.53	(e)	1551559.04	(e)	4274.78	(c)	4277.14	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-85	(a)	Monitoring well	(a)	7/10/98	(a)	na		862973.14	(e)	1551559.18	(e)	4275.16	(c)	4277.79	(c)	34.3	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-86	(a)	Monitoring well	(a)	7/9/98	(a)	na		862965.78	(e)	1552343.08	(e)	4275.83	(c)	4278.23	(c)	39.0	(a)	21.4	(a)	39.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-88	(a)	Monitoring well	(a)	7/5/98	(a)	na		862958.18	(e)	1552337.53	(e)	4276.86	(c)	4279.45	(c)	34.0	(a)	17.0	(a)	34.0	(a)	23.4	(g)	38.4	(a)	Yes	(a)	Yes	(i)
GW-89	(a)	Monitoring well	(a)	7/15/98	(a)	na		862564.41	(e)	1552337.53	(e)	4276.85	(c)	4279.28	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-90	(a)	Monitoring well	(a)	7/16/98	(a)	na		862173.19	(e)	1552331.49	(e)	4276.04	(c)	4278.77	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-91	(a)	Monitoring well	(a)	7/16/98	(a)	na		861778.51	(e)	1552325.45	(e)	4276.04	(c)	4278.77	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-92	(a)	Monitoring well	(a)	7/16/98	(a)	na		861379.65	(e)	1552318.54	(e)	4276.35	(c)	4278.95	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-93	(a)	Monitoring well	(a)	7/6/98	(a)	na		861389.47	(e)	1551930.99	(e)	4275.02	(c)	4277.85	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-94	(a)	Monitoring well	(a)	7/7/98	(a)	na		861405.32	(e)	1551131.92	(e)	4273.98	(c)	4276.25	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)

TABLE 1
SUMMARY OF MONITORING WELL, BOREHOLE AND LYSIMETER INFORMATION
ENVIROCARE OF UTAH, INC.

Location		Type		Date Installed		Date Abandoned		Northing (ft)		Easting (ft)		Ground surface elev. (ft amsl)		Mensurement Point elev. (ft amsl)		Total depth of boring (ft)		Depth to top of filter pack (ft)		Depth to bottom of filter pack (ft)		Depth to top of screened interval (ft)		Depth to bottom of screened interval (ft)		Well/boring log?		Hydraulic test?	
GW-95	(a)	Monitoring well	(a)	7/7/98	(a)	na		861,419.95	(e)	1550303.22	(e)	4271.57	(c)	4274.65	(c)	29.0	(a)	12.0	(a)	29.0	(a)	14.0	(a)	29.0	(a)	Yes	(a)	Yes	(i)
GW-96	(a)	Monitoring well	(a)	7/8/98	(a)	July 23, 1998	(f)	Not available		Not available		Not available		Not available		29.0	(a)	12.0	(a)	29.0	(a)	14.0	(a)	29.0	(a)	Yes	(a)	Yes	(i)
GW-97	(a)	Monitoring well	(a)	7/8/98	(a)	July 23, 1998	(f)	Not available		Not available		Not available		Not available		31.0	(a)	12.0	(a)	30.0	(a)	15.0	(a)	30.0	(a)	Yes	(a)	Yes	(i)
GW-98	(a)	Monitoring well	(a)	7/8/98	(a)	July 23, 1998	(f)	Not available		Not available		Not available		Not available		29.1	(a)	12.0	(a)	29.1	(a)	14.1	(a)	29.1	(a)	Yes	(a)	Yes	(i)
GW-99	(a)	Monitoring well	(a)	7/17/98	(a)	na		861825.67	(c)	1549885.08	(e)	4270.89	(c)	4273.67	(c)	29.0	(a)	12.0	(a)	29.0	(a)	14.0	(a)	29.0	(a)	Yes	(a)	Yes	(i)
GW-100	(a)	Monitoring well	(a)	7/17/98	(a)	na		862218.82	(c)	1549893.66	(e)	4271.27	(c)	4274.21	(c)	29.0	(a)	12.0	(a)	29.0	(a)	14.0	(a)	29.0	(a)	Yes	(a)	Yes	(i)
GW-101	(a)	Monitoring well	(a)	7/14/98	(a)	na		862612.18	(e)	1549901.93	(e)	4272.32	(c)	4275.01	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-102	(a)	Monitoring well	(a)	7/14/98	(a)	na		863006.22	(e)	1549910.78	(e)	4273.17	(c)	4275.40	(c)	34.0	(a)	17.0	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	Yes	(i)
GW-103	(a)	Monitoring well	(a)	8/3/99	(a)	na		859219.02	(a)	1552546.69	(a)	4275.20	(c)	4278.30	(c)	39.0	(a)	26.4	(a)	39.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-104	(a)	Monitoring well	(a)	8/3/99	(a)	na		859211.21	(a)	1553039.26	(a)	4275.40	(c)	4278.70	(c)	39.0	(a)	26.5	(a)	39.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
GW-105	(a)	Monitoring well	(a)	8/2/99	(a)	na		859203.08	(a)	1553529.71	(a)	4276.25	(c)	4279.08	(c)	39.0	(a)	26.5	(a)	39.0	(a)	29.0	(a)	39.0	(a)	Yes	(a)	Yes	(i)
PZ-1	(a)	Monitoring well	(a)	8/4/99	(a)	na		859229.02	(a)	1549564.18	(e)	4269.70	(a)	4269.70	(a)	30.0	(a)	16.5	(a)	30.0	(a)	19.0	(a)	29.0	(a)	Yes	(a)	Yes	(i)
PZ-2	(a)	Monitoring well	(a)	8/4/99	(a)	na		865345.68	(a)	1553611.78	(e)	4282.00	(a)	4282.00	(a)	37.0	(a)	23.0	(a)	37.0	(a)	26.5	(a)	36.5	(a)	Yes	(a)	No	
SL-1	(b)	Suction lysimeter	(b)	7/16/93	(b)	na		861013.00	(b)	1552428.00	(b)	4274.50	(b)	na		24.0	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
SL-2	(b)	Suction lysimeter	(b)	7/19/93	(b)	na		860813.00	(b)	1552424.00	(b)	4275.10	(b)	na		24.0	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
SL-3	(b)	Suction lysimeter	(b)	7/20/93	(b)	na		860643.00	(b)	1552420.00	(b)	4275.30	(b)	na		24.0	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
SRS-1	(b)	Oil resistivity senso	(b)	7/16/93	(b)	na		861023.00	(b)	1552428.00	(b)	4274.70	(b)	na		22.5	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
SRS-2	(b)	Oil resistivity senso	(b)	7/19/93	(b)	na		860823.00	(b)	1552424.00	(b)	4275.30	(b)	na		22.5	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
SRS-3	(b)	Oil resistivity senso	(b)	7/20/93	(b)	na		860653.00	(b)	1552420.00	(b)	4275.00	(b)	na		22.5	(b)	na		na		na	(a)	na	(a)	Yes	(b)	No	
P3-95 NEC	(a)	Monitoring well	(a)	12/10/98	(a)	na		862309.14	(a)	1554153.60	(a)	4280.51	(c)	4282.86	(c)	39.0	(a)	20.6	(a)	39.2	(a)	24.2	(a)	39.2	(a)	Yes	(a)	No	
P3-95 SWC	(a)	Monitoring well	(a)	12/9/98	(a)	na		860653.86	(a)	1553913.00	(a)	4277.48	(c)	4280.22	(c)	36.0	(a)	19.0	(a)	36.0	(a)	21.0	(a)	36.0	(a)	Yes	(a)	No	
P3-97 NEC	(a)	Monitoring well	(a)	12/11/98	(a)	na		862629.13	(a)	1554159.58	(a)	4279.54	(c)	4281.91	(c)	34.0	(a)	15.5	(a)	34.0	(a)	19.0	(a)	34.0	(a)	Yes	(a)	No	
LSW-104S	(d)	Monitoring well	(d)	prior 2/96	(d)	na		Not available		Not available		Not available		Not available		Not available		15.0	(a)	32.0	(a)	20.0	(a)		(a)	No		No	
GW-106	(a)	Monitoring Well	(a)	4/5/2000	(a)	na		7,424,978.39	(a)	1,190,205.31	(a)	4,273.43	(a)	4276.31	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-107	(a)	Monitoring Well	(a)	4/12/2000	(a)	na		7,425,371.18	(a)	1,190,222.92	(a)	4273.47	(a)	4276.18	(a)	39	(a)	21.5	(a)	39	(a)	23.75	(a)	38.75	(a)	Yes	(a)	Yes	(a)
GW-108	(a)	Monitoring Well	(a)	4/5/2000	(a)	na		7,425,717.51	(a)	1,190,239.29	(a)	4273.29	(a)	4275.89	(a)	39	(a)	21.5	(a)	39	(a)	24	(a)	39	(a)	Yes	(a)	Yes	(a)
GW-109	(a)	Monitoring Well	(a)	4/4/2000	(a)	na		7,425,706.20	(a)	1,190,522.23	(a)	4273.9	(a)	4276.5	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-110	(a)	Monitoring Well	(a)	4/4/2000	(a)	na		7,425,706.41	(a)	1,190,849.75	(a)	4274.1	(a)	4276.74	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-111	(a)	Monitoring Well	(a)	4/4/2000	(a)	na		7,425,681.74	(a)	1,191,176.67	(a)	4274.4	(a)	4277.03	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-112	(a)	Monitoring Well	(a)	4/3/2000	(a)	na		7,425,670.31	(a)	1,191,511.61	(a)	4274.76	(a)	4277.47	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-113	(a)	Monitoring Well	(a)	4/3/2000	(a)	na		7,425,625.59	(a)	1,191,919.66	(a)	4276.05	(a)	4278.83	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-114	(a)	Monitoring Well	(a)	3/31/2000	(a)	na		7,425,620.16	(a)	1,192,069.38	(a)	4276.68	(a)	4279.4	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-115	(a)	Monitoring Well	(a)	3/31/2000	(a)	na		7,425,614.71	(a)	1,192,219.40	(a)	4277.03	(a)	4279.85	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-116	(a)	Monitoring Well	(a)	3/30/2000	(a)	na		7,425,609.27	(a)	1,192,369.27	(a)	4278.06	(a)	4280.78	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-117	(a)	Monitoring Well	(a)	3/30/2000	(a)	na		7,425,281.20	(a)	1,192,572.86	(a)	4277.12	(a)	4279.97	(a)	39	(a)	21.5	(a)	39	(a)	23.5	(a)	38.5	(a)	Yes	(a)	Yes	(a)
GW-125	(a)	Monitoring Well	(a)	10/24/2000	(a)	na		7,424,925.07	(a)	1,192,558.48	(a)	4276.72	(a)	4280.24	(a)	38.5	(a)	21	(a)	38.5	(a)	23	(a)	38	(a)	Yes	(a)	Yes	(a)
GW-126	(a)	Monitoring Well	(a)	12/6/2002	(a)	na		7,422,411.59	(a)	1,192,626.95	(a)	4250.09	(a)	4279.13	(a)	36	(a)	17.5	(a)	36	(a)	20.5	(a)	35.5	(a)	Yes	(a)	Yes	(a)
GW-127	(a)	Monitoring Well	(a)	12/6/2002	(a)	na		7,421,541.70	(a)	1,192,608.25	(a)	4250.31	(a)	4278.38	(a)	36	(a)	17.5	(a)	36	(a)	20.5	(a)	35.5	(a)	Yes	(a)	Yes	(a)
GW-118	(a)	Monitoring Well	(a)	6/9/2000	(a)	na		7,422,188.34	(a)	1,194,912.87	(a)	4249.98	(a)	4284.4	(a)	44	(a)	26.9	(a)	44	(a)	28.5	(a)	43.5	(a)	Yes	(a)	Yes	(a)
GW-119	(a)	Monitoring Well	(a)	6/8/2000	(a)	na		7,422,337.21	(a)	1,194,921.64	(a)	4249.81	(a)	4284.9	(a)	44	(a)	27.1	(a)	44	(a)	28.5	(a)	43.5	(a)	Yes	(a)	Yes	(a)
GW-120	(a)	Monitoring Well	(a)	6/7/2000	(a)	na		7,422,487.08	(a)	1,194,927.38	(a)	4249.46	(a)	4285.71	(a)	44	(a)	26.1	(a)	44	(a)	28.5	(a)	43.5	(a)	Yes	(a)	Yes	(a)
GW-121	(a)	Monitoring Well	(a)	6/7/2000	(a)	na		7,422,636.37	(a)	1194.934.41	(a)	4249.89	(a)	4286.11	(a)	44	(a)	26.9	(a)	44	(a)	28.5	(a)	43.5	(a)	Yes	(a)	Yes	(a)
GW-122	(a)	Monitoring Well	(a)	6/9/2000	(a)	na		7,422,736.84	(a)	1,194,936.90	(a)	4250.6	(a)	4286.25	(a)	44	(a)	26	(a)	44	(a)	28.5	(a)	43.5	(a)	Yes	(a)	Yes	(a)
GW-123	(a)	Monitoring Well	(a)	6/6/2000	(a)	October 2000		7,422,741.22	(a)	1,194,707.23	(a)	4285.71	(a)	4289.21	(a)	49	(a)	32	(a)	49	(a)	33.6	(a)	48.6	(a)	Yes	(a)	No	(a)
GW-123R	(a)	Monitoring Well	(a)	6/6/2000	(a)	na		7,422,741.22	(a)	1,194,707.23	(a)	4250.27	(a)	4289.21	(a)	49	(a)	32	(a)	49	(a)	33.6	(a)	48.6	(a)	Yes	(a)	Yes	(a)
GW-124	(a)	Monitoring Well	(a)	6/13/2000	(a)	na		7,422,756.35	(a)	1,194,333.31	(a)	4249.36	(a)	4278.45	(a)	39	(a)	20.5	(a)	39	(a)	24	(a)	39	(a)	Yes	(a)	Yes	(a)
GW-38R	(a)	Monitoring Well	(a)	6/13/2000	(a)	na		7,422,366.42	(a)	1,191,229.26	(a)	4251.25	(a)	4275.7	(a)	34	(a)	21	(a)	34	(a)	24	(a)	34	(a)	Yes	(a)	Yes	(a)

Note:

All available well logs and completion diagrams are included in Appendix A.

Data Sources:

(a) Boring and completion logs provided by Envirocare or in Revised Hydrogeologic Report, Bingham Environmental, February 1996.
(b) As-Built Diagrams for Suction Lysimeters and Soil Resistivity Instruments, Bingham Environmental, November 1993.
(c) Pentacore Resources Survey, August, September 1999.
(d) Revised Hydrogeologic Report, Bingham Environmental, February 1996.
(e) Excel file provided by Envirocare (Certified well location tables 1999).
(f) Information provided by Mr. Daniel Shrum (Envirocare).
(g) Where no total depth of boring is available, depth at bottom of filter pack is assumed to be total depth of boring.
(h) Depth of boring and bottom of filter pack are assumed to be the bottom of a 10 foot screen.
(i) Final Report for Slug Withdrawal Testing at Envirocare's Clive, Utah Facility, EarthFax, August 1999.
(j) Final Slug Test Results, Adrian Brown Consultants, October 1997.
(k) Abandonment of monitoring wells in the vicinity of the Proposed LARW 200-foot expansion and the Proposed LARW Embankment, Envirocare, 11/12/99.

Abbreviations:

na = Not applicable
amsl = Above mean sea level

TABLE 2

HYDROSTRATIGRAPHIC UNIT CONTACT ELEVATION AND UNIT THICKNESS
ENVIROCARE OF UTAH, INC.

Well	Top of Unit 4 (ft amsl)	Unit 4 thickness (ft)	Top of Unit 3 (ft amsl)	Unit 3 thickness (ft)	Top of Unit 2 (ft amsl)	Unit 2 thickness (ft)	Top of Unit 1 (ft amsl)
I-1-100	4276.64	10.14	4266.50	15.50	4251.00	17.00	4234.00
I-2-50	4277.17	9.17	4268.00	12.80	4255.20	19.70	4235.50
I-3-100	4278.79	8.79	4270.00	13.30	4256.70	20.20	4236.50
I-4-50	4277.69	9.69	4268.00	10.00	4258.00	13.00	4245.00
DH-16A	See GW-16						
DH-30	See GW-105						
DH-31	See I-3-100						
DH-32	See GW-64						
DH-33	See GW-70						
DH-34	See SC-3						
DH-47	4271.00	9.50	4261.50	18.00	4243.50	13.50	4230.00
DH-48	4277.00	10.50	4266.50	11.20	4255.30		
DH-49	See GW-41						
DH-50	4277.00	10.50	4266.50	10.70	4255.80		
DH-51	See GW-67						
DH-52	4276.30	11.00	4265.30	14.00	4251.30		
DH-53	4277.00	9.50	4267.50	11.50	4256.00		
DH-54	4277.10	9.50	4267.60	12.60	4255.00		
DH-59	See GW-63						
DH-61	4273.50	10.50	4263.00	16.00	4247.00		
DH-62	See GW-38						
DH-65	See GW-64						
GW-1	See GW-60						
GW-2	4277.90	9.50	4268.40	13.50	4254.90		
GW-3	See DH-47						
GW-4	See GW-23						
GW-5	4276.60	8.00	4268.60	20.00	4248.60		
GW-6	4279.80	10.00	4269.80	18.80	4251.00	9.00	4242.00
GW-7	Not found						
GW-8	4280.00	10.00	4270.00	18.00	4252.00		
GW-9	4278.80	6.00	4272.80	14.50	4258.30		

TABLE 2

HYDROSTRATIGRAPHIC UNIT CONTACT ELEVATION AND UNIT THICKNESS
ENVIROCARE OF UTAH, INC.

Well	Top of Unit 4 (ft amsl)	Unit 4 thickness (ft)	Top of Unit 3 (ft amsl)	Unit 3 thickness (ft)	Top of Unit 2 (ft amsl)	Unit 2 thickness (ft)	Top of Unit 1 (ft amsl)
GW-10	Not found						
GW-11	See GW-64						
GW-12	See DH-50						
GW-13	See GW-45						
GW-16	4277.56	9.56	4268.00	13.00	4255.00		
GW-16R	See GW-16						
GW-17A	4276.53	10.03	4266.50	15.00	4251.50		
GW-18	See GW-103						
GW-19A	See GW-19B						
GW-19B	4268.91	13.41	4255.50	15.00	4240.50	13.50	4227.00
GW-20	4275.04	9.54	4265.50	15.00	4250.50		
GW-21	4281.00	13.50	4267.50	7.00	4260.50	21.50	4239.00
GW-22	4275.48	8.98	4266.50	12.00	4254.50		
GW-23	4274.73	8.23	4266.50	13.50	4253.00		
GW-24	4274.91	8.91	4266.00	14.00	4252.00		
GW-25	4273.99	8.49	4265.50	16.50	4249.00		
GW-26	4272.71	10.21	4262.50	16.50	4246.00		
GW-27	See GW-27D						
GW-27D	4270.88	11.50	4259.38	16.50	4242.88	17.00	4225.88
GW-28	4269.36	12.86	4256.50	12.50	4244.00		
GW-29	See GW-103						
GW-36	4269.84	12.34	4257.50	12.00	4245.50		
GW-37	4268.75	7.25	4261.50	14.50	4247.00		
GW-38	4270.75	6.75	4264.00	16.00	4248.00		
GW-41	4277.04	9.54	4267.50	11.00	4256.50	11.00	4245.50
GW-42	4277.24	9.24	4268.00	11.00	4257.00		
GW-43	4278.24	11.24	4267.00	10.00	4257.00	15.00	4242.00
GW-44	4277.32	10.32	4267.00	11.50	4255.50	13.50	4242.00
GW-45	4277.59	10.59	4267.00	12.00	4255.00	10.00	4245.00
GW-46	4277.16	10.16	4267.00	12.00	4255.00	12.00	4243.00
GW-55	4277.85	10.35	4267.50	11.50	4256.00		

TABLE 2

HYDROSTRATIGRAPHIC UNIT CONTACT ELEVATION AND UNIT THICKNESS
ENVIROCARE OF UTAH, INC.

Well	Top of Unit 4[1] (ft amsl)	Unit 4 thickness (ft)	Top of Unit 3 (ft amsl)	Unit 3 thickness (ft)	Top of Unit 2 (ft amsl)	Unit 2 thickness (ft)	Top of Unit 1 (ft amsl)
GW-56	4275.90	8.50	4267.40	11.00	4256.40	12.50	4243.90
GW-56R	4277.54	9.54	4268.00	12.00	4256.00		
GW-57	4269.30	11.80	4257.50	16.50	4241.00		
GW-58	4268.90	11.90	4257.00	14.00	4243.00		
GW-60	4272.70	10.00	4262.70	12.70	4250.00		
GW-63	4269.90	10.40	4259.50	14.00	4245.50		
GW-64	4276.70	9.70	4267.00	12.50	4254.50	9.50	4245.00
GW-66	4276.70	9.70	4267.00	12.00	4255.00	10.00	4245.00
GW-67	4278.15	9.15	4269.00	10.50	4258.50	15.50	4243.00
GW-67R	See GW-67						
GW-68	4279.01	9.01	4270.00	11.00	4259.00	16.00	4243.00
GW-68R	See GW-68						
GW-69	4278.03	9.03	4269.00	13.00	4256.00	11.00	4245.00
GW-69R	See GW-69						
GW-70	4278.72	8.72	4270.00	14.00	4256.00	12.00	4244.00
GW-71	4278.35	9.85	4268.50	12.00	4256.50	13.50	4243.00
GW-75	See GW-105						
GW-76	See GW-104						
GW-77	See GW-105						
GW-78	See GW-104						
GW-79	4277.10	9.00	4268.10	12.50	4255.60		
GW-80	4277.08[2]	10.00	4267.08	11.00	4256.08		
GW-81	4274.18	9.00	4265.18				
GW-82	4274.35	8.00	4266.35	22.50	4243.85		
GW-83	4274.51	7.00	4267.51	22.00	4245.51	2.51	4243.00
GW-84	4274.78	7.50	4267.28	19.50	4247.78		
GW-85	4275.16	7.50	4267.66	19.50	4248.16		
GW-86	4275.83	8.50	4267.33	19.00	4248.33		
GW-88	4276.86	9.00	4267.86	16.00	4251.86		
GW-89	4276.85	8.50	4268.35	17.50	4250.85		
GW-90	4276.04	9.00	4267.04	15.00	4252.04		

TABLE 2

HYDROSTRATIGRAPHIC UNIT CONTACT ELEVATION AND UNIT THICKNESS
ENVIROCARE OF UTAH, INC.

Well	Top of Unit 4 (ft amsl)	Unit 4 thickness (ft)	Top of Unit 3 (ft amsl)	Unit 3 thickness (ft)	Top of Unit 2 (ft amsl)	Unit 2 thickness (ft)	Top of Unit 1 (ft amsl)
GW-91	4276.10	9.00	4267.10	18.10	4249.00		
GW-92	4276.35	9.50	4266.85	15.50	4251.35		
GW-93	4275.02	8.00	4267.02	24.00	4243.02		
GW-94	4273.94	8.94	4265.00	18.00	4247.00		
GW-95	4271.57	11.50	4260.07	16.00	4244.07		
GW-96	Not found						
GW-97	Not found						
GW-98	Not found						
GW-99	4270.89	12.00	4258.89	14.00	4244.89		
GW-100	4271.27	12.27	4259.00	16.00	4243.00		
GW-101	4272.32	9.00	4263.32	20.00	4243.32		
GW-102	See SC-6						
GW-103	4275.29	13.00	4262.29	10.29	4252.00		
GW-104	4275.42	13.00	4262.42	11.42	4251.00		
GW-105	4276.23	13.00	4263.23	15.50	4247.73		
GW-106	4273.43	9.00	4264.43	21.50	4242.93		
GW-107	4273.47	9.00	4264.47	22.50	4241.97		
GW-108	4273.29	9.00	4264.29	24.00	4240.29		
GW-109	4273.90	9.00	4264.90	19.00	4245.90		
GW-110	4274.10	10.50	4263.60	18.50	4245.10		
GW-111	4274.40	9.50	4264.90	19.50	4245.40		
GW-112	4274.76	11.00	4263.76	17.00	4246.76		
GW-113	4276.05	10.50	4265.55	15.50	4250.05		
GW-114	4276.68	11.50	4265.18	14.00	4251.18		
GW-115	4277.03	11.50	4265.53	17.50	4248.03		
GW-116	4278.06	11.00	4267.06	15.00	4252.06		
GW-117	4277.12	11.00	4266.12	18.00	4248.12		
GW-118	See GW-2						
GW-119	See GW-2						
GW-120	See GW-2						
GW-121	See GW-2						

TABLE 2

HYDROSTRATIGRAPHIC UNIT CONTACT ELEVATION AND UNIT THICKNESS
ENVIROCARE OF UTAH, INC.

Well	Top of Unit 4[1] (ft amsl)	Unit 4 thickness (ft)	Top of Unit 3 (ft amsl)	Unit 3 thickness (ft)	Top of Unit 2 (ft amsl)	Unit 2 thickness (ft)	Top of Unit 1 (ft amsl)
GW-122	See I-3-100						
GW-123	See I-3-100						
GW-123R	See I-3-100	11.50					
GW-124	See I-3-100						
GW-125	See GW-88						
GW-126	See GW-24						
GW-127	4274.95	7.50	4267.45	7.25	4260.20		
PZ-1	4269.70	13.50	4256.20	12.50	4243.70		
PZ-2	4282.00	12.50	4269.50	16.00	4253.50		
SL-1	See SRS-1						
SL-2	See SRS-2						
SL-3	See SRS-3						
SRS-1	4274.50	8.80	4265.70	13.00	4252.70		
SRS-2	4275.10	9.30	4265.80	12.50	4253.30		
SRS-3	4275.30	9.80	4265.50	12.50	4253.00		
P3-95 NEC	4280.51	16.50	4264.01	7.50	4256.51		
P3-95 SWC	4277.48	9.00	4268.48	11.50	4256.98		
P3-97 NEC	4279.54	12.00	4267.54	11.50	4256.04		
LSW-104S	Not found						
	Maximum	16.50	4272.80	25.00	4260.50	25.00	4245.50
	Minimum	6.00	4255.50	7.00	4239.50	2.51	4221.50
	Average	9.86	4265.57	14.70	4250.88	14.66	4237.97

[1] Where several monitoring wells, boreholes, or lysimeters are located within a small area, a single log was selected to represent all logs in the immediate vicinity. The representative log was chosen based on log detail, quality, and total depth.

[2] Adjusted upward 3.5 feet to reflect pre-excavation ground surface elevation.

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
PZ-1#1		30.4	3.49	1.23E-03		-2.910	
PZ-1#2		30.4	3.56	1.26E-03	1.24E-03	-2.901	-2.905
DH-31B1	MW	34.18	2.359	8.32E-04		-3.080	
DH-31B2	MW	34.18	2.661	9.39E-04		-3.027	
DH-31B3	MW	34.18	2.428	8.56E-04	8.76E-04	-3.067	-3.058
DH-32A1	LARW	33.26	0.030	1.08E-05		-4.968	
DH-32A2	LARW	33.26	0.033	1.17E-05	1.12E-05	-4.931	-4.949
DH-33A1	MW	33.83	0.006	2.23E-06	2.23E-06	-5.652	-5.652
DH-59A1	11.e(2)		0.186	6.55E-05		-4.184	
DH-59A2	11.e(2)		0.688	2.43E-04		-3.615	
DH-59A3	11.e(2)		0.861	3.04E-04	2.04E-04	-3.517	-3.772
DH-62A1	11.e(2)		2.938	1.04E-03		-2.985	
DH-62A3	11.e(2)		2.938	1.04E-03		-2.985	
DH-62B2	11.e(2)		2.868	1.01E-03	1.03E-03	-2.995	-2.988
GW-16R-A1	LARW	36.94	1.754	6.19E-04		-3.208	
GW-16R-B1	LARW	36.94	1.979	6.98E-04		-3.156	
GW-16R-B2	LARW	36.94	1.028	3.63E-04	5.60E-04	-3.440	-3.268
GW-17AA1	VITRO	34.61	2.074	7.32E-04		-3.136	
GW-17AB1	VITRO	34.61	2.497	8.81E-04		-3.055	
GW-17AB2	VITRO	34.61	2.393	8.44E-04	8.19E-04	-3.074	-3.088
GW-19AA1	11.e(2)	29.44	0.221	7.80E-05		-4.108	
GW-19AB1	11.e(2)	29.44	0.178	6.28E-05		-4.202	
GW-19AB2	11.e(2)	29.44	0.253	8.93E-05	7.67E-05	-4.049	-4.120
GW-20-A1	LARW	36.05	5.011	1.77E-03		-2.753	
GW-20-A2	LARW	36.05	5.495	1.94E-03		-2.713	
GW-20-A3	LARW	36.05	6.661	2.35E-03	2.02E-03	-2.629	-2.698
GW-21A1	VITRO	44.26	5.149	1.82E-03		-2.741	
GW-21A2	VITRO	44.26	4.251	1.50E-03		-2.824	
GW-21A3	VITRO	44.26	5.365	1.89E-03	1.74E-03	-2.723	-2.763
GW-22-A1	LARW	33.3	2.445	8.63E-04		-3.064	
GW-22-A2	LARW	33.3	2.203	7.77E-04		-3.109	
GW-22-A3	LARW	33.3	2.108	7.44E-04	7.95E-04	-3.129	-3.101
GW-23-A3	LARW	33.28	1.469	5.18E-04		-3.286	
GW-23-B1	LARW	33.28	1.693	5.97E-04	5.58E-04	-3.224	-3.255
GW-24-A1	LARW	33.18	0.605	2.13E-04		-3.671	
GW-24-B1	LARW	33.18	0.775	2.73E-04		-3.563	
GW-24-B2	LARW	33.18	0.719	2.54E-04	2.47E-04	-3.596	-3.610
GW-25-B1	11.e(2)	35	2.316	8.17E-04		-3.088	
GW-25-B2	11.e(2)	35	3.326	1.17E-03		-2.931	
GW-25-B3	11.e(2)	35	3.568	1.26E-03		-2.900	
GW-25-B4	11.e(2)	35	2.557	9.02E-04		-3.045	
GW-25-B5	11.e(2)	35	3.154	1.11E-03	1.05E-03	-2.954	-2.983
GW-26-A1	11.e(2)	31	0.950	3.35E-04		-3.475	
GW-26-A2	11.e(2)	31	0.924	3.26E-04	3.31E-04	-3.487	-3.481
GW-27A1	11.e(2)	32	0.125	4.42E-05		-4.355	
GW-27B1	11.e(2)	32	0.074	2.60E-05		-4.585	
GW-27B2	11.e(2)	32	0.098	3.44E-05	3.49E-05	-4.463	-4.467
GW-28A1	11.e(2)	31.41	0.684	2.41E-04		-3.617	

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
GW-28B1	11.e(2)	31.41	0.569	2.01E-04		-3.697	
GW-28B2	11.e(2)	31.41	0.431	1.52E-04	1.98E-04	-3.818	-3.711
GW-29A1	LARW		2.436	8.60E-04		-3.066	
GW-29A2	LARW		0.582	2.05E-04		-3.687	
GW-29A3	LARW		1.331	4.69E-04	5.11E-04	-3.328	-3.361
GW-36A1	11.e(2)	31.64	1.875	6.61E-04		-3.180	
GW-36A2	11.e(2)	31.64	1.728	6.10E-04		-3.215	
GW-36A3	11.e(2)	31.64	1.840	6.49E-04	6.40E-04	-3.188	-3.194
GW-37A1	11.e(2)	31.74	0.976	3.44E-04		-3.463	
GW-37B1	11.e(2)	31.74	1.020	3.60E-04		-3.444	
GW-37B2	11.e(2)	31.74	1.071	3.78E-04	3.61E-04	-3.423	-3.443
GW-38A1	11.e(2)	32.14	1.788	6.31E-04		-3.200	
GW-38B1	11.e(2)	32.14	1.572	5.55E-04		-3.256	
GW-38B2	11.e(2)	32.14	1.572	5.55E-04	5.80E-04	-3.256	-3.237
GW-41A1	MW	37.48	1.391	4.91E-04		-3.309	
GW-41B1	MW	37.48	2.048	7.22E-04		-3.141	
GW-41B2	MW	37.48	1.979	6.98E-04	6.37E-04	-3.156	-3.202
GW-42A1	MW	37.06	2.195	7.74E-04		-3.111	
GW-42B1	MW	37.06	2.713	9.57E-04		-3.019	
GW-42B2	MW	37.06	2.246	7.92E-04	8.41E-04	-3.101	-3.077
GW-43A1	MW	37.68	2.056	7.25E-04		-3.139	
GW-43B2	MW	37.68	3.231	1.14E-03		-2.943	
GW-43B3	MW		2.843	1.00E-03	9.56E-04	-2.999	-3.027
GW-44A1	MW	36.82	1.400	4.94E-04		-3.306	
GW-44B1	MW	36.82	2.359	8.32E-04		-3.080	
GW-44B2	MW	36.82	2.229	7.86E-04	7.04E-04	-3.104	-3.164
GW-45A1	MW	36.85	0.459	1.62E-04		-3.791	
GW-45B1	MW	36.85	0.682	2.40E-04		-3.619	
GW-45B2	MW	36.85	0.687	2.42E-04	2.15E-04	-3.616	-3.675
GW-46A1	MW	37.31	0.296	1.05E-04		-3.981	
GW-46B1	MW	37.31	0.300	1.06E-04		-3.976	
GW-46B2	MW	37.31	0.330	1.16E-04	1.09E-04	-3.934	-3.963
GW-56R-A1	LARW	36.5	6.843	2.41E-03		-2.617	
GW-56R-A2	LARW	36.5	2.635	9.30E-04		-3.032	
GW-56R-A3	LARW	36.5	4.225	1.49E-03		-2.827	
GW-56R-A4	LARW	36.5	7.422	2.62E-03	1.86E-03	-2.582	-2.764
GW-57A1	11.e(2)	32.13	0.461	1.63E-04		-3.788	
GW-57B1	11.e(2)	32.13	0.334	1.18E-04		-3.928	
GW-57B2	11.e(2)	32.13	0.527	1.86E-04	1.56E-04	-3.731	-3.816
GW-58A1	11.e(2)	31.77	1.590	5.61E-04		-3.251	
GW-58B1	11.e(2)	31.77	1.322	4.66E-04		-3.331	
GW-58B2	11.e(2)	31.77	0.950	3.35E-04	4.54E-04	-3.475	-3.352
GW-60-A1	11.e(2)	29.44	5.694	2.01E-03		-2.697	
GW-60-A3	11.e(2)	29.44	13.565	4.79E-03	3.40E-03	-2.320	-2.509
GW-63-A1	11.e(2)		2.532	8.93E-04		-3.049	
GW-63-A2	11.e(2)	31.1	2.462	8.69E-04		-3.061	
GW-63-A3	11.e(2)	31.1	1.279	4.51E-04	7.38E-04	-3.346	-3.152
GW-64-B1	LARW	36.61	2.048	7.22E-04		-3.141	

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
GW-64-B2	LARW	36.61	1.875	6.61E-04		-3.180	
GW-64-B4	LARW		1.970	6.95E-04	6.93E-04	-3.158	-3.160
GW-66A1	MW	37.36	0.218	7.68E-05		-4.115	
GW-66B1	MW	37.36	0.148	5.21E-05		-4.283	
GW-66B2	MW	37.36	0.290	1.02E-04	7.71E-05	-3.990	-4.129
GW-67A1	MW	39.63	0.976	3.44E-04		-3.463	
GW-67B1	MW	39.63	1.192	4.21E-04		-3.376	
GW-67B2	MW	39.63	1.166	4.11E-04		-3.386	
GW-67 #1	MW	40.83	1.98	6.99E-04		-3.156	
GW-67 #2	MW	40.83	1.97	6.95E-04	5.14E-04	-3.158	-3.308
GW-67R#1	MW	39.3	5.32	1.88E-03		-2.727	
GW-67R#2	MW	39.3	5.25	1.85E-03	1.86E-03	-2.732	-2.729
GW-68A1	MW	42.09	0.327	1.16E-04		-3.937	
GW-68B1	MW	42.09	0.270	9.54E-05		-4.020	
GW-68B2	MW	42.09	0.260	9.17E-05		-4.037	
GW-68 #1	MW	43.96	0.94	3.32E-04		-3.479	
GW-68 #2	MW	43.96	0.93	3.28E-04	1.92E-04	-3.484	-3.792
GW-68R#1	MW	39.15	8.24	2.91E-03		-2.537	
GW-68R#2	MW	39.15	8.44	2.98E-03	2.94E-03	-2.526	-2.531
GW-69B1	MW	40.68	0.124	4.39E-05		-4.358	
GW-69A1	MW	40.68	0.131	4.63E-05		-4.334	
GW-69 #1	MW	42.35	2.82	9.95E-04		-3.002	
GW-69 #2	MW	42.35	2.12	7.48E-04	4.58E-04	-3.126	-3.705
GW-69R#1	MW	39.4	4.25	1.50E-03		-2.824	
GW-69R#2	MW	39.4	3.32	1.17E-03	1.34E-03	-2.931	-2.878
GW-70A1	MW	42.36	0.463	1.63E-04		-3.787	
GW-70B1	MW	42.36	0.606	2.14E-04		-3.670	
GW-70B2	MW	42.36	0.480	1.69E-04		-3.772	
GW-70 #1	MW	42.45	7.98	2.82E-03		-2.550	
GW-70 #2	MW	42.45	7.79	2.75E-03	1.22E-03	-2.561	-3.268
GW-71A1	MW	42.4	4.355	1.54E-03		-2.814	
GW-71B1	MW	42.4	2.402	8.47E-04		-3.072	
GW-71B2	MW	42.4	2.203	7.77E-04		-3.109	
GW-71 #1	MW	43.97	8.89	3.14E-03		-2.504	
GW-71 #2	MW	43.97	8.86	3.13E-03	1.88E-03	-2.505	-2.801
GW-75A1	LARW		0.026	9.33E-06		-5.030	
GW-75A2	LARW		0.066	2.33E-05	1.63E-05	-4.633	-4.832
GW-76A1	LARW		0.046	1.61E-05		-4.794	
GW-76A2	LARW		0.282	9.94E-05	5.77E-05	-4.003	-4.398
GW-77 #1	LARW	40	2.56	9.03E-04		-3.044	
GW-77 #2	LARW	40	2.5	8.82E-04	8.93E-04	-3.055	-3.049
GW-78 #1		40	5.08	1.79E-03		-2.747	
GW-78 #2		40	4.15	1.46E-03	1.63E-03	-2.834	-2.791
GW-79 #1	MW	36.5	4.5	1.59E-03		-2.799	
GW-79 #2	MW	36.5	4.12	1.45E-03	1.52E-03	-2.838	-2.818
GW-80 #1	MW	36.18	4.91	1.73E-03		-2.761	
GW-80 #2	MW	36.18	5.01	1.77E-03	1.75E-03	-2.753	-2.757
GW-81 #1	WLARW	36.71	1.490	5.26E-04		-3.279	

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
GW-81 #2	WLARW	36.71	1.470	5.19E-04	5.22E-04	-3.285	-3.282
GW-82 #1	WLARW	36.44	1.820	6.42E-04		-3.192	
GW-82 #2	WLARW	36.44	1.450	5.12E-04	5.77E-04	-3.291	-3.242
GW-83 #1	WLARW	36.45	8.540	3.01E-03		-2.521	
GW-83 #2	WLARW	36.45	8.760	3.09E-03	3.05E-03	-2.510	-2.516
GW-84 #1	WLARW	36.76	10.950	3.86E-03		-2.413	
GW-84 #2	WLARW	36.76	10.300	3.63E-03	3.75E-03	-2.440	-2.426
GW-85 #1	WLARW	37.34	11.140	3.93E-03		-2.406	
GW-85 #2	WLARW	37.34	11.180	3.94E-03	3.94E-03	-2.404	-2.405
GW-86 #1	WLARW	41.4	4.800	1.69E-03		-2.771	
GW-86 #2	WLARW	41.4	4.570	1.61E-03	1.65E-03	-2.793	-2.782
GW-88 #1	WLARW	36.78	2.660	9.38E-04		-3.028	
GW-88 #2	WLARW	36.78	2.920	1.03E-03	9.84E-04	-2.987	-3.007
GW-89 #1	WLARW	37.02	1.670	5.89E-04		-3.230	
GW-89 #2	WLARW	37.02	1.880	6.63E-04	6.26E-04	-3.178	-3.204
GW-90 #1	WLARW	36.84	8.860	3.13E-03		-2.505	
GW-90 #2	WLARW	36.84	7.780	2.74E-03	2.94E-03	-2.562	-2.533
GW-91 #1	WLARW	36.92	5.730	2.02E-03		-2.694	
GW-91 #2	WLARW	36.92	5.480	1.93E-03	1.98E-03	-2.714	-2.704
GW-92 #1	WLARW	36.93	2.450	8.64E-04		-3.063	
GW-92 #2	WLARW	36.93	2.470	8.71E-04	8.68E-04	-3.060	-3.062
GW-93 #1	WLARW	37.49	17.04	6.01E-03		-2.221	
GW-93 #2	WLARW	37.49	16.72	5.90E-03	5.96E-03	-2.229	-2.225
GW-94 #1	WLARW	36.91	12.730	4.49E-03		-2.348	
GW-94 #2	WLARW	36.91	13.710	4.84E-03	4.66E-03	-2.315	-2.332
GW-95 #1	WLARW	31.99	1.040	3.67E-04		-3.435	
GW-95 #2	WLARW	31.99	1.010	3.56E-04	3.62E-04	-3.448	-3.442
GW-99 #1	WLARW	31.8	0.850	3.00E-04		-3.523	
GW-99 #2	WLARW	31.8	0.820	2.89E-04	2.95E-04	-3.539	-3.531
GW-100 #1	WLARW	32.95	1.780	6.28E-04		-3.202	
GW-100 #2	WLARW	32.95	1.870	6.60E-04	6.44E-04	-3.181	-3.191
GW-101 #1	WLARW	36.53	2.360	8.33E-04		-3.080	
GW-101 #2	WLARW	36.53	1.910	6.74E-04	7.53E-04	-3.171	-3.126
GW-102 #1	WLARW	36.8	2.370	8.36E-04		-3.078	
GW-102 #2	WLARW	36.8	2.460	8.68E-04	8.52E-04	-3.062	-3.070
GW-103	LARW	41.32	11.45	4.04E-03		-2.394	
GW-103	LARW	41.32	11.67	4.12E-03		-2.386	
GW-103	LARW	41.32	17.83	6.29E-03		-2.201	
GW-103	LARW	41.32	8.85	3.12E-03	4.39E-03	-2.505	-2.372
GW-104	LARW	40.28	7.17	2.53E-03		-2.597	
GW-104	LARW	40.28	10.39	3.66E-03		-2.436	
GW-104	LARW	40.28	8.89	3.14E-03	3.11E-03	-2.503	-2.512
GW-105	LARW	38.58	15.72	5.55E-03		-2.256	
GW-105	LARW	38.58	15.18	5.35E-03		-2.271	
GW-105	LARW	38.58	15.80	5.57E-03	5.49E-03	-2.254	-2.260
I-1-30A1	MW	37.72	2.203	7.77E-04		-3.109	
I-1-30A2	MW	37.72	2.402	8.47E-04		-3.072	
I-1-30A3	MW	37.72	2.359	8.32E-04	8.19E-04	-3.080	-3.087

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
I-2-30A2	LARW	40.22	0.494	1.74E-04	1.74E-04	-3.759	-3.759
I-3-30A1	MW	37.12	1.097	3.87E-04		-3.412	
I-3-30B1	MW	37.12	0.633	2.23E-04		-3.651	
I-3-30B2	MW	37.12	0.670	2.36E-04	2.82E-04	-3.627	-3.563
GW-106	A,B&C		1.75	6.19E-04		-3.208	
GW-106	A,B&C		1.68	5.94E-04	6.07E-04	-3.226	-3.217
GW-107	A,B&C		1.41	4.96E-04		-3.305	
GW-107	A,B&C		1.54	5.45E-04	5.21E-04	-3.264	-3.284
GW-108	A,B&C		1.82	6.41E-04		-3.193	
GW-108	A,B&C		1.74	6.13E-04	6.27E-04	-3.213	-3.203
GW-109	A,B&C		1.84	6.50E-04		-3.187	
GW-109	A,B&C		1.71	6.04E-04	6.27E-04	-3.219	-3.203
GW-110	A,B&C		2.27	8.00E-04		-3.097	
GW-110	A,B&C		2.10	7.41E-04	7.71E-04	-3.130	-3.114
GW-111	A,B&C		5.39	1.90E-03		-2.721	
GW-111	A,B&C		4.39	1.55E-03	1.73E-03	-2.810	-2.765
GW-112	A,B&C		5.95	2.10E-03		-2.678	
GW-112	A,B&C		6.49	2.29E-03	2.20E-03	-2.640	-2.659
GW-113	A,B&C		3.12	1.10E-03		-2.959	
GW-113	A,B&C		2.69	9.50E-04	1.03E-03	-3.022	-2.990
GW-114	A,B&C		3.03	1.07E-03		-2.971	
GW-114	A,B&C		3.37	1.19E-03	1.13E-03	-2.924	-2.948
GW-115	A,B&C		3.94	1.39E-03		-2.857	
GW-115	A,B&C		4.11	1.45E-03	1.42E-03	-2.839	-2.848
GW-116	A,B&C		6.72	2.37E-03		-2.625	
GW-116	A,B&C		7.06	2.49E-03	2.43E-03	-2.604	-2.615
GW-117	A,B&C		5.75	2.03E-03		-2.693	
GW-117	A,B&C		6.32	2.23E-03	2.13E-03	-2.652	-2.672
GW-118	MW	46.6	6.98	2.46E-03		-2.608	
GW-118	MW	46.6	6.70	2.36E-03	2.41E-03	-2.627	-2.618
GW-119	MW	46.6	0.78	2.73E-04		-3.563	
GW-119	MW	46.6	3.04	1.07E-03	6.72E-04	-2.970	-3.267
GW-120	MW	46.5	5.76	2.03E-03		-2.692	
GW-120	MW	46.5	6.88	2.43E-03	2.23E-03	-2.615	-2.654
GW-121	MW	46.22	0.34	1.21E-04		-3.919	
GW-121	MW	46.22	0.34	1.18E-04	1.20E-04	-3.927	-3.923
GW-122	MW	44.53	2.21	7.79E-04		-3.108	
GW-122	MW	44.53	2.35	8.28E-04	8.04E-04	-3.082	-3.095
GW-123	MW	51.4	5.45	1.92E-03		-2.716	
GW-123	MW	51.4	1.82	6.43E-04	1.28E-03	-3.192	-2.954
GW-123R	MW	42.5	1.230	4.34E-04		-3.363	
GW-123R	MW	42.5	1.076	3.80E-04		-3.421	
GW-123R	MW	42.5	1.033	3.65E-04	3.93E-04	-3.438	-3.407
GW-124	MW	42.44	0.80	2.84E-04		-3.547	
GW-124	MW	42.44	0.72	2.55E-04	2.69E-04	-3.594	-3.571
GW-125	B&C	38.5	8.670	3.06E-03		-2.514	
GW-125	B&C	38.5	9.608	3.39E-03		-2.470	
GW-125	B&C	38.5	8.689	3.07E-03	3.17E-03	-2.514	-2.499

TABLE 3.

SITE-WIDE HYDRAULIC CONDUCTIVITY TEST RESULTS
ENVIROCARE OF UTAH, INC.

Well/Test	Cell	Total Depth (ft)	Hydraulic Conductivity (ft/day)	Hydraulic Conductivity (cm/sec)	Well Hydraulic Conductivity (cm/sec)	Log Hydraulic Conductivity (log[cm/sec])	Well Hydraulic Conductivity (log[cm/sec])
GW-126	11e.(2)	36.0	0.938	3.31E-04		-3.480	
GW-126	11e.(2)	36.0	0.998	3.52E-04	3.42E-04	-3.453	-2.886
GW-127	11e.(2)	36.0	1.832	6.46E-04		-3.190	
GW-127	11e.(2)	36.0	1.637	5.78E-04	6.12E-04	-3.238	-3.175
GW-38R	11e.(2)	37.33	0.28	1.00E-04		-3.999	
GW-38R	11e.(2)	37.33	0.29	1.04E-04	1.02E-04	-3.983	-3.991
P3-95 NEC	Pond	41.92	0.98	3.46E-04		-3.461	
P3-95 NEC	Pond	41.92	0.81	2.87E-04		-3.542	
P3-95 NEC	Pond	41.92	0.85	3.01E-04	3.11E-04	-3.522	-3.508
P3-95 SWC	Pond	39.3	0.13	4.53E-05		-4.344	
P3-95 SWC	Pond	39.3	0.10	3.48E-05	4.01E-05	-4.458	-4.401
P3-97 NEC	Pond	36.96	0.73	2.58E-04		-3.589	
P3-97 NEC	Pond	36.96	0.32	1.13E-04	1.86E-04	-3.945	-3.767
						Mean log[K]	-3.206
				Mean K (cm/s)	1.18E-03	Geo Mean K:	6.22E-04

Site-wide mean K	1.18E-03
Site-wide Geometric Mean K	6.22E-04
90% UCL Site-wide Geometric Mean K	7.78E-04
90% LCL Site-wide Geometric Mean K	4.89E-04

TABLE 4

SUMMARY OF GROUNDWATER ELEVATIONS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES Easting (feet)	Northing (feet)	Top of Pro. Casing w/o Lid[1] (feet)	Depth to Water (feet)	Salt Water Elevation (feet)	Fresh Water Elevation (feet)	Specific Gravity (g/cm^3)
I-1-30	RCRA	1,194,194.6	7,420,819.0	4279.40	29.75	4249.65	4249.74	1.024
I-2-30	LARW	1,193,935.7	7,422,071.2	4279.77	30.25	4249.52	4249.59	1.020
I-3-30	RCRA	1,194,626.1	7,422,833.0	4281.36	32.45	4248.91	4248.97	1.020
GW-16R	LARW	1,193,964.6	7,422,809.2	4281.10	31.89	4249.21	4249.28	1.030
GW-19A	11.e.(2)	1,189,866.3	7,421,006.9	4270.82	19.84	4250.98	4251.31	1.050
GW-20	11.e.(2) LARW	1,192,636.5	7,421,936.1	4276.65	26.45	4250.20	4250.40	1.040
GW-22	LARW	1,193,499.7	7,422,861.3	4277.34	27.87	4249.47	4249.52	1.022
GW-23	LARW	1,193,089.9	7,422,873.7	4276.74	27.12	4249.62	4249.73	1.036
GW-24	11.e.(2) LARW	1,192,671.5	7,422,785.1	4276.75	26.74	4250.01	4250.13	1.032
GW-25	11.e.(2) LARW	1,191,693.2	7,423,028.6	4276.31	26.00	4250.31	4250.49	1.038
GW-26	11.e.(2)	1,190,955.0	7,423,055.5	4274.65	24.46	4250.19	4250.34	1.042
GW-27	11.e.(2)	1,190,120.7	7,423,091.1	4272.37	22.90	4249.47	4249.64	1.038
GW-28	11.e.(2)	1,190,087.7	7,422,147.8	4271.38	21.56	4249.82	4249.99	1.034
GW-29	11.e.(2) LARW	1,192,604.8	7,421,047.6	4276.21	26.00	4250.21	4250.36	1.040
GW-36	11.e.(2)	1,190,712.6	7,421,626.5	4272.02	21.44	4250.58	4250.74	1.030
GW-37	11.e.(2)	1,191,276.7	7,421,998.9	4270.88	20.55	4250.33	4250.53	1.036
GW-38R	11.e.(2)	1,191,229.3	7,422,366.4	4275.70	25.70	4250.00	4250.17	1.030
GW-41	RCRA	1,194,870.5	7,421,286.0	4279.48	30.25	4249.23	4249.33	1.030
GW-42	RCRA	1,194,876.4	7,421,425.6	4279.24	30.03	4249.21	4249.29	1.026
GW-55	RCRA	1,194,070.6	7,421,476.9	4279.81	dry	0.00	0.00	0.000
GW-56R	LARW	1,193,981.0	7,422,413.8	4279.08	29.85	4249.23	4249.33	1.030
GW-57	11.e.(2)	1,190,104.5	7,422,623.9	4271.93	22.29	4249.64	4249.81	1.036
GW-58	11.e.(2)	1,190,098.8	7,421,674.4	4271.14	21.03	4250.11	4250.31	1.038
GW-60	11.e.(2)	1,191,831.7	7,420,905.5	4274.68	23.80	4250.88	4250.98	1.034
GW-63	11.e.(2) LARW	1,190,937.5	7,420,950.5	4272.02	21.42	4250.60	4250.75	1.030
GW-64	LARW	1,193,916.5	7,421,546.5	4278.76	29.00	4249.76	4249.90	1.036
GW-66	RCRA	1,194,173.4	7,421,166.8	4279.54	29.95	4249.59	4249.66	1.022
GW-67	RCRA	1,194,887.2	7,421,587.8	4282.15	32.89	4249.26	4249.37	1.022
GW-67R	RCRA	1,194,893.7	7,421,581.8	4281.41	32.19	4249.22	4249.32	1.020
GW-68	RCRA	1,194,893.6	7,421,736.6	4282.29	33.19	4249.10	4249.24	1.030
GW-68R	RCRA	1,194,899.7	7,421,731.7	4282.29	33.30	4248.99	4249.11	1.028
GW-69	RCRA	1,194,899.9	7,421,886.4	4281.65	32.71	4248.94	4249.06	1.030
GW-69R	RCRA	1,194,906.5	7,421,879.2	4281.63	32.89	4248.74	4248.88	1.030
GW-70	RCRA	1,194,906.7	7,422,037.3	4282.01	32.98	4249.03	4249.12	1.020
GW-77	LARW	1,193,899.3	7,420,992.4	4282.91	33.20	4249.71	4249.86	1.030
GW-103	LARW	1,192,746.7	7,420,830.2	4278.34	28.23	4250.11	4250.36	1.034
GW-104	LARW	1,193,239.1	7,420,813.8	4278.67	28.76	4249.91	4250.14	1.032

TABLE 4

SUMMARY OF GROUNDWATER ELEVATIONS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES Easting (feet)	STATE PLANE COORDINATES Northing (feet)	Top of Pro. Casing w/o Lid[1] (feet)	Depth to Water (feet)	Salt Water Elevation (feet)	Fresh Water Elevation (feet)	Specific Gravity (g/cm^3)
GW-105	LARW	1,193,729.5	7,420,796.4	4279.08	29.30	4249.78	4249.97	1.030
GW-126	11.e.(2) LARW	1,192,627.0	7,422,411.6	4279.13	29.04	4250.09	4250.21	1.022
GW-127	11.e.(2) LARW	1,192,608.3	7,421,541.7	4278.38	28.05	4250.33	4250.46	1.022
GW-118	RCRA	1,194,912.9	7,422,188.4	4284.40	35.36	4249.04	4249.20	1.028
GW-119	RCRA	1,194,921.6	7,422,337.2	4284.90	35.87	4249.03	4249.15	1.022
GW-120	RCRA	1,194,927.4	7,422,487.1	4285.71	36.80	4248.91	4249.03	1.024
GW-121	RCRA	1,194,934.4	7,422,636.4	4286.11	37.24	4248.87	4248.99	1.024
GW-122	RCRA	1,194,936.9	7,422,736.8	4286.25	37.50	4248.75	4248.88	1.026
GW-123R	RCRA	1,194,698.7	7,422,739.2	4285.11	36.30	4248.81	4248.95	1.032
GW-124	RCRA	1,194,333.3	7,422,756.4	4278.45	29.58	4248.87	4249.07	1.032
I-1-100	Deep Well	1,194,192.7	7,420,814.7	4279.25	29.36	4249.89	4250.94	1.016
I-3-100	Deep Well	1,194,626.4	7,422,838.1	4281.49	32.45	4249.04	4250.05	1.016
GW-19B	Deep Well	1,189,865.7	7,420,999.2	4270.76	20.85	4249.91	4251.29	1.020
GW-27D	Deep Well	1,190,119.3	7,423,066.6	4273.65	24.27	4249.38	4250.62	1.018
P3-95 NEC	Pond Well	1,194,410.9	7,423,887.2	4282.89	34.20	4248.69	4248.77	1.020
P3-95 SWC	Pond Well	1,194,165.6	7,423,636.5	4280.23	31.53	4248.70	4248.88	1.050
P3-97 NEC	Pond Well	1,194,422.7	7,424,206.4	4281.90	33.22	4248.68	4248.73	1.030
PZ-1	Pond Well	1,189,764.9	7,420,894.3	4269.04	18.84	4250.20	4250.50	1.056
PZ-2	Pond Well	1,193,922.9	7,426,936.2	4281.84	na	#VALUE!	#VALUE!	1.024
GW-81	WLARW	1,190,513.6	7,424,651.0	4276.77	27.58	4249.19	4249.33	1.030
GW-82	WLARW	1,190,844.5	7,424,637.9	4276.81	27.56	4249.25	4249.38	1.030
GW-83	WLARW	1,191,173.7	7,424,625.2	4276.90	27.54	4249.36	4249.48	1.028
GW-84	WLARW	1,191,506.3	7,424,612.5	4277.21	27.82	4249.39	4249.53	1.034
GW-85	WLARW	1,191,829.5	7,424,600.2	4277.88	28.45	4249.43	4249.57	1.032
GW-86	WLARW	1,192,225.5	7,424,585.3	4278.32	29.00	4249.32	4249.56	1.038
GW-88	WLARW	1,192,613.1	7,424,570.2	4279.60	30.14	4249.46	4249.57	1.034
GW-89	WLARW	1,192,600.0	7,424,176.7	4279.35	29.73	4249.62	4249.74	1.036
GW-90	WLARW	1,192,586.7	7,423,785.8	4278.90	29.10	4249.80	4249.93	1.034
GW-91	WLARW	1,192,573.2	7,423,391.1	4278.78	28.82	4249.96	4250.07	1.030
GW-92	WLARW	1,192,558.8	7,422,992.5	4278.98	28.75	4250.23	4250.30	1.018
GW-93	WLARW	1,192,171.6	7,423,009.7	4277.89	27.71	4250.18	4250.35	1.038
GW-94	WLARW	1,191,373.0	7,423,040.6	4276.61	26.37	4250.24	4250.43	1.038
GW-95	WLARW	1,190,543.9	7,423,071.3	4274.67	24.79	4249.88	4250.02	1.038
GW-99	WLARW	1,190,134.5	7,423,484.5	4273.62	24.19	4249.43	4249.56	1.034
GW-100	WLARW	1,190,150.6	7,423,877.2	4274.29	25.11	4249.18	4249.29	1.032
GW-101	WLARW	1,190,166.3	7,424,270.3	4275.06	25.94	4249.12	4249.27	1.028
GW-102	WLARW	1,190,182.3	7,424,664.1	4275.49	26.40	4249.09	4249.25	1.034
GW-106	B&C	1,190,205.3	7,424,978.4	4276.31	27.34	4248.97	4249.20	1.032

TABLE 4

SUMMARY OF GROUNDWATER ELEVATIONS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES Easting (feet)	STATE PLANE COORDINATES Northing (feet)	Top of Pro. Casing w/o Lid[1] (feet)	Depth to Water (feet)	Salt Water Elevation (feet)	Fresh Water Elevation (feet)	Specific Gravity (g/cm^3)
GW-107	B&C	1,190,222.9	7,425,371.2	4276.18	27.20	4248.98	4249.14	1.022
GW-108	B&C	1,190,239.3	7,425,717.5	4275.89	26.94	4248.95	4249.18	1.032
GW-109	B&C	1,190,522.2	7,425,706.2	4276.50	27.40	4249.10	4249.31	1.030
GW-110	B&C	1,190,849.7	7,425,693.4	4276.74	27.58	4249.16	4249.36	1.028
GW-111	B&C	1,191,176.7	7,425,681.7	4277.03	28.04	4248.99	4249.18	1.028
GW-112	B&C	1,191,511.6	7,425,670.3	4277.47	28.60	4248.87	4249.12	1.038
GW-113	B&C	1,191,919.7	7,425,625.6	4278.83	29.75	4249.08	4249.32	1.040
GW-114	B&C	1,192,069.4	7,425,620.2	4279.40	30.45	4248.95	4249.12	1.030
GW-115	B&C	1,192,219.4	7,425,614.7	4279.85	30.85	4249.00	4249.14	1.026
GW-116	B&C	1,192,369.3	7,425,609.3	4280.78	31.74	4249.04	4249.15	1.022
GW-117	B&C	1,192,572.9	7,425,281.2	4279.97	30.91	4249.06	4249.24	1.032
GW-125	B&C	1,192,558.5	7,424,925.1	4280.24	31.12	4249.12	4249.24	1.022

[1] - Surveyed location where depth to water measurements are referenced.
NM - Not Measured
-- Not calculated

TABLE 5

SUMMARY OF HORIZONTAL GRADIENTS
ENVIROCARE OF UTAH, INC.

Measured February 2004

AREA	Water Type	GRADIENTS				COMPLIANCE	HORIZONTAL
		MAXIMUM	MINIMUM	AVERAGE	GRADIENT LIMIT	YES/NO	VELOCITY (ft/day)
All unconfined wells	Fresh	4.70E-03	1.01E-05	5.78E-04	NA	NA	6.99E-05
	Salt	4.49E-03	6.77E-06	5.77E-04			1.48E-06
LARW	Fresh	1.83E-03	2.02E-05	6.63E-04	9.67E-03	YES	1.70E-06
	Salt	1.78E-03	5.10E-05	6.43E-04			1.64E-06
Class A	Fresh	2.88E-03	1.17E-04	8.45E-04	1.00E-03	YES	2.16E-06
	Salt	3.11E-03	7.33E-05	8.49E-04			2.17E-06
11e.(2)	Fresh	4.70E-03	1.01E-05	5.64E-04	3.29E-03	YES	1.44E-06
	Salt	4.49E-03	7.31E-06	5.61E-04			1.43E-06
Mixed Waste	Fresh	2.56E-03	5.58E-05	7.53E-04	9.67E-03	YES	1.92E-06
	Salt	2.62E-03	6.77E-06	7.64E-04			1.95E-06
Deep	Fresh	4.37E-04	8.41E-05	3.00E-04	NA	NA	7.68E-07
	Salt	4.10E-04	6.54E-05	2.56E-04			6.54E-07
B & C	Fresh	2.88E-03	1.82E-05	4.72E-04	NA	NA	1.21E-06
	Salt	3.11E-03	1.21E-05	5.14E-04			1.31E-06

TABLE 6

SUMMARY OF VERTICAL GRADIENTS
ENVIROCARE OF UTAH, INC.

Measured February 2004

	Well ID	STATE PLANE COORDINATES Easting (feet)	Northing (feet)	Depth to Water (feet)	Saline Water Elevation (feet)	Fresh Water Groundwater Elevation (feet)	Mid-Point of Filter Pack Elevation (feet)	Δ Vertical Distance (feet)
Well	I-1-30	1,194,194.6	7,420,819.0	29.75	4249.65	4249.74	4247.8	-63.75
Nest	I-1-100	1,194,192.7	7,420,814.7	29.36	4249.89	4250.94	4184.0	
Well	I-3-30	1,194,626.1	7,422,833.0	32.45	4248.91	4248.97	4249.5	-63.46
Nest	I-3-100	1,194,626.4	7,422,838.1	32.45	4249.04	4250.05	4186.0	
Well	GW-19A	1,189,866.3	7,421,006.9	19.84	4250.98	4251.31	4246.1	-65.48
Nest	GW-19B	1,189,865.7	7,420,999.2	20.85	4249.91	4251.29	4180.6	
Well	GW-27	1,190,120.7	7,423,091.1	22.80	4249.57	4249.74	4246.7	-66.34
Nest	GW-27D	1,190,119.3	7,423,066.6	24.27	4249.38	4250.62	4180.4	

A negative vertical gradient = upward gradient
A positive vertical gradient = downward gradient

TABLE 6

SUMMARY OF VERTICAL GRADIENTS
ENVIROCARE OF UTAH, INC.

Measured February 2004

	Well ID	Salt Water Δ GW Elevations (feet)	Salt Water Vertical Gradient (ft/ft)	Salt Water Vertical Velocity (ft/day)	Fresh Water Δ GW Elevations (feet)	Fresh Water Vertical Gradient (ft/ft)	Fresh Water Vertical Velocity (ft/day)	Specific Gravity (g/cm^3)
Well	I-1-30	0.24	-0.0038	-0.00001	1.21	-0.0189	-0.00005	1.024
Nest	I-1-100							1.016
Well	I-3-30	0.13	-0.0021	-0.00001	1.08	-0.0171	-0.00004	1.020
Nest	I-3-100							1.016
Well	GW-19A	-1.07	0.0164	0.00004	-0.01	0.0002	0.000001	1.050
Nest	GW-19B							1.020
Well	GW-27	-0.20	0.0030	0.00001	0.88	-0.0132	-0.00003	1.038
Nest	GW-27D							1.018

A negative vertical gradient =
A positive vertical gradient =

TABLE 7

SUMMARY OF GROUNDWATER TOTAL DISSOLVE SOLIDS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES		Top of Pro. Casing w/o Lid[1] (feet)	Average Total Dissolve Solids (mg/L)	Number Of Samples
		Easting (feet)	Northing (feet)			
I-1-30	RCRA	1,194,194.6	7,420,819.0	4279.40	26,017	29
I-2-30	LARW	1,193,935.7	7,422,071.2	4279.77	33,577	39
I-3-30	RCRA	1,194,626.1	7,422,833.0	4281.36	27,250	8
GW-16R	LARW	1,193,964.6	7,422,809.2	4281.10	40,258	31
GW-19A	11.e.(2)	1,189,866.3	7,421,006.9	4270.82	58,246	59
GW-20	11.e.(2) LARW	1,192,636.5	7,421,936.1	4276.65	49,838	60
GW-22	LARW	1,193,499.7	7,422,861.3	4277.34	42,186	43
GW-23	LARW	1,193,089.9	7,422,873.7	4276.74	44,750	42
GW-24	11.e.(2) LARW	1,192,671.5	7,422,785.1	4276.75	44,279	53
GW-25	11.e.(2) LARW	1,191,693.2	7,423,028.6	4276.31	49,022	54
GW-26	11.e.(2)	1,190,955.0	7,423,055.5	4274.65	50,263	52
GW-27	11.e.(2)	1,190,120.7	7,423,091.1	4272.37	48,366	53
GW-28	11.e.(2)	1,190,087.7	7,422,147.8	4271.38	45,215	59
GW-29	11.e.(2) LARW	1,192,604.8	7,421,047.6	4276.21	48,032	56
GW-36	11.e.(2)	1,190,712.6	7,421,626.5	4272.02	40,305	39
GW-37	11.e.(2)	1,191,276.7	7,421,998.9	4270.88	46,564	36
GW-38R	11.e.(2)	1,191,229.3	7,422,366.4	4275.70	42,000	4
GW-41	RCRA	1,194,870.5	7,421,286.0	4279.48	39,193	14
GW-42	RCRA	1,194,876.4	7,421,425.6	4279.24	33,807	15
GW-55	RCRA	1,194,070.6	7,421,476.9	4279.81		
GW-56R	LARW	1,193,981.0	7,422,413.8	4279.08	41,865	48
GW-57	11.e.(2)	1,190,104.5	7,422,623.9	4271.93	45,021	52
GW-58	11.e.(2)	1,190,098.8	7,421,674.4	4271.14	43,706	53
GW-60	11.e.(2)	1,191,831.7	7,420,905.5	4274.68	41,892	38
GW-63	11.e.(2) LARW	1,190,937.5	7,420,950.5	4272.02	37,670	46
GW-64	LARW	1,193,916.5	7,421,546.5	4278.76	39,372	25
GW-66	RCRA	1,194,173.4	7,421,166.8	4279.54	29,550	10
GW-67	RCRA	1,194,887.2	7,421,587.8	4282.15	26,045	11
GW-67R	RCRA	1,194,893.7	7,421,581.8	4281.41	25,033	12
GW-68	RCRA	1,194,893.6	7,421,736.6	4282.29	37,870	10
GW-68R	RCRA	1,194,899.7	7,421,731.7	4282.29	35,650	12
GW-69	RCRA	1,194,899.9	7,421,886.4	4281.65	40,711	9
GW-69R	RCRA	1,194,906.5	7,421,879.2	4281.63	39,954	13
GW-70	RCRA	1,194,906.7	7,422,037.3	4282.01	24,673	11
GW-77	LARW	1,193,899.3	7,420,992.4	4282.91	42,720	15
GW-103	LARW	1,192,746.7	7,420,830.2	4278.34	39,217	23
GW-104	LARW	1,193,239.1	7,420,813.8	4278.67	38,727	22
GW-105	LARW	1,193,729.5	7,420,796.4	4279.08	34,773	22

TABLE 7

SUMMARY OF GROUNDWATER TOTAL DISSOLVE SOLIDS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES		Top of Pro. Casing w/o Lid[1] (feet)	Average Total Dissolve Solids (mg/L)	Number Of Samples
		Easting (feet)	Northing (feet)			
GW-126	11.e.(2) LARW	1,192,627.0	7,422,411.6	4279.13	45,500	2
GW-127	11.e.(2) LARW	1,192,608.3	7,421,541.7	4278.38	40,000	2
GW-118	RCRA	1,194,912.9	7,422,188.4	4284.40	34,382	11
GW-119	RCRA	1,194,921.6	7,422,337.2	4284.90	29,942	12
GW-120	RCRA	1,194,927.4	7,422,487.1	4285.71	30,956	9
GW-121	RCRA	1,194,934.4	7,422,636.4	4286.11	28,580	10
GW-122	RCRA	1,194,936.9	7,422,736.8	4286.25	28,290	10
GW-123R	RCRA	1,194,698.7	7,422,739.2	4285.11	40,313	8
GW-124	RCRA	1,194,333.3	7,422,756.4	4278.45	39,111	9
I-1-100	Deep Well	1,194,192.7	7,420,814.7	4279.25		
I-3-100	Deep Well	1,194,626.4	7,422,838.1	4281.49		
GW-19B	Deep Well	1,189,865.7	7,420,999.2	4270.76		
GW-27D	Deep Well	1,190,119.3	7,423,066.6	4273.65		
P3-95 NEC	Pond Well	1,194,410.9	7,423,887.2	4282.89	25,255	22
P3-95 SWC	Pond Well	1,194,165.6	7,423,636.5	4280.23	68,970	20
P3-97 NEC	Pond Well	1,194,422.7	7,424,206.4	4281.90	37,543	28
PZ-1	Pond Well	1,189,764.9	7,420,894.3	4269.04		
PZ-2	Pond Well	1,193,922.9	7,426,936.2	4281.84		
GW-81	WLARW	1,190,513.6	7,424,651.0	4276.77	37,688	17
GW-82	WLARW	1,190,844.5	7,424,637.9	4276.81	35,717	18
GW-83	WLARW	1,191,173.7	7,424,625.2	4276.90	34,975	20
GW-84	WLARW	1,191,506.3	7,424,612.5	4277.21	42,626	19
GW-85	WLARW	1,191,829.5	7,424,600.2	4277.88	41,755	20
GW-86	WLARW	1,192,225.5	7,424,585.3	4278.32	45,520	20
GW-88	WLARW	1,192,613.1	7,424,570.2	4279.60	40,424	17
GW-89	WLARW	1,192,600.0	7,424,176.7	4279.35	41,953	17
GW-90	WLARW	1,192,586.7	7,423,785.8	4278.90	39,915	20
GW-91	WLARW	1,192,573.2	7,423,391.1	4278.78	45,683	18
GW-92	WLARW	1,192,558.8	7,422,992.5	4278.98	14,956	17
GW-93	WLARW	1,192,171.6	7,423,009.7	4277.89	47,800	19
GW-94	WLARW	1,191,373.0	7,423,040.6	4276.61	43,158	19
GW-95	WLARW	1,190,543.9	7,423,071.3	4274.67	46,429	17
GW-99	WLARW	1,190,134.5	7,423,484.5	4273.62	41,100	17
GW-100	WLARW	1,190,150.6	7,423,877.2	4274.29	38,806	17
GW-101	WLARW	1,190,166.3	7,424,270.3	4275.06	35,721	19
GW-102	WLARW	1,190,182.3	7,424,664.1	4275.49	41,900	19
GW-106	B&C	1,190,205.3	7,424,978.4	4276.31	37,967	6
GW-107	B&C	1,190,222.9	7,425,371.2	4276.18	25,800	7

TABLE 7

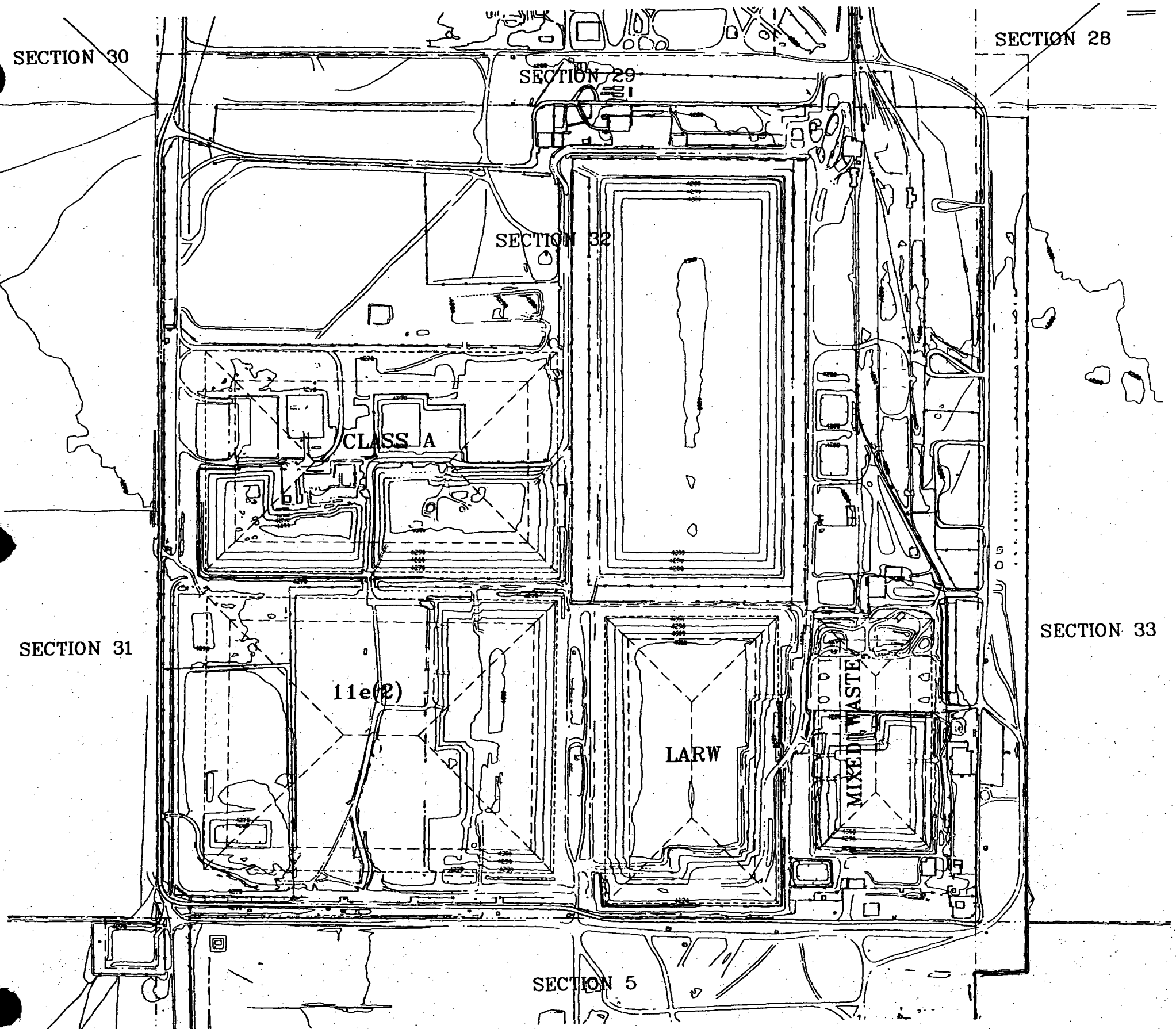
SUMMARY OF GROUNDWATER TOTAL DISSOLVE SOLIDS
ENVIROCARE OF UTAH, INC.

Measured February 2004

Well ID	Area	STATE PLANE COORDINATES		Top of Pro. Casing w/o Lid[1] (feet)	Average Total Dissolve Solids (mg/L)	Number Of Samples
		Easting (feet)	Northing (feet)			
GW-108	B&C	1,190,239.3	7,425,717.5	4275.89	39,500	5
GW-109	B&C	1,190,522.2	7,425,706.2	4276.50	39,420	5
GW-110	B&C	1,190,849.7	7,425,693.4	4276.74	34,420	5
GW-111	B&C	1,191,176.7	7,425,681.7	4277.03	36,250	4
GW-112	B&C	1,191,511.6	7,425,670.3	4277.47	45,500	4
GW-113	B&C	1,191,919.7	7,425,625.6	4278.83	50,575	4
GW-114	B&C	1,192,069.4	7,425,620.2	4279.40	37,875	4
GW-115	B&C	1,192,219.4	7,425,614.7	4279.85	42,425	4
GW-116	B&C	1,192,369.3	7,425,609.3	4280.78	40,400	4
GW-117	B&C	1,192,572.9	7,425,281.2	4279.97	51,750	4
GW-125	B&C	1,192,558.5	7,424,925.1	4280.24	37,750	4

[1] - Surveyed location where depth to water measurements are referenced.
NM - Not Measured
-- Not calculated

FIGURES



LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- BUILDING
- ROAD, IMPROVED
- ROAD, GRAVEL

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	06/11/
-	ENVIROCARE SITE FACILITIES	FIGURE 1	
D.SHRUM	TOPOGRAPHY OF PERMITTED AREA CLIVE, UTAH		

Engineering\NEW DRAWING FILES\BRYAN\MIKE LEBARON\FIGURE 1 TOPO FACILITY.dwg, 06/15/2004 07:28:41 AM, sbryan

SECTION 30

SECTION 29

SECTION 28

SECTION 32

CLASS A

SECTION 31

11e(2)

LARW

MIXED WASTE

SECTION 33

SECTION 5

LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- GW-16R MONITORING WELLS
- GW-21 NON-COMPLIANCE WELL
- PZ-1 PIEZOMETER
- SRS-1 SOIL RESISTIVITY
- SL-1 SUCTION LYSIMETER
- CL-1 COLLECTION LYSIMETER
- GW-2 ABANDONED WELL/EXPLORATORY HOLE

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

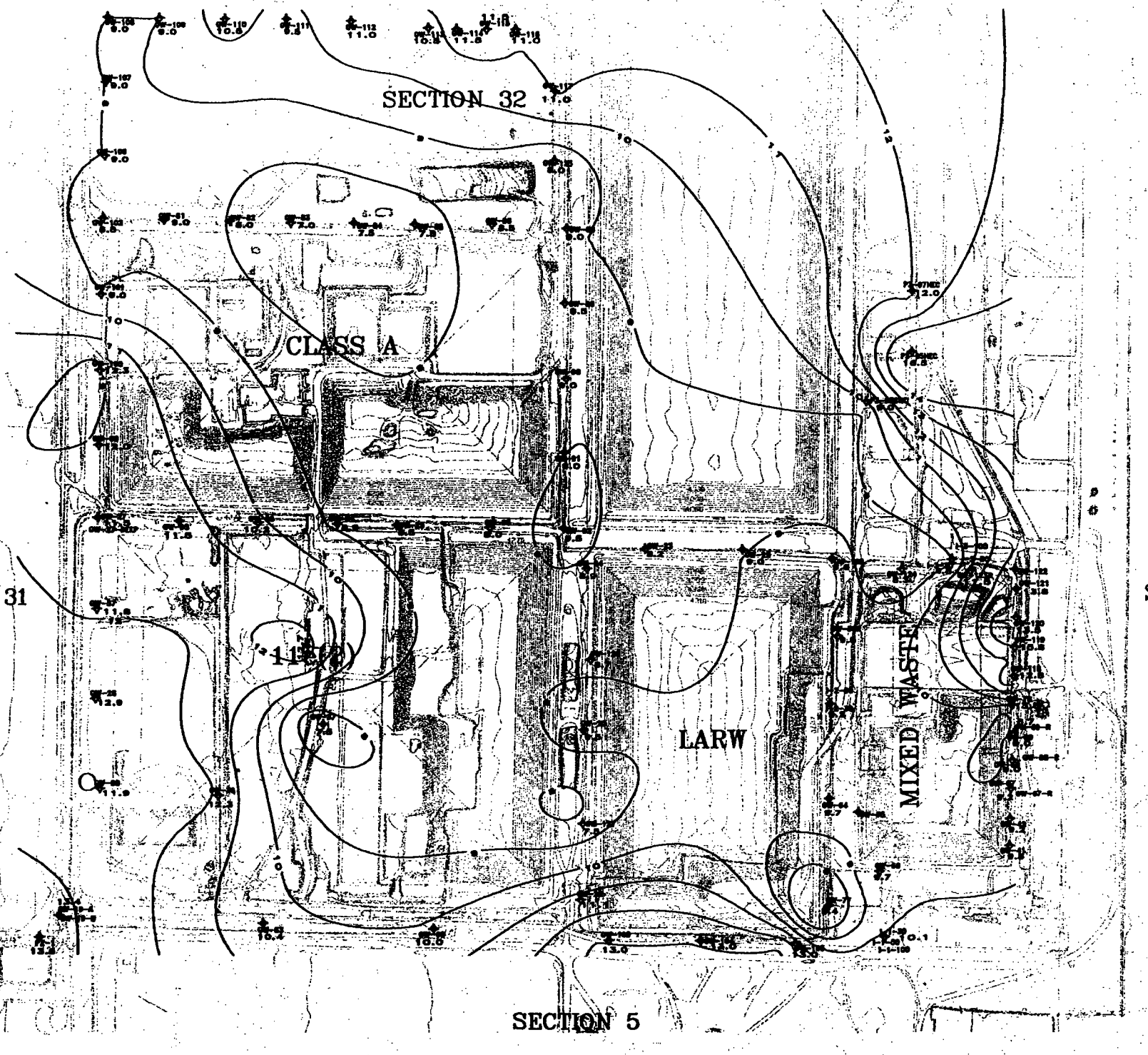
S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/08/04
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	MONITORING WELL, BOREHOLE & LYSIMETER LOCATIONS CLIVE, UTAH	FIGURE 2	

SECTION 30

SECTION 29

SECTION 28

SECTION 32



SECTION 31

SECTION 33

SECTION 5

LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- ISO-THICKNESS CONTOURS
- ✦ GW-16R MONITORING WELLS
- CONTOUR INTERVAL 1 FOOT

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/07
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	UNIT 4 CLAY ISOPACH MAP	FIGURE 4	
	CLIVE, UTAH		

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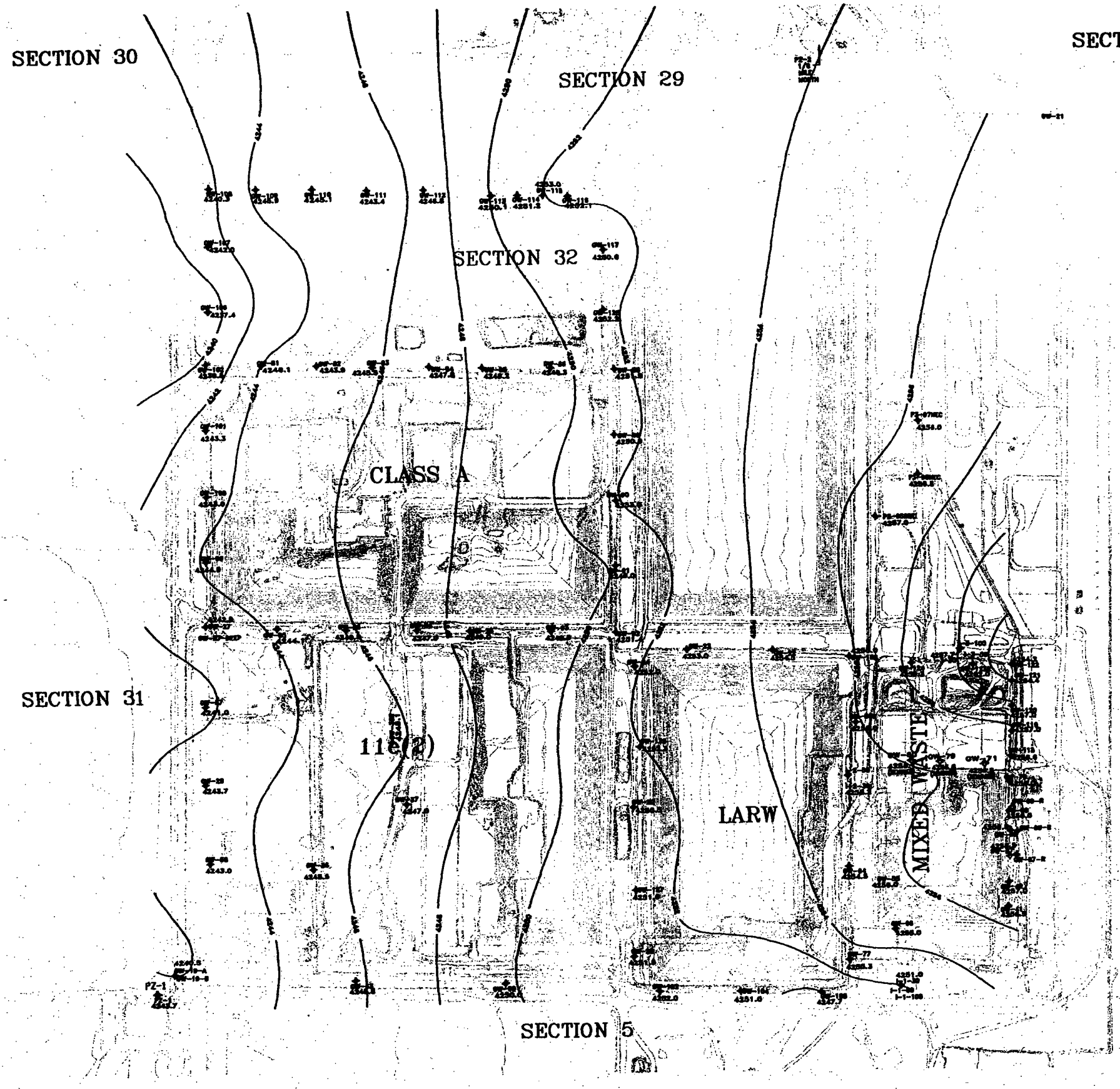
sbryon



LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- ISO-ELEVATION CONTOURS
- ✦ GW-16R MONITORING WELLS

CONTOUR INTERVAL 2 FEET

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/0
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	TOP OF UNIT 2 CLAY STRUCTURAL CONTOUR MAP	FIGURE 5	
	CLIVE, UTAH		

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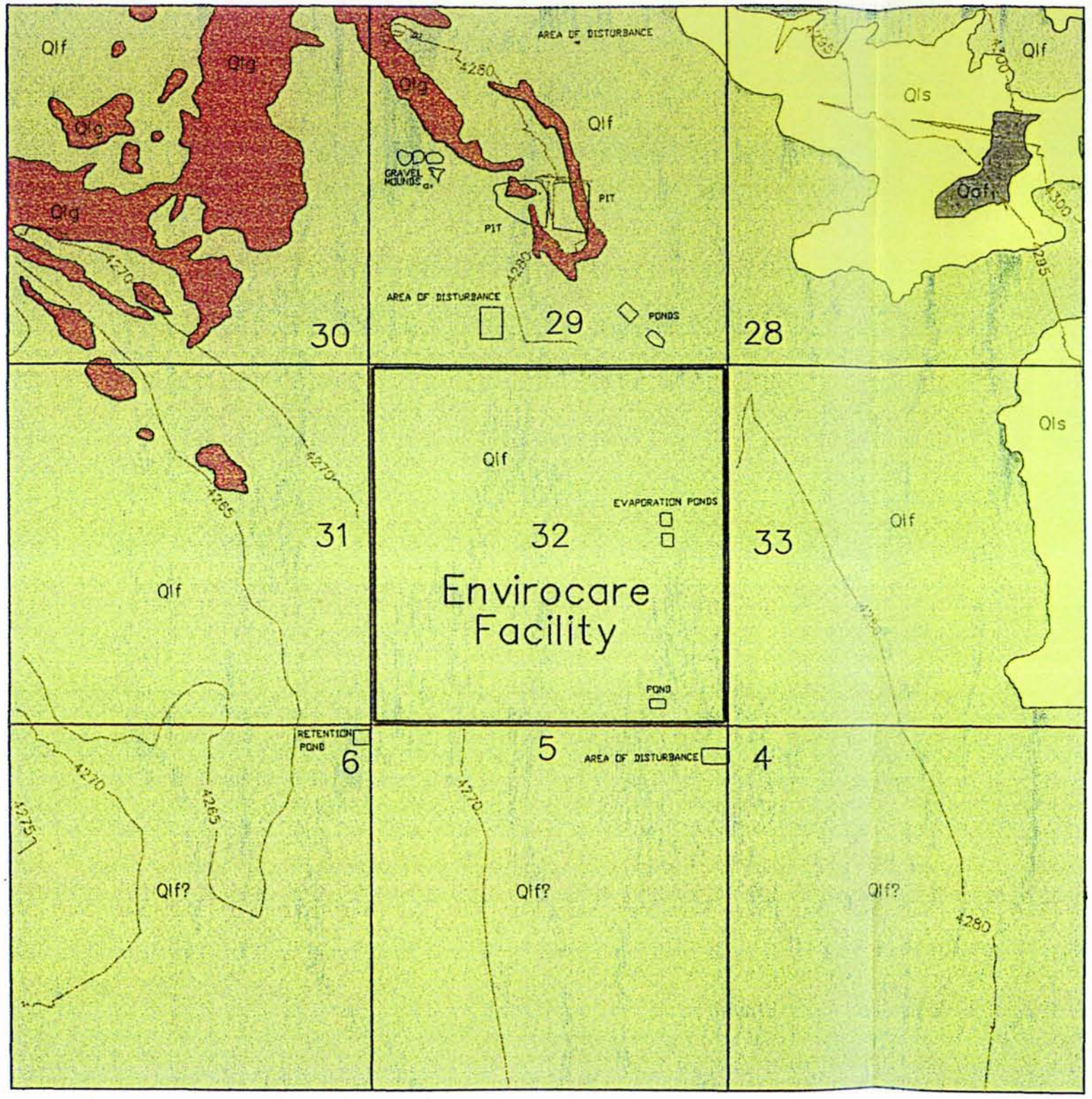

NORTH

Graphic Scale

0 0.5 1.0 miles

Legend

- Qlg Quaternary lacustrine gravel
- Qls Quaternary lacustrine sand
- Qlf Quaternary lacustrine mud
- Qafi Quaternary younger alluvial fan deposits

Adapted from Solomon (1993)

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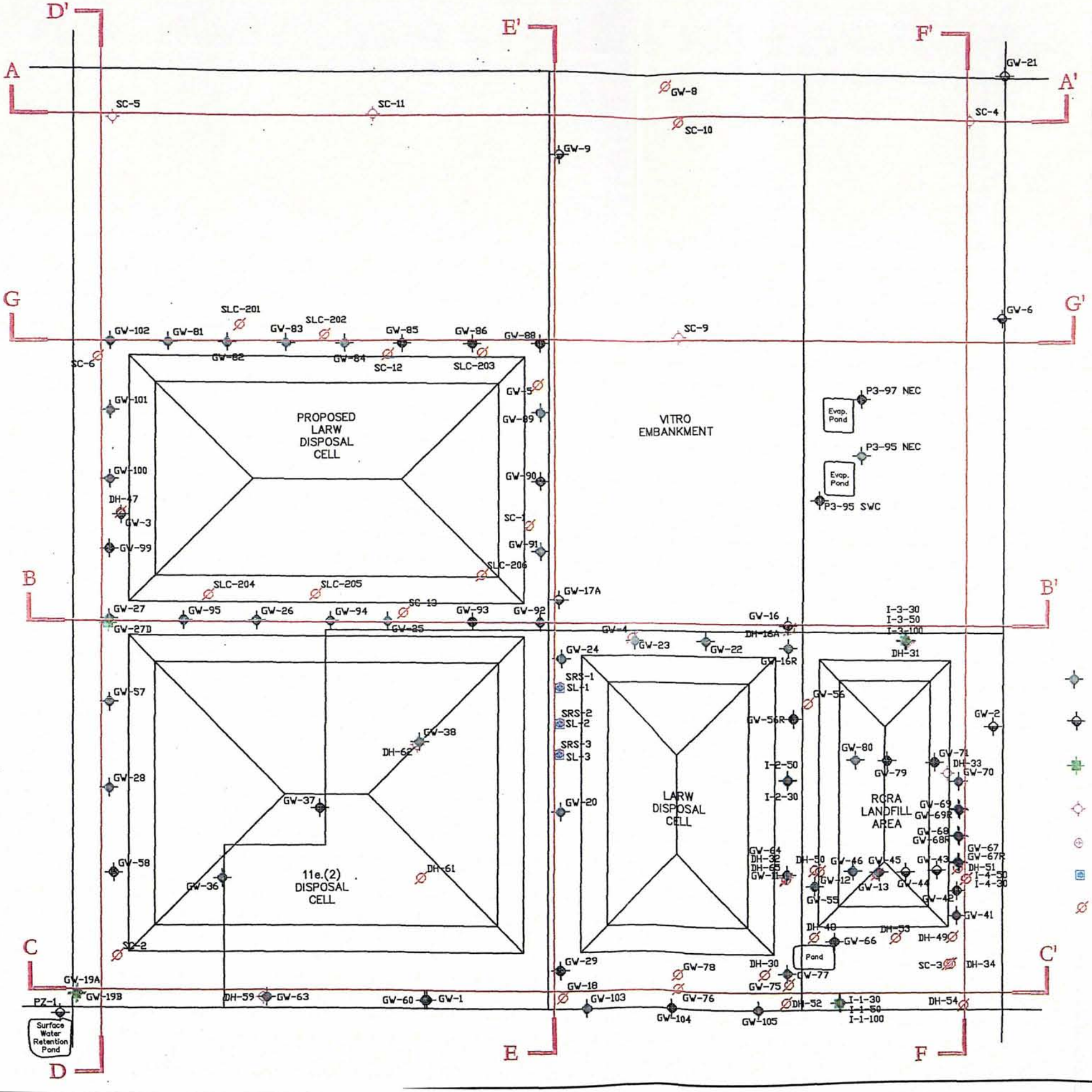
Figure 3. Regional geologic map.



NORTH

Graphic Scale

600 300 0 600

(feet)
1 inch = 600 ft.

Legend

GW-22	Compliance ground water monitoring well (shallow aquifer)
GW-24	Non-compliance ground water monitoring well (shallow aquifer)
I-1-30	Compliance ground water monitoring well (deep aquifer)
DH-33	Piezometer
SRS-1	Soil resistivity sample borehole
SL-1	Suction lysimeter
DH-53	Abandoned well/piezometer/exploratory hole

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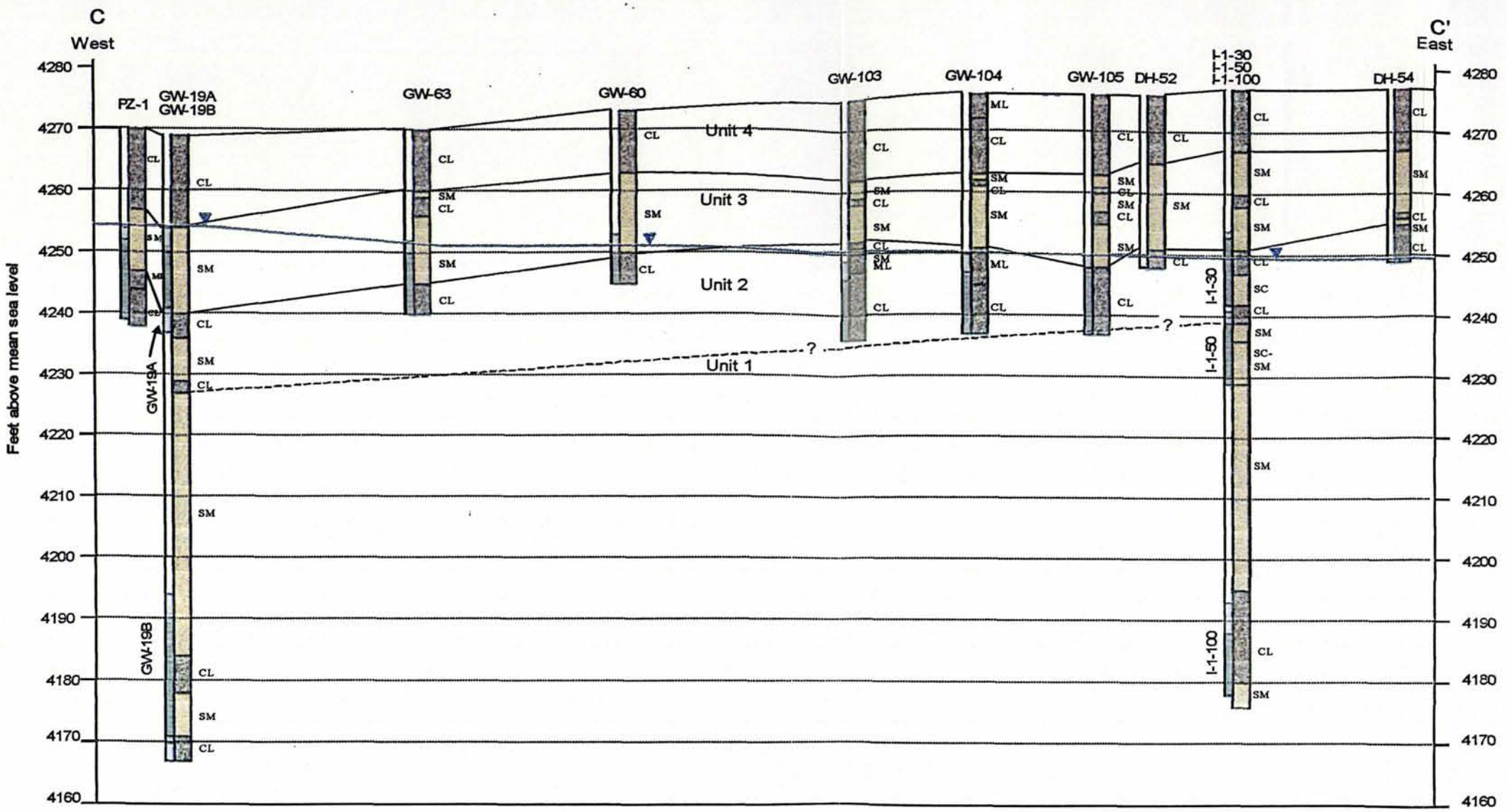

Legend

- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity
- Phreatic surface, shallow aquifer, August 1999
- Filter pack of well
- Screened interval of well

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

Note: Some logs are offset from section line as shown on Figure 6.

0 500
Horizontal scale (feet)

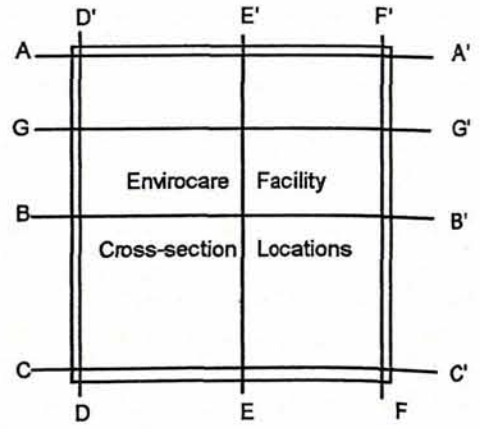

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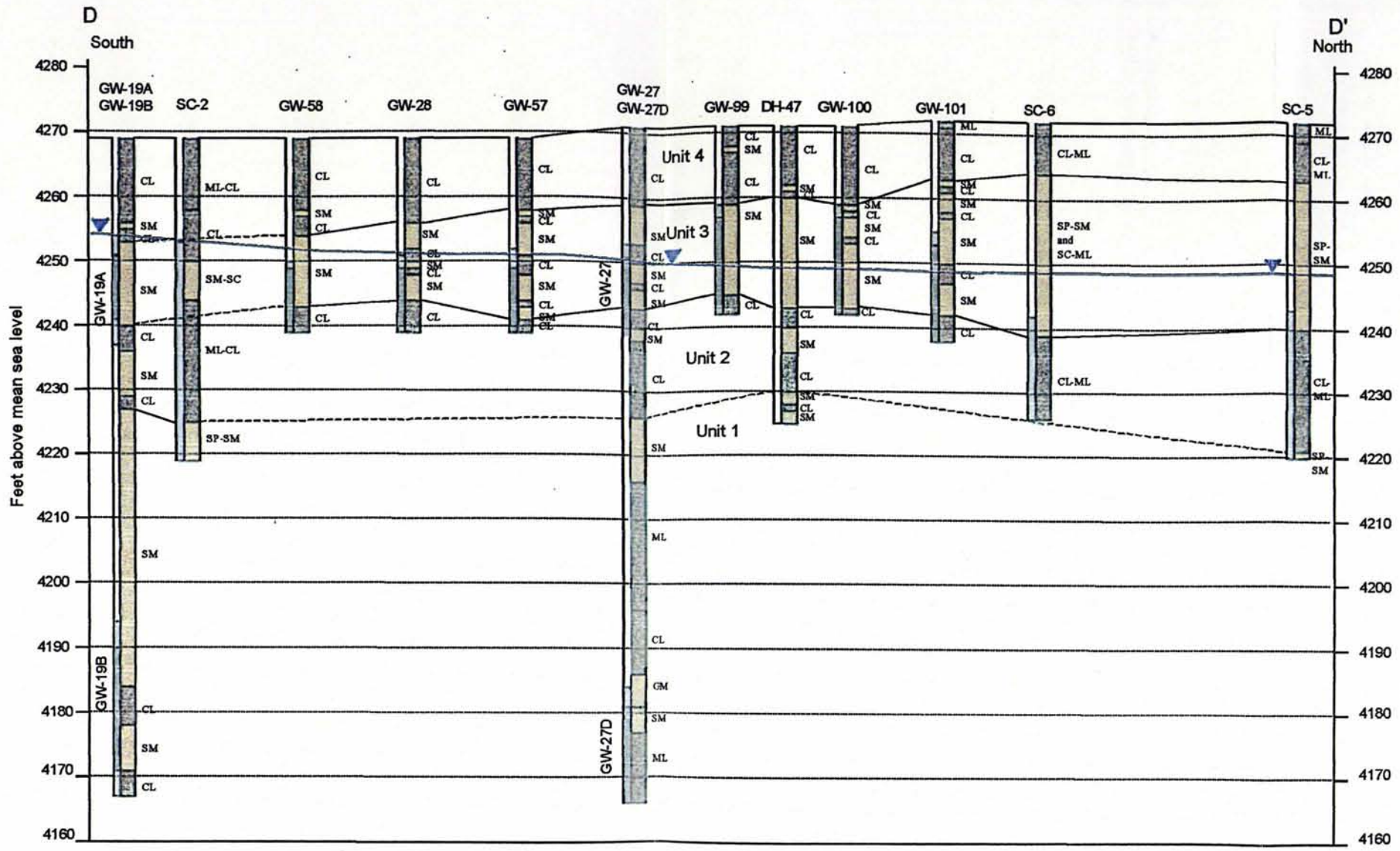
Figure 9. Hydrogeologic cross-section C-C'.



Legend

- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity
- Phreatic surface, shallow aquifer, August 1999
- Filter pack of well
- Screened interval of well

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

Note: Some logs are offset from section line as shown on Figure 6.

0 500
Horizontal scale (feet)

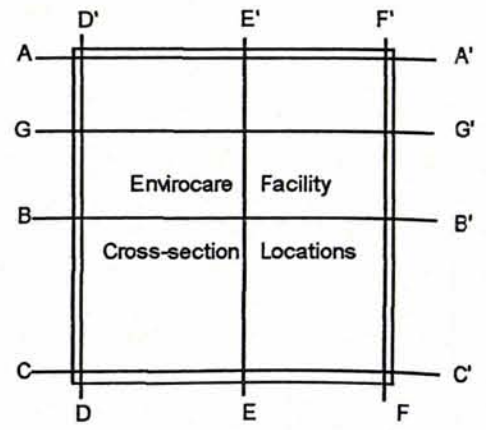


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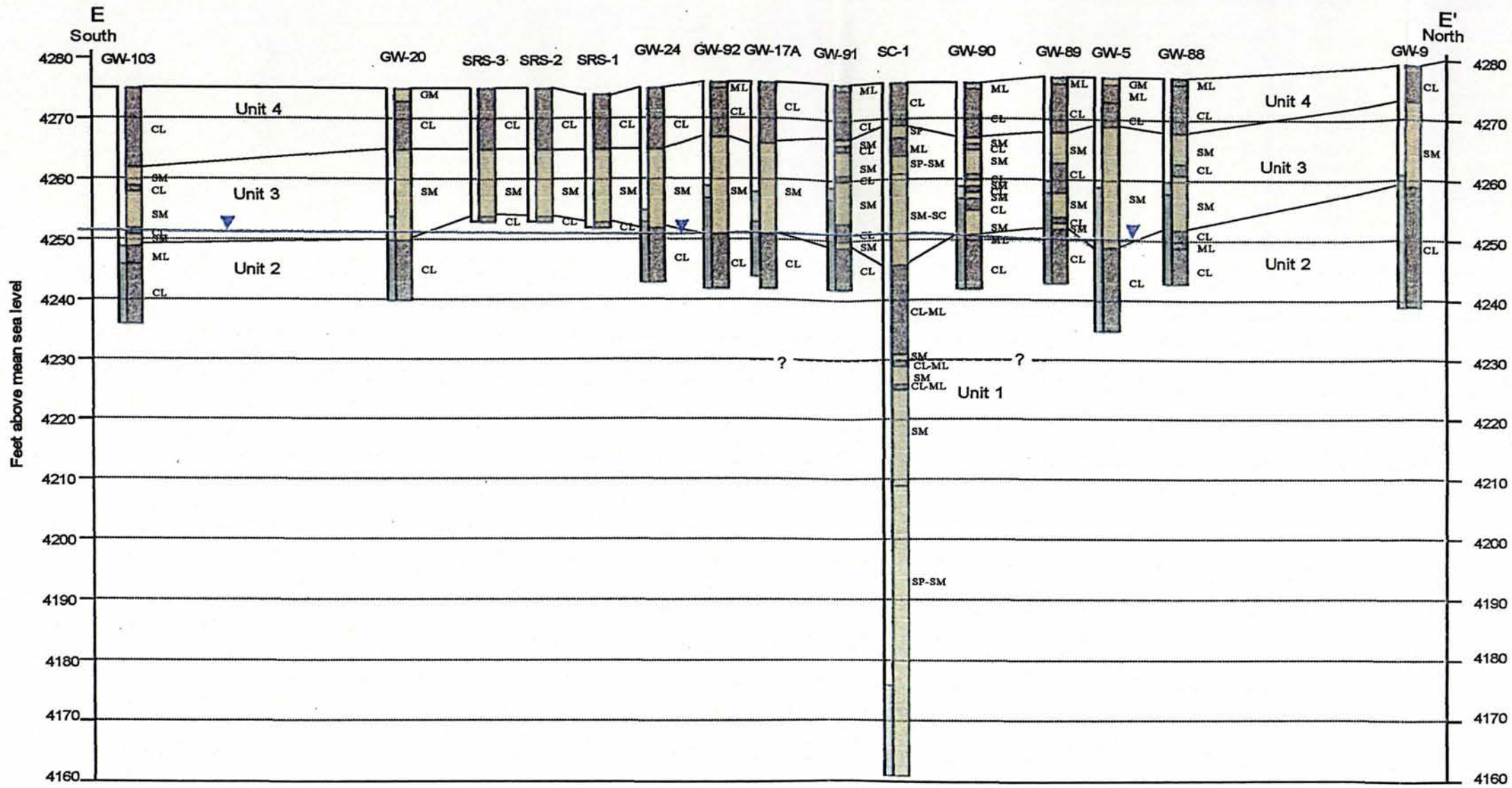
Figure 10. Hydrogeologic cross- section D-D'.



Legend

- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity
- Phreatic surface, shallow aquifer, August 1999
- Filter pack of well
- Screened interval of well

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

Note: Some logs are offset from section line as shown on Figure 6.

0 500
Horizontal scale (feet)

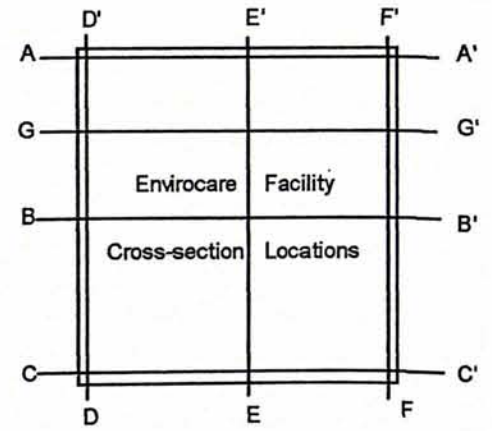


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Figure 11. Hydrogeologic cross-section E-E'.

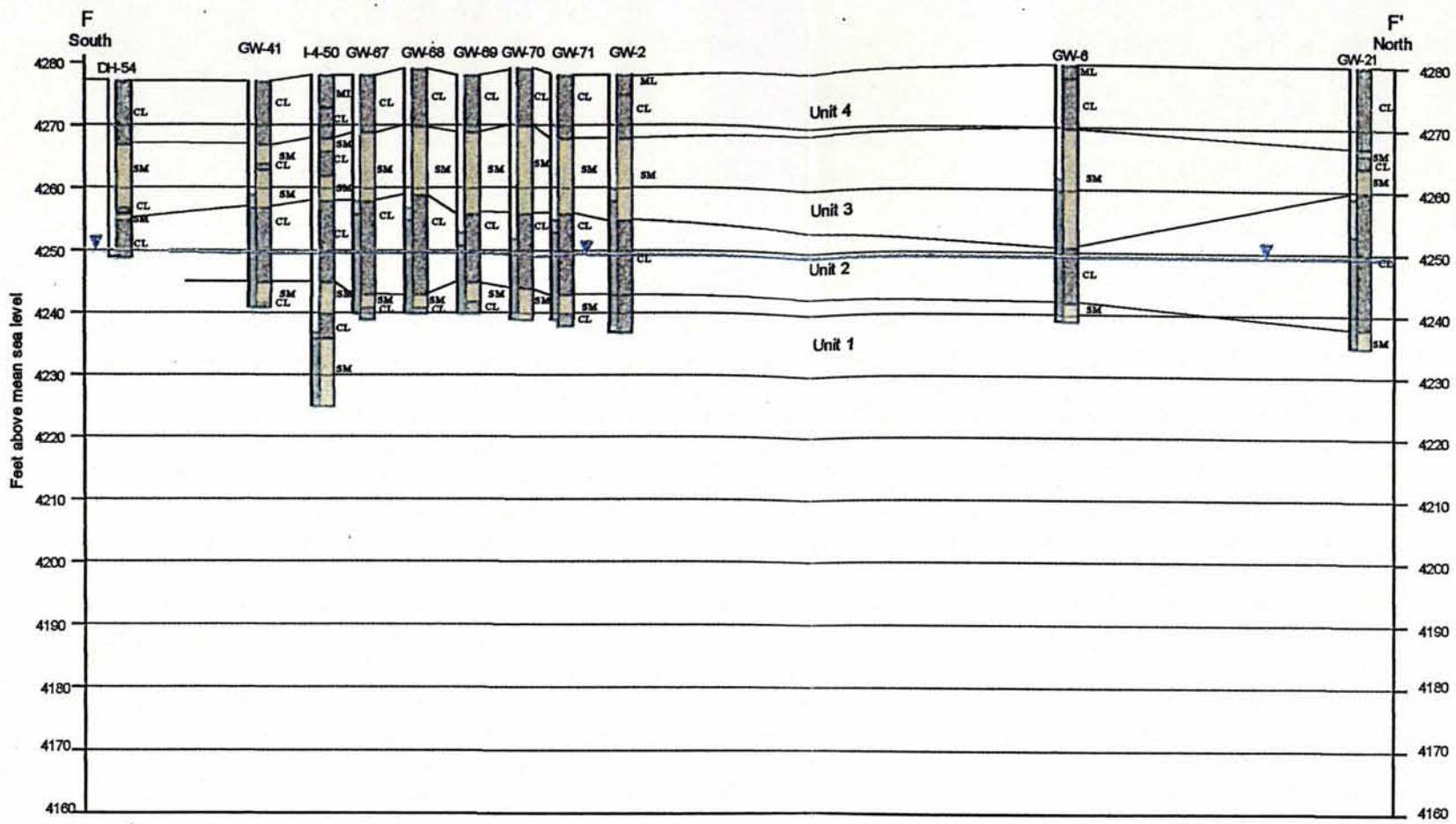

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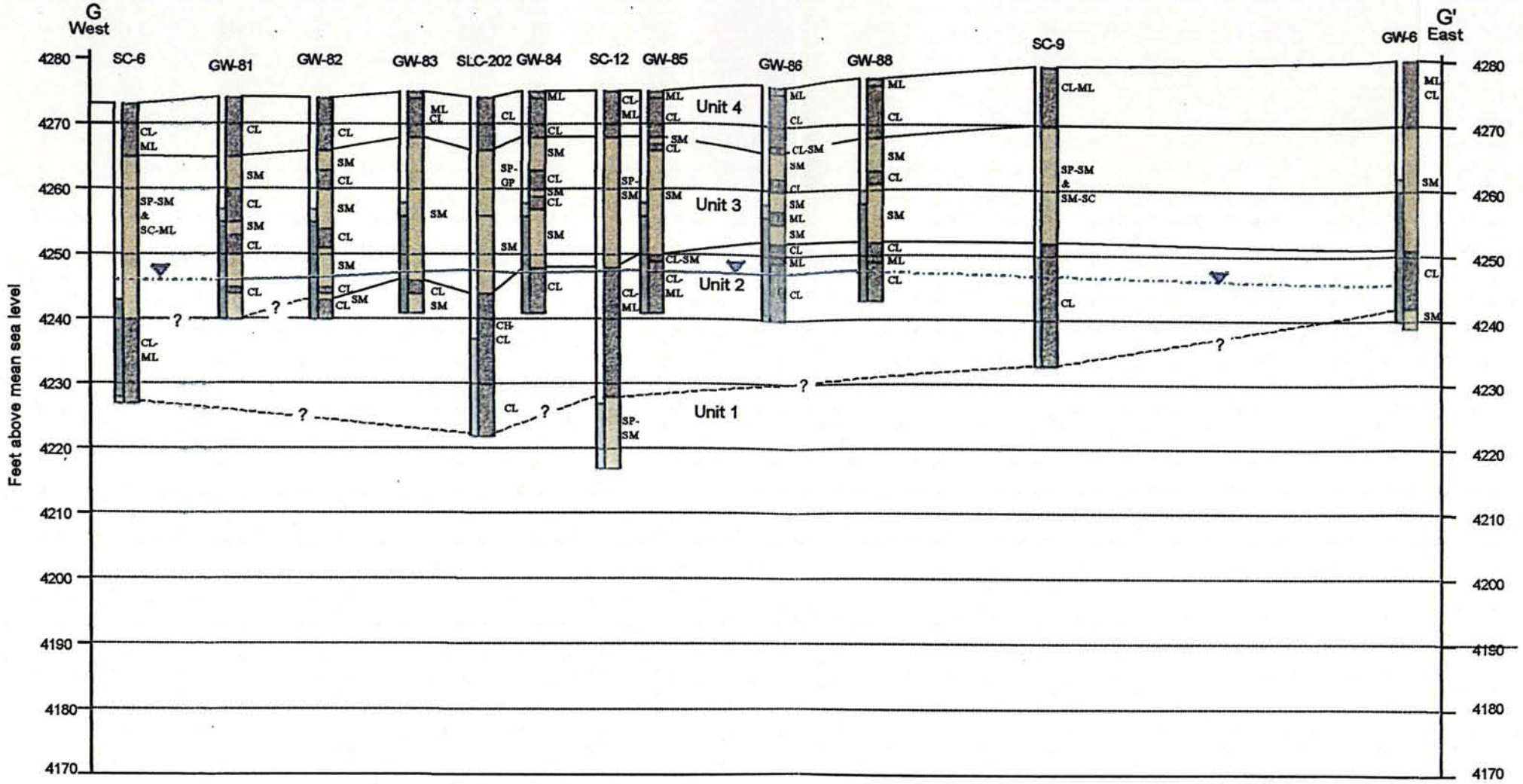
Figure 12. Hydrogeologic cross-section F-F'.



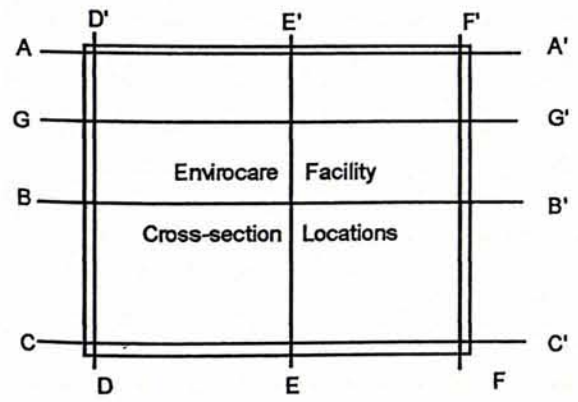
Legend

- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity
- Phreatic surface, shallow aquifer, August 1999
- Filter pack of well
- Screened interval of well

0 500 Horizontal scale (feet)

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

Note: Some logs are offset from section line as shown on Figure 6.



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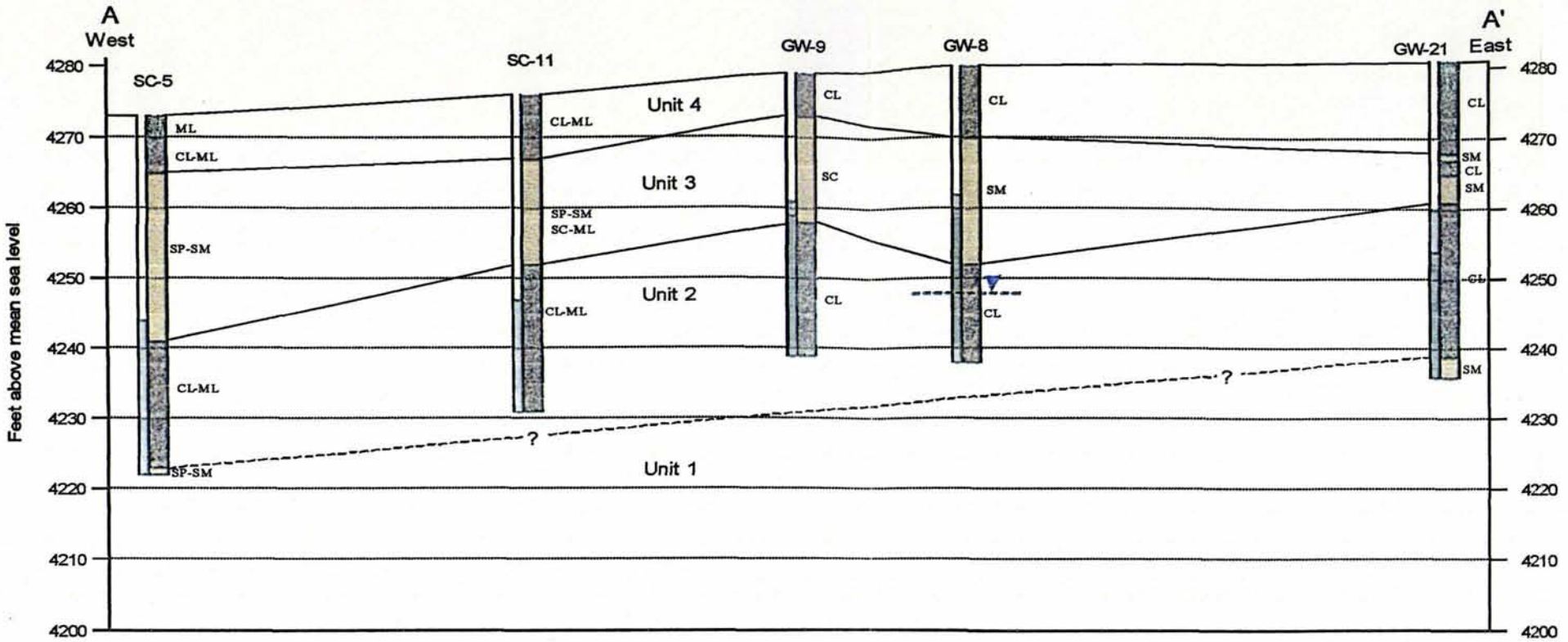
ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT
78 EAST 6700 SOUTH
MIDVALE, UTAH 84047 (801) 562-2521

Envirocare of Utah

Figure 13. Hydrogeologic cross-section G-G'.



Legend

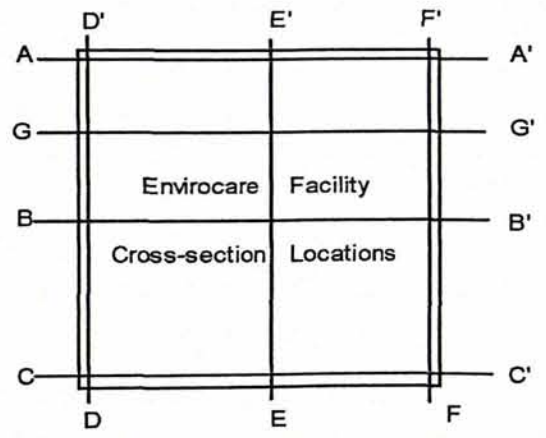
- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

- Phreatic surface, shallow aquifer, November 1999
- Filter pack of well
- Screened interval of well

Note: Some logs are offset from section line as shown on Figure 6.

0 500
Horizontal scale (feet)



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76 EAST 6790 SOUTH
MIDVALE, UTAH 84047 (801) 562-2521

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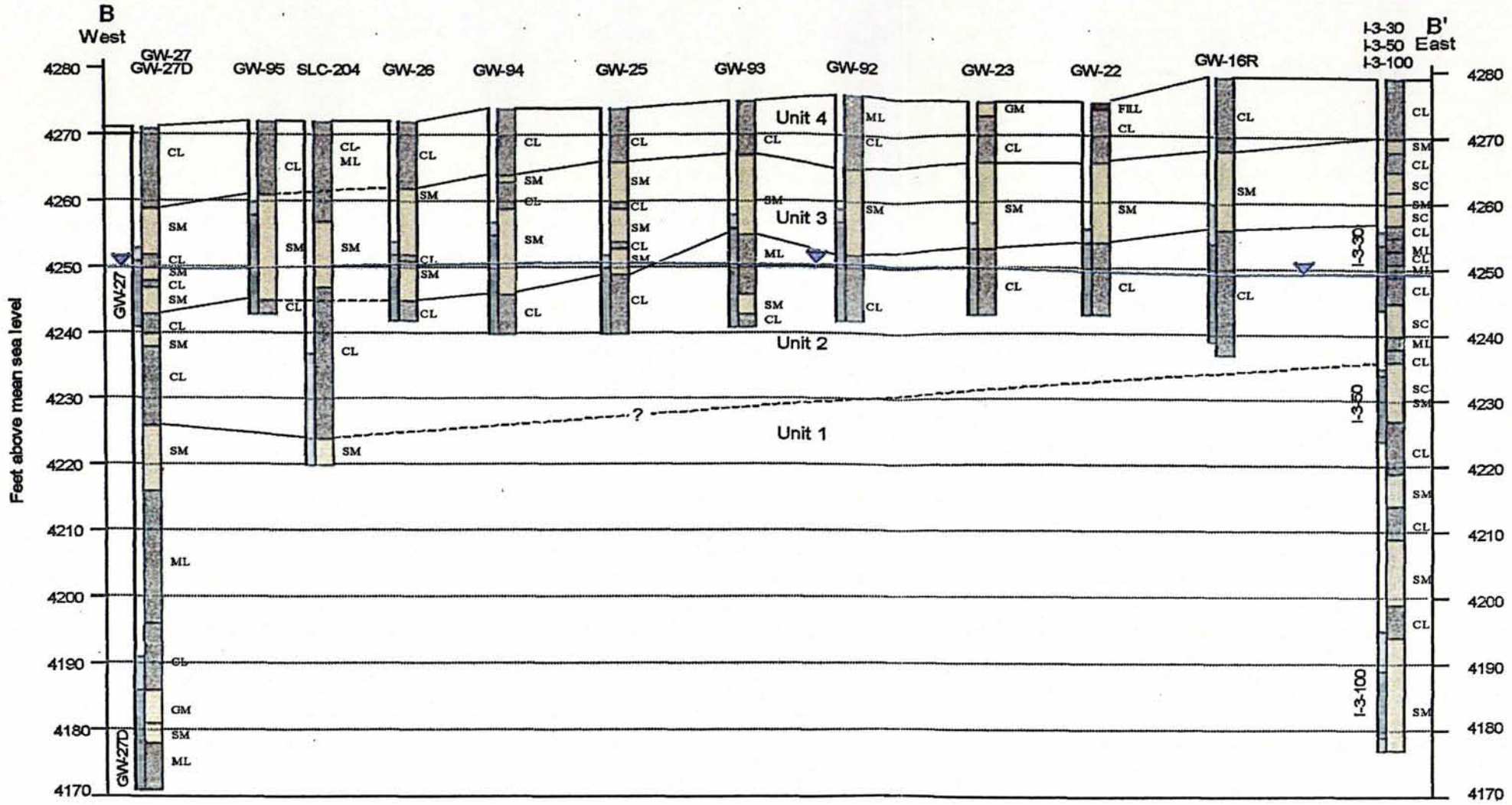
Figure 7. Hydrogeologic cross-section A-A'.



Legend

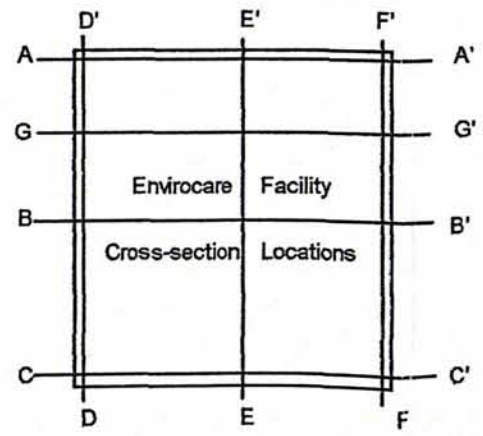
- Sediments with moderate to high estimated hydraulic conductivity
- Sediments with low estimated hydraulic conductivity
- Phreatic surface, shallow aquifer, August 1999

GW - Well graded gravel
GP - Poorly graded gravel
GM - Silty gravel
GC - Clayey gravel
SW - Well graded sand
SP - Poorly graded sand
SM - Silty sand
SC - Clayey sand
ML - Silt
CL - Clay

- Filter pack of well
- Screened interval of well

Note: Some logs are offset from section line as shown on Figure 6.

0 500
Horizontal scale (feet)



PENTACORE RESOURCES, LLC
ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT
78 EAST 8790 SOUTH
MIDVALE, UTAH 84047 (801) 562-2821

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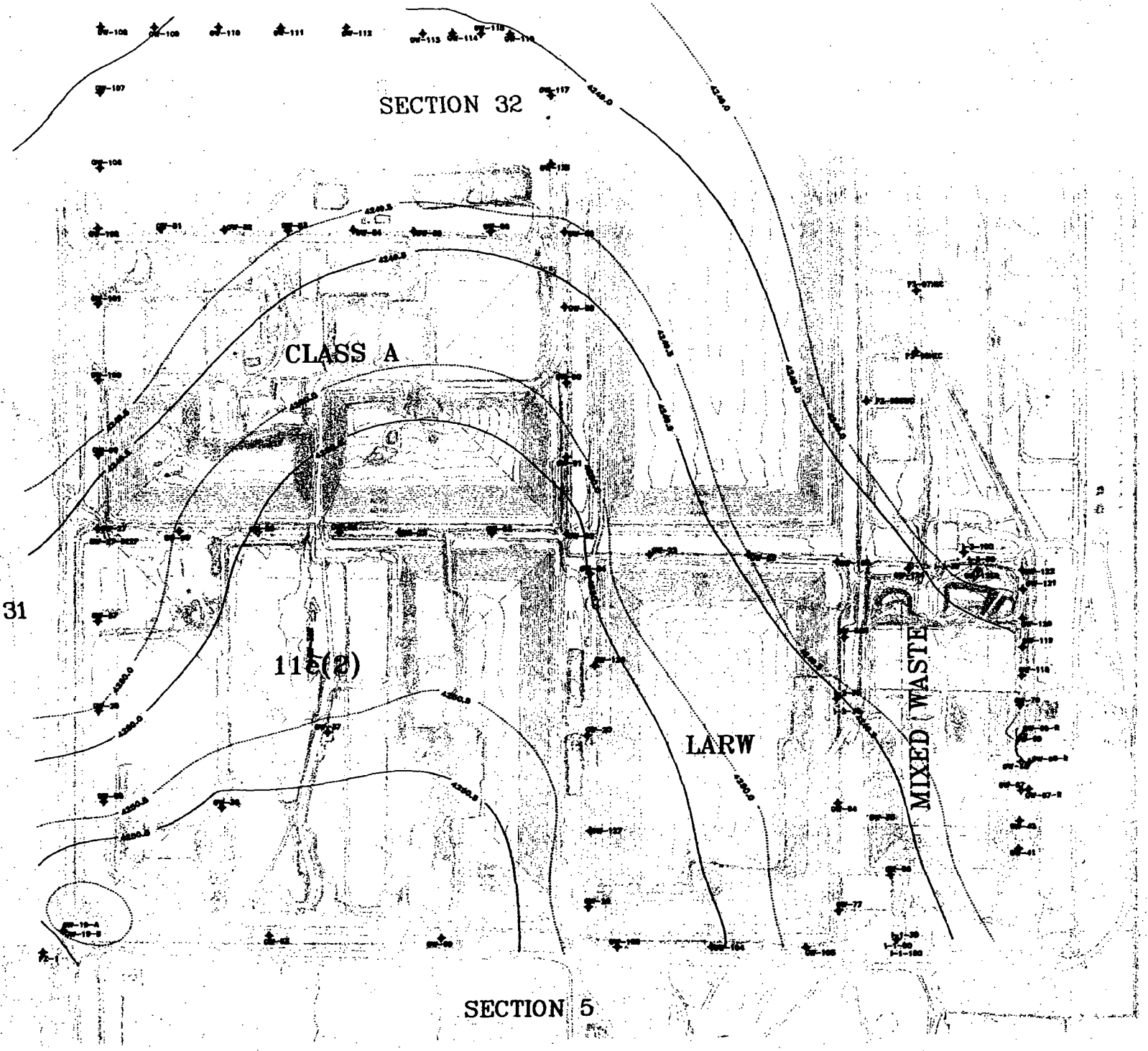
Figure 8. Hydrogeologic cross-section B-B'.

SECTION 30

SECTION 29

SECTION 28

SECTION 32



SECTION 31

SECTION 33

SECTION 5

LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- SALT WATER CONTOURS
- FRESHWATER CONTOURS
- ✦ GW-16R MONITORING WELLS

CONTOUR INTERVAL 0.5 FEET

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/07
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	FEB.04 WATER LEVELS SALT & FRESH WATER CLIVE, UTAH	FIGURE 14	

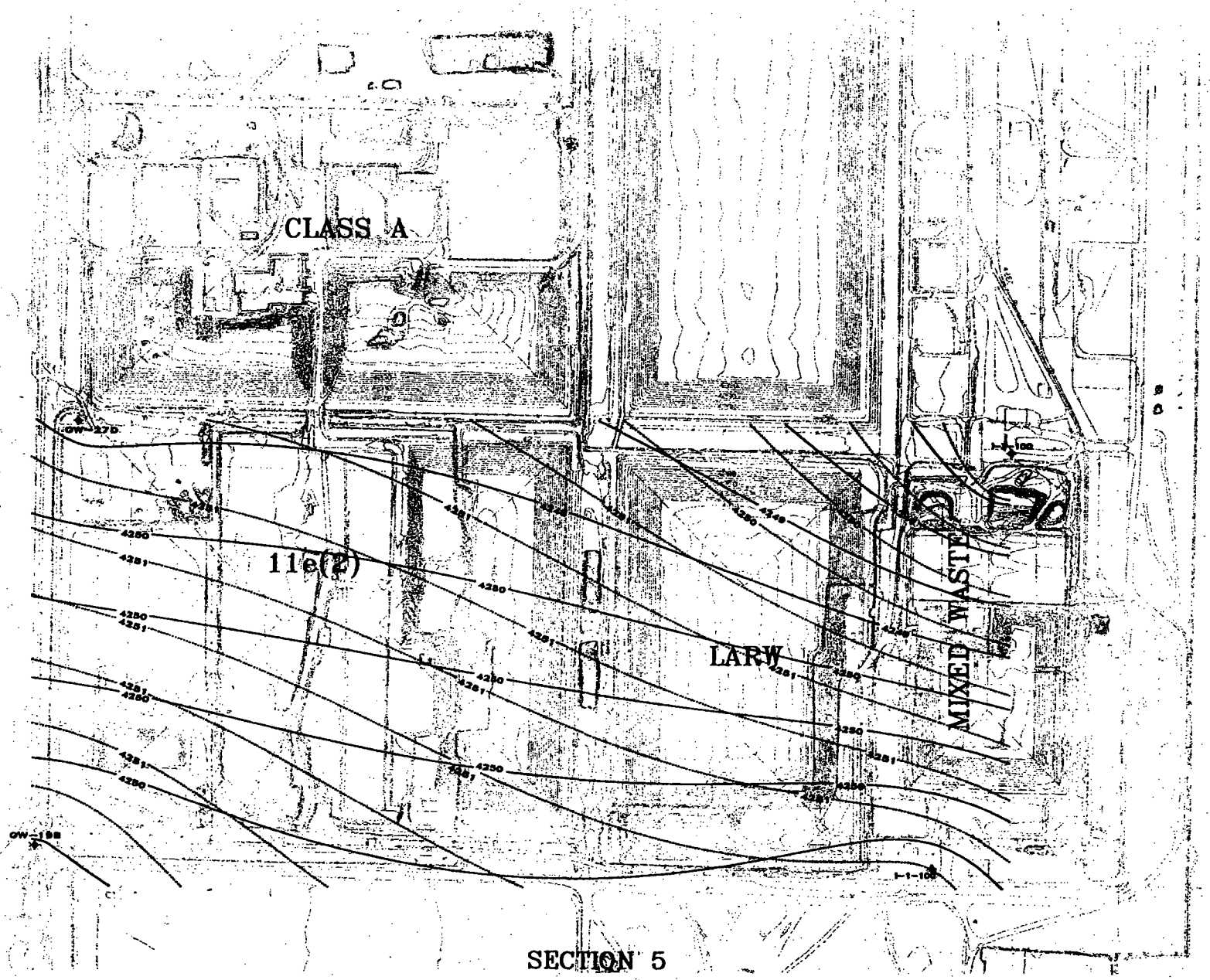
V:\Engineering\DRAWING FILES\SBRYAN\JEFF LOW\salt & fresh.dwg, 07/08/2004 02:22:04, sbryan

SECTION 30

SECTION 29

SECTION 28

SECTION 32



SECTION 31

SECTION 33

SECTION 5

LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- SALT WATER CONTOURS
- FRESHWATER CONTOURS
- ✦ GW-16R DEEP MONITORING WELLS
- CONTOUR INTERVAL 0.1 foot

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/16/
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	DEEP AQUIFER, SALINE AND FRESHWATER ELEVATIONS CLIVE, UTAH	FIGURE 15	

SECTION 30

SECTION 29

SECTION 28

SECTION 32

CLASS A

SECTION 31

11e(2)

LARW

MIXED WASTE

SECTION 33

SECTION 5

LEGEND

- FENCE
- RAILROAD
- SECTION LINE
- PERMITTED EMBANKMENT LIMITS
- EMBANKMENT BREAK LINES
- ISO-CONCENTRATION CONTOUR
- ✦ GW-16R MONITORING WELLS

CONTOUR INTERVAL 5000 mg/L

NOTE:
CONTOUR INFORMATION IS BASED ON AN AERIAL SITE SURVEY PERFORMED 12-16-03 BY AERO-GRAPHICS AERIAL SURVEYS, INC. MAJOR CONTOUR INTERVAL IS 10', MINOR INTERVAL IS 2'.

360 0 360 720

ENVIROCARE OF UTAH, INC.
THE SAFE ALTERNATIVE

S.BRYAN	ENVIROCARE 'CLIVE' SITE	AS NOTED	07/07/
J.LOW	ENVIROCARE SITE FACILITIES		
D.SHRUM	TOTAL DISSOLVED SOLIDS ISO-CONCENTRATION MAP CLIVE, UTAH	FIGURE 16	

V:\Engineering\DRAWING FILES\SBRYAN\JEFF LOW\TOTAL DISSOLVED SOLIDS ISO-CONCENTRATION MAP.dwg, 07/14/2004 08:24:36 AM, sbryan

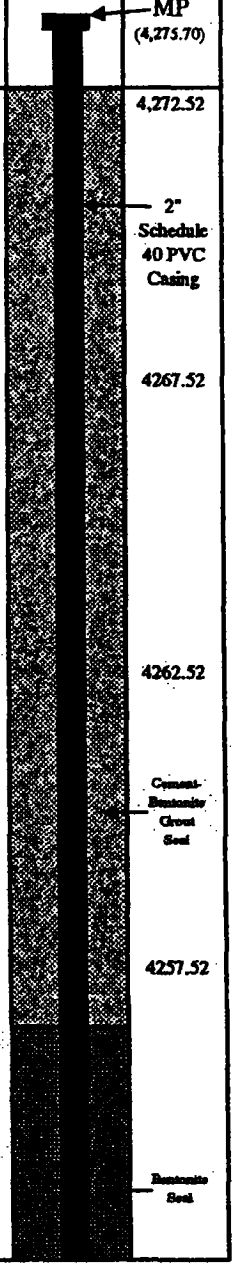
APPENDIX A

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) Disposal Facility	Boring Number: GW-38R
Date Drilled: 6-13-00 Date Completed: 6-13-00	Northing: 7,422,366.42 Easting: 1,191,229.26
Logged By: Dan Shrum	Ground Surface Elevation (ft): 4,272.52
Groundwater Elevation (ft): 4,251.25	Measuring Point (MP) Elevation (ft): 4,275.70
Date Measured: 6/14/2000	MP is top of Protective Casing
Total Depth (ft): 34.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 34.00 to 24.00 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.00 to 0.0 feet Type PVC Sch. 40
Sand 34.0 to 21.0 feet Bentonite Seal 21.0 to 16.0 feet Cement Grout Seal 16.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	0	30	70	NA	CC	3.0	CL	Silty clay, medium brown, fine sand, slightly moist, medium stiff	4,272.52
4	0	20	80	NA	CC	5.0		Silty clay, as above.	4267.52
7	0	15	85					Color change to light gray.	
9				NA	CC	5.0			
10	0	15	85					Silty clay, gray, fine sands, firm, moist to very moist, clay in layers, light to medium gray color.	4262.52
13	0	85	15				SM	Silty sand, fine to medium sand, sub-angular, brown, dense, slightly moist.	
14	0	80	20	NA	CC	4.5		Silty sand, as above, fine sand, some clay ~5%.	4257.52
19				NA	CC	4.5		Silty sand, greenish gray, fine sands, medium dense	



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-38R

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) Disposal Facility	Boring Number: GW-38R
Date Drilled: 6-13-00 Date Completed: 6-13-00	Northing: 7,422,366.42 Easting: 1,191,229.26
Logged By: Dan Shrum	Ground Surface Elevation (ft): 4,272.52
Groundwater Elevation (ft): 4,251.25	Measuring Point (MP) Elevation (ft): 4,275.70
Date Measured: 6/14/2000	MP is top of Protective Casing
Total Depth (ft): 34.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 34.00 to 24.00 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.00 to 0.0 feet Type PVC Sch. 40
Sand 34.0 to 21.0 feet Bentonite Seal 21.0 to 16.0 feet Cement Grout Seal 16.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	35	65				ML	Sandy silt, greenish gray, fine sands, calcite deposits - whitish.	4252.52 Bentonite Seal
21									
22									
23	0	85	15				SM	Silty sand, fine sands, dark gray, wet, medium dense, much cleaner sand than above.	
24	0	85	15	NA	CC	5.0		as above.	
25									4247.52
26									
27									
28	0	10	90				CL	Silty clay, light gray, stiff, slightly moist, fine sand.	16/30 Sand
29	0	10	90	5	CC	5.0		Silty clay, bluish gray, soft, wet.	
30				6 2 3	SS				4242.52
31								as above.	2" Schedule 40 PVC 0.010-inch Screen
32									
33									
34									

TD of boring - 34.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

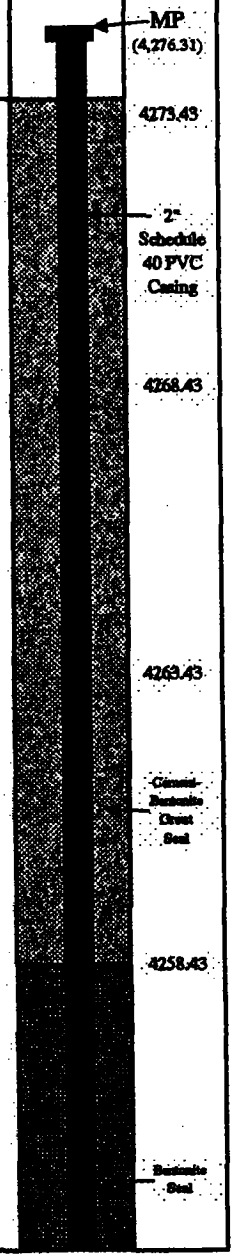
GW-38R

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-106
Date Drilled: 4-5-00 Date Completed: 4-6-00	Northing: 7,424,978.39 Easting: 1,190,205.31
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.43
Groundwater Elevation (ft): 4,249.00	Measuring Point (MP) Elevation (ft): 4,276.31
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 14.8 feet Cement Grout Seal 14.8 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	4.0	ML	Clayey silt, brown, stiff, dry.
1								
	0	20	80				ML/CL	Clayey silt/silty clay, brown, stiff, sl. moist.
2								
3								
4	0	20	80	NA	CC	5.0	CL	Silty clay, lt gray with iron oxide staining, stiff, moist.
5								
6								
7								
8								
9	5	70	25	NA	CC	1.3	SM	Silty sand, brown, medium dense, fine to medium grained sand with slightly moist, some gravels to 1/4 inch.
10								
11								
12								
13								
14	0	20	80	NA	CC	3.0	CL	Silty clay, light gray, moderately stiff, moist, low plasticity.
15								
16								
17								
18	0	70	30				SM	Silty sand, fine grained, light brown, dense, moist.
19				NA	CC	2.5		



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-106

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-106
Date Drilled: 4-5-00 Date Completed: 4-6-00	Northing: 7,424,978.39 Easting: 1,190,205.31
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.43
Groundwater Elevation (ft): 4,249.00	Measuring Point (MP) Elevation (ft): 4,276.31
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 14.8 feet Cement Grout Seal 14.8 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM	Silty sand, fine grained, light brown, dense, moist.	4253.43 Bentonite Seal
21									
22								Black sand layers, probably volcanic sands, very thin, very dense.	
23									
24	0	70	30	NA	CC	3.0		Silty sand, brown, wet, medium dense, fines sand, rounded grains.	4248.43
25									
26									
27									
28									16/30 Sand
29				NA	CC	5.0		Silty sand, brown, very moist, dense.	
30									4243.43
31	0	40	60				ML	Sandy silt, brown, very moist to wet, medium dense.	
32								Color change to greenish gray, wet.	
33									
34				2	SS/	5.0		Sandy silt, wet, medium dense, loose.	
35				2 3 4	CC				4238.43 2" Schedule 40 PVC 0.010-inch Screen
36									
37	0	20	80				CL	Silty clay, greenish gray, moist, stiff, medium plasticity.	
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

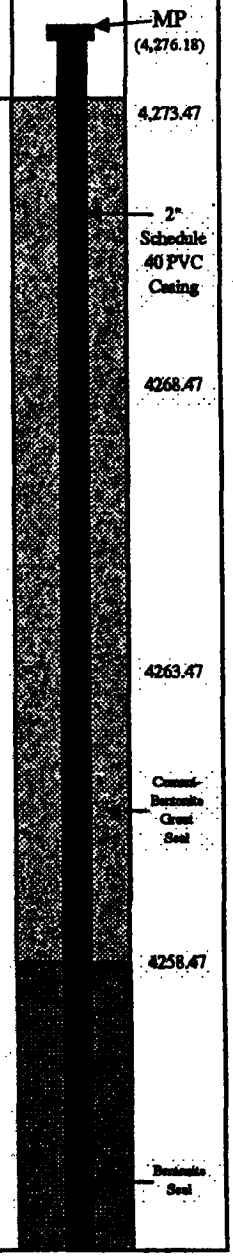
GW-106

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-107
Date Drilled: 4-5-00 Date Completed: 4-5-00	Northing: 7,425,371.18 Easting: 1,190,222.92
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.47
Groundwater Elevation (ft): 4,249.05	Measuring Point (MP) Elevation (ft): 4,276.18
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.75 to 23.75 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.75 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	30	70	NA	CC	4.0	ML	Clayey silt, brown, firm, dry, fine sand.
1								
2								
3								Iron oxide staining begins, sl. Moist
4				NA	CC	5.0		
5	0	20	80				CL	Silty clay, light gray with iron oxide staining, moist, medium stiff, low plasticity
6								
7								
8	5	20	75				ML	Clayey silt, light brown with iron oxide staining, slightly moist, medium stiff, subangular gravels.
9	20	60	20	NA	CC	1.0	SM	Silty sand with gravel, brown, dry, loose, fine to medium grained sand, subrounded gravels, abundant quartz.
10								
11								
12								
13								
14	5	70	25	NA	CC	1.0		Silty sand, brown, medium dense, slightly moist, decreasing gravels.
15								
16								
17								
18								
19	0	75	25	NA	CC	2.5		Very thin black sand layers



Elevation (feet)
4,273.47
4268.47
4263.47
4258.47

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-107

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-107
Date Drilled: 4-5-00 Date Completed: 4-5-00	Northing: 7,425,371.18 Easting: 1,190,222.92
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.47
Groundwater Elevation (ft): 4,249.05	Measuring Point (MP) Elevation (ft): 4,276.18
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.75 to 23.75 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.75 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM	Silty sand, fine grained, light brown, dense, moist.	4253.47 Bentonite Seal
21									
22									
23									
24	0	65	35	NA	CC	2.5		Silty sand, brown, wet, medium dense, fine subrounded sand, increasing silt.	4248.47
25									
26									
27									
28									16/30 Sand
29				NA	CC	4.5		Silty sand, light brown, very moist.	4243.47
30									
31									
32	0	40	60				ML/CL	Silty clay/clayey silt, greenish gray, wet, soft, high sand fraction fine sands.	
33									
34	0	15	85	1	SS/	5.0	CL	Silty clay, greenish gray, very moist, soft, medium plasticity.	
35				1 2 8	CC				4238.47 2" Schedule 40 PVC 0.010-inch Screen
36								color change to light brown, stiff.	
37									
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

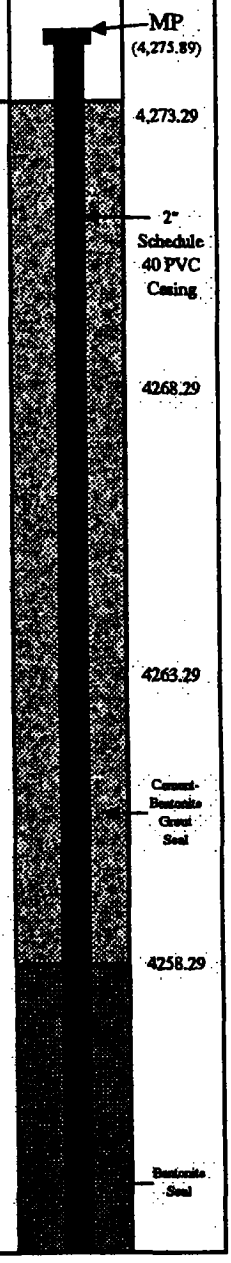
GW-107

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-108
Date Drilled: 4-5-00 Date Completed: 4-5-00	Northing: 7,425,717.51 Easting: 1,190,239.29
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.29
Groundwater Elevation (ft): 4,249.63	Measuring Point (MP) Elevation (ft): 4,275.89
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 39.0 to 24.0 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.0 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 14.8 feet Cement Grout Seal 14.8 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	3.5	ML	Clayey silt, brown, very stiff, dry.
3	0	20	80				CL	Silty clay, light brown with iron oxide staining, moderately stiff, slightly moist.
4	0	15	85	NA	CC	5.0		
7								Silty clay, light gray with light brown layers, moderately stiff, moist, salt crystals.
9	0	75	25	NA	CC	4.5	SM	Silty sand, brown, medium dense, slightly moist, fine-subrounded sand grains.
11	0	75	25					Silty sand, light brown, fine to medium grained sand, loose, dry.
14	0	70	30	NA	CC	4.0		Silty sand, light brown, fine, subrounded sand grains, medium dense, moist
19	0	70	30	NA	CC	4.5		



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-108

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-108
Date Drilled: 4-5-00 Date Completed: 4-5-00	Northing: 7,425,717.51 Easting: 1,190,239.29
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.29
Groundwater Elevation (ft): 4,249.63	Measuring Point (MP) Elevation (ft): 4,275.89
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 39.0 to 24.0 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.0 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 14.8 feet Cement Grout Seal 14.8 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM	Silty sand, fine grained, light brown, dense, moist. Very thin black sand layers	4253.29 Bentonite Seal
21									
22									
23									
24	0	30	70	NA	CC	5.0	ML	Clayey silt, brown, stiff, moist, fine sands, no plasticity.	4248.29
25									
26	0	60	40				SM	Silty sand, light brown, dense, moist, fine sand, high silt fraction.	
27									
28								thin white sand layer, fine grained, sub-rounded, approximately 1.5 centimeters thick.	16/30 Sand
29				NA	CC	5.0		Silty sand, light brown, wet, loose.	4243.29
30									
31	0	35	65					Silty sand, greenish gray, medium dense, very moist to wet.	
32									
33							CL	Silty clay, greenish gray, stiff, very moist.	
34	0	15	85	12	SS/	4.5			4238.29
35				8 8	CC				2" Schedule 40 PVC 0.010-inch Screen
36	0	65	35	13			SM CL	Silty sand, greenish gray, loose, wet Silty clay, greenish gray, stiff, very moist	
37	0	20	80						
38								Thin, wet, silty sand lenses.	
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-108

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-109
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,706.20 Easting: 1,190,522.23
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.90
Groundwater Elevation (ft): 4,249.27	Measuring Point (MP) Elevation (ft): 4,276.50
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	0	30	70	NA	CC	3.5	ML	Clayey silt, brown, very stiff, dry.	4,273.90
3	0	20	80				CL	Silty clay, brown with reddish brown mottling (iron oxide staining), medium stiff, slightly moist.	
4				NA	CC	5.0			4268.90
6	0	15	85					Silty clay, gray with light gray layers, iron oxide staining, medium stiff, slightly moist, salt crystals present.	
9	0	65	35	NA	CC	2.0	SM	Silty sand, light brown, fine-subrounded sand grains, medium dense, slightly moist.	4263.90
14	5	70	25	NA	CC	1.0		Silty sand, light brown, fine to medium sand, subrounded, very dense, slightly moist, subrounded quartzite gravel to 5%.	4258.90
19	0	70	30	NA	CC	5.0		Silty sand, brown, fine-grained sands, very dense, moist.	

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-109

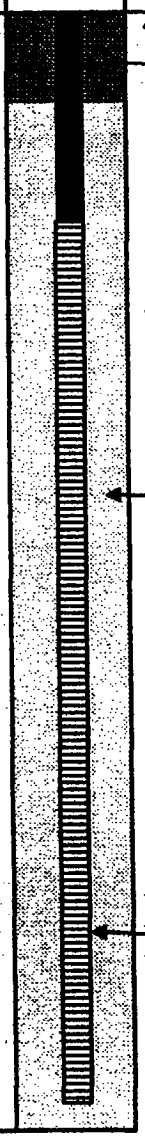
Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-109
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,706.20 Easting: 1,190,522.23
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,273.90
Groundwater Elevation (ft): 4,249.27	Measuring Point (MP) Elevation (ft): 4,276.50
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM	Silty sand, brown, fine-grained sands, very dense, moist.	4253.90 Bentonite Seal
21									
22									
23									
24	0	70	30	NA	CC	4.5		Silty sand, light brown, moist, very dense.	4248.90
25									
26									
27									
28	0	20	80				CL	Silty clay with sand, brown, moist, medium stiff, fine sands.	16/30 Sand
29				NA	CC	5.0			
30									4243.90
31	0	25	75					Silty clay, greenish gray, thin, light gray layers, very moist, medium stiff, medium plasticity.	
32									
33									
34				4	SS/	4.5			
35				3 5 7	CC			Thin sandy lenses, wet, loose	4238.90 2" Schedule 40 PVC 0.010-inch Screen
36	0	15	85					Silty clay, stiff, very moist to wet, medium plasticity.	
37									
38									
39									

TD of boring - 39.0 feet bgs



CC Continuous Core Barrel
SS Split Spoon Sampler

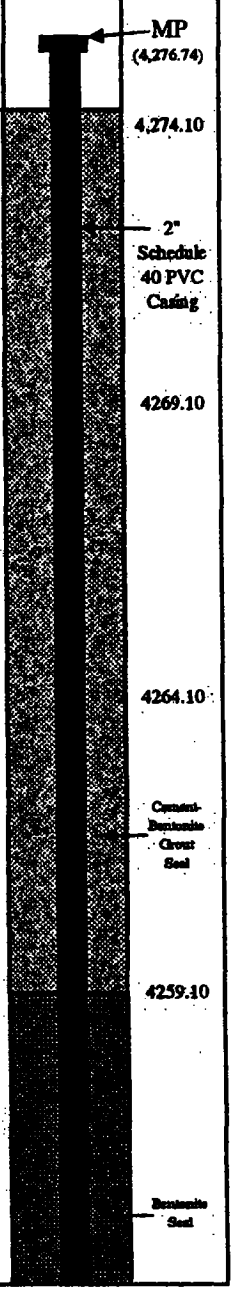
GW-109

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-110
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,693.41 Easting: 1,190,849.75
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.10
Groundwater Elevation (ft): 4,249.23	Measuring Point (MP) Elevation (ft): 4,276.74
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	30	70	NA	CC	2.5	ML	Clayey silt, brown, stiff, dry.
3							ML/CL	Clayey silt-silty clay, light brown with iron oxide staining, medium stiff, slightly moist, medium plasticity.
4				NA	CC	5.0		
6	0	20	80				CL	Silty clay, light gray with iron oxide staining, moist, soft.
9				NA	CC	4.0		
10	0	70	30				SM	Silty sand, light brown, dense, slightly moist, fine-subrounded sands
14	0	70	30	NA	CC	2.0		Silty sand, very dense, slightly moist.
16	0	70	30	NA	CC	1.0		very dense sands.
19	0	60	40	NA	CC	1.5		Silty sand, light brown, fine sands, increasing silt and clay, dense, slightly moist.



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-110

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-110
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,693.41 Easting: 1,190,849.75
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.10
Groundwater Elevation (ft): 4,249.23	Measuring Point (MP) Elevation (ft): 4,276.74
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM	Silty sand, light brown, fine sands, increasing silt and clay, dense, slightly moist.	4254.10 Bentonite Seal
21									
22									
23									
24	0	65	35	NA	CC	2.0		Silty sand, fine grained sands, dense, very moist, light brown.	
25									4249.10
26									
27								Wet, lense.	
28									16/30 Sand
29	0	25	75	NA	CC	5.0	CL	Silty clay, light gray, dense, moist.	
30									4244.10
31	0	30	70					Silty clay, greenish gray with light gray layers, sand to 30%.	
32									
33									
34				8	SS/	5.0		Silty clay, greenish gray, very moist, stiff	
				8	CC				
35				10					4239.10
	0	60	40	14			SM	Silty sand lense, wet, greenish gray, medium dense.	2" Schedule 40 PVC 0.010-inch Screen
36							CL	Silty clay, greenish gray, wet, stiff.	
37									
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

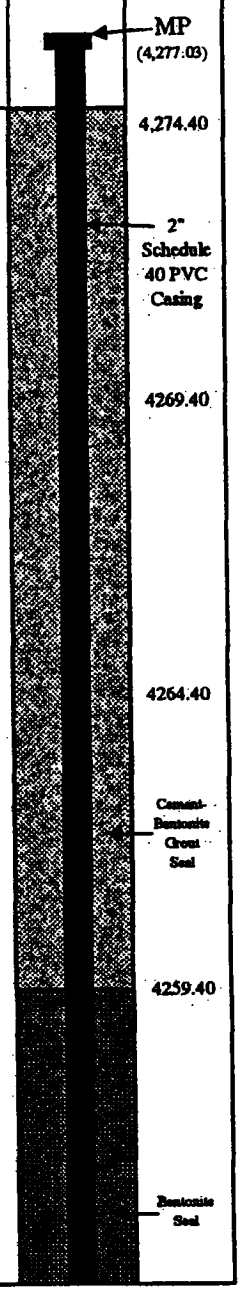
GW-110

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-111
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,681.74 Easting: 1,191,176.67
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.40
Groundwater Elevation (ft): 4,249.26	Measuring Point (MP) Elevation (ft): 4,277.03
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	3.0	ML	Clayey silt, brown, very stiff, dry.
1								
2								slightly moist
3								
4	0	20	80	NA	CC	3.0	CL	Silty clay, light brown with iron oxide staining, medium stiff, slightly moist.
5								
6								Silty clay, gray with light gray layers, stiff, slightly moist.
7								
8								
9				NA	CC	4.0		
10	0	70	30				SM	Silty sand, brown, medium dense, slightly moist, fine to medium grained sands.
11								
12	5	70	25					subrounded gravels in silty sand.
13								
14				NA	CC	4.5		
15	0	70	30					Silty sand, fine grained, loose to medium dense, slightly moist.
16								
17								
18								
19	0	70	30	NA	CC	4.5		Silty sand, light brown, fine sands, medium dense, moist.



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-111

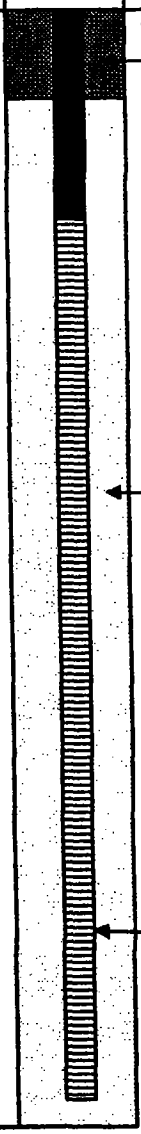
Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-111
Date Drilled: 4-4-00 Date Completed: 4-4-00	Northing: 7,425,681.74 Easting: 1,191,176.67
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.40
Groundwater Elevation (ft): 4,249.26	Measuring Point (MP) Elevation (ft): 4,277.03
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
20							SM	Silty sand, light brown, fine sands, medium dense, moist.
21								
22	0	40	60				ML	Sandy silt, stiff, moist, fine grained sand, light brown.
23	0	70	30				SM	Silty sand, light brown, medium dense, moist
24				NA	CC	4.5		
25								
26								
26	0	70	30					Silty sand, wet, light brown, medium dense.
27								
28								
28	0	60	40					increasing silt, fine sand.
29	0	70	30	NA	CC	5.0	CL	Silty clay, light brown, stiff, moist, low plasticity.
30								
31								
32	0	20	80					Silty clay, greenish gray with light gray layers, very moist, stiff.
33								
34	0	15	85	12	SS/	5.0		
				13	CC			
35				18				Silty clay with silty sand lenses, wet.
				25				
36								
37								
38								
39								

Elevation (feet)



TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

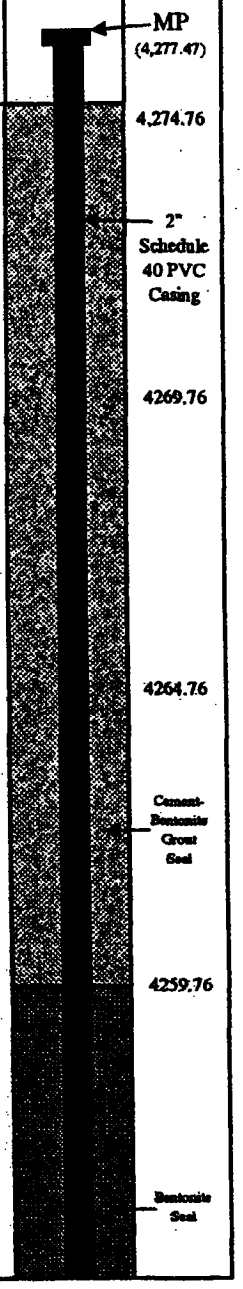
GW-111

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-112
Date Drilled: 4-3-00 Date Completed: 4-3-00	Northing: 7,425,670.31 Easting: 1,191,511.61
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.76
Groundwater Elevation (ft): 4,249.21	Measuring Point (MP) Elevation (ft): 4,277.47
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	2.5	ML	Clayey silt, medium stiff, brown, dry to slightly moist.
4	0	20	80	NA	CC	5.0	CL	Silty clay, light brown with iron oxide staining, medium stiff, slightly moist, low plasticity
7	0	15	85					Silty clay, light gray with iron oxide staining, increasing clay, medium plasticity, moist.
9	0	15	85	NA	CC	4.5		Silty clay, as above, decreasing iron oxide staining.
11	0	70	30				SM	Silty sand, brown, medium dense, dry, fine to medium sand, subrounded.
14	0	70	30	NA	CC	2.5		Silty sand, light brown, medium dense, slightly moist, fine grained.
19	0	70	30	NA	CC	5.0		



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-112

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-112
Date Drilled: 4-3-00 Date Completed: 4-3-00	Northing: 7,425,670.31 Easting: 1,191,511.61
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,274.76
Groundwater Elevation (ft): 4,249.21	Measuring Point (MP) Elevation (ft): 4,277.47
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							SM		4254.76 Bentonite Seal
21	0	25	75				ML	Clayey silt, brown, medium stiff, slightly moist, low plasticity.	
22									
23	0	70	30				SM	Silty sand, fine-subrounded grains, light brown, medium dense, slightly moist.	
24				NA	CC	5.0			
25								Silty sand, medium dense, light brown, moist with wet lenses.	4249.76
26									
27									
28	0	25	75				ML	Clayey silt, light gray, medium stiff, moist, fine sand.	16/30 Sand
29	0	20	80	NA	CC	5.0			
30									4244.76
31									
32							CL	Silty clay, greenish gray with thin light gray layers, moist, stiff, thin-wet silty sand lenses.	
33									
34				3	SS/	5.0		Silty clay, greenish gray, moist, medium stiff, very stiff.	
35				5 12 5	CC				4239.76 2" Schedule 40 PVC 0.010-inch Screen
36								thin, wet sand lenses.	
37									
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

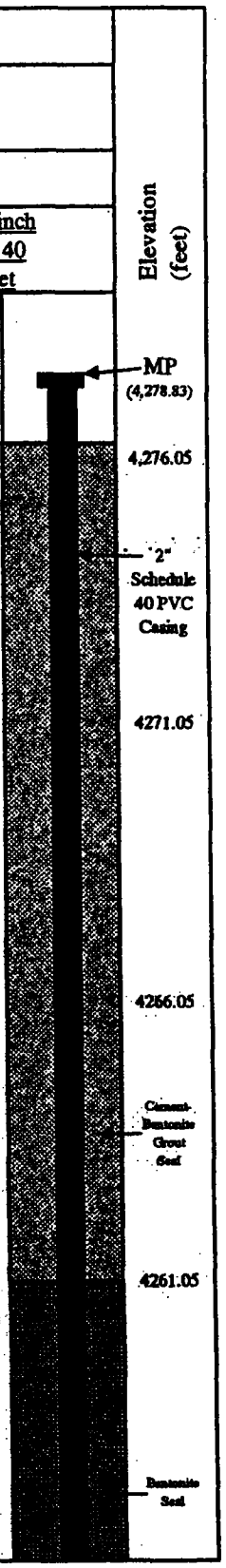
GW-112

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-113
Date Drilled: 4-3-00 Date Completed: 4-3-00	Northing: 7,425,625.59 Easting: 1,191,919.66
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,276.05
Groundwater Elevation (ft): 4,249.32	Measuring Point (MP) Elevation (ft): 4,278.83
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	3.0	ML	Clayey silt, brown, soft, slightly moist.
1								
	0	20	80				CL	Silty clay, light brown, medium stiff, low plasticity, slightly moist.
2								
3								Iron oxide staining.
4				NA	CC	5.0		
5	0	20	80					Silty clay, light gray with iron oxide staining, medium stiff, slightly moist.
6								
7								Alternating light gray and light brown layers with iron oxide staining.
8								
9	0	25	75	NA	CC	4.5		
10								
							SM	Silty sand, brown, dry, medium dense, fine to medium sand, subrounded.
11								
12								
13								
14				NA	CC	5.0		
15	0	20	80				CL	Silty clay, light gray, stiff, moist, medium plasticity.
16								
17								
	0	70	30				SM	Silty sand, light brown, dense, slightly moist, fine grained.
18								
19				NA	CC	5.0		
	0	25	75				ML/CL	Silty clay-clayey silt, brown, medium stiff, slightly moist, fine sands.



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-113

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-113
Date Drilled: 4-3-00 Date Completed: 4-3-00	Northing: 7,425,625.59 Easting: 1,191,919.66
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,276.05
Groundwater Elevation (ft): 4,249.32	Measuring Point (MP) Elevation (ft): 4,278.83
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
20	0	25	75				ML/CL	Silty clay-clayey silt, brown, medium stiff, slightly moist, fine sands.
21								
22								
23	0	75	25				SM	Silty sand, light brown, slightly moist, dense, fine sand,
24				NA	CC	5.0		sub-rounded.
25								
26	0	15	85				CL	Silty clay, brown, slightly moist, stiff, medium plasticity.
27								
28								
29	0	30	70	NA	CC	5.0		Silty clay, light gray with light brown layers, very moist to wet, soft.
30								
31								
32								
33	0	15	85				ML/CL	Silty clay-clayey silt, greenish gray, moist, medium stiff, low plasticity.
34				3	SS/	5.0		
				3	CC			
35				5			CL	
				8				Silty clay with silty sand lenses, greenish gray, wet, stiff,
36								medium plasticity, fine sand.
37								
38								
39								

Elevation (feet): 4256.05 Bentonite Seal; 4251.05 16/30 Sand; 4246.05; 4241.05 2" Schedule 40 PVC 0.010-inch Screen

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

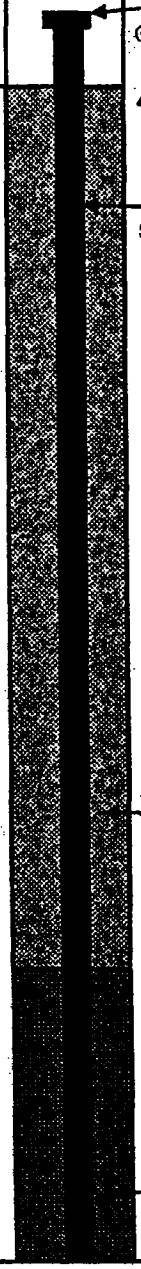
GW-113

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-114
Date Drilled: 3-31-00 Date Completed: 3-31-00	Northing: 7,425,620.16 Easting: 1,192,069.38
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,276.68
Groundwater Elevation (ft): 4,249.39	Measuring Point (MP) Elevation (ft): 4,279.40
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	0	20	80	NA	CC	3.5	ML	Clayey silt, brown, stiff, slightly moist.	4,276.68
1									
2	0	20	80				ML/CL	Clayey silt-silty clay, medium stiff, brown, slightly moist	
3									
4				NA	CC	5.0			
5	0	15	85				CL	Silty clay, light brown with iron oxide staining, medium stiff, moist.	4271.68
6									
7	0	15	85					Silty clay, light gray with iron oxide staining, medium stiff, moist.	
8									
9	0	20	80	NA	CC	3.5		Silty clay, light gray, stiff, medium plasticity, moist.	
10									4266.68
11									
12	0	70	30				SM	Silty sand, brown, loose, slightly moist, fine-subrounded grains.	
13									
14	0	70	30	NA	CC	5.0		Silty sand, brown, dry, medium dense, fine to medium sand, subrounded.	
15									4261.68
16									
17	0	60	40					Increasing silts.	
18									
19				NA	CC	5.0			



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-114

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-114
Date Drilled: 3-31-00 Date Completed: 3-31-00	Northing: 7,425,620.16 Easting: 1,192,069.38
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,276.68
Groundwater Elevation (ft): 4,249.39	Measuring Point (MP) Elevation (ft): 4,279.40
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	35	65				ML	Sandy silt, medium stiff, light brown, slightly moist, fine sands.	4256.68 Bentonite Seal
21									
22									
23	0	30	70					color change to brown, decreasing sand	
24				NA	CC	5.0			
25									4251.68
26	0	20	80				ML/CL	Silty clay-clayey silt, brown, stiff, moist, low plasticity.	
27									
28									16/30 Sand
29	0	15	85	NA	CC	5.0	CL	Silty clay, olive gray with brown mottling, medium stiff, moist	
30									4246.68
31									
32								silty clay, olive gray with light gray layers, very moist.	
33									
34				9	SS/	4.0		Silty clay with silty sand lenses, wet, very stiff,	
35				25 41	CC			fine sand in lenses, olive gray.	4241.68
36				25					2" Schedule 40 PVC 0.010-inch Screen
37									
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

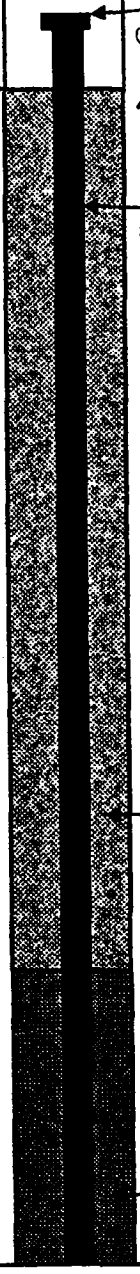
GW-114

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-115
Date Drilled: 3-31-00 Date Completed: 3-31-00	Northing: 7,425,614.71 Easting: 1,192,219.40
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,277.03
Groundwater Elevation (ft): 4,249.43	Measuring Point (MP) Elevation (ft): 4,279.85
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
0	0	25	75	NA	CC	4.0	ML	Clayey silt, brown, stiff, slightly moist.
1	0	20	80				ML/CL	Silty clay-clayey silt, light gray, medium stiff, slightly moist.
4	0	15	85	NA	CC	5.0	CL	Silty clay, brown with iron oxide staining, medium stiff, moist.
7	0	15	85					Silty clay, light gray with iron oxide staining, increasing silt.
9	0	15	85	NA	CC	5.0	ML/CL	Silty clay-clayey silt, light gray with iron oxide staining, moist, low plasticity.
11	0	70	30				SM	Silty sand, brown, medium dense, slightly moist, fine to medium grained, subrounded.
14				NA	CC	4.0		
15	0	30	70				ML	Clayey silt, brown, stiff, moist, fine sands.
16	0	70	30				SM	Silty sand, light brown, medium dense, slightly moist, fine-subrounded sand grains.
19				NA	CC	5.0		



Elevation (feet)
4,277.03
4272.03
4267.03
4262.03

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-115

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-115
Date Drilled: 3-31-00 Date Completed: 3-31-00	Northing: 7,425,614.71 Easting: 1,192,219.40
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,277.03
Groundwater Elevation (ft): 4,249.43	Measuring Point (MP) Elevation (ft): 4,279.85
Date Measured: 4/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	70	30				SM	Silty sand, light brown, dense, moist.	4257.03 Bentonite Seal
24	0	30	70	NA	CC	5.0	ML	Clayey silt, brown, medium stiff, moist, fine sands.	4252.03
29	0	15	85	NA	CC	5.0	CL	Silty clay, olive gray, soft, very moist.	16/30 Sand; 4247.03
								Silty sand lenses, olive gray, wet, fine sands.	
34	0	15	85	4 11 11 20	SS/ CC	4.0		Silty clay, olive gray, very moist with thin, wet sand layers. fine sand in lenses, olive gray.	4242.03 2" Schedule 40 PVC 0.010-inch Screen
39								TD of boring - 39.0 feet bgs	

CC Continuous Core Barrel
SS Split Spoon Sampler

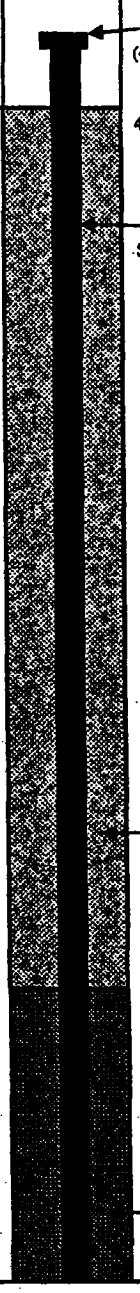
GW-115

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-116
Date Drilled: 3-30-00 Date Completed: 3-30-00	Northing: 7,425,609.27 Easting: 1,192,369.27
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,278.06
Groundwater Elevation (ft): 4,249.48	Measuring Point (MP) Elevation (ft): 4,280.78
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	5	25	70	NA	CC	4.0	ML	Clayey silt, brown, stiff, slightly moist, small gravels.	4,278.06
1	0	25	75				CL	Silty clay, light brown, medium stiff, slightly moist.	
2									
3									
4	0	20	80	NA	CC	4.5		Silty clay, light brown, iron oxide staining, slightly moist, stiff.	4273.06
5									
6									
7									
8	0	20	80					Silty clay, light gray with gray layers, medium stiff, slightly moist.	
9	0	20	80	NA	CC	4.0			
10									4268.06
11	0	70	30				SM	Silty sand, brown, dense, slightly moist fine to medium grained, subrounded.	
12									
13									
14				NA	CC	4.0			
15	0	70	30					Silty sand, light gray, dense, slightly moist, fine grained.	4263.06
16									
17									
18									
19				NA	CC	3.0			



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-116

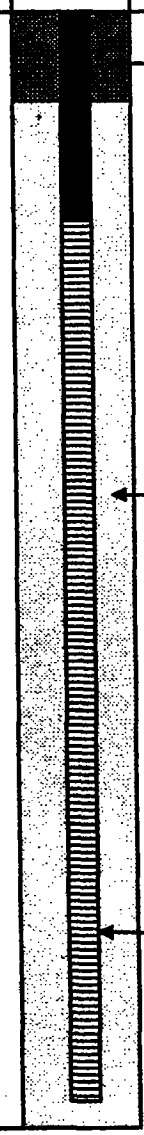
Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-116
Date Drilled: 3-30-00 Date Completed: 3-30-00	Northing: 7,425,609.27 Easting: 1,192,369.27
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,278.06
Groundwater Elevation (ft): 4,249.48	Measuring Point (MP) Elevation (ft): 4,280.78
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
20	0	40	60				ML	Sandy silt, light gray to light brown, stiff, moist, fine sands.
21								
	0	70	30				SM	Silty sand, light brown, dense, moist.
22								
23								
24				NA	CC	5.0		
25								
26	0	15	85				CL	Silty clay, light brown, moist, stiff, medium plasticity.
27								
28								
29	0	20	80	NA	CC	4.0		Silty clay, olive gray, stiff, very moist.
30								
								alternating olive gray and light gray layers.
31								
32								Thin silty sand lenses, wet.
33								
34	0	20	80		CC	5.0		
35								Silty sand lenses, olive gray, wet.
36								
37								
38	0	70	30				SM	Silty sand, olive gray, dense, very moist, fine-rounded grains.
39								

TD of boring - 39.0 feet bgs



Elevation (feet)

CC Continuous Core Barrel
SS Split Spoon Sampler

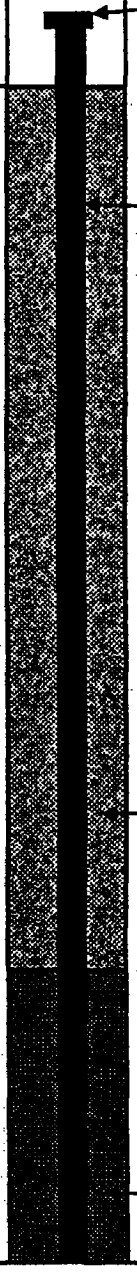
GW-116

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-117
Date Drilled: 3-30-00 Date Completed: 3-30-00	Northing: 7,425,281.20 Easting: 1,192,572.86
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,277.12
Groundwater Elevation (ft): 4,249.53	Measuring Point (MP) Elevation (ft): 4,279.97
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	0	20	80	NA	CC	4.0	ML	Clayey silty, medium brown, medium stiff, slightly moist.	4,277.12
1									
2	0	15	85				CL	Silty clay, light gray, medium stiff, moist.	
3									
4				NA	CC	4.5		Silty clay, light gray with iron oxide staining, medium stiff, moist.	4272.12
5									
6									
7									
8	0	15	85						
9				NA	CC	4.5		Silty clay, light brown, medium stiff, slightly moist.	
10									4267.12
11	0	70	30				SM	Silty sand, light brown, fine grained sand, medium dense, slightly moist, some silts.	
12									
13									
14	0	40	60	NA	CC	4.0	ML	Sandy silt, light brown, dense, slightly moist.	
15									4262.12
16	0	70	30				SM	Silty sand, medium brown, medium dense, slightly moist.	
17									
18									
19	0	70	30	NA	CC	4.5		Silty sand as above, clay lenses, light brown and light gray, medium stiff, slightly moist.	



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-117

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: B & C Waste Area	Boring Number: GW-117
Date Drilled: 3-30-00 Date Completed: 3-30-00	Northing: 7,425,281.20 Easting: 1,192,572.86
Logged By: Brian Duggan	Ground Surface Elevation (ft): 4,277.12
Groundwater Elevation (ft): 4,249.53	Measuring Point (MP) Elevation (ft): 4,279.97
Date Measured: 04/12/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 38.5 to 23.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 23.5 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 21.5 feet Bentonite Seal 21.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	70	30				SM	Silty sand as above, clay lenses, light brown and light gray, medium stiff, slightly moist.	4257.12 Bentonite Seal
21									
22									
23									
24				NA	CC	5.0			
25									4252.12
26									
27	0	20	80				ML	Silty sand grading to sandy silt, light gray, stiff, slightly moist to moist.	16/30 Sand
28									
29	0	15	85	NA	CC	5.0	CL	Silty clay, light gray, medium stiff, very moist.	
30									4247.12
31								Thin, wet, silty sand lenses, olive gray	
32									
33									
34	0	15	85		CC	5.0		Silty clay, olive gray, very stiff, very moist.	
35									4242.12
36								Thin, wet, silty sand lenses.	2" Schedule 40 PVC 0.010-inch Screen
37									
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-117

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-118
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,188.34 Easting: 1,194,912.87
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.35
Groundwater Elevation (ft): 4,249.98	Measuring Point (MP) Elevation (ft): 4,284.40
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4281.35
4				NA	CC	5.0		Clay-silty to very silty, damp to moist, soft to firm, brown to light brown.	4276.35
9	0	5	95	NA	CC	5.0	CL	Clay, whitish to light gray, damp to moist, soft, layered (varved), rootlets, some iron-oxide staining.	4271.35
13	0	95	5				SM	Sand, firm, damp, tan to light brown, unconsolidated.	
14				NA	CC	2.5			4266.35
17	0	5	95				CL	Clay, gray, some small gravel or coarse sand moist, soft, little silt, grades to very sandy clay.	
19				NA	CC	4.0		alternating fine sand, light brown with clay, light gray, thin sand layers ~1-inch thick.	

MP (4,284.40)
2" Schedule 40 PVC Casing
Cement-Bentonite Grout Seal

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-118

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-118
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,188.34 Easting: 1,194,912.87
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.35
Groundwater Elevation (ft): 4,249.98	Measuring Point (MP) Elevation (ft): 4,284.40
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							CL		4261.35 Cement-Bentonite Grout Seal
21	0	5	95					Clay, brown, damp, soft.	
	0	95	5				SM	Sand, fine grained, light brown to reddish brown, damp, no clay	
22								small amount of silt.	
23	0	50	50					Clayey sand to sandy clay, reddish brown, damp, firm.	Bentonite Seal
24	0	70	30	NA	CC	5.0			
25	0	0	100				CL	Clay, light brown, some silt, medium sand, firm, damp.	4256.35
26									
27									
28	0	0	100	NA	CC	2.5		Silty clay, firm, reddish brown to red.	
29									
30									4251.35
								Sandy silt, brown, very moist, wet, medium dense.	
31									
	0	5	95					Clay, white, soft, damp, some cementation, some lamination.	16/30 Sand
32								Color change to greenish gray, wet.	
33									
34					CC	5.0			
35									4246.35
									2" Schedule 40 PVC 0.010-inch Screen
36									
	0	85	15				SM	Sand, light gray, some iron oxide staining, damp to very wet,	
37								some clay and silt.	
38	0	50	50				CL	Clayey sand - sandy clay, light gray, damp, firm, some cementation.	
39				NA	CC	5.0			

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-118

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-118
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,188.34 Easting: 1,194,912.87
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.35
Groundwater Elevation (ft): 4,249.98	Measuring Point (MP) Elevation (ft): 4,284.40
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	% Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40	0	50	50				CL	Clayey sand - sandy clay, very wet, some cement, light gray.	4241.35
41									
42	0	5	95					Clay, light brown, firm, silty, very little sand, damp.	
43									
44									

TD of boring - 44.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

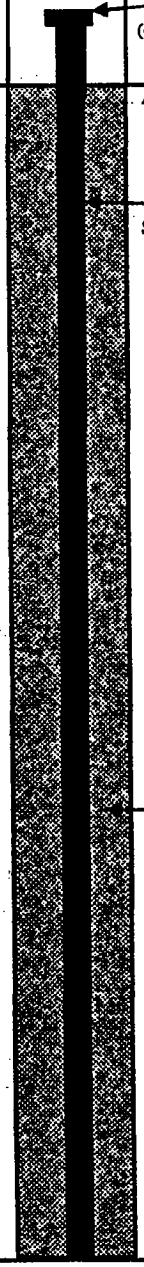
GW-118

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-119
Date Drilled: 6-8-00 Date Completed: 6-8-00	Northing: 7,422,337.21 Easting: 1,194,921.64
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.67
Groundwater Elevation (ft): 4,249.81	Measuring Point (MP) Elevation (ft): 4,284.90
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 27.1 feet Bentonite Seal 27.1 to 23.1 feet Cement Grout Seal 23.1 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4281.67
4				NA	CC	4.0	CL	Clay-silty to very silty, some sand, firm, brown, some indistinct layering.	4276.67
9				NA	CC	5.0		Clay, little sand, soft, brown with reddish brown staining, silty, moist, layered.	4271.67
13	0	95	5				SM	Sand, firm, slightly damp, brown to reddish brown, little clay or silt.	
14				NA	CC	5.0			
15							CL	Clay, tan to light brown, silty, some iron staining, soft, damp.	4266.67
17								Clay, gray, some small gravel or coarse sand.	
19				NA	CC	5.0			



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-119

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-119
Date Drilled: 6-8-00 Date Completed: 6-8-00	Northing: 7,422,337.21 Easting: 1,194,921.64
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.67
Groundwater Elevation (ft): 4,249.81	Measuring Point (MP) Elevation (ft): 4,284.90
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 27.1 feet Bentonite Seal 27.1 to 23.1 feet Cement Grout Seal 23.1 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20							CL		4261.67 Cement-Bentonite Grout Seal
21	0	90	10				SM	Sand, fine grained, damp, light brown to tan, little silt or clay, loose.	
22							CL	Clay, light reddish brown, sandy, silty, firm, damp.	
23									Bentonite Seal
24				NA	CC	5.0			
25								Clay, little sand, silty, firm, reddish brown, some layering, damp.	4256.67
26									
27									
28							ML/CL	Clayey silty - silty clay, brown, damp, crumbly.	
29				NA	CC	5.0			
30									4251.67
31	0	5	95				CL	Clay, light gray, wet to very wet, soft, some silt, little sand iron oxide staining.	16/30 Sand
32									
33									
34					CC	5.0			
35									4246.67
36	0	70	30				SM	Sand, clayey to very clayey, damp to very wet, firm, gray to light brown, some silt.	2" Schedule 40 PVC 0.010-inch Screen
37									
38							CL	interbedded clayey sand, clay beds, very wet.	
39				14 24	CC SS	5.0			

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-119

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-119
Date Drilled: 6-8-00 Date Completed: 6-8-00	Northing: 7,422,337.21 Easting: 1,194,921.64
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,281.67
Groundwater Elevation (ft): 4,249.81	Measuring Point (MP) Elevation (ft): 4,284.90
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 27.1 feet Bentonite Seal 27.1 to 23.1 feet Cement Grout Seal 23.1 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40				20			CL	Clayey sand - sandy clay, very wet, some cement, light gray.	4241.67
				23					
41									
	0	5	95					Clay, silty to very silty, light gray, firm, damp, some sand.	
42									
43									
44									

TD of boring - 44.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-119

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-120
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,487.08 Easting: 1,194,927.38
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.77
Groundwater Elevation (ft): 4,249.46	Measuring Point (MP) Elevation (ft): 4,285.71
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.1 feet Bentonite Seal 26.1 to 21.9 feet Cement Grout Seal 21.9 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4282.77
4	0	5	95	NA	CC	4.0	CL	Silty clay and clayey silt, brown, damp, hard, more clay with depth.	4277.77
9				NA	CC	5.0			
10								Clay, brown to light gray, moist, brown staining, silty partings, lighter color with depth, soft, variegated.	4272.77
14				NA	CC	3.0			4267.77
16	0	95	5				SM	Sand, firm, light brown, slightly damp, some clay with depth, little silt.	
19				NA	CC	2.0			

MP (4,285.71)
2" Schedule 40 PVC Casing
Cement-Bentonite Grout Seal

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-120

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-120
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,487.08 Easting: 1,194,927.38
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.77
Groundwater Elevation (ft): 4,249.46	Measuring Point (MP) Elevation (ft): 4,285.71
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.1 feet Bentonite Seal 26.1 to 21.9 feet Cement Grout Seal 21.9 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	70	30				SM	Silty sand, damp, hard, light brown to gray.	4262.77 Cement-Bentonite Grout Seal
21									
22									
23									Bentonite Seal
24				NA	CC	5.0		increasing clay.	4257.77
25									
26	0	10	90				CL	Clay, moist, light grayish brown to light brown, soft, some sand, silty.	
27									
28									
29				NA	CC	5.0			
30									4252.77
31									
32								Clay, white, soft, some silty, little sand, moist.	16/30 Sand
33									
34	0	5	95		CC	5.0		Clay, light gray, some cementation, variegated, soft, little sand, some silt, some iron oxide staining.	
35									4247.77
36									2" Schedule 40 PVC 0.010-inch Screen
37									
38							SM	Silty sand, light gray, damp, little clay, dense, some iron oxide staining.	
39	0	60	40	16 13	CC/ SS	5.0		Silty sand, light gray, very wet, some clay.	

CC Continuous Core Barrel
SS Split Spoon Sampler

GW-120

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-120
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,487.08 Easting: 1,194,927.38
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.77
Groundwater Elevation (ft): 4,249.46	Measuring Point (MP) Elevation (ft): 4,285.71
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.1 feet Bentonite Seal 26.1 to 21.9 feet Cement Grout Seal 21.9 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40				18			SM	Silty sand, light gray, very wet, some clay.	4242.77
				19					
41									
	0	10	90				CL	Clay, silty, some sand, damp to moist, iron oxide staining, light gray.	
42									
43									
44									

TD of boring - 44.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

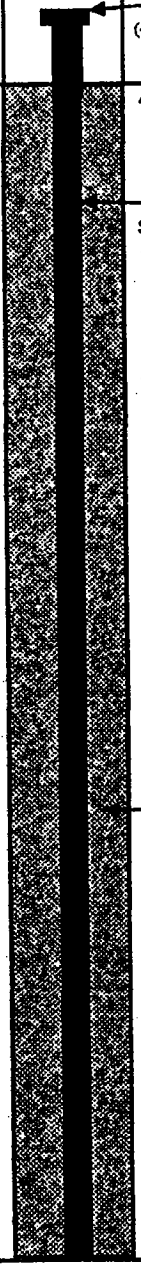
GW-120

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-121
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,636.37 Easting: 1,194,934.41
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.94
Groundwater Elevation (ft): 4,249.89	Measuring Point (MP) Elevation (ft): 4,286.11
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4282.94
4	0	15	85	NA	CC	4.5		Silt, brown, damp, some sand, some clay, firm.	
5									4277.94
6	0	5	95				CL	Clay, silty, light brown to tan, little sand, soft, moist, increasing darkness with depth, some iron staining.	
9				NA	CC	5.0		Clay, light brown to white, with light gray layers, some iron oxide staining, soft, little sand.	4272.94
14				NA	CC	2.5	SM	Sand, tan to light reddish brown, soft, damp, firm.	4267.94
16	0	95	5					Clayey sand or sandy clay, damp, light brown to tan, some silt.	
19	0	70	30	NA	CC	2.0	CL	Sandy clay, damp, fine sand, rootlets, more silt with depth soft to firm.	



CC Continuous Core Barrel
SS Split Spoon Sampler

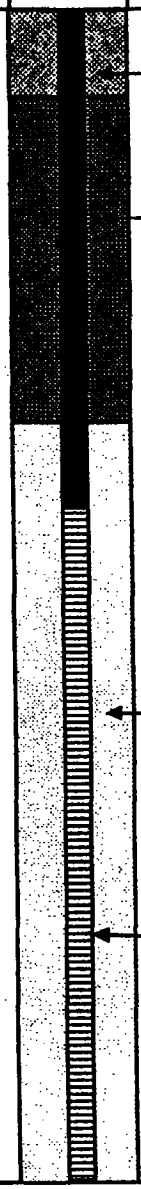
GW-121

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-121
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,636.37 Easting: 1,194,934.41
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.94
Groundwater Elevation (ft): 4,249.89	Measuring Point (MP) Elevation (ft): 4,286.11
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
20	0	70	30				CL	Sandy clay, damp, fine sand, rootlets, more silt with depth soft to firm.
21								
22								
23								
24	0	15	85	NA	CC	4.5		Clay, light gray to light brown, some sandy layers, silty with depth soft to firm, damp.
25								
26								
27								
28								
29				NA	CC	5.0		
30	0	20	80					Silty clay, light brown, firm to very firm, damp, increasing clay with depth.
31								
32	0	0	100					Clay, white to light gray, no sand, some silt, soft, damp.
33								
34	0	5	95		CC	5.0		Clay, light gray, some cementation, variegated, soft, little sand, some silt, some iron oxide staining.
35								
36								
37								
38	0	50	50				SM	Sandy clay to clayey sand, moist, iron oxide staining, firm.
39	0	40	60	9 9	CC/ SS	5.0	CL	Clay, very wet, light gray, some cementation, sandy to very sandy.



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-121

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-121
Date Drilled: 6-7-00 Date Completed: 6-7-00	Northing: 7,422,636.37 Easting: 1,194,934.41
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.94
Groundwater Elevation (ft): 4,249.89	Measuring Point (MP) Elevation (ft): 4,286.11
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.9 feet Bentonite Seal 26.9 to 21.6 feet Cement Grout Seal 21.6 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40				19			CL	Clay, very wet, light gray, some cementation, sandy to very sandy.	4242.94
				22					
41	0	10	90					Clay, silty, some sand, damp to moist, iron oxide staining, light gray.	
42									
43								Sandy clay, light gray, wet, some silt, soft.	
44									

TD of boring - 44.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

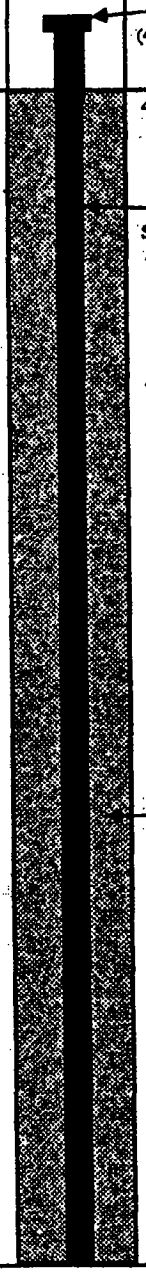
GW-121

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-122
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,736.84 Easting: 1,194,936.90
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.98
Groundwater Elevation (ft): 4,250.60	Measuring Point (MP) Elevation (ft): 4,286.25
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.0 feet Bentonite Seal 26.0 to 20.5 feet Cement Grout Seal 20.5 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4282.98
4				NA	CC	0.0			4277.98
9				NA	CC	0.5	CL	Silty clay, brownish gray.	4272.98
14	0	95	5	NA	CC	5.0	SM	Sand with gravel, dry, fine grained, poorly sorted, very tight, tan to light brown, some clay.	4267.98
19	0	30	70	NA	CC	5.0	CL	Clay, very sandy/silty, light gray, white layers, moist .	



CC Continuous Core Barrel
SS Split Spoon Sampler

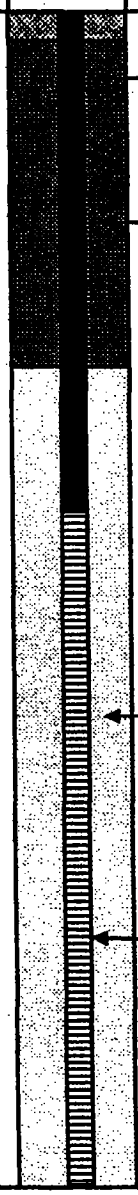
GW-122

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-122
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,736.84 Easting: 1,194,936.90
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.98
Groundwater Elevation (ft): 4,250.60	Measuring Point (MP) Elevation (ft): 4,286.25
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.0 feet Bentonite Seal 26.0 to 20.5 feet Cement Grout Seal 20.5 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log
20	0	30	70				CL	Clay, very sandy/silty, light gray, white layers, moist.
24	0	15	85	NA	CC	1.0		Clay, very sandy, moist, gray, fine sand.
29				NA	CC	5.0		
30	0	20	80					Silty clay, light brown, firm to very firm, damp, increasing clay with depth.
32	0	0	100					Clay, white to light gray, no sand, some silt, soft, damp.
34	0	5	95		CC	5.0		Clay, light gray, some cementation, variegated, soft, little sand, some silt, some iron oxide staining.
38	0	50	50				SM	Sandy clay to clayey sand, moist, iron oxide staining, firm.
39	0	40	60	8 18	CC/ SS	5.0	CL	Clay, very wet, light gray, some cementation, sandy to very sandy.



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-122

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-122
Date Drilled: 6-9-00 Date Completed: 6-9-00	Northing: 7,422,736.84 Easting: 1,194,936.90
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,282.98
Groundwater Elevation (ft): 4,250.60	Measuring Point (MP) Elevation (ft): 4,286.25
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 44.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 43.5 to 28.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 28.5 to 0.0 feet Type PVC Sch. 40
Sand 44.0 to 26.0 feet Bentonite Seal 26.0 to 20.5 feet Cement Grout Seal 20.5 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40				21			CL	Clay, very wet, light gray, some cementation, sandy to very sandy.	4242.98
				22					
41	0	10	90					Clay, silty, some sand, damp to moist, iron oxide staining, light gray.	
42									
43								Sandy clay, light gray, wet, some silt, soft.	
44									

TD of boring - 44.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

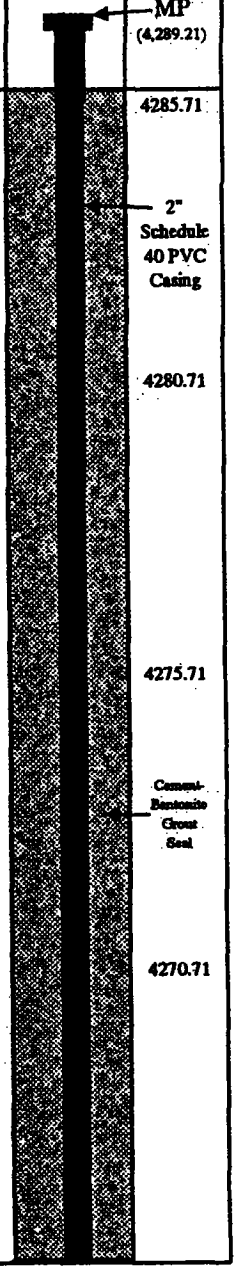
GW-122

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-123
Date Drilled: 6-6-00 Date Completed: 6-6-00	Northing: 7,422,741.22 Easting: 1,194,707.23
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,285.71
Groundwater Elevation (ft): 4,250.27	Measuring Point (MP) Elevation (ft): 4,289.21
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 49.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 48.6 to 33.6 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 33.6 to 0.0 feet Type PVC Sch. 40
Sand 49.0 to 32.0 feet Bentonite Seal 32.0 to 27.2 feet Cement Grout Seal 27.2 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0				NA	CC	NA	ML/CL	Run-on berm.	4285.71
4				NA	CC	0.0			4280.71
9	0	10	90	NA	CC	0.5	CL	Clay, silty, light brown, damp, very little sand.	4275.71
14	0	20	80	NA	CC	5.0		Clay, white to greenish gray, layered or laminated, moist, brown staining.	4270.71
18							SM	Sand, fine grained, light brown, well sorted.	
19	0	30	70	NA	CC	4.0	CL	Clay, sandy, greenish gray, brown staining, moist.	



CC Continuous Core Barrel
SS Split Spoon Sampler

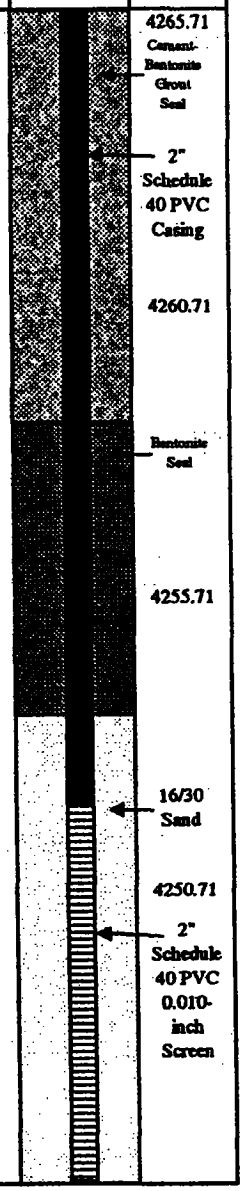
GW-123

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-123
Date Drilled: 6-6-00 Date Completed: 6-6-00	Northing: 7,422,741.22 Easting: 1,194,707.23
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,285.71
Groundwater Elevation (ft): 4,250.27	Measuring Point (MP) Elevation (ft): 4,289.21
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 49.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 48.6 to 33.6 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 33.6 to 0.0 feet Type PVC Sch. 40
Sand 49.0 to 32.0 feet Bentonite Seal 32.0 to 27.2 feet Cement Grout Seal 27.2 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	30	70				CL	Clay, sandy, greenish gray, brown staining, moist.	4265.71
21									
22	0	50	50					Sandy clay, some silt.	
23	0	5	95					Silty clay, light gray, damp.	
24	0	60	40	NA	CC	2.5	SM	Sand, clayey, light gray to tan, damp.	
	0	5	95				CL	Clay, grayish green, silty, damp.	
25	0	85	15				SM	Sand, some silt fine grained.	4260.71
	0	90	10					Sand, silty, light brown.	
26									
27									
28									
29				NA	CC	5.0			
30								Silty sand, light brown, damp, firm.	4255.71
31									
32									
33									
34	0	5	95		CC	3.0	CL	Silty clay, light brown, damp.	4250.71
35									
36									
37									
38									
39					CC	5.0			



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-123

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-123
Date Drilled: 6-6-00 Date Completed: 6-6-00	Northing: 7,422,741.22 Easting: 1,194,707.23
Logged By: Jeff Low	Ground Surface Elevation (ft): 4,285.71
Groundwater Elevation (ft): 4,250.27	Measuring Point (MP) Elevation (ft): 4,289.21
Date Measured: 06/14/2000	MP is top of Protective Casing
Total Depth (ft): 49.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 48.6 to 33.6 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 33.6 to 0.0 feet Type PVC Sch. 40
Sand 49.0 to 32.0 feet Bentonite Seal 32.0 to 27.2 feet Cement Grout Seal 27.2 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
40							CL	Silty clay, light brown, damp.	4245.71
41									
42	0	10	90					Clay, silty, some sand, damp to moist, iron oxide staining, light gray.	2" Schedule 40 PVC 0.010-inch Screen
43									
44									
45									4240.71
46									
47									16/30 Sand
48									
49									

TD of boring - 49.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

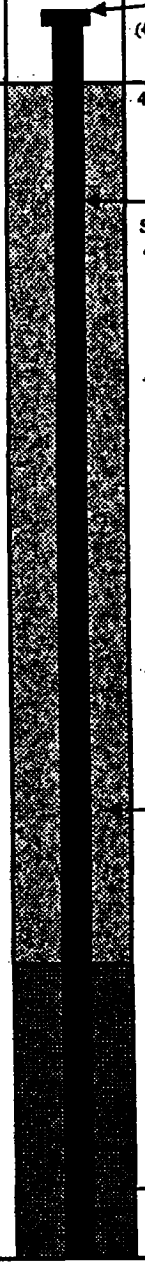
GW-123

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-124
Date Drilled: 6-13-00 Date Completed: 6-13-00	Northing: 7,422,756.35 Easting: 1,194,333.31
Logged By: Dan Shrum	Ground Surface Elevation (ft): 4,275.31
Groundwater Elevation (ft): 4,249.36	Measuring Point (MP) Elevation (ft): 4,278.45
Date Measured: 6/14/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 39.00 to 24.00 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.00 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 20.5 feet Bentonite Seal 20.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
0	0	20	80	NA	CC	4.0	CL	Silty clay, medium brown, fine sands, firm, slightly moist, layered.	4,275.31
1									
2								As above, color change to greenish gray, moist.	
3									
4				NA	CC	5.0			4270.31
5									
6									
7								Silty clay, grayish white, fine sands, firm, slightly moist, layered.	
8									
9	0	75	25	NA	CC	5.0	SM	Silty sand, brown, fine sands, medium dense, slightly moist, sub-angular sand grains.	4265.31
10									
11									
12	0	20	80				ML	Sandy silt, brown, fine sands, firm, slightly moist.	
13	0	75	25				SM	Silty sand, dark yellowish brown, mostly fine sands - some coarse, dense, slightly cemented.	
14				NA	CC	2.5			
15									4260.31
16	0	10	90				CL	Silty clay, grayish white, stiff, slightly moist, fine sand.	
17									
18	0	90	10				SM	Silty sand, dark yellowish brown, fine to medium sands, low silt content, medium dense, slightly moist, cleaner sand than above.	
19	0	15	85	NA	CC	5.0	CL	Silty clay, dark yellowish brown, fine sands, firm, slightly moist, some layers with more water, low plasticity, abundant silt.	



CC Continuous Core Barrel
SS Split Spoon Sampler

GW-124

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: Mixed Waste Expansion Area	Boring Number: GW-124
Date Drilled: 6-13-00 Date Completed: 6-13-00	Northing: 7,422,756.35 Easting: 1,194,333.31
Logged By: Dan Shrum	Ground Surface Elevation (ft): 4,275.31
Groundwater Elevation (ft): 4,249.36	Measuring Point (MP) Elevation (ft): 4,278.45
Date Measured: 6/14/2000	MP is top of Protective Casing
Total Depth (ft): 39.0	Drilling Contractor: RC Exploration
Diameter (in): 8.0	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 39.00 to 24.00 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 24.00 to 0.0 feet Type PVC Sch. 40
Sand 39.0 to 20.5 feet Bentonite Seal 20.5 to 15.0 feet Cement Grout Seal 15.0 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Fines	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Stratigraphic Log	Elevation (feet)
20	0	15	85				CL	Silty clay, dark yellowish brown, fine sands, firm, slightly moist, some layers with more water, low plasticity, abundant silt.	4255.31
21									
22									
23									
24	0	20	80	NA	CC	5.0		as above.	
25									4250.31
26	0	30	70					Color change to grayish white, moist to wet, more sand, find sands.	
27									
28									16/30 Sand
29	0	30	70	NA	CC	5.0		Silty clay, greenish gray, abundant layers of silty sand, moist.	
30									4245.31
31									
32									
33	5	70	25				SM	Silty sand, greenish gray, some gravel, wet.	
34	0	15	85	9	SS/	5.0	CL	Silty clay, grayish white, stiff, wet, fine sands in layers.	
35				11 12 13	CC				4240.31
36								color change to light brown, stiff.	2" Schedule 40 PVC 0.010-inch Screen
37	0	20	80					Silty clay, greenish gray, moist, stiff, medium plasticity.	
38									
39									

TD of boring - 39.0 feet bgs

CC Continuous Core Barrel
SS Split Spoon Sampler

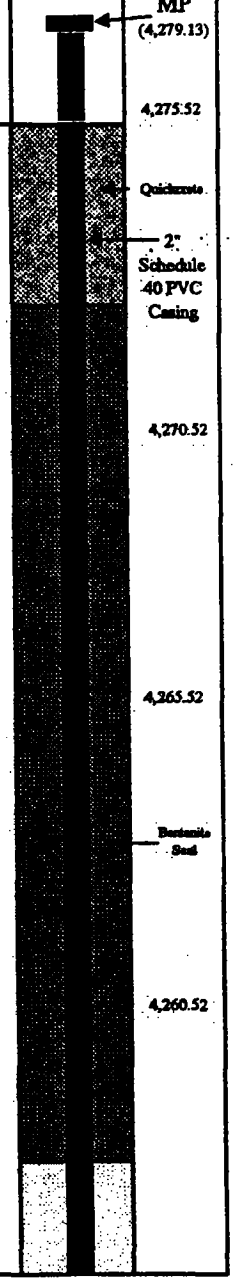
GW-124

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) East Area	Boring Number: GW-126
Date Drilled: 12/6/02 Date Completed: 12/9/02	Northing: 7,422,411.59 Easting: 1,192,626.95
Logged By: Jeff G. Low	Ground Surface Elevation (ft): 4,275.52
Groundwater Elevation (ft): 4,250.09	Measuring Point (MP) Elevation (ft): 4,279.13
Date Measured: 2/11/03	MP is top of Protective Casing
Total Depth (ft): 36.0 feet	Drilling Contractor: RayCon Drilling
Diameter (in): 8.25 inches	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 35.5 to 20.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 20.5 to 0.0 feet Type PVC Sch. 40
Sand 36.0 to 17.5 feet Bentonite Seal 17.5 to 2.5 feet Quickrete 2.5 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Clay	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Lithologic Log
0	0	15	85	NA	CC	2	CL	Disturbed or Processed Clay
3	0	30	70				SC	Sandy Clay - brown, some silt, damp
4	0	20	80	NA	CC	1.5		Silty Clay with Sand - reddish brown, damp
5								Silty Clay - light gray, moist, soft
8	0	25	75	NA	CC	1		
9	0	75	25				SM /SC	Silty Sand With Clay - moist, light gray, soft
13	0	80	20	NA	CC	2		Silty Sand - slightly moist, soft, some clay
18	0	5	95	NA	CC	4	CL	Silty Clay- some sand, light gray to lt brown, moist, firm



Elevation (feet)

CC Continuous Core Barrel

GW-126

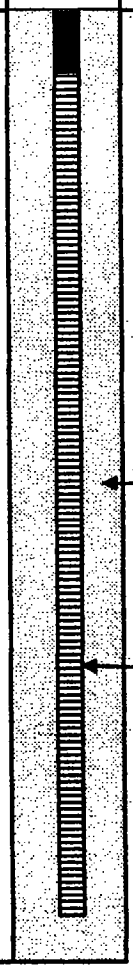
Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) East Area	Boring Number: GW-126
Date Drilled: 12/6/02 Date Completed: 12/9/02	Northing: 7,422,411.59 Easting: 1,192,626.95
Logged By: Jeff G. Low	Ground Surface Elevation (ft): 4,275.52
Groundwater Elevation (ft): 4,250.09	Measuring Point (MP) Elevation (ft): 4,279.13
Date Measured: 2/11/03	MP is top of Protective Casing
Total Depth (ft): 36.0 feet	Drilling Contractor: RayCon Drilling
Diameter (in): 8.25 inches	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 35.5 to 20.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 20.5 to 0.0 feet Type PVC Sch. 40
Sand 36.0 to 17.5 feet Bentonite Seal 17.5 to 2.5 feet Quickrete 2.5 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Clay	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Lithologic Log	Elevation (feet)
20									4,255.52
21									
22									
23	0	3	97	NA	CC	5		Silty Clay - slightly moist to moist, light gray, firm to stiff	
24									
25									4,250.52
26									
27									
28	0	20	80	NA	CC	2		Silty Clay - moist to very moist, soft, some sandy layers.	16/30 Sand
29									
30									4,245.52
31									2" Schedule 40 PVC 0.010-inch Screen
32									
33	0	5	95	NA	CC	2	CL	Silty Clay - stiff, light gray, moist.	
34									
35									4,240.31
36									

TD of boring - 36.0 feet bgs



CC Continuous Core Barrel

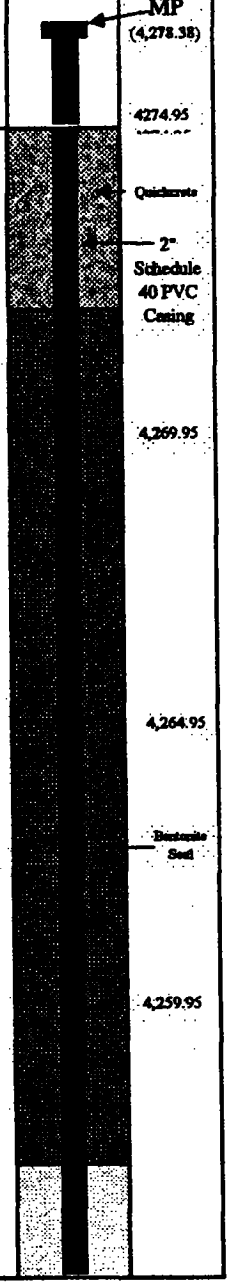
GW-126

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) East Area	Boring Number: GW-127
Date Drilled: 12/6/02 Date Completed: 12/9/02	Northing: 7,421,541.70 Easting: 1,192,608.25
Logged By: Jeff G. Low	Ground Surface Elevation (ft): 4,274.95
Groundwater Elevation (ft): 4,250.31	Measuring Point (MP) Elevation (ft): 4,278.38
Date Measured: 2/11/03	MP is top of Protective Casing
Total Depth (ft): 36.0 feet	Drilling Contractor: RayCon Drilling
Diameter (in): 8.25 inches	Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 35.5 to 20.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 20.5 to 0.0 feet Type PVC Sch. 40
Sand 36.0 to 17.5 feet Bentonite Seal 17.5 to 2.5 feet Quickrete 2.5 to 0.0 feet

Depth (feet)	Grain Size % Gravel	% Sand	% Clay	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Lithologic Log
0	0	15	85	NA	CC	2	CL	Disturbed or Processed Clay
1	0	5	95					Silty Clay - Brown, some fine sand, slightly moist
2								Increasing sands and silts
3								
4	0	20	80	NA	CC	2.5		Clay with Sand - reddish brown, damp
5								
6								
7								
8	0	75	25	NA	CC	2	SM /SC	Silty Sand - with clay, moist, light gray, grades to clay with silt moist, stiff
9								
10								
11								
12								
13	0	80	20	NA	CC	2		Silty Sand - fine grained, moist, soft, tan to gray, some clay
14								
15	0	90	10					Silty Sand - light gray, moist, soft, rootlets, less clay than above.
16								
17								
18	0	5	95	NA	CC	4	CL	Silty Clay- some sand, light gray to lt brown, moist, firm.
19								



CC Continuous Core Barrel

GW-127

Envirocare of Utah, Inc.
Groundwater Monitoring Well Boring Log

Project: 11e.(2) East Area		Boring Number: GW-127
Date Drilled: 12/6/02 Date Completed: 12/9/02		Northing: 7,421,541.70 Easting: 1,192,608.25
Logged By: Jeff G. Low		Ground Surface Elevation (ft): 4,274.95
Groundwater Elevation (ft): 4,250.31		Measuring Point (MP) Elevation (ft): 4,278.38
Date Measured: 2/11/03		MP is top of Protective Casing
Total Depth (ft): 36.0 feet		Drilling Contractor: RayCon Drilling
Diameter (in): 8.25 inches		Drilling Method: Hollow Stem Auger

Well Screen: Diameter 2-inch I.D. Length 35.5 to 20.5 feet Slot Size 0.010-inch
Casing: Diameter 2-inch I.D. Length 20.5 to 0.0 feet Type PVC Sch. 40
Sand 36.0 to 17.5 feet Bentonite Seal 17.5 to 2.5 feet Quickrete 2.5 to 0.0 feet

Depth (feet)	Grain Size: % Gravel	% Sand	% Clay	Blows (6 in.)	Sample Type	Sample Recovery	Graphic Log	Lithologic Log	Elevation (feet)
20	0	65	35				SM	Silty Sand - some clay, moist, fine grained, light brown to tan.	4,254.95
21									
22							CL	Silty Clay - moist, light brown to brown, firm.	
23	0	3	97	NA	CC	2.5		Silty Clay - Damp to moist, firm to very firm, light brown to light gray	
24									
25									4,249.95
26									
27									
28	0	20	80	NA	CC	2		Silty Clay - Moist to very moist, soft	16/30 Sand
29									
30									4,244.95
31									2" Schedule 40 PVC 0.010-inch Screen
32									
33	0	5	95	NA	CC	2	CL	Silty Clay - stiff, light gray, moist	
34									
35									
36									4,239.57

TD of boring - 36.0 feet bgs

CC Continuous Core Barrel

GW-127