DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Golder Associates NC, Inc. on behalf of Red Rock Disposal, LLC

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Rachel P. Kirkman, P.G. Phone: 336-852-4903

E-mail: rkirkman@golder.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Red Rock C&D Landfill	7130 New Landfill Lane Holly Springs, NC 27540	92-28	.0500	September 27-28, 2007

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☐ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify)

Notification attached?

☐ No. No groundwater or surface water standards or explosive methane gas limits were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Rachel P. Kirkman, P.G.	Senior Project Geologist	(336) 852-4903
Facility Representative Name (Print)	Title	(Area Code) Telephone Number

Rachel P. Kirkman 11-28-07

Signature Date

Affix NC Licensed/ Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1611 GEOLOGIST RACHEL P. KIRKMAN

Rachel P. Kirkman 11-28-07

Revised 10/2006

Golder Associates NC, Inc.

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Fax (336) 852-4904

November 27, 2007 Project No. 073-9603507.100

Department of Environment and Natural Resources
Division of Waste Management
Solid Waste Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605
919-733-4996

Attention: Mr. Donald Herndon
Environmental Specialist

Re: Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Holly Springs, Wake County, North Carolina
Water Quality Monitoring Report, Second Semi-Annual 2007 Sampling Event

Dear Mr. Herndon:

On behalf of Red Rock Disposal, LLC (Red Rock), a subsidiary of Waste Industries USA, Inc. (Waste Industries), Golder Associates NC, Inc. (Golder) is submitting the enclosed *Water Quality Monitoring Report*, which documents the results of the September 27-28, 2007, compliance monitoring event at the above-referenced facility.

Red Rock Disposal, LLC is voluntarily monitoring groundwater at this facility for parameters listed in Title 15A NCAC 13B.0544 of the North Carolina Solid Waste Management Rules (NCSWMR) in order to collect background data under the recently implemented Construction and Demolition (C&D) Landfill Rules. As presented, seven inorganic constituents (barium, cobalt, lead, vanadium, iron, manganese and zinc) were detected above the Solid Waste Section Limits (SWSLs) in one or more downgradient monitoring wells during the September 2007 monitoring event. There were no organic constituents detected in any of the monitoring wells above the SWSLs.

The concentrations of barium and lead were determined to be below the facility background concentrations; therefore no further action is required. Insufficient background data were available to perform statistical analysis of cobalt, iron, manganese, vanadium, and zinc. The concentrations of lead in MW-4, and iron and manganese in MW-4 and MW-5 exceeded their respective North Carolina Groundwater Quality Standards (2L Standards) during this event. Based on historical results, the concentrations of iron, lead, and manganese are assumed to be representative of naturally occurring conditions. The concentrations of vanadium in MW-3 and MW-4 exceeded the Solid Waste Section Groundwater Protection Standard (GPS). However, these detections are consistent with historical detections of vanadium at the facility and are believed to be representative of naturally occurring conditions.

Based on these results, Red Rock Disposal, LLC will continue monitoring this facility in accordance with the requirements of them Detection Monitoring Program for Construction & Demolition Landfills as outlined in Title 15A NCAC 13B.0544. The next event is tentatively scheduled for March 2008. If you have any questions, please contact the undersigned at 336-852-4903.

Sincerely,
GOLDER ASSOCIATES NC, INC.

FOR

Jeremy A. DeVore
Geologist

Rachel P. Kirkman, P.G.
Senior Project Geologist

Enclosure

Cc: Donald Plessinger, Landfill Manager, Red Rock Disposal, LLC, 7130 New Landfill Drive, Holly Springs, NC 27540, donald.plessinger@wasteindustries.com, 919-557-9583.
Shawn P. Carroll, Landfill Division Environmental Operative, Waste Industries USA, Inc., 3301 Benson Drive, Suite 503, Raleigh, NC 27609, shawn.carroll@wasteindustries.com, 910-520-1002. (Electronic Copy)

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WATER QUALITY MONITORING REPORT
SECOND SEMI-ANNUAL 2007 SAMPLING EVENT

RED ROCK DISPOSAL, LLC CONSTRUCTION AND DEMOLITION LANDFILL, PERMIT NO. 92-28
WAKE COUNTY, NORTH CAROLINA

NOVEMBER 2007

PREPARED FOR:

RED ROCK DISPOSAL, LLC
7130 NEW LANDFILL DRIVE
HOLLY SPRINGS, NC 27540

PREPARED BY:

GOLDER ASSOCIATES NC, INC.
4900 KOGER BOULEVARD, SUITE 140
GREENSBORO, NC 27407
PROJECT NO. 073-9603507.100

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Drawing 1 Groundwater Contour Map, September 27, 2007

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1.0 INTRODUCTION

This report summarizes the monitoring results from the September 27-28, 2007, groundwater, surface water sampling and analysis event at the Red Rock Disposal, LLC Construction & Demolition (C&D) Landfill (Red Rock Landfill) in Wake County, North Carolina. The sampling event was conducted in general accordance with Title 15A of the North Carolina Administrative Code (NCAC) Subchapter 13B.0544. The Red Rock Landfill, an active C&D landfill, is owned and operated by Red Rock Disposal, LLC a subsidiary of Waste Industries USA, Inc. (Waste Industries), under Permit No. 92-28 issued by the North Carolina (NC) Department of Environment and Natural Resources (DENR).

1.1 Site Description and Background

The location of the facility is shown on the inlay on Drawing 1. Red Rock Landfill is located in southwestern Wake County, approximately 5 miles southwest of Holly Springs, North Carolina. Access to the site is from New Landfill Drive, located off Rex Road to the north of the site.

There are three streams that traverse the site, which drain into the Shearon Harris Reservoir, located to the southwest of the site. One stream is the Jim Branch that flows southwesterly along the southeastern portion of the property boundary. A second stream is an unnamed intermittent tributary of the Jim Branch, which flows southeasterly across a portion of the northern property boundary. A third stream is another unnamed tributary of the Jim Branch that flows southerly across a portion of the southern property boundary. The locations of these surface water features are shown on Drawing 1.

Based on the topography as shown on Drawing 1, topographic surface elevations at the facility range from elevations of approximately 250 feet above mean sea level (AMSL) near the southeastern portion of the site near the Jim Branch, to 330 feet AMSL near the northeastern property boundary along Rex Road. The site is surrounded predominantly by wooded or agricultural properties, along with a nearby rock quarry. North Carolina designated game lands border portions of the site to the west. A Progress Energy power line easement cuts through the southern portion of the site.

1.2 Compliance Monitoring History

Groundwater monitoring at the facility was initiated in October 2001 after approval of G.N. Richardson & Associates' (GNRA) Water Quality Monitoring Plan (WQMP) for Phase I, by the NCDENR, which included wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-10. The WQMP for Phase I was updated in October 2003 to include wells MW-11, MW-12, MW-13, and MW-14, which were installed in August 2003 to monitor Phase 2. Background sampling for these wells will be initiated prior to waste disposal in Phase 2 in accordance with the facility permit. Monitoring well MW-1 was decommissioned as part of the expansion; however, MW-9 will remain for water levels until excavations begin in that area.

Currently the facility's monitoring network is comprised of six monitoring wells (MW-2T, MW-3, MW-4, MW-5, MW-6T, and MW-10), which monitor the uppermost aquifer beneath the facility.

MW-10 is the facility's upgradient background monitoring well. Monitoring wells MW-2T and MW-6T are replacement wells for MW-2 and MW-6, which were decommissioned.

In addition to the groundwater monitoring points, the facility's monitoring network includes three surface water sampling points, SW-1, SW-2, and SW-3. Upstream surface water monitoring point SW-1 was relocated northwest of MW-9 and upstream of the facility at a springhead, after site construction created wetlands in the former upstream location. Point SW-2 is located along an unnamed tributary of Jim Branch, which is downstream of the waste area. Point SW-3 is located along Jim Branch downstream of the facility. These points are sampled in conjunction with the groundwater monitoring wells in accordance with the facility's permit and WQMP.

1.3 Hydrogeologic Setting

Geologically, the facility is located within the Deep River basin and Durham sub-basin of the Triassic Basin in the Piedmont Physiographic Province of North Carolina (NCGS 1985). Generally, the Triassic Basin consists of Lower Mesozoic sedimentary and igneous rocks that filled rift basins. The Durham sub-basin contains conglomerates, fanglomerates, sandstones and mudstones. More specifically, all three Deep River sub-basins contain a middle clay-shale and mudstone interval 50 to about 400 meters thick, which is evident by the red shale present at the site, in addition to the presence of conglomerates and sandstones. The Deep River basin is bounded on the east by the Jonesboro fault system and is intruded by through-going north- and northwest-striking diabase dikes (Olsen, et al. 1991).

The uppermost groundwater beneath the facility is present in a shallow, unconfined aquifer comprised of saprolite, partially weathered rock, and conglomerate bedrock. Groundwater occurs at depths varying widely from approximately 2 feet below grade to more than 30 feet below grade across the site. Groundwater elevations average approximately 3-10 feet below grade along the perimeter downgradient boundary, and approximately 5-17 feet below grade to the north along the upgradient northern perimeter boundary.

Depth-to-water measurements obtained during the September 2007 monitoring event and summarized in Table 1 were used to prepare a groundwater surface contour map presented on Drawing 1. Groundwater depth measurements obtained from the majority of monitoring wells during this water quality monitoring event were several feet lower than the previous March 2007 monitoring event. This decrease in water levels is attributed to the regional drought conditions across North Carolina during 2007.

Surface water and groundwater at the site generally flows to the south and southeast toward Jim Branch, located along the southeastern portion of the site. The Jim Branch flows toward the southwest into the Shearon Harris Reservoir, located approximately ¾ of a mile from the site. Groundwater beneath the site flows in three distinguishable and vertically interconnected hydrogeologic units; saprolite, partially weathered rock (PWR), and bedrock (GNR 2003). The groundwater contour map and interpreted flow directions are consistent with previously submitted interpretations for this facility.

Based on the September 27, 2007, groundwater contour map, the hydraulic gradient in the shallow aquifer underlying the site as measured along the conceptual flow path shown on the contour map was calculated to be approximately 0.031. Groundwater velocities were calculated using a hydraulic conductivity of $7.45E^{-04}$, which is the average of the hydraulic conductivities for each of the hydrogeologic units present at the facility (GNR 2003). The estimated effective porosity of the shallow aquifer is 0.10 (GNR 2003).

Using the above values, the estimated rate of groundwater flow for the uppermost aquifer beneath the facility was calculated using the following modified Darcy equation:

$$V_{gw} = Ki/n_e$$

where V_{gw} = average linear velocity (feet/year), K = hydraulic conductivity (feet/year), i = horizontal hydraulic gradient, and n_e = effective porosity.

The average estimated linear groundwater flow velocity under the waste management unit is approximately 239 feet/year, which is consistent with previous estimates (Table 2). The range of groundwater flow is expected to vary depending on the hydrogeologic unit in which it occurs. The linear velocity equation above makes the simplified assumptions of a homogeneous and isotropic aquifer. Therefore, this equation can grossly overestimate groundwater velocity when applied to heterogeneous and/or anisotropic conditions, such as in the saprolite wells used for gradient estimates at this site. The saprolite may have areas that exhibit relict foliation and these structures can result in locally anisotropic groundwater flow directions.

2.0 FIELD PROGRAM, MONITORING RESULTS, AND DISCUSSION

Field activities conducted as part of the September 2007 sampling event are discussed in the following sections.

2.1 Visual Inspection Program

In order to ensure that a potential release is detected at the earliest possible time, the visual inspection program is used at the Red Rock C&D Landfill by the sampling crews. This program includes physical indicators such as potential water table mounding beneath the waste management unit, physical examination of any stresses in biological communities, unexplained changes in soil characteristics, and any other change to the environment due to the waste management unit. During the September 2007 compliance monitoring event, no physical indicators of a potential release were observed in the vicinity of the waste management areas by the sampling personnel.

2.2 Well Network and Groundwater Elevation Measurements

The current network of groundwater monitoring wells at the facility consists of wells MW-2T, MW-3, MW-4, MW-5, MW-6T, and MW-10. Monitoring well construction information for all site monitoring wells is summarized on Table 3 and the well locations are shown on Drawing 1. The well locations were selected to yield groundwater samples representative of the conditions in the uppermost aquifer underlying the facility, and to monitor for potential releases from the landfill unit.

One upstream (SW-1) and two downstream (SW-2 and SW-3) surface water monitoring points are also monitored.

Monitoring well MW-10 is the facility's background well, and is located hydraulically upgradient to sidegradient of the waste disposal area. Monitoring wells MW-2T, MW-3, MW-4, MW-5, and MW-6T are located downgradient of the waste disposal area and represent the facility's downgradient compliance wells. The well locations yield groundwater samples representative of the conditions in the uppermost aquifer underlying the facility and monitor for potential releases from the landfill unit.

Depth-to-water measurements were recorded to the nearest 0.01 foot prior to initiating groundwater purging and sampling activities. The respective groundwater level elevations for this event are presented in Table 1. The historical water level data are also shown on this table.

As presented, recent groundwater elevation data for the current monitoring well network indicate that the hydraulic head level in the uppermost aquifer beneath the facility is fairly consistent, with temporal variation from the long-term average limited to approximately 5-10 feet (plus or minus). However, several historical groundwater elevation readings appear to be anomalous and are not considered representative of site hydrogeologic conditions. The range in fluctuation (excluding anomalous data) appears to be greatest in MW-10, which is the upgradient well, located in a groundwater recharge area. The range in fluctuation in compliance wells MW-2T, MW-3, MW-4, MW-5, and MW-6T, which are located near groundwater discharge areas, is much less, presumably due to the stabilizing affect of the hydraulic discharge boundary.

2.3 September 2007 Groundwater Monitoring Event

Personnel from Golder visited the facility on September 27-28, 2007, to purge and sample monitoring wells MW-2T, MW-3, MW-4, MW-5, MW-6T, and MW-10 and to sample surface water monitoring points SW-1, SW-2, and SW-3. Depth-to-water measurements were obtained from the network monitoring wells to the nearest 0.01 foot using an electronic water level indicator prior to purging the wells.

Monitoring wells were purged and sampled using disposable bailers. Measurements of temperature, pH, specific conductivity, temperature, and turbidity were recorded prior to the purge, after each purge volume, and at the time of sampling.

During the purge, the laboratory-supplied sample containers were prepared. Each sample container was labeled with the sample identification number, sampling personnel, date and time of sample collection, project name and number, and requested chemical analyses.

The required groundwater samples were collected directly from the disposable bailers in the labeled, laboratory-supplied, pre-preserved sample containers after purging was completed. After collection, the samples were placed in a cooler on ice, under chain-of-custody control. Copies of the groundwater sampling logs are presented in Appendix I. Included in each log is a description of the sampling equipment, sampling method, field observations, and water-quality measurements.

All surface water monitoring points (SW-1, SW-2 and SW-3) were dry during the current sampling event. Typically, the surface water samples are collected directly from the stream, taking care to prevent the overflow of the sample containers and to minimize sample-induced turbidity. Measurements of temperature, pH, specific conductivity, temperature, turbidity, dissolved oxygen, and oxygen reduction potential are measured directly from the stream and recorded during the collection of the surface water samples.

After collection, the samples are placed in a cooler on ice, under chain-of-custody control. Copies of the sampling logs are presented in Appendix I, which indicate the sampling location and the time sampling personnel attempted to sample. Included in each log is typically a description of the sampling equipment, sampling method, field observations, and water-quality measurements.

2.4 Laboratory Analysis Program

The September 28, 2007, groundwater samples were picked up at the site by Environmental Conservation Laboratories, Inc. (ENCO) of Cary, North Carolina under chain-of-custody control for analysis. As presented, groundwater samples at the facility were analyzed for NC Appendix I constituents plus several indicator parameters as specified in the new NCDENR SWS C&D Rules effective January 1, 2007. The surface water samples at the facility were analyzed for the NC Appendix I list of constituents. The samples were received at the laboratory on September 28, 2007, in good condition and properly preserved.

2.5 September 2007 Sampling Results

Analytical results for the September 2007 groundwater and surface water samples are summarized in Tables 4 and 5 along with available historical data. The laboratory certificates-of-analysis, chain-of-custody form and laboratory data reviews for the sampling event are included in Appendix II.

As presented, seven inorganic constituents (barium, cobalt, iron, manganese, lead, vanadium, and zinc) were detected above their respective Solid Waste Section Limits (SWSLs) in one or more downgradient monitoring wells during the September 2007 monitoring event. No inorganic constituents were detected above the SWSLs in the groundwater samples. All surface water monitoring points were dry during the September 2007 monitoring event and no samples could be obtained.

3.0 LABORATORY AND FIELD QA/QC

A field blank was collected by Golder personnel as part of the September 2007 groundwater sampling event. In addition to the field blank, a laboratory-prepared trip blank accompanied the volatile sample containers for the September 2007 sampling event to and from the laboratory. ENCO analyzed the field blank for Appendix I constituents and the trip blank for Appendix I volatile organic compounds. Reviews of the laboratory data were performed by Golder personnel (included in Appendix II). Method blanks are also included in the laboratory QA/QC procedures.

Acetone, barium, chloride and thallium were detected in one or more blanks at estimated concentrations. Based on our data review the following detections should be considered blank-

qualified and were not included in the statistical analyses where applicable: acetone and thallium in MW-2T, and thallium in MW-3, MW-4, MW-5 and MW-10.

4.0 DATA EVALUATION

The results of the data evaluations are presented in the following sections.

4.1 Statistical Evaluations

As presented, barium, cobalt, iron, manganese, lead, vanadium, and zinc were detected above the SWSLs in one or more downgradient monitoring wells during this sampling event. Statistical analyses are not yet required by the facility's approved WQMP. However, voluntarily pursuant to the requirements of 15A NCAC 13B.0544, the barium and lead concentrations detected in downgradient monitoring wells were statistically evaluated to determine if the reported concentrations exceeded the facility background concentration. The statistical worksheets are presented as Appendix III.

As presented, the reported barium concentrations in MW-3 and MW-6T were above the inter-well but below their respective intra-well statistical limits. The concentrations of barium in MW-4 and MW-5 were below the inter-well limit. The lead concentration in MW-4 was determined to be below the facility background concentration. These detections appear to be consistent with previous detections of barium and lead in these wells, and are believed to be representative of naturally occurring conditions.

Due to an insufficient amount of background data, statistical analysis of cobalt, vanadium, iron, manganese and zinc could not be performed. Based on visual inspection, data appears to be generally consistent with historical data and are assumed to be consistent with naturally occurring conditions. Future data will help determine trends for these constituents.

4.2 North Carolina Groundwater and Surface Water Standard Comparisons

As presented in Table 4, concentrations of iron, lead, and manganese in MW-4; iron and manganese in MW-5; and manganese in MW-6T exceeded their respective NC 2L Groundwater Protection Standards (GPS). Vanadium was detected in MW-3 and MW-4 above the Solid Waste Section GPS; the concentration in MW-4 should be considered estimated as it is below the SWSL. The concentrations of these constituents in downgradient monitoring wells appear to be representative of background (i.e., naturally occurring) conditions as describe above. All surface water monitoring points were dry during the September 2007 monitoring event; therefore no comparisons to surface water standards could be made.

5.0 CONCLUSIONS

Based on the results summarized herein, Red Rock Disposal, LLC, appears to be in compliance with respect to water quality monitoring requirements and will continue monitoring the uppermost aquifer beneath this facility in accordance with the requirements of the Detection Monitoring Program for

Construction & Demolition Landfills as outlined in Title 15A NCAC 13B.0544. The next groundwater monitoring event is scheduled tentatively for March 2008.

6.0 REFERENCES

HGL (The Hutchinson Group, Ltd.), Murrysville, PA, various monitoring well, piezometer construction records and boring logs, July-October 2000.

GNR (G.N. Richardson & Associates, Inc.), Raleigh, NC, *Groundwater and Surface Water Monitoring Reports*, November 2001 through October 2006, and *Water Quality Monitoring Plans*, May 2001 and October 2003.

NCGS (North Carolina Geologic Survey), 1985. Geologic Map of North Carolina.

Olsen et al. (Olsen, Paul E., Froelich, Albert J., Daniels, David L., Smoot, Joseph P., Gore, Pamela J.W.), Rift Basins of Early Mesozoic Age, in Horton, J.W., Jr., and Zullo, V.A., eds., The Geology of the Carolinas: The University of Tennessee Press, 1991, pp. 142-170.

USGS (Heath, Ralph C.), Basic Ground-Water Hydrology, Water Supply Paper 2220, for U.S. Department of Interior and U.S.G.S., 1983.

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TABLES

TABLE 1

Summary of Historical Groundwater Elevation Data
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

	Monitoring Well																				
	MW-1	**MW-2**	**MW-2T***	**MW-3**	**MW-4**	**MW-5**	**MW-6**	**MW-6T***	**MW-7**	**MW-8**	**MW-9**	**MW-10***	**MW-11**	**MW-12**	**MW-13**	**MW-14**	**PZ-1**	**PZ-2**	**PZ-3**	**PZ-4**	**PZ-5**
TOC Elevation (ft AMSL)	280.60	262.13	281.19	261.80	254.10	254.47	277.47	289.21	302.36	286.62	300.69	301.16	310.77	314.83	331.34	301.20	309.08	306.65	281.14	254.21	255.08
Date	**Static Water Elevation (ft AMSL)**																				
11/30/2000	269.62	253.80	NI	248.38	241.87	251.28	272.53	NI	288.67	258.15	290.89	283.86	NI	NI	NI	NI	276.98	260.12	259.79	281.26	269.60
1/10/2001	269.50	254.51	NI	248.23	249.18	251.48	272.52	NI	287.84	258.07	290.45	283.53	NI	NI	NI	NI	277.06	257.37	260.79	281.46	273.95
2/13/2001	269.82	255.45	NI	248.66	251.48	251.87	272.94	NI	289.39	264.94	289.63	283.28	NI	NI	NI	NI	277.00	256.92	260.00	283.79	274.27
4/9/2001	270.77	257.46	NI	249.95	251.24	251.49	274.29	NI	298.81	257.76	297.33	285.13	NI	NI	NI	NI	277.31	257.16	260.61	283.59	276.02
4/26/2001	270.54	256.00	NI	249.57	250.10	251.76	273.62	NI	294.38	257.67	295.36	284.56	NI	NI	NI	NI	277.31	257.00	260.34	282.40	275.90
6/11/2002	253.11	--	255.03	248.33	246.57	247.22	--	269.74	--	--	--	286.80	NI	NI	NI	NI	--	--	--	--	--
11/1/2002	254.23	--	254.99	248.35	251.61	251.85	--	270.41	--	--	--	285.63	NI	NI	NI	NI	--	--	--	--	--
3/6/2003	256.00	--	256.87	252.85	251.91	251.98	--	271.68	--	--	--	290.06	NI	NI	NI	NI	--	--	--	--	--
9/9/2003	271.60	--	256.21	250.19	251.36	251.19	--	275.07	--	--	295.47	287.74	280.77	299.71	319.69	291.03	--	--	--	--	--
9/23/2003	273.60	--	237.32	249.92	250.86	250.82	--	275.24	--	--	--	--	--	--	--	--	--	--	--	--	--
3/11/2004	275.58	--	257.22	252.61	251.73	251.81	--	277.64	--	--	--	290.45	--	--	--	--	--	--	--	--	--
9/23/2004	--	--	257.62	250.98	251.57	251.44	--	275.73	--	--	--	290.13	--	--	--	--	--	--	--	--	--
3/10/2005	--	--	257.31	252.19	251.88	251.99	--	275.37	--	--	--	290.88	--	--	--	--	--	--	--	--	--
9/22/2005	--	--	255.82	248.26	247.45	246.83	--	--	--	--	--	289.94	--	--	--	--	--	--	--	--	--
3/6/2006	--	--	256.17	250.29	250.61	250.59	--	274.96	--	--	--	291.63	--	--	--	--	--	--	--	--	--
9/19/2006	--	--	257.19	248.77	248.53	250.47	--	277.26	--	--	--	290.83	--	--	--	--	--	--	--	--	--
3/20/2007	--	--	266.28	251.80	251.30	251.05	--	275.79	--	--	297.48	293.25	289.81	300.53	324.84	290.12	--	--	--	--	--
9/27/2007	--	--	256.52	247.78	247.31	248.56	--	277.70	293.42	--	--	289.87	283.46	300.39	319.14	286.50	--	--	--	--	--
MEAN	*271.38*	*255.44*	*257.34*	*249.96*	*250.46*	*250.89*	*273.18*	*274.44*	*291.82*	*259.32*	*293.80*	*287.98*	*285.29*	*300.12*	*322.27*	*290.58*	*277.13*	*257.71*	*260.31*	*282.50*	*273.95*
MAXIMUM	*275.58*	*257.46*	*266.28*	*252.85*	*251.91*	*251.99*	*274.29*	*277.64*	*298.81*	*264.94*	*297.48*	*293.25*	*289.81*	*300.53*	*324.84*	*291.03*	*277.31*	*260.12*	*260.79*	*283.79*	*276.02*
MINIMUM	*269.50*	*253.80*	*254.99*	*248.23*	*246.57*	*246.83*	*272.52*	*269.74*	*287.84*	*257.67*	*289.63*	*283.28*	*280.77*	*299.71*	*319.69*	*290.12*	*276.98*	*256.92*	*259.79*	*281.26*	*269.60*

Notes:

1. ft AMSL = feet above mean sea level.
2. -- = not measured or no data
3. TOC = top of casing
4. NI = not installed
5. MW = monitoring well
6. TOC and Water Elevation Data for dates prior to March 2007 from historical G.N. Richardson & Associates, Inc. *Ground and Surface Water Monitoring Reports* .
7. *MW-2T and MW-6T are replacement well installations for MW-2 and MW-6, respectively.
8. **TOC Elevation for MW-10 is listed as both 296.35 feet AMSL in the Hutchinson Group, Ltd. data and 301.16 feet AMSL in the Richardson data from the same sampling periods. The latest TOC elevation is used for this table.
9. It appears that MW-2T and MW-6T were replacement wells and MW-10 was resurveyed by G.N. Richardson & Associates, Inc. The TOC data from the most recent reports are used in this table.
10. Water level data for MW-1 from 6/11/2002, 11/1/2002, and 3/6/2003; for MW-2T from 9/23/2003; and for MW-4 from 11/3/2000 appear to be anomalous and were not included in the mean, maximum, and minimum groundwater calculations.

TABLE 2

Summary of Estimated Horizontal Flow Velocities
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

September 2007							
Gradient Calculation Segment	**Flow Direction**	**Gradient Segment Length (feet)**	**Gradient Segment Elevations (feet)**	**Horizontal Gradient (i, feet)**	**Effective Porosity (n_e)**	**Hydraulic Conductivity (K, cm/sec)**	**Velocity (V_{gw}, feet/year)**
i_1	SSE	776	310 280	0.0387	0.1	0.000745	297.99
i_2	SSE	1492	290 250	0.0268	0.1	0.000745	206.65
i_3	SE	731	270 250	0.0274	0.1	0.000745	210.89

Notes:

1. Horizontal velocities based on the modified Darcy equation $V_{gw} = Ki/n_e$.
2. Values for K and n_e were based on mean values for MW-1, MW-3, MW-5 and MW-10 and hydrogeologic data collected by G.N. Richardson & Associates, Inc. Values for n_e also based on typical effective porosities for similar hydrogeologic conditions as discussed in the 1983 U.S. Dept of Interior and U.S.G.S. publication *Basic Ground-Water Hydrology, Water-Supply Paper 2220,* by Ralph C. Heath.

TABLE 3

Summary of Well Construction Information

Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28

Wake County, North Carolina

Well Identification	Construction Date	Ground Surface Elevation (ft AMSL)	Measuring Point Elevation (ft AMSL)	Well Depth (feet)	Well Diameter (inches)	Screened Interval (ft bgs)	Screened Interval (ft AMSL)	Depth to Bedrock (feet bgs)	Well Status
MW-1	10/5-6/2000	277.33	280.60	30	2	5-15	272.33-262.33	7.00	Decommissioned
MW-2	10/3/2000	260.46	262.13	25	2	5-15	255.46-245.46	8.00	Decommissioned
MW-2T	9/29/2001	--	281.19	82	2	--	--	--	Active
MW-3	10/19/2000	257.5	261.80	31.5	2	17-27	240.5-230.5	5.00	Active
MW-4	10/11/2000	251.76	254.10	17	2	5-15	246.76-236.76	6.00	Active
MW-5	10/12/2000	252.04	254.47	15.5	2	4-14	248.04-238.04	11.00	Active
MW-6	10/18/2000	274.72	277.47	23	2	10-20	264.72-254.72	5.00	Decommissioned
MW-6T	9/29/2001	287.38	289.21	45	2	35-45	252.38-242.38	10.00	Active
MW-7	10/17/2000	300.14	302.36	20.5	2	8-18	292.14-282.14	10.30	Water Levels Only
MW-8	10/18/2000	283.58	286.62	33.5	2	23-33	260.58-250.58	33.50	Water Levels Only
MW-9	10/16/2000	298.44	300.69	37	2	22-32	276.44-266.44	13.40	Water Levels Only
MW-10	10/18/2000	--	301.16	34	2	11-31	--	17.00	Active
MW-11	8/12/2003	308.17	310.77	50	2	40-50	268.17-258.17	12.00	Water Levels Only
MW-12	8/11/2003	312.04	314.83	28.5	2	17-27	295.04-285.04	8.00	Water Levels Only
MW-13	8/11/2003	328.36	331.34	17	2	7-17	321.36-311.36	7.00	Water Levels Only
MW-14	8/12/2003	298.24	301.20	32	2	22-32	276.24-266.24	8.00	Water Levels Only

Notes:

1. ft AMSL= feet above mean sea level
2. ft BGS= feet below ground surface
3. NA= not drilled to auger refusal
4. -- = no data available
5. Unless otherwise noted, well construction information given by G.N. Richardson & Associates, Inc. & The Hutchinson Group, Ltd. hydrogeologic data, including previous *Groundwater Monitoring Reports* and May 2001 and Oct 2003 *Water Quality Monitoring Plans.*
6. MW-2T & MW-6T are replacement wells for MW-2 and MW-6 and have been included as part of the monitoring well network since the April 2001 sampling event.
7. Well depths for MW-2T, MW-3, MW-4, MW-5, and MW-10 were based on Golder's March 2007 field measurements.

TABLE 4

Summary of Groundwater Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upgradient MW-1	Upgradient MW-10	Downgradient MW-2	Downgradient MW-2T*	Downgradient MW-3	Downgradient MW-4	Downgradient MW-5	Downgradient MW-6	Downgradient MW-6T*	Downgradient MW-9	Blanks
Antimony	ug/L	10/31/01	30	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
SWS GPS = 1.4 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	6	--	ND	--	1.09 J	ND	ND	0.60 J	--	ND	--	ND
	ug/L	09/28/07	6	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Arsenic	ug/L	10/31/01	10	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
NC 2L = 50 ug/L	ug/L	06/11/02	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	11/01/02	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/11/04	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/04	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/10/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/22/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/06	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/19/06	10	--	ND	--	ND	ND	ND	ND	--	17	--	ND
	ug/L	03/21/07	10	--	ND	--	ND	ND	4.8 J	ND	--	ND	--	ND
	ug/L	09/28/07	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Barium	ug/L	10/31/01	500	909	--	1410	--	1650	922	ND	ND	--	ND	ND
NC 2L = 2000 ug/L	ug/L	06/11/02	500	ND	ND	--	646	1547	ND	ND	--	837	--	ND
	ug/L	11/01/02	500	ND	ND	--	ND	1733	ND	ND	--	787	--	ND
	ug/L	03/06/03	500	ND	ND	--	535	1939	ND	ND	--	936	ND	ND
	ug/L	09/23/03	500	1046	ND	--	ND	2090	ND	ND	--	1066	--	ND
	ug/L	03/11/04	500	752	707	--	ND	1881	ND	ND	--	966	--	ND
	ug/L	09/23/04	500	--	ND	--	ND	1830	ND	ND	--	977	--	ND
	ug/L	03/10/05	500	--	872	--	ND	2129	ND	ND	--	1164	--	ND
	ug/L	09/22/05	500	--	ND	--	ND	1871	ND	ND	--	1018	--	ND
	ug/L	03/06/06	500	--	590	--	ND	1838	ND	ND	--	1458	--	ND
	ug/L	09/19/06	500	--	ND	--	ND	2090	ND	ND	--	1787	--	ND
	ug/L	03/21/07	100	--	901	--	61.8 J	2080	24.7 J	226	--	1700	--	0.30 J
	ug/L	09/28/07	100	--	488	--	59.1 J	1930	286	238	--	1800	--	0.30 J
Beryllium	ug/L	10/31/01	2	ND	--	ND	--	ND	4	ND	ND	--	ND	ND
SWS GPS = 4 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	1	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/28/07	1	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Cadmium	ug/L	10/31/01	1	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
NC 2L = 1.75 ug/L	ug/L	06/11/02	1	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	11/01/02	1	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/03	1	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/03	1	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/11/04	1	ND	ND	--	7	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/04	1	--	ND	--	1	ND	ND	ND	--	ND	--	ND
	ug/L	03/10/05	1	--	ND	--	3	ND	ND	ND	--	ND	--	ND
	ug/L	09/22/05	1	--	ND	--	7	ND	ND	ND	--	2	--	ND
	ug/L	03/06/06	1	--	ND	--	1	ND	ND	ND	--	ND	--	ND
	ug/L	09/19/06	1	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/21/07	1	--	ND	--	0.80 J	ND	ND	ND	--	ND	--	ND
	ug/L	09/28/07	1	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Chromium	ug/L	10/31/01	10	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
NC 2L = 50 ug/L	ug/L	06/11/02	10	ND	ND	--	58	ND	29	ND	--	ND	--	ND
	ug/L	11/01/02	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/11/04	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/04	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/10/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/22/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/06	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/19/06	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/21/07	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/28/07	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Cobalt	ug/L	10/31/01	10	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
SWS GPS = 70 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	10	--	ND	--	ND	ND	3.1 J	30.7	--	ND	--	ND
	ug/L	09/28/07	10	--	ND	--	ND	ND	3.0 J	21.1	--	ND	--	ND

TABLE 4

Summary of Groundwater Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upgradient MW-1	Upgradient MW-10	Downgradient MW-2	Downgradient MW-2T*	Downgradient MW-3	Downgradient MW-4	Downgradient MW-5	Downgradient MW-6	Downgradient MW-6T*	Downgradient MW-9	Blanks
Lead	ug/L	10/31/01	10	ND	--	ND	--	ND	14	ND	ND	--	ND	ND
NC 2L = 15 ug/L	ug/L	06/11/02	10	ND	ND	--	ND	ND	17	ND	--	ND	--	ND
	ug/L	11/01/02	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/03	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/11/04	10	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/04	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/10/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/22/05	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/06	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/19/06	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/21/07	10	--	ND	--	ND	2.4 B	ND	6.0 B	--	ND	--	2.7 J
	ug/L	09/28/07	10	--	ND	--	ND	ND	15.9	ND	--	ND	--	ND
Nickel	ug/L	10/31/01	50	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
NC 2L = 100 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	50	--	ND	--	ND	ND	ND	2.3 J	--	ND	--	ND
	ug/L	09/28/07	50	--	ND	--	ND	ND	ND	5.3 J	--	ND	--	ND
Selenium	ug/L	10/31/01	20	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
NC 2L = 50 ug/L	ug/L	06/11/02	20	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	11/01/02	20	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/06/03	20	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/03	20	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/11/04	20	ND	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/23/04	20	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	03/10/05	20	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
	ug/L	09/22/05	20	--	ND	--	ND	22	ND	ND	--	ND	--	ND
	ug/L	03/06/06	20	--	ND	--	ND	22	ND	ND	--	23	--	ND
	ug/L	09/19/06	20	--	ND	--	ND	29	ND	ND	--	47	--	ND
	ug/L	03/21/07	10	--	ND	--	ND	ND	3.2 B	ND	--	ND	--	2.5 J
	ug/L	09/28/07	10	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
Thallium	ug/L	10/31/01	10	ND	--	ND	--	ND	ND	ND	ND	--	ND	ND
SWS GPS = 0.28 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	6	--	ND	--	ND	ND	ND	0.132 J	--	ND	--	ND
	ug/L	09/28/07	6	--	0.042 B	--	0.043 B	0.045 B	0.101 B	0.072 B	--	ND	--	0.066 J
Vanadium	ug/L	10/31/01	40	ND	--	ND	--	50	ND	ND	ND	--	ND	ND
SWS GPS = 3.5 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	25	--	ND	--	17.4 J	22.9 J	ND	ND	--	ND	--	ND
	ug/L	09/28/07	25	--	ND	--	3.2 J	29.6	23.2 J	ND	--	ND	--	ND
Zinc	ug/L	10/31/01	20	ND	--	22	--	ND	21	ND	ND	--	ND	ND
NC 2L = 1050 ug/L	ug/L	06/11/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--	--	--	--	--	--	--	--
	ug/L	03/21/07	10	--	ND	--	3.1 B	5.9 J	4.5 B	49.8	--	ND	--	1.1 J
	ug/L	09/28/07	10	--	2.3 J	--	ND	4.8 J	41.4	17.6	--	54.3	--	ND
Iron	ug/L	03/21/07	300	--	20 J	--	26 J	ND	813	4820	--	ND	--	ND
NC 2L = 300 ug/L	ug/L	09/28/07	300	--	170 J	--	39 J	ND	21800	436	--	ND	--	--
Manganese	ug/L	03/21/07	50	--	166	--	141	16.8 J	743	3540	--	1370	--	ND
NC 2L = 50 ug/L	ug/L	09/28/07	50	--	251	--	36.0 J	33.7 J	498	2040	--	1580	--	--
Acetone	ug/L	03/21/07	100	--	ND	--	ND	ND	ND	ND	--	ND	--	ND
NC 2L = 700 ug/L	ug/L	09/28/07	100	--	ND	--	2.8 B	ND	ND	ND	--	ND	--	5.2 J
Chloride	mg/L	03/21/07	--	--	1000	--	1500	2100	15	290	--	2000	--	ND
	mg/L	09/28/07	--	--	170	--	430	1600	14	210	--	1700	--	0.53 J
Total Dissolved Solids	mg/L	03/21/07	--	--	860	--	1100	3400	64	590	--	3100	--	ND
	mg/L	09/28/07	--	--	490	--	1200	3100	1400	480	--	3200	--	--
Sulfate as SO4	mg/L	03/21/07	--	--	15	--	38	7.3 B	10	45	--	9.7	--	1.7 J
	mg/L	09/28/07	250	--	13 J	--	40 J	32 J	8.0 J	58 J	--	25 J	--	--
Total Alkalinity	mg/L	03/21/07	--	--	120	--	320	270	31	22	--	310	--	ND
	mg/L	09/28/07	--	--	180	--	340	350	ND	15	--	320	--	--

TABLE 4

Summary of Groundwater Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upgradient		Downgradient								Blanks
				MW-1	MW-10	MW-2	MW-2T*	MW-3	MW-4	MW-5	MW-6	MW-6T*	MW-9	
pH (field)	S.U.	10/31/01	--	--	--	--	--	--	--	--	--	--	--	--
	S.U.	06/11/02	--	7.00	7.00	--	6.30	6.80	5.50	5.80	--	7.10	--	--
	S.U.	11/01/02	--	7.30	6.90	--	7.10	7.10	5.20	5.00	--	7.40	--	--
	S.U.	03/06/03	--	7.50	5.90	--	6.90	7.00	5.40	5.10	--	7.30	--	--
	S.U.	09/23/03	--	6.70	6.10	--	7.40	6.90	5.20	4.50	--	7.30	--	--
	S.U.	03/11/04	--	6.60	6.70	--	7.00	6.70	5.30	4.70	--	7.40	--	--
	S.U.	09/23/04	--	--	6.60	--	7.20	6.80	5.80	5.30	--	7.20	--	--
	S.U.	03/10/05	--	--	6.40	--	7.30	6.90	6.00	5.60	--	7.20	--	--
	S.U.	09/22/05	--	--	6.60	--	7.60	7.00	5.90	6.70	--	7.20	--	--
	S.U.	03/06/06	--	--	6.60	--	7.60	6.80	5.50	5.30	--	7.00	--	--
	S.U.	09/19/06	--	--	6.70	--	7.40	7.00	5.90	5.10	--	7.10	--	--
	S.U.	03/21/07	--	--	5.63	--	7.08	7.24	6.95	7.83	--	6.86	--	--
	S.U.	09/28/07	--	--	6.18	--	7.15	7.14	6.43	7.50	--	6.92	--	--
Specific Conductance	uS/cm	10/31/01	--	--	--	--	--	--	--	--	--	--	--	--
(lab prior to 9/19/06 event)	uS/cm	06/11/02	--	2300	620	--	2200	4300	270	810	--	3700	--	--
	uS/cm	11/01/02	--	2000	796	--	1820	4000	114	254	--	4000	--	--
	uS/cm	03/06/03	--	2240	253	--	1804	5170	141	458	--	3770	--	--
	uS/cm	09/23/03	--	4059	622	--	1692	3088	141	247	--	3015	--	--
	uS/cm	03/11/04	--	5078	1464	--	2250	5310	208	944	--	4050	--	--
	uS/cm	09/23/04	--	--	995	--	2410	5220	124	525	--	4050	--	--
	uS/cm	03/10/05	--	--	1382	--	1876	4073	184	938	--	3091	--	--
	uS/cm	09/22/05	--	--	997	--	1968	4040	190	2860	--	3850	--	--
	uS/cm	03/06/06	--	--	1170	--	1963	4610	140	894	--	4150	--	--
	uS/cm	09/19/06	--	--	1378	--	2170	4850	158	698	--	4700	--	--
	uS/cm	03/21/07	--	--	1870	--	2470	6480	101	1320	--	6320	--	--
	uS/cm	09/28/07	--	--	1080	--	2260	5760	175	1060	--	6080	--	--
Temperature	Celsius	10/31/01	--	--	--	--	--	--	--	--	--	--	--	--
(lab prior to 9/19/06 event)	Celsius	06/11/02	--	17.0	16.0	--	16.0	15.0	16.0	15.0	--	19.0	--	--
	Celsius	11/01/02	--	16.0	17.0	--	17.0	17.0	15.0	15.0	--	17.0	--	--
	Celsius	03/06/03	--	16.0	12.0	--	16.0	13.0	12.0	11.0	--	16.0	--	--
	Celsius	09/23/03	--	22.0	19.0	--	17.0	19.0	21.0	20.0	--	20.0	--	--
	Celsius	03/11/04	--	12.0	13.0	--	16.0	12.0	11.0	10.0	--	14.0	--	--
	Celsius	09/23/04	--	--	19.0	--	18.0	19.0	20.0	20.0	--	21.0	--	--
	Celsius	03/10/05	--	--	12.0	--	16.0	12.0	9.0	10.0	--	13.0	--	--
	Celsius	09/22/05	--	--	20.0	--	20.0	19.0	20.0	20.0	--	22.0	--	--
	Celsius	03/06/06	--	--	14.0	--	17.0	14.0	13.0	13.0	--	15.0	--	--
	Celsius	09/19/06	--	--	19.0	--	18.0	19.0	19.0	21.0	--	20.0	--	--
	Celsius	03/21/07	--	--	12.8	--	15.9	13.2	11.9	11.2	--	12.7	--	--
	Celsius	09/28/07	--	--	21.98	--	21.32	20.78	20.61	22.75	--	26.35	--	--
Turbidity (field)	NTU	03/21/07	--	--	124	--	135	106	154	342	--	97	--	--
	NTU	09/28/07	--	--	0	--	0	0	>1000	0	--	189	--	--

Notes:

mg/L = milligrams per liter
ug/L = micrograms per liter
S.U. = Standard Units
NTU = Nephelometric Turbidity Units
ND = Not detected at the stated reporting limit
uS/cm= microsiemens per cubic centimeter
J = Estimated value
-- = no data
Blanks = field, trip and method blanks
Shaded = Concentrations above the NC 2L Groundwater Standards or Solid Waste Section Groundwater Protection Standards (SWS GPS) have been shaded.
*MW-2T & MW-6T are replacement wells for MW-2 and MW-6 and have been included as part of the monitoring well network following the April 2001 sampling event.
MW-2T, MW-3, MW-4, MW-5, MW-6T and MW-10 have comprised the current monitoring well network since the Sept. 2004 event.
MW-10 is the facility's background well.
MW-1 was removed from the site for cell construction and was decomissioned following the March 2004 sampling event according to G.N. Richardson & Associates, Inc. WQMP Oct. 2003.
SWS Reporting Limit = NCPQL or lab-sepcific reporting limit prior to 2007 and NCSWSL starting on 01/18/07

TABLE 5

Summary of Surface Water Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream		Downstream				Blanks	
				SW-1		SW-2		SW-3			
Barium	ug/L	10/31/01	--	--		--		--		--	
No SW Standard	ug/L	06/11/02	500	Dry		ND		ND		ND	
	ug/L	11/01/02	500	ND		ND		ND		ND	
	ug/L	03/06/03	500	ND		ND		ND		ND	
	ug/L	09/23/03	500	ND		ND		ND		ND	
	ug/L	03/11/04	500	Dry		ND		ND		ND	
	ug/L	09/23/04	500	--		ND		ND		ND	
	ug/L	03/10/05	500	--		ND		ND		ND	
	ug/L	09/22/05	500	--		ND		ND		ND	
	ug/L	03/06/06	500	--		ND		ND		ND	
	ug/L	09/19/06	500	--		ND		ND		ND	
	ug/L	03/21/07	100	86.5	J	67.8	J	78.9	J	0.30	J
	ug/L	09/28/07	--	Dry		Dry		Dry		0.30	J
Chromium	ug/L	10/31/01	--	--		--		--		--	
SW Standard = 50 ug/L	ug/L	06/11/02	10	Dry		234		ND		ND	
	ug/L	11/01/02	10	ND		ND		ND		ND	
	ug/L	03/06/03	10	ND		ND		ND		ND	
	ug/L	09/23/03	10	ND		ND		ND		ND	
	ug/L	03/11/04	10	Dry		ND		ND		ND	
	ug/L	09/23/04	10	--		ND		ND		ND	
	ug/L	03/10/05	10	--		ND		ND		ND	
	ug/L	09/22/05	10	--		ND		ND		ND	
	ug/L	03/06/06	10	--		ND		ND		ND	
	ug/L	09/19/06	10	--		ND		ND		ND	
	ug/L	03/21/07	10	ND		ND		ND		ND	
	ug/L	09/28/07	--	Dry		Dry		Dry		--	
Lead	ug/L	10/31/01	--	--		--		--		--	
SW Standard = 25 ug/L*	ug/L	06/11/02	10	Dry		14		ND		ND	
	ug/L	11/01/02	10	ND		11		ND		ND	
	ug/L	03/06/03	10	ND		ND		ND		ND	
	ug/L	09/23/03	10	ND		15		ND		ND	
	ug/L	03/11/04	10	Dry		14		ND		ND	
	ug/L	09/23/04	10	--		ND		ND		ND	
	ug/L	03/10/05	10	--		ND		ND		ND	
	ug/L	09/22/05	10	--		ND		23		ND	
	ug/L	03/06/06	10	--		ND		ND		ND	
	ug/L	09/19/06	10	--		ND		ND		ND	
	ug/L	03/21/07	10	5.4	B	3.4	B	2.2	B	2.7	J
	ug/L	09/28/07	--	Dry		Dry		Dry		--	
Selenium	ug/L	10/31/01	--	--		--		--		--	
SW Standard = 5 ug/L	ug/L	06/11/02	20	Dry		ND		ND		ND	
	ug/L	11/01/02	20	ND		ND		ND		ND	
	ug/L	03/06/03	20	ND		ND		ND		ND	
	ug/L	09/23/03	20	ND		ND		ND		ND	
	ug/L	03/11/04	20	Dry		ND		ND		ND	
	ug/L	09/23/04	20	--		ND		ND		ND	
	ug/L	03/10/05	20	--		ND		ND		ND	
	ug/L	09/22/05	20	--		ND		ND		ND	
	ug/L	03/06/06	20	--		ND		ND		ND	
	ug/L	09/19/06	20	--		ND		ND		ND	
	ug/L	03/21/07	10	ND		2.9	B	ND		2.5	J
	ug/L	09/28/07	--	Dry		Dry		Dry		--	

TABLE 5

Summary of Surface Water Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream	Downstream		Blanks
				SW-1	SW-2	SW-3	
Vanadium	ug/L	10/31/01	--	--	--	--	--
No SW Standard	ug/L	06/11/02	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--
	ug/L	03/21/07	25	ND	1.1 J	1.8 J	ND
	ug/L	09/28/07	--	Dry	Dry	Dry	--
Zinc	ug/L	10/31/01	--	--	--	--	--
SW Standard = 50 ug/L*	ug/L	06/11/02	--	--	--	--	--
	ug/L	11/01/02	--	--	--	--	--
	ug/L	03/06/03	--	--	--	--	--
	ug/L	09/23/03	--	--	--	--	--
	ug/L	03/11/04	--	--	--	--	--
	ug/L	09/23/04	--	--	--	--	--
	ug/L	03/10/05	--	--	--	--	--
	ug/L	09/22/05	--	--	--	--	--
	ug/L	03/06/06	--	--	--	--	--
	ug/L	09/19/06	--	--	--	--	--
	ug/L	03/21/07	10	6.7 J	4.9 B	8.4 J	1.1 J
	ug/L	09/28/07	--	Dry	Dry	Dry	--
pH (field)	S.U.	10/31/01	--	--	--	--	--
	S.U.	06/11/02	--	Dry	7.70	6.50	--
	S.U.	11/01/02	--	5.20	6.10	7.00	--
	S.U.	03/06/03	--	5.00	6.00	5.80	--
	S.U.	09/23/03	--	5.10	5.20	5.10	--
	S.U.	03/11/04	--	Dry	6.30	6.40	--
	S.U.	09/23/04	--	--	6.70	6.80	--
	S.U.	03/10/05	--	--	6.60	7.20	--
	S.U.	09/22/05	--	--	7.60	7.20	--
	S.U.	03/06/06	--	--	7.60	4.80	--
	S.U.	09/19/06	--	--	7.00	6.90	--
	S.U.	03/21/07	--	7.74	8.63	6.68	--
	S.U.	09/28/07	--	Dry	Dry	Dry	--
Specific Conductance	uS/cm	10/31/01	--	--	--	--	--
(lab prior to 9/19/06 event)	uS/cm	06/11/02	--	Dry	140	120	--
	uS/cm	11/01/02	--	59	105	155	--
	uS/cm	03/06/03	--	35	82	90	--
	uS/cm	09/23/03	--	55	116	128	--
	uS/cm	03/11/04	--	Dry	16	114	--
	uS/cm	09/23/04	--	--	138	112	--
	uS/cm	03/10/05	--	--	108	222	--
	uS/cm	09/22/05	--	--	166	300	--
	uS/cm	03/06/06	--	--	162	295	--
	uS/cm	09/19/06	--	--	160	170	--
	uS/cm	03/21/07	--	85	153	285	--
	uS/cm	09/28/07	--	Dry	Dry	Dry	--

TABLE 5

Summary of Surface Water Monitoring Results
Detected Constituents
Red Rock Disposal, LLC C&D Landfill, Permit No. 92-28
Wake County, North Carolina

Detected Monitoring Constituent/Parameter	Reporting Units	Sample Date	SWS Reporting Limit	Upstream	Downstream		Blanks
				SW-1	SW-2	SW-3	
Temperature	Celsius	10/31/01	--	--	--	--	--
(lab prior to 9/19/06 event)	Celsius	06/11/02	--	Dry	20.0	21.0	--
	Celsius	11/01/02	--	13.0	11.0	11	--
	Celsius	03/06/03	--	14.0	13.0	13.0	--
	Celsius	09/23/03	--	22.0	22.0	21.0	--
	Celsius	03/11/04	--	Dry	8.0	8.0	--
	Celsius	09/23/04	--	--	20.0	18.0	--
	Celsius	03/10/05	--	--	7.0	6.0	--
	Celsius	09/22/05	--	--	24.0	23.0	--
	Celsius	03/06/06	--	--	13.0	11.0	--
	Celsius	09/19/06	--	--	23.0	21.0	--
	Celsius	03/21/07	--	13.4	11.7	12.4	--
	Celsius	09/28/07	--	Dry	Dry	Dry	--
Turbidity (field)	NTU	03/21/07	--	133	146	183	--
	NTU	09/28/07	--	Dry	Dry	Dry	--
Oxidation Reduction Potential	millivolts	03/21/07	--	155	67	114	--
(field)	millivolts	09/28/07	--	Dry	Dry	Dry	--
Dissolved Oxygen (field)	mg/L	03/21/07	--	9.5	10.3	9.9	--
	mg/L	09/28/07	--	Dry	Dry	Dry	--

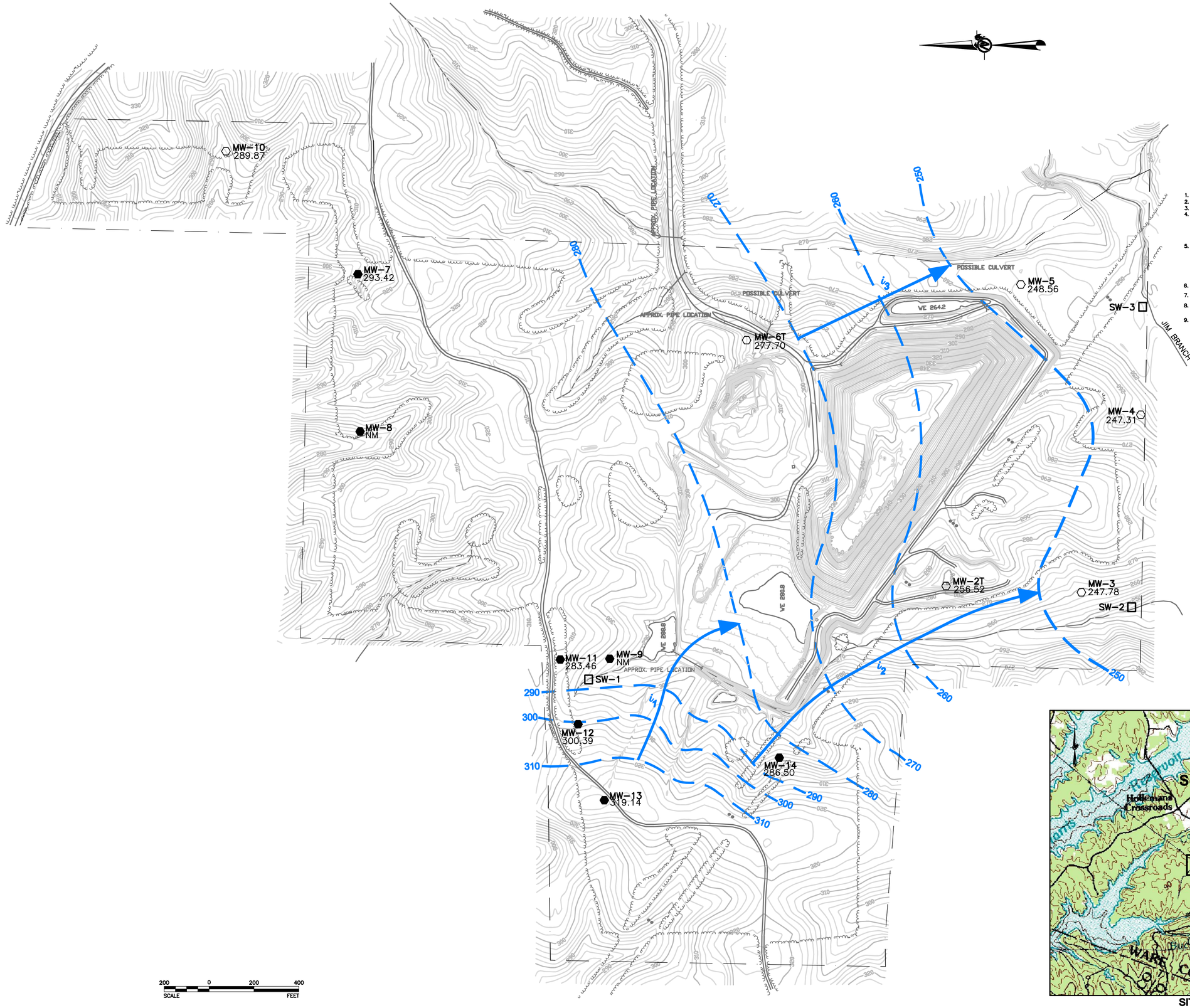
Notes:

mg/L = milligrams per liter
ug/L = micrograms per liter
S.U. = Standard Units
NTU = Nephelometric Turbidity Units
ND = Not detected at the stated reporting limit
mS = microsiemens
mV = Millivolts
J = Estimated value
-- = no data
SW Standard = Surface Water Standard based on Class C Freshwater Aquatic Life Classification
Shaded = Concentrations above applicable Surface Water Standards
Blanks = field, trip and method blanks

1) The previous SW-1 location was in a wetland area that had been removed from the site for landfill expansion following the March 2004 sampling event. During the March 2007 sampling event, SW-1 was relocated as shown on Dwg. 1.
2) Surface Water Standards based on Class C Freshwater Aquatic Life classification for the Jim Branch in the Cape Fear basin per 15A NCAC 2B.
*SW Standard for lead is a Narrative Standard per 2B .0211
*SW Stanadard for zinc is an Action Level Standard per 2B .0211

SWS Reporting Limit = NCPQL or lab-sepcific reporting limit prior to 2007 and NCSWSL starting on 01/18/07

DRAWING

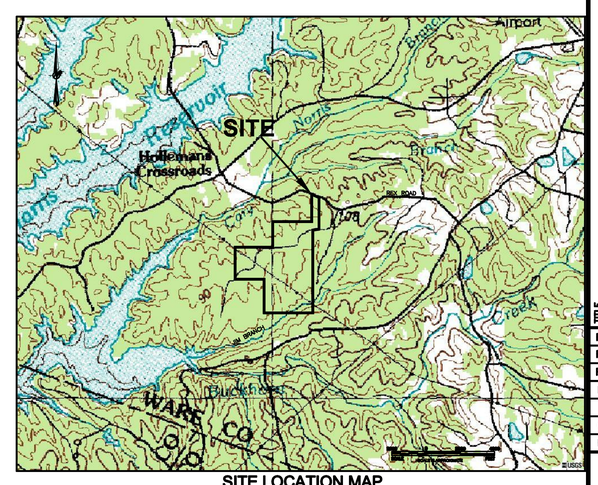


LEGEND

10 FT. CONTOUR INTERVAL	
2 FT. CONTOUR INTERVAL	
FACILITY BOUNDARY	
TREELINE	
EXISTING ROAD	
STREAM	
GROUNDWATER SURFACE 10 FT CONTOURS	250
APPROXIMATE GROUNDWATER FLOW SEGMENT USED TO CALCULATE GRADIENT	v_1
GROUNDWATER MONITORING WELL WITH GROUNDWATER ELEVATION	MW-2T 256.52
SURFACE WATER MONITORING POINT	SW-3
NON-COMPLIANCE WELL	MW-12 300.39

NOTES

1. TOPOGRAPHIC CONTOUR INTERVAL = 2 FEET
2. GROUNDWATER SURFACE CONTOUR INTERVAL= 10 FEET
3. GROUNDWATER ELEVATIONS MEASURED ON SEPTEMBER 27, 2007.
4. GROUNDWATER CONTOURS BASED ON LINEAR INTERPOLATION BETWEEN AND EXTRAPOLATION FROM KNOWN DATA, TOPOGRAPHIC CONTOURS, AND KNOWN FIELD CONDITIONS. THEREFORE, GROUNDWATER CONTOURS MAY NOT REFLECT ACTUAL GROUNDWATER CONDITIONS.
5. GROUNDWATER CONTOUR LINES SHOW THE WATER TABLE SHAPE AND ELEVATION. THESE CONTOURS ARE INFERRED LINES FOLLOWING THE GROUNDWATER SURFACE AT A CONSTANT ELEVATION ABOVE SEA LEVEL. THE GROUNDWATER FLOW DIRECTION IS GENERALLY PERPENDICULAR TO THE GROUNDWATER SURFACE CONTOURS, SIMILAR TO THE RELATIONSHIP BETWEEN SURFACE WATER FLOW AND TOPOGRAPHIC CONTOURS.
6. GRID COORDINATES REFERENCE NC STATE PLANE SYSTEM (NAD 1983)
7. ELEVATION REFERENCE U.S.G.S VERTICAL DATUM (MSL).
8. OVERALL SITE TOPOGRAPHY PREPARED BY GEODATA CORP., BASED ON AERIAL PHOTOGRAPHY DATED DECEMBER 22, 2005.
9. THE FACILITY BOUNDARY SHOWN REFERENCES DRAWING TITLED, "BOUNDARY SURVEY FOR WASTE INDUSTRIES," PREPARED BY SURVEY SOULUTIONS, P.C. DATED 12/27/00, SCALE 1" = 400'. (G.N. RICHARDSON & ASSOCIATES, INC SEPTEMBER 2006)



SITE LOCATION MAP
LOCATION IS APPROXIMATE

Golder Associates
GREENSBORO, NC

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	10/08/07	BD	GROUNDWATER CONTOURS	LKB		

PROJECT
RED ROCK DISPOSAL, LLC
CONSTRUCTION/ DEMOLITION
LANDFILL, PERMIT NO. 92-28
WAKE COUNTY, NC

TITLE
GROUNDWATER CONTOUR MAP
SEPTEMBER 27, 2007

PROJECT No.	073-9603507	
FILE No.		
REV.	SCALE	1"=200'
DESIGN	BSD	04/16/07
CADD	LKB	04/16/07
CHECK	BSD	04/26/07
REVIEW	RPK	04/26/07

DWG-1

APPENDIX I

GROUNDWATER AND SURFACE WATER SAMPLING LOGS

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW - 2T*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *24.67* **feet**
Depth to Bottom: *81.94* **feet**
H_2O Column Thickness: *57.27* **feet**
Purge Volume: *9.34* **gal.**
3x Purge Volume: *28.00* **gal.**
Well Location: *S-SW area of LF right on service road*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
14:55	6.90	2.26	239.0	20.56	0.00
15:12	7.79	2.44	800.0	19.08	9.34
15:29	7.95	2.47	>1000	19.00	16.50
Dry @ 16.50 gallons					
Sampled on 9-28-2007 @ 13:15					
13:15	7.15	2.26	0.0	21.32	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW -3*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *14.02* **feet**
Depth to Bottom: *31.43* **feet**
H_2O Column Thickness: *17.41* **feet**
Purge Volume: *2.84* **gal.**
3x Purge Volume: *8.52* **gal.**
Well Location: *S-SW area of LF. Service road blocked by fallen trees and ditches*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
16:00	7.72	5.73	142.0	20.23	0.0
16:08	7.65	5.71	391.0	18.15	2.9
16:14	7.36	5.73	>1000	17.10	5.8
Dry @ 6.75					
Sampled on 9-28-2007 @ 13:45					
13:45	7.14	5.76	0.0	20.78	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW - 4*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *6.79* **feet**
Depth to Bottom: *17.33* **feet**
H_2O Column Thickness: *10.54* **feet**
Purge Volume: *1.72* **gal.**
3x Purge Volume: *5.16* **gal.**
Well Location: *S edge of landfill*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
14:18	7.90	0.183	370.0	21.62	0.0
14:20	7.17	0.148	>1000	20.15	1.8
14:23	6.72	0.158	>1000	18.40	3.6
Dry @ 4.0 gallons					
Sampled on 9-28-2007 @ 12:45					
12:45	6.43	0.175	>1000	20.61	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW - 5*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *5.11* **feet**
Depth to Bottom: *15.41* **feet**
H_2O Column Thickness: *9.5* **feet**
Purge Volume: *1.55* **gal.**
3x Purge Volume: *4.65* **gal.**
Well Location: *SE area of landfill off N side of road down a hill*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
13:44	7.33	1.25	20.3	22.61	0.0
13:48	6.79	1.29	>1000	20.26	1.6
13:50	6.24	3.35	>1000	19.82	3.2
13:53	6.87	3.65	>1000	19.47	4.7
Sampled on 9-28-2007 @ 12:05					
12:05	7.5	1.06	0.0	22.75	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW - 6T*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *11.51* **feet**
Depth to Bottom: *54.12* **feet**
H_2O Column Thickness: *42.61* **feet**
Purge Volume: *6.95* **gal.**
3x Purge Volume: *20.84* **gal.**
Well Location: *Just past office on right hand side of the road*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
12:15	7.04	5.38	95.1	24.95	0.0
12:30	7.26	6.18	177.0	19.99	7.0
12:47	7.50	6.33	170.0	19.73	14.0
13:05	7.44	6.22	112.0	19.24	20.9
Sampled on 9-28-2007 @ 11:35					
11:35	6.92	6.08	189.0	26.35	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

Golder Associates

DATE: *9/27/2007*

GROUNDWATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF*
Project No./Phase No.: *073-9603507.100*
Well ID: *MW-10*
Sampler(s): *B. Draper/ R. Stringfellow*
Well Diameter: *2.00* **inches**
Initial Depth to Water: *11.29* **feet**
Depth to Bottom: *34.39* **feet**
H_2O Column Thickness: *23.10* **feet**
Purge Volume: *3.77* **gal.**
3x Purge Volume: *11.30* **gal.**
Well Location: *Back of Landfill down access road in woods*
Equipment: *Disposable Bailer, Horiba U-22 Water Quality Meter, Slope 150' Water Level Meter*

Time	pH (S.U.)	Cond. (mS/cm)	Turb. (NTU)	Temp. (°C)	Volume (Gallons)
11:16	5.87	1.630	0.0	20.59	0.0
11:24	6.73	1.600	>1000	17.73	3.8
11:32	7.00	1.240	>1000	17.45	7.6
11:41	7.04	1.280	>1000	17.25	11.3
Sampled on 9-28-2007 @ 9:35					
9:35	6.18	1.080	0.0	21.98	--

Comments (weather conditions, color, type of sample, purge-water management, etc.):
9-27-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.16" Hg, Wind: Calm
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph

Signature: [signature] **Date:** 11-28-2007
QA/QC Sign Off: [signature] **Date:** 11-28-07

DATE: *9/28/2007*

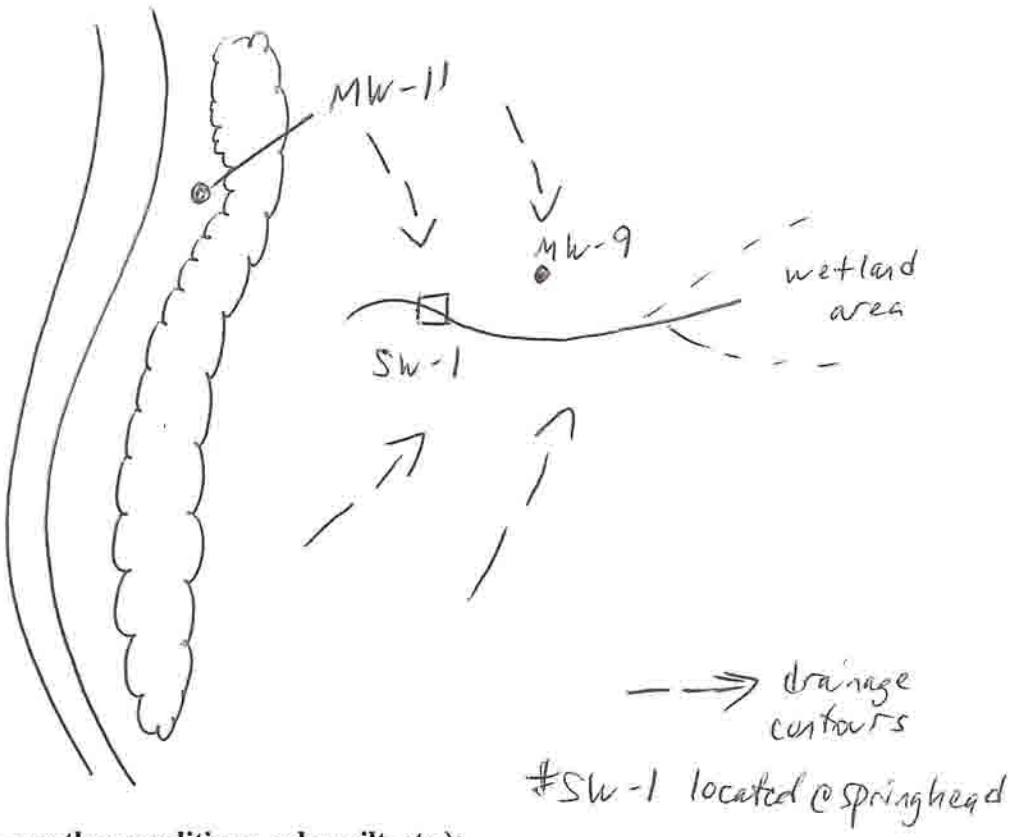
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF* **Project No./Phase No.:** *073-9603507.100*
Sample ID: *SW - 1* **Sampler(s):** *B. Draper / R. Stringfellow*
Sampling Location: *Stream bed 400 feet south of access road in N-NW corner of LF*
Equipment: *Horiba water quality meter*

Time	15:15
pH s.u.	Dry
Cond. mS/cm	Dry
Turb. ntu	Dry
Dis. O2 mg/L	Dry
Temp. oC	Dry
TDS Sal	Dry
ORP mv	Dry

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph
creek was dry, no sample

Signature: Date: 9-28-2007
QA/QC Sign Off: Date: 11-1-07

DATE: *9/28/2007*

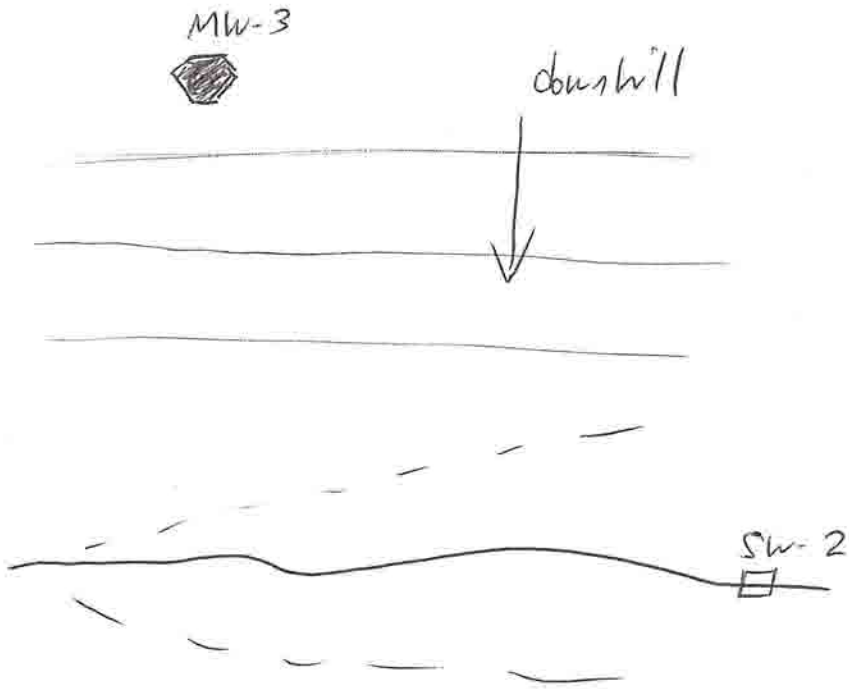
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF* **Project No./Phase No.:** *073-9603507.100*
Sample ID: *SW - 2* **Sampler(s):** *B. Draper / R. Stringfellow*
Sampling Location: *S-SW area of LF. Service road blocked by fallen trees and ditches*
Equipment: *Horiba water quality meter*

Time	14:05
pH s.u.	Dry
Cond. mS/cm	Dry
Turb. ntu	Dry
Dis. O2 mg/L	Dry
Temp. oC	Dry
TDS Sal	Dry
ORP mv	Dry

Surface Water Sampling Location Sketch



* located in drain downhill from MW-3

Comments (sample methodology, weather conditions, color, silt, etc.):
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph
creek was dry, no sample

Signature: Date: 9-28-2007
QA/QC Sign Off: Date: 11-7-07

DATE: *9/28/2007*

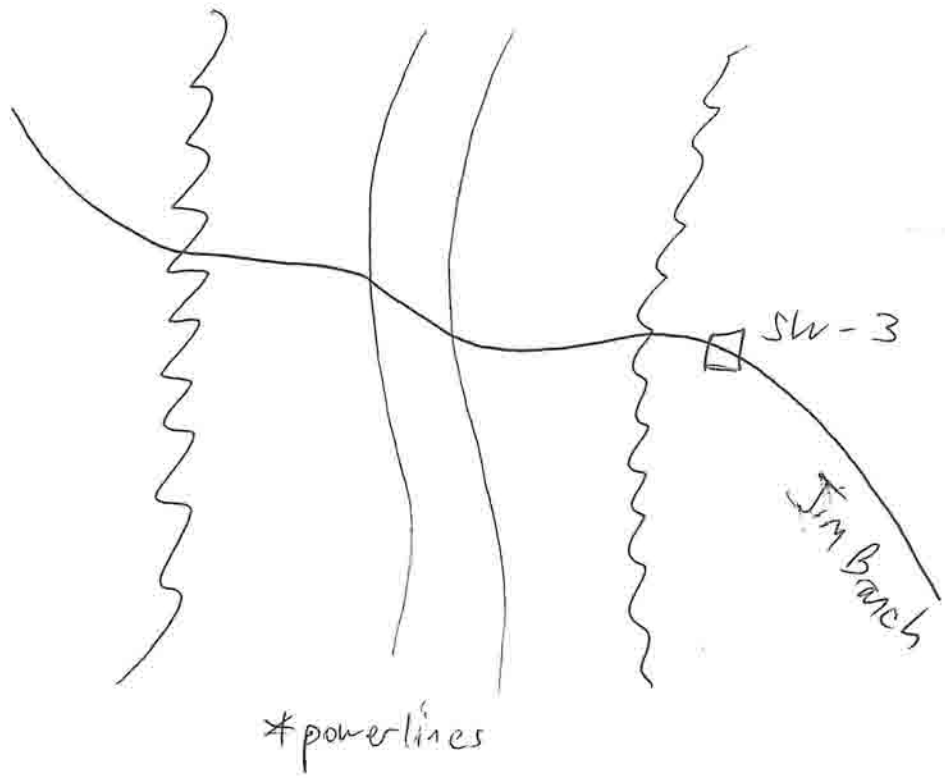
Golder Associates

SURFACE WATER SAMPLING LOG

Project Name: *WI - Red Rock C&D LF* **Project No./Phase No.:** *073-9603507.100*
Sample ID: *SW - 3* **Sampler(s):** *B. Draper / R. Stringfellow*
Sampling Location: *creek normally flows across a powerline access road in SE corner of LF*
Equipment: *Horiba water quality meter*

Time	12:00
pH s.u.	Dry
Cond. mS/cm	Dry
Turb. ntu	Dry
Dis. O2 mg/L	Dry
Temp. oC	Dry
TDS Sal	Dry
ORP mv	Dry

Surface Water Sampling Location Sketch



Comments (sample methodology, weather conditions, color, silt, etc.):
9-28-2007 - Weather Conditions: Temp: High 91°F, Moisture: 94%, Baro. Press: 30.04" Hg, Wind: 0-8 mph
creek was dry, no sample

Signature: [signature] Date: 9-28-2007
QA/QC Sign Off: [signature] Date: 11-7-07

Golder Associates

WELL CONDITION SUMMARY

DATE: 9-26/27-2007

Project Name: WT - Red Rock Disposal, LLC

Project No./Task No. 073-9603507.100

Personnel: B. Dreger / R. Stumpfellow

Page 1 of 1

Well ID	Protective Casing	Well Casing	Label	Lock	Pad Condition	Depth of Well (Feet)	General Turbudity	Comments/ Observations*
MW-2T	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-3	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☐ Clear ☐ Turbid	
MW-4	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☐ Clear ☐ Turbid	
MW-5	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-6T	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-10	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-7	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☐ Yes ☑ No	☑ OK ☐ Damaged		☑ Clear ☑ Turbid	* INSTALLED WELL TAG NO LOCK
MW-8	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☐ Yes ☑ No	☑ OK ☐ Damaged		☑ Clear ☑ Turbid	* RE-INSTALLED WELL TAG NO LOCK
MW-11	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-12	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
MW-13	☑ OK ☐ Damaged	☑ OK ☐ Damaged	☑ OK ☐ Inadequate	☑ Yes ☐ No	☑ OK ☐ Damaged		☑ Clear ☐ Turbid	
	☐ OK ☐ Damaged	☐ OK ☐ Damaged	☐ OK ☐ Inadequate	☐ Yes ☐ No	☐ OK ☐ Damaged		☐ Clear ☐ Turbid	

* Note ponding water, weep holes, condition of surrounding area, including any disturbance of the ground since last inspection, evidence of contamination.

Signature: [signature] Date: 9-27-2007

APPENDIX II

SEPTEMBER 2007 CERTIFICATES-OF-ANALYSIS, CHAIN-OF-CUSTODY FORMS AND LABORATORY DATA REVIEWS

Environmental Conservation Laboratories, Inc.
102-A Woodwinds Industrial Court
Cary NC, 27511
Phone: 919.467.3090 FAX: 919.467.3515

www.encolabs.com

Thursday, November 8, 2007

Golder Associates, Inc. (GO007)

Attn: Rachel Kirkman

The Wingate Building 4900 Koger Blvd., Suite 140

Greensboro, NC 27407

RECEIVED NOV 12 2007

RE: Laboratory Results for
Project Number: 073-96033507.100, Project Name/Desc: WI- Red Rock
ENCO Workorder: C712999

Dear Rachel Kirkman,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on Friday, September 28, 2007.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

The analytical results contained in this report are in compliance with NELAC standards, except as noted in the project narrative. This report shall not be reproduced except in full, without the written approval of the Laboratory.

This report contains only those analyses performed by Environmental Conservation Laboratories. Unless otherwise noted, all analyses were performed at ENCO Cary. Data from outside organizations will be reported under separate cover.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Stephanie Franz

Stephanie Franz
Project Manager

Enclosure(s)

The total number of pages in this report, including this page is 52.

CASE NARRATIVE

Date: 08 November 2007
Client: Golder Associates
Project #: WI - Red Rock
Lab ID: C712999

Overview

This report is an amendment to the original report dated 10 October 2007 for this work order. The report was revised, at the client's request, to include data for Cadmium for a re-prepared/reanalyzed sample (9828-MW5) and to remove requested analyte parameters.

All samples submitted were analyzed by Environmental Conservation Laboratories, Inc. in accordance with the methods referenced in the laboratory report. Any particular difficulties encountered during sample handling by Environmental Conservation Laboratories, Inc. will be discussed in the QC Remarks section below.

Quality Control Samples

No Comments

Quality Control Remarks

No Comments

Other Comments

Not all of the samples in this pre-log were received. Some of the sampling points were dry during the sampling event.

The samples were not checked for residual Chlorine upon receipt by ENCO as it is not a requirement for groundwater samples.

The analytical data presented in this report are consistent with the methods as referenced in the analytical report. Any exceptions or deviations are noted in the QC remarks section of this narrative.

Released By:
Environmental Conservation Laboratories, Inc.

Stephanie Franz
Project Manager

www.encolabs.com

SAMPLE SUMMARY/LABORATORY CHRONICLE

Client ID: 9828-MW2T	Lab ID: C712999-01	Sampled: 09/27/07 13:15	Received: 09/28/07 16:30
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 20:10
EPA 310.1	10/11/07	10/04/07 10:43	10/4/2007 10:43
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 11:37
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:45
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 12:34
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 13:02

Client ID: 9828-MW3	Lab ID: C712999-02	Sampled: 09/27/07 13:45	Received: 09/28/07 16:30
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 20:27
EPA 310.1	10/11/07	10/04/07 10:43	10/4/2007 10:43
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 11:44
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:47
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 12:37
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 11:06

Client ID: 9828-MW4	Lab ID: C712999-03	Sampled: 09/27/07 12:45	Received: 09/28/07 16:30
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 20:43
EPA 310.2	10/11/07	10/01/07 10:30	10/1/2007 11:30
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 11:52
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:50
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 13:22
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 11:35

Client ID: 9828-MW5 (ms/msd)	Lab ID: C712999-04	Sampled: 09/27/07 12:05	Received: 09/28/07 16:30
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 19:54
EPA 310.2	10/11/07	10/01/07 10:30	10/1/2007 11:12
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 11:13
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:33
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 12:07
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 10:07

Client ID: 9828-MW5 (ms/msd)	Lab ID: C712999-04RE1	Sampled: 09/27/07 12:05	Received: 09/28/07 16:30
Parameter	**Hold Date/Time(s)**	**Prep Date/Time(s)**	**Analysis Date/Time(s)**
EPA 6010B	03/25/08	10/01/07 09:53	11/1/2007 16:49

www.encolabs.com

Client ID: 9828-MW6T	Lab ID: C712999-05	Sampled: 09/27/07 11:35	Received: 09/28/07 16:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 20:59
EPA 310.1	10/11/07	10/04/07 10:43	10/4/2007 10:43
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 11:59
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:52
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 13:25
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 12:04

Client ID: 9828-MW10	Lab ID: C712999-06	Sampled: 09/27/07 09:35	Received: 09/28/07 16:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 160.1	10/04/07	10/01/07 13:15	10/2/2007 12:04
EPA 300.0	10/25/07	10/01/07 13:53	10/1/2007 21:15
EPA 310.2	10/11/07	10/01/07 10:30	10/1/2007 11:16
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 12:06
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:55
EPA 7470A	10/25/07	10/04/07 10:57	10/5/2007 12:45
EPA 8260B	10/11/07	10/09/07 00:30	10/9/2007 12:33

Client ID: Field Blank	Lab ID: C712999-07	Sampled: 09/27/07 16:20	Received: 09/28/07 16:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 6010B	03/25/08	10/01/07 09:53	10/3/2007 12:32
EPA 6020	03/25/08	10/01/07 09:57	10/5/2007 13:57
EPA 8260B	10/11/07	10/08/07 14:55	10/8/2007 21:24

Client ID: Trip Blank	Lab ID: C712999-08	Sampled: 09/27/07 00:00	Received: 09/28/07 16:30

Parameter	Hold Date/Time(s)	Prep Date/Time(s)	Analysis Date/Time(s)
EPA 8260B	10/11/07	10/08/07 14:55	10/8/2007 20:55

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NORTH CAROLINA SWS SAMPLE DETECTION SUMMARY

Client ID: 9828-MW2T — **Lab ID: C712999-01**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	2.8	J	1	0.90	5.0	100	ug/L	EPA 8260B	
Barium	59.1	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	430		5	0.25	5.0	NE	mg/L	EPA 300.0	
Iron	39	J	1	20	50	300	ug/L	EPA 6010B	
Manganese	36.0	J	1	1.4	10.0	50	ug/L	EPA 6010B	
Sulfate	40	J	5	0.15	10	250	mg/L	EPA 300.0	
Thallium	0.043	J	1	0.036	0.050	5.5	ug/L	EPA 6020	
Total Alkalinity	340		1	2.0	2.0	NE	mg/L	EPA 310.1	
Total Dissolved Solids	1200		1	10	10	NE	mg/L	EPA 160.1	
Vanadium	3.2	J	1	1.0	10.0	25	ug/L	EPA 6010B	

Client ID: 9828-MW3 — **Lab ID: C712999-02**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium	1930		1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	1600		10	0.50	10	NE	mg/L	EPA 300.0	
Manganese	33.7	J	1	1.4	10.0	50	ug/L	EPA 6010B	
Sulfate	32	J	10	0.30	20	250	mg/L	EPA 300.0	
Thallium	0.045	J	1	0.036	0.050	5.5	ug/L	EPA 6020	
Total Alkalinity	350		1	2.0	2.0	NE	mg/L	EPA 310.1	
Total Dissolved Solids	3100		1	10	10	NE	mg/L	EPA 160.1	
Vanadium	29.6		1	1.0	10.0	25	ug/L	EPA 6010B	
Zinc	4.8	J	1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: 9828-MW4 — **Lab ID: C712999-03**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium	286		1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	14		1	0.05	1.0	NE	mg/L	EPA 300.0	
Cobalt	3.0	J	1	2.0	10.0	10	ug/L	EPA 6010B	
Iron	21800		1	20	50	300	ug/L	EPA 6010B	
Lead	15.9		1	2.0	10.0	10	ug/L	EPA 6010B	
Manganese	498		1	1.4	10.0	50	ug/L	EPA 6010B	
Sulfate	8.0	J	1	0.03	2.0	250	mg/L	EPA 300.0	
Thallium	0.101	J	1	0.036	0.050	5.5	ug/L	EPA 6020	
Total Dissolved Solids	1400		1	10	10	NE	mg/L	EPA 160.1	
Vanadium	23.2	J	1	1.0	10.0	25	ug/L	EPA 6010B	
Zinc	41.4		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: 9828-MW5 (ms/msd) — **Lab ID: C712999-04**

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium	238		1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	210		1	0.05	1.0	NE	mg/L	EPA 300.0	
Cobalt	21.1		1	2.0	10.0	10	ug/L	EPA 6010B	
Iron	436		1	20	50	300	ug/L	EPA 6010B	
Manganese	2040		1	1.4	10.0	50	ug/L	EPA 6010B	
Nickel	5.3	J	1	2.0	10.0	50	ug/L	EPA 6010B	
Sulfate	58	J	1	0.03	2.0	250	mg/L	EPA 300.0	
Thallium	0.072	J	1	0.036	0.050	5.5	ug/L	EPA 6020	
Total Alkalinity	15		1	5.2	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids	480		1	10	10	NE	mg/L	EPA 160.1	

Client ID: 9828-MW5 (ms/msd) **Lab ID:** C712999-04

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Zinc	17.6		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: 9828-MW6T **Lab ID:** C712999-05

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium	1800		1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	1700		10	0.50	10	NE	mg/L	EPA 300.0	
Manganese	1580		1	1.4	10.0	50	ug/L	EPA 6010B	
Sulfate	25	J	10	0.30	20	250	mg/L	EPA 300.0	
Total Alkalinity	320		1	2.0	2.0	NE	mg/L	EPA 310.1	
Total Dissolved Solids	3200		1	10	10	NE	mg/L	EPA 160.1	
Zinc	54.3		1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: 9828-MW10 **Lab ID:** C712999-06

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Barium	488		1	0.20	10.0	100	ug/L	EPA 6010B	
Chloride	170		2	0.10	2.0	NE	mg/L	EPA 300.0	
Iron	170	J	1	20	50	300	ug/L	EPA 6010B	
Manganese	251		1	1.4	10.0	50	ug/L	EPA 6010B	
Sulfate	13	J	2	0.06	4.0	250	mg/L	EPA 300.0	
Thallium	0.042	J	1	0.036	0.050	5.5	ug/L	EPA 6020	
Total Alkalinity	180		1	5.2	15	NE	mg/L	EPA 310.2	
Total Dissolved Solids	490		1	10	10	NE	mg/L	EPA 160.1	
Zinc	2.3	J	1	1.0	10.0	10	ug/L	EPA 6010B	

Client ID: Field Blank **Lab ID:** C712999-07

Analyte	Results	Flag	DF	MDL	MRL	NC SWSL	Units	Method	Notes
Acetone	5.2	J	1	0.90	5.0	100	ug/L	EPA 8260B	
Barium	0.30	J	1	0.20	10.0	100	ug/L	EPA 6010B	
Thallium	0.066	J	1	0.036	0.050	5.5	ug/L	EPA 6020	

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ANALYTICAL RESULTS

Description: 9828-MW2T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-01
Sampled: 09/27/07 13:15
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 13:02	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 13:02	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 13:02	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 13:02	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 13:02	jkg	
Acetone [67-64-1] *	**2.8**	J	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 13:02	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 13:02	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 13:02	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 13:02	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 13:02	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 13:02	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 13:02	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 13:02	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 13:02	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 13:02	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 13:02	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 13:02	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 13:02	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 13:02	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 13:02	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 13:02	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 13:02	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 13:02	jkg	

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Description: 9828-MW2T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-01
Sampled: 09/27/07 13:15
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 13:02	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 13:02	jkg	
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 13:02	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*91 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 13:02*	*jkg*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 13:02*	*jkg*	
Toluene-d8	*41*	*1*	*50.0*	*82 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 13:02*	*jkg*	

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Description: 9828-MW2T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-01
Sampled: 09/27/07 13:15
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:45	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Barium [7440-39-3] *	**59.1**	J	ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 11:37	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 11:37	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 11:37	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Cobalt [7440-48-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Iron [7439-89-6] *	**39**	J	ug/L	1	20	50	300	EPA 6010B	10/03/07 11:37	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Manganese [7439-96-5] *	**36.0**	J	ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 11:37	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 12:34	VLO	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 11:37	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	
Thallium [7440-28-0] *	**0.043**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:45	ZZZ	
Vanadium [7440-62-2] *	**3.2**	J	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 11:37	JDH	
Zinc [7440-66-6] *	1.0	U	ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 11:37	JDH	

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Description: 9828-MW2T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-01
Sampled: 09/27/07 13:15
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	**340**		mg/L	1	2.0	2.0	NE	EPA 310.1	10/04/07 10:43	CKN	
Total Dissolved Solids [NA] *	**1200**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW2T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-01
Sampled: 09/27/07 13:15
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**430**		mg/L	5	0.25	5.0	NE	EPA 300.0	10/01/07 20:10	RSA	
Sulfate [14808-79-8] *	**40**	J	mg/L	5	0.15	10	250	EPA 300.0	10/01/07 20:10	RSA	

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Description: 9828-MW3
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-02
Sampled: 09/27/07 13:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 11:06	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 11:06	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 11:06	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 11:06	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 11:06	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 11:06	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 11:06	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 11:06	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 11:06	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 11:06	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 11:06	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 11:06	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 11:06	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 11:06	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 11:06	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 11:06	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 11:06	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 11:06	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 11:06	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 11:06	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 11:06	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 11:06	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 11:06	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 11:06	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:06	jkg	

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Description: 9828-MW3
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-02
Sampled: 09/27/07 13:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 11:06	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*43*	*1*	*50.0*	*85 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 11:06*	*jkg*	
Dibromofluoromethane	*46*	*1*	*50.0*	*92 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 11:06*	*jkg*	
Toluene-d8	*44*	*1*	*50.0*	*88 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 11:06*	*jkg*	

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Description: 9828-MW3
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-02
Sampled: 09/27/07 13:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:47	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Barium [7440-39-3] *	**1930**		ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 11:44	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 11:44	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 11:44	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Cobalt [7440-48-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Iron [7439-89-6] *	20	U	ug/L	1	20	50	300	EPA 6010B	10/03/07 11:44	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Manganese [7439-96-5] *	**33.7**	J	ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 11:44	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 12:37	VLO	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 11:44	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	
Thallium [7440-28-0] *	**0.045**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:47	ZZZ	
Vanadium [7440-62-2] *	**29.6**		ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 11:44	JDH	
Zinc [7440-66-6] *	**4.8**	J	ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 11:44	JDH	

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Description: 9828-MW3
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-02
Sampled: 09/27/07 13:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	**350**		mg/L	1	2.0	2.0	NE	EPA 310.1	10/04/07 10:43	CKN	
Total Dissolved Solids [NA] *	**3100**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW3
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-02
Sampled: 09/27/07 13:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**1600**		mg/L	10	0.50	10	NE	EPA 300.0	10/01/07 20:27	RSA	
Sulfate [14808-79-8] *	**32**	J	mg/L	10	0.30	20	250	EPA 300.0	10/01/07 20:27	RSA	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 9828-MW4
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-03
Sampled: 09/27/07 12:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 11:35	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 11:35	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 11:35	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 11:35	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 11:35	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 11:35	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 11:35	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 11:35	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 11:35	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 11:35	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 11:35	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 11:35	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 11:35	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 11:35	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 11:35	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 11:35	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 11:35	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 11:35	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 11:35	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 11:35	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 11:35	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 11:35	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 11:35	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 11:35	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 11:35	jkg	

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Description: 9828-MW4
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-03
Sampled: 09/27/07 12:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 11:35	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*43*	*1*	*50.0*	*87 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 11:35*	*jkg*	
Dibromofluoromethane	*46*	*1*	*50.0*	*91 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 11:35*	*jkg*	
Toluene-d8	*42*	*1*	*50.0*	*83 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 11:35*	*jkg*	

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Description: 9828-MW4
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-03
Sampled: 09/27/07 12:45
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Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:50	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Barium [7440-39-3] *	**286**		ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 11:52	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 11:52	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 11:52	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Cobalt [7440-48-4] *	**3.0**	J	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Iron [7439-89-6] *	**21800**		ug/L	1	20	50	300	EPA 6010B	10/03/07 11:52	JDH	
Lead [7439-92-1] *	**15.9**		ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Manganese [7439-96-5] *	**498**		ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 11:52	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 13:22	VLO	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 11:52	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	
Thallium [7440-28-0] *	**0.101**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:50	ZZZ	
Vanadium [7440-62-2] *	**23.2**	J	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 11:52	JDH	
Zinc [7440-66-6] *	**41.4**		ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 11:52	JDH	

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Description: 9828-MW4
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-03
Sampled: 09/27/07 12:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	5.2	U	mg/L	1	5.2	15	NE	EPA 310.2	10/01/07 11:30	PEV	
Total Dissolved Solids [NA] *	**1400**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW4
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-03
Sampled: 09/27/07 12:45
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**14**		mg/L	1	0.05	1.0	NE	EPA 300.0	10/01/07 20:43	RSA	
Sulfate [14808-79-8] *	**8.0**	J	mg/L	1	0.03	2.0	250	EPA 300.0	10/01/07 20:43	RSA	

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Description: 9828-MW5 (ms/msd)
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-04
Sampled: 09/27/07 12:05
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 10:07	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 10:07	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 10:07	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 10:07	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 10:07	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 10:07	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 10:07	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 10:07	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 10:07	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 10:07	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 10:07	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 10:07	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 10:07	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 10:07	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 10:07	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 10:07	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 10:07	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 10:07	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 10:07	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 10:07	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 10:07	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 10:07	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 10:07	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 10:07	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 10:07	jkg	

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Description: 9828-MW5 (ms/msd)
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-04
Sampled: 09/27/07 12:05
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 10:07	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*84 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 10:07*	*jkg*	
Dibromofluoromethane	*44*	*1*	*50.0*	*87 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 10:07*	*jkg*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 10:07*	*jkg*	

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Description: 9828-MW5 (ms/msd)
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-04
Sampled: 09/27/07 12:05
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:33	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Barium [7440-39-3] *	**238**		ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 11:13	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 11:13	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	11/01/07 16:49	VLO	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Cobalt [7440-48-4] *	**21.1**		ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Iron [7439-89-6] *	**436**		ug/L	1	20	50	300	EPA 6010B	10/03/07 11:13	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Manganese [7439-96-5] *	**2040**		ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 11:13	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 12:07	VLO	
Nickel [7440-02-0] *	**5.3**	J	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 11:13	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	
Thallium [7440-28-0] *	**0.072**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:33	ZZZ	
Vanadium [7440-62-2] *	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 11:13	JDH	
Zinc [7440-66-6] *	**17.6**		ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 11:13	JDH	

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Description: 9828-MW5 (ms/msd)
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-04
Sampled: 09/27/07 12:05
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	**15**		mg/L	1	5.2	15	NE	EPA 310.2	10/01/07 11:12	PEV	
Total Dissolved Solids [NA] *	**480**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW5 (ms/msd)
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-04
Sampled: 09/27/07 12:05
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**210**		mg/L	1	0.05	1.0	NE	EPA 300.0	10/01/07 19:54	RSA	
Sulfate [14808-79-8] *	**58**	J	mg/L	1	0.03	2.0	250	EPA 300.0	10/01/07 19:54	RSA	

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Description: 9828-MW6T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-05
Sampled: 09/27/07 11:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 12:04	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 12:04	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 12:04	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 12:04	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 12:04	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 12:04	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 12:04	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 12:04	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 12:04	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 12:04	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 12:04	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 12:04	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 12:04	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 12:04	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 12:04	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 12:04	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 12:04	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 12:04	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 12:04	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 12:04	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 12:04	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 12:04	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 12:04	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 12:04	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:04	jkg	

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Description: 9828-MW6T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-05
Sampled: 09/27/07 11:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 12:04	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*44*	*1*	*50.0*	*87 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 12:04*	*jkg*	
Dibromofluoromethane	*47*	*1*	*50.0*	*93 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 12:04*	*jkg*	
Toluene-d8	*43*	*1*	*50.0*	*87 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 12:04*	*jkg*	

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Description: 9828-MW6T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-05
Sampled: 09/27/07 11:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:52	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Barium [7440-39-3] *	**1800**		ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 11:59	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 11:59	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 11:59	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Cobalt [7440-48-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Iron [7439-89-6] *	20	U	ug/L	1	20	50	300	EPA 6010B	10/03/07 11:59	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Manganese [7439-96-5] *	**1580**		ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 11:59	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 13:25	VLO	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 11:59	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	
Thallium [7440-28-0] *	0.036	U	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:52	ZZZ	
Vanadium [7440-62-2] *	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 11:59	JDH	
Zinc [7440-66-6] *	**54.3**		ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 11:59	JDH	

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Description:	9828-MW6T	**Lab Sample ID:**	C712999-05	**Received:**	09/28/07 16:30
Matrix:	Water	**Sampled:**	09/27/07 11:35	**Work Order:**	C712999
Project:	WI- Red Rock	**Sampled By:**	B. Draper/R. Stringfellow		

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	**320**		mg/L	1	2.0	2.0	NE	EPA 310.1	10/04/07 10:43	CKN	
Total Dissolved Solids [NA] *	**3200**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW6T
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-05
Sampled: 09/27/07 11:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**1700**		mg/L	10	0.50	10	NE	EPA 300.0	10/01/07 20:59	RSA	
Sulfate [14808-79-8] *	**25**	J	mg/L	10	0.30	20	250	EPA 300.0	10/01/07 20:59	RSA	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: 9828-MW10
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-06
Sampled: 09/27/07 09:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/09/07 12:33	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/09/07 12:33	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/09/07 12:33	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/09/07 12:33	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/09/07 12:33	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/09/07 12:33	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/09/07 12:33	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/09/07 12:33	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/09/07 12:33	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/09/07 12:33	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/09/07 12:33	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/09/07 12:33	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/09/07 12:33	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/09/07 12:33	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/09/07 12:33	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/09/07 12:33	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/09/07 12:33	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/09/07 12:33	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/09/07 12:33	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/09/07 12:33	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/09/07 12:33	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/09/07 12:33	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/09/07 12:33	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/09/07 12:33	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/09/07 12:33	jkg	

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Description: 9828-MW10
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-06
Sampled: 09/27/07 09:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/09/07 12:33	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*42*	*1*	*50.0*	*85 %*	*53-138*	*7J09001*	*EPA 8260B*	*10/09/07 12:33*	*jkg*	
Dibromofluoromethane	*47*	*1*	*50.0*	*94 %*	*65-110*	*7J09001*	*EPA 8260B*	*10/09/07 12:33*	*jkg*	
Toluene-d8	*44*	*1*	*50.0*	*87 %*	*72-114*	*7J09001*	*EPA 8260B*	*10/09/07 12:33*	*jkg*	

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Description: 9828-MW10
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-06
Sampled: 09/27/07 09:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:55	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Barium [7440-39-3] *	**488**		ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 12:06	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 12:06	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 12:06	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Cobalt [7440-48-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Iron [7439-89-6] *	**170**	J	ug/L	1	20	50	300	EPA 6010B	10/03/07 12:06	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Manganese [7439-96-5] *	**251**		ug/L	1	1.4	10.0	50	EPA 6010B	10/03/07 12:06	JDH	
Mercury [7439-97-6] *	0.11	U	ug/L	1	0.11	0.20	0.2	EPA 7470A	10/05/07 12:45	VLO	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 12:06	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	
Thallium [7440-28-0] *	**0.042**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:55	ZZZ	
Vanadium [7440-62-2] *	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 12:06	JDH	
Zinc [7440-66-6] *	**2.3**	J	ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 12:06	JDH	

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Description: 9828-MW10
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-06
Sampled: 09/27/07 09:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Total Alkalinity [NA] *	**180**		mg/L	1	5.2	15	NE	EPA 310.2	10/01/07 11:16	PEV	
Total Dissolved Solids [NA] *	**490**		mg/L	1	10	10	NE	EPA 160.1	10/02/07 12:04	JOC	

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Description: 9828-MW10
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-06
Sampled: 09/27/07 09:35
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Classical Chemistry Parameters

** - ENCO Orlando certified analyte [NC 424]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Chloride [16887-00-6] *	**170**		mg/L	2	0.10	2.0	NE	EPA 300.0	10/01/07 21:15	RSA	
Sulfate [14808-79-8] *	**13**	J	mg/L	2	0.06	4.0	250	EPA 300.0	10/01/07 21:15	RSA	

This report relates only to the sample as received by the laboratory, and may only be reproduced in full.

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Description: Field Blank
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-07
Sampled: 09/27/07 16:20
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/08/07 21:24	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/08/07 21:24	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/08/07 21:24	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/08/07 21:24	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/08/07 21:24	jkg	
Acetone [67-64-1] *	**5.2**	J	ug/L	1	0.90	5.0	100	EPA 8260B	10/08/07 21:24	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/08/07 21:24	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/08/07 21:24	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/08/07 21:24	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/08/07 21:24	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/08/07 21:24	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/08/07 21:24	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/08/07 21:24	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/08/07 21:24	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/08/07 21:24	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/08/07 21:24	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/08/07 21:24	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/08/07 21:24	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/08/07 21:24	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/08/07 21:24	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/08/07 21:24	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/08/07 21:24	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/08/07 21:24	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/08/07 21:24	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 21:24	jkg	

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Description: Field Blank
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-07
Sampled: 09/27/07 16:20
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/08/07 21:24	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
4-Bromofluorobenzene	*45*	*1*	*50.0*	*89 %*	*53-138*	*7J08028*	*EPA 8260B*	*10/08/07 21:24*	*jkg*	
Dibromofluoromethane	*46*	*1*	*50.0*	*93 %*	*65-110*	*7J08028*	*EPA 8260B*	*10/08/07 21:24*	*jkg*	
Toluene-d8	*43*	*1*	*50.0*	*86 %*	*72-114*	*7J08028*	*EPA 8260B*	*10/08/07 21:24*	*jkg*	

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Description: Field Blank
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-07
Sampled: 09/27/07 16:20
Sampled By: B. Draper/R. Stringfellow

Received: 09/28/07 16:30
Work Order: C712999

Metals by EPA 6000/7000 Series Methods

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Antimony [7440-36-0] *	0.68	U	ug/L	1	0.68	2.00	6	EPA 6020	10/05/07 13:57	ZZZ	
Arsenic [7440-38-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Barium [7440-39-3] *	**0.30**	J	ug/L	1	0.20	10.0	100	EPA 6010B	10/03/07 12:32	JDH	
Beryllium [7440-41-7] *	0.70	U	ug/L	1	0.70	1.00	1	EPA 6010B	10/03/07 12:32	JDH	
Cadmium [7440-43-9] *	0.50	U	ug/L	1	0.50	1.00	1	EPA 6010B	10/03/07 12:32	JDH	
Chromium [7440-47-3] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Cobalt [7440-48-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Copper [7440-50-8] *	0.60	U	ug/L	1	0.60	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Lead [7439-92-1] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Nickel [7440-02-0] *	2.0	U	ug/L	1	2.0	10.0	50	EPA 6010B	10/03/07 12:32	JDH	
Selenium [7782-49-2] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Silver [7440-22-4] *	2.0	U	ug/L	1	2.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	
Thallium [7440-28-0] *	**0.066**	J	ug/L	1	0.036	0.050	5.5	EPA 6020	10/05/07 13:57	ZZZ	
Vanadium [7440-62-2] *	1.0	U	ug/L	1	1.0	10.0	25	EPA 6010B	10/03/07 12:32	JDH	
Zinc [7440-66-6] *	1.0	U	ug/L	1	1.0	10.0	10	EPA 6010B	10/03/07 12:32	JDH	

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Description: Trip Blank
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-08
Sampled: 09/27/07 00:00
Sampled By:

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
1,1,1,2-Tetrachloroethane [630-20-6] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
1,1,1-Trichloroethane [71-55-6] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,1,2,2-Tetrachloroethane [79-34-5] *	0.27	U	ug/L	1	0.27	1.0	3	EPA 8260B	10/08/07 20:55	jkg	
1,1,2-Trichloroethane [79-00-5] *	0.24	U	ug/L	1	0.24	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,1-Dichloroethane [75-34-3] *	0.090	U	ug/L	1	0.090	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
1,1-Dichloroethene [75-35-4] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
1,2,3-Trichloropropane [96-18-4] *	0.32	U	ug/L	1	0.32	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,2-Dibromo-3-chloropropane [96-12-8] *	0.19	U	ug/L	1	0.19	1.0	13	EPA 8260B	10/08/07 20:55	jkg	
1,2-Dibromoethane [106-93-4] *	0.19	U	ug/L	1	0.19	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,2-Dichlorobenzene [95-50-1] *	0.17	U	ug/L	1	0.17	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
1,2-Dichloroethane [107-06-2] *	0.36	U	ug/L	1	0.36	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,2-Dichloropropane [78-87-5] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
1,4-Dichlorobenzene [106-46-7] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
2-Butanone [78-93-3] *	0.56	U	ug/L	1	0.56	5.0	100	EPA 8260B	10/08/07 20:55	jkg	
2-Hexanone [591-78-6] *	0.24	U	ug/L	1	0.24	5.0	50	EPA 8260B	10/08/07 20:55	jkg	
4-Methyl-2-pentanone [108-10-1] *	0.36	U	ug/L	1	0.36	5.0	100	EPA 8260B	10/08/07 20:55	jkg	
Acetone [67-64-1] *	0.90	U	ug/L	1	0.90	5.0	100	EPA 8260B	10/08/07 20:55	jkg	
Acrylonitrile [107-13-1] *	2.0	U	ug/L	1	2.0	5.0	200	EPA 8260B	10/08/07 20:55	jkg	
Benzene [71-43-2] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Bromochloromethane [74-97-5] *	0.19	U	ug/L	1	0.19	1.0	3	EPA 8260B	10/08/07 20:55	jkg	
Bromodichloromethane [75-27-4] *	0.19	U	ug/L	1	0.19	0.40	1	EPA 8260B	10/08/07 20:55	jkg	
Bromoform [75-25-2] *	0.36	U	ug/L	1	0.36	1.0	3	EPA 8260B	10/08/07 20:55	jkg	
Bromomethane [74-83-9] *	0.21	U	ug/L	1	0.21	1.0	10	EPA 8260B	10/08/07 20:55	jkg	
Carbon disulfide [75-15-0] *	0.12	U	ug/L	1	0.12	5.0	100	EPA 8260B	10/08/07 20:55	jkg	
Carbon tetrachloride [56-23-5] *	0.38	U	ug/L	1	0.38	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Chlorobenzene [108-90-7] *	0.16	U	ug/L	1	0.16	1.0	3	EPA 8260B	10/08/07 20:55	jkg	
Chloroethane [75-00-3] *	0.40	U	ug/L	1	0.40	1.0	10	EPA 8260B	10/08/07 20:55	jkg	
Chloroform [67-66-3] *	0.16	U	ug/L	1	0.16	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
Chloromethane [74-87-3] *	0.18	U	ug/L	1	0.18	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
cis-1,2-Dichloroethene [156-59-2] *	0.14	U	ug/L	1	0.14	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
cis-1,3-Dichloropropene [10061-01-5] *	0.16	U	ug/L	1	0.16	0.20	1	EPA 8260B	10/08/07 20:55	jkg	
Dibromochloromethane [124-48-1] *	0.18	U	ug/L	1	0.18	1.0	3	EPA 8260B	10/08/07 20:55	jkg	
Dibromomethane [74-95-3] *	0.14	U	ug/L	1	0.14	1.0	10	EPA 8260B	10/08/07 20:55	jkg	
Ethylbenzene [100-41-4] *	0.17	U	ug/L	1	0.17	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Iodomethane [74-88-4] *	0.23	U	ug/L	1	0.23	2.0	10	EPA 8260B	10/08/07 20:55	jkg	
Methylene chloride [75-09-2] *	0.088	U	ug/L	1	0.088	2.0	1	EPA 8260B	10/08/07 20:55	jkg	
Styrene [100-42-5] *	0.12	U	ug/L	1	0.12	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Tetrachloroethene [127-18-4] *	0.25	U	ug/L	1	0.25	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Toluene [108-88-3] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
trans-1,2-Dichloroethene [156-60-5] *	0.10	U	ug/L	1	0.10	1.0	5	EPA 8260B	10/08/07 20:55	jkg	
trans-1,3-Dichloropropene [10061-02-6] *	0.18	U	ug/L	1	0.18	0.20	1	EPA 8260B	10/08/07 20:55	jkg	
trans-1,4-Dichloro-2-butene [110-57-6] *	0.60	U	ug/L	1	0.60	1.0	100	EPA 8260B	10/08/07 20:55	jkg	
Trichloroethene [79-01-6] *	0.23	U	ug/L	1	0.23	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Trichlorofluoromethane [75-69-4] *	0.16	U	ug/L	1	0.16	1.0	1	EPA 8260B	10/08/07 20:55	jkg	
Vinyl acetate [108-05-4] *	0.19	U	ug/L	1	0.19	2.0	50	EPA 8260B	10/08/07 20:55	jkg	
Vinyl chloride [75-01-4] *	0.15	U	ug/L	1	0.15	1.0	1	EPA 8260B	10/08/07 20:55	jkg	

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Description: Trip Blank
Matrix: Water
Project: WI- Red Rock

Lab Sample ID: C712999-08
Sampled: 09/27/07 00:00
Sampled By:

Received: 09/28/07 16:30
Work Order: C712999

Volatile Organic Compounds by GCMS

** - ENCO Cary certified analyte [NC 591]*

Analyte [CAS Number]	Results	Flag	Units	DF	MDL	MRL	NC SWSL	Method	Analyzed	By	Notes
Xylenes (Total) [1330-20-7]	0.21	U	ug/L	1	0.21	1.0	5	EPA 8260B	10/08/07 20:55	jkg	

Surrogates	*Results*	*DF*	*Spike Lvl*	*% Rec*	*% Rec Limits*	*Batch*	*Method*	*Analyzed*	*By*	Notes
1,2-Dichloroethane-d4	*50*	*1*	*50.0*	*99 %*	*23-144*	*7J08028*	*EPA 8260B*	*10/08/07 20:55*	*jkg*	
4-Bromofluorobenzene	*46*	*1*	*50.0*	*92 %*	*53-138*	*7J08028*	*EPA 8260B*	*10/08/07 20:55*	*jkg*	
Dibromofluoromethane	*45*	*1*	*50.0*	*90 %*	*65-110*	*7J08028*	*EPA 8260B*	*10/08/07 20:55*	*jkg*	
Toluene-d8	*42*	*1*	*50.0*	*84 %*	*72-114*	*7J08028*	*EPA 8260B*	*10/08/07 20:55*	*jkg*	

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QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 7J08028 - EPA 5030B_MS

Blank (7J08028-BLK1) Prepared: 10/08/2007 14:39 Analyzed: 10/08/2007 16:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	**2.0**	**J**	5.0	ug/L							
Acrylonitrile	2.0	U	5.0	ug/L							
Benzene	0.12	U	1.0	ug/L							
2-Butanone	0.56	U	5.0	ug/L							
2-Hexanone	0.24	U	5.0	ug/L							
Iodomethane	0.23	U	2.0	ug/L							
Tetrachloroethene	0.25	U	1.0	ug/L							
4-Methyl-2-pentanone	0.36	U	5.0	ug/L							
Bromochloromethane	0.19	U	1.0	ug/L							
Trichloroethene	0.23	U	1.0	ug/L							
Bromodichloromethane	0.19	U	1.0	ug/L							
Bromoform	0.36	U	1.0	ug/L							
Bromomethane	0.21	U	1.0	ug/L							
Carbon disulfide	0.12	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.16	U	1.0	ug/L							
Chloroethane	0.40	U	1.0	ug/L							
Chloroform	0.16	U	1.0	ug/L							
Chloromethane	0.18	U	1.0	ug/L							
Dibromochloromethane	0.18	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19	U	1.0	ug/L							
1,2-Dibromoethane	0.19	U	1.0	ug/L							
Dibromomethane	0.14	U	1.0	ug/L							
1,2-Dichlorobenzene	0.17	U	1.0	ug/L							
1,4-Dichlorobenzene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60	U	1.0	ug/L							
1,1-Dichloroethane	0.090	U	1.0	ug/L							
1,2-Dichloroethane	0.36	U	1.0	ug/L							
1,1-Dichloroethene	0.14	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.10	U	1.0	ug/L							
1,2-Dichloropropane	0.18	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.16	U	1.0	ug/L							
trans-1,3-Dichloropropene	0.18	U	0.20	ug/L							
Ethylbenzene	0.17	U	1.0	ug/L							
Methylene chloride	0.088	U	2.0	ug/L							
Styrene	0.12	U	1.0	ug/L							
1,1,1,2-Tetrachloroethane	0.16	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27	U	1.0	ug/L							
Toluene	0.15	U	1.0	ug/L							
1,1,1-Trichloroethane	0.24	U	1.0	ug/L							
1,1,2-Trichloroethane	0.24	U	1.0	ug/L							
Trichlorofluoromethane	0.16	U	1.0	ug/L							
1,2,3-Trichloropropane	0.32	U	1.0	ug/L							
Vinyl acetate	0.19	U	2.0	ug/L							
Vinyl chloride	0.15	U	1.0	ug/L							
Xylenes (Total)	0.21	U	1.0	ug/L							
Surrogate: Toluene-d8	*44*			*ug/L*	*50.0*		*87*	*72-114*			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 7J08028 - EPA 5030B_MS

Blank (7J08028-BLK1) Continued Prepared: 10/08/2007 14:39 Analyzed: 10/08/2007 16:59

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*43*			*ug/L*	*50.0*		*85*	*53-138*			
Surrogate: Dibromofluoromethane	*47*			*ug/L*	*50.0*		*94*	*65-110*			

LCS (7J08028-BS1) Prepared: 10/08/2007 14:39 Analyzed: 10/08/2007 17:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	23		1.0	ug/L	20.0		113	73-127			
Trichloroethene	21		1.0	ug/L	20.0		105	76-128			
Chlorobenzene	19		1.0	ug/L	20.0		95	75-114			
1,1-Dichloroethene	23		1.0	ug/L	20.0		116	43-131			
Toluene	19		1.0	ug/L	20.0		93	71-112			

Matrix Spike (7J08028-MS1) Prepared: 10/08/2007 14:39 Analyzed: 10/08/2007 18:28

Source: C714501-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	21		1.0	ug/L	20.0	0.12 U	106	73-127			
Trichloroethene	20		1.0	ug/L	20.0	0.23 U	101	76-128			
Chlorobenzene	20		1.0	ug/L	20.0	0.16 U	100	75-114			
1,1-Dichloroethene	22		1.0	ug/L	20.0	0.14 U	108	43-131			
Toluene	19		1.0	ug/L	20.0	0.15 U	97	71-112			

Matrix Spike Dup (7J08028-MSD1) Prepared: 10/08/2007 14:39 Analyzed: 10/08/2007 18:58

Source: C714501-06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	22		1.0	ug/L	20.0	0.12 U	111	73-127	5	18	
Trichloroethene	21		1.0	ug/L	20.0	0.23 U	105	76-128	5	17	
Chlorobenzene	19		1.0	ug/L	20.0	0.16 U	95	75-114	5	17	
1,1-Dichloroethene	21		1.0	ug/L	20.0	0.14 U	107	43-131	0.8	16	
Toluene	19		1.0	ug/L	20.0	0.15 U	93	71-112	5	23	

Batch 7J09001 - EPA 5030B_MS

Blank (7J09001-BLK1) Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 07:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Acetone	0.90	U	5.0	ug/L							
Acrylonitrile	2.0	U	5.0	ug/L							
Benzene	0.12	U	1.0	ug/L							
2-Butanone	0.56	U	5.0	ug/L							
2-Hexanone	0.24	U	5.0	ug/L							
Iodomethane	0.23	U	2.0	ug/L							
Tetrachloroethene	0.25	U	1.0	ug/L							
4-Methyl-2-pentanone	0.36	U	5.0	ug/L							
Bromochloromethane	0.19	U	1.0	ug/L							
Trichloroethene	0.23	U	1.0	ug/L							

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 7J09001 - EPA 5030B_MS

Blank (7J09001-BLK1) Continued Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 07:37

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Bromodichloromethane	0.19	U	0.40	ug/L							
Bromoform	0.36	U	1.0	ug/L							
Bromomethane	0.21	U	1.0	ug/L							
Carbon disulfide	0.12	U	5.0	ug/L							
Carbon tetrachloride	0.38	U	1.0	ug/L							
Chlorobenzene	0.16	U	1.0	ug/L							
Chloroethane	0.40	U	1.0	ug/L							
Chloroform	0.16	U	1.0	ug/L							
Chloromethane	0.18	U	1.0	ug/L							
Dibromochloromethane	0.18	U	1.0	ug/L							
1,2-Dibromo-3-chloropropane	0.19	U	1.0	ug/L							
1,2-Dibromoethane	0.19	U	1.0	ug/L							
Dibromomethane	0.14	U	1.0	ug/L							
1,2-Dichlorobenzene	0.17	U	1.0	ug/L							
1,4-Dichlorobenzene	0.15	U	1.0	ug/L							
trans-1,4-Dichloro-2-butene	0.60	U	1.0	ug/L							
1,1-Dichloroethane	0.090	U	1.0	ug/L							
1,2-Dichloroethane	0.36	U	1.0	ug/L							
1,1-Dichloroethene	0.14	U	1.0	ug/L							
cis-1,2-Dichloroethene	0.14	U	1.0	ug/L							
trans-1,2-Dichloroethene	0.10	U	1.0	ug/L							
1,2-Dichloropropane	0.18	U	1.0	ug/L							
cis-1,3-Dichloropropene	0.16	U	0.20	ug/L							
trans-1,3-Dichloropropene	0.18	U	0.20	ug/L							
Ethylbenzene	0.17	U	1.0	ug/L							
Methylene chloride	0.088	U	2.0	ug/L							
Styrene	0.12	U	1.0	ug/L							
1,1,1,2-Tetrachloroethane	0.16	U	1.0	ug/L							
1,1,2,2-Tetrachloroethane	0.27	U	1.0	ug/L							
Toluene	0.15	U	1.0	ug/L							
1,1,1-Trichloroethane	0.24	U	1.0	ug/L							
1,1,2-Trichloroethane	0.24	U	1.0	ug/L							
Trichlorofluoromethane	0.16	U	1.0	ug/L							
1,2,3-Trichloropropane	0.32	U	1.0	ug/L							
Vinyl acetate	0.19	U	2.0	ug/L							
Vinyl chloride	0.15	U	1.0	ug/L							
Xylenes (Total)	0.21	U	1.0	ug/L							
Surrogate: Toluene-d8	*42*			*ug/L*	*50.0*		*85*	*72-114*			
Surrogate: 4-Bromofluorobenzene	*44*			*ug/L*	*50.0*		*87*	*53-138*			
Surrogate: Dibromofluoromethane	*45*			*ug/L*	*50.0*		*89*	*65-110*			

LCS (7J09001-BS1) Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 08:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	21		1.0	ug/L	20.0		107	73-127			
Trichloroethene	20		1.0	ug/L	20.0		100	76-128			
Chlorobenzene	18		1.0	ug/L	20.0		92	75-114			
1,1-Dichloroethene	21		1.0	ug/L	20.0		105	43-131			

QUALITY CONTROL

Volatile Organic Compounds by GCMS - Quality Control

Batch 7J09001 - EPA 5030B_MS

LCS (7J09001-BS1) Continued Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 08:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Toluene	18		1.0	ug/L	20.0		89	71-112			

Matrix Spike (7J09001-MS1) Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 08:40

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	22		1.0	ug/L	20.0	0.12 U	111	73-127			
Trichloroethene	21		1.0	ug/L	20.0	0.23 U	106	76-128			
Chlorobenzene	20		1.0	ug/L	20.0	0.16 U	98	75-114			
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.14 U	113	43-131			
Toluene	19		1.0	ug/L	20.0	0.15 U	97	71-112			

Matrix Spike Dup (7J09001-MSD1) Prepared: 10/09/2007 00:30 Analyzed: 10/09/2007 09:09

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Benzene	24		1.0	ug/L	20.0	0.12 U	119	73-127	7	18	
Trichloroethene	23		1.0	ug/L	20.0	0.23 U	114	76-128	8	17	
Chlorobenzene	22		1.0	ug/L	20.0	0.16 U	111	75-114	12	17	
1,1-Dichloroethene	23		1.0	ug/L	20.0	0.14 U	117	43-131	3	16	
Toluene	22		1.0	ug/L	20.0	0.15 U	110	71-112	13	23	

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7J01004 - EPA 3005A

Blank (7J01004-BLK1) Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 10:47

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	2.0	U	10.0	ug/L							
Barium	**0.20**	**J**	10.0	ug/L							
Beryllium	0.70	U	1.00	ug/L							
Cadmium	0.50	U	1.00	ug/L							
Chromium	2.0	U	10.0	ug/L							
Cobalt	2.0	U	10.0	ug/L							
Copper	0.60	U	10.0	ug/L							
Iron	20	U	50	ug/L							
Lead	2.0	U	10.0	ug/L							
Manganese	1.4	U	10.0	ug/L							
Nickel	2.0	U	10.0	ug/L							
Selenium	2.0	U	10.0	ug/L							
Silver	2.0	U	10.0	ug/L							
Vanadium	1.0	U	10.0	ug/L							
Zinc	1.0	U	10.0	ug/L							

LCS (7J01004-BS1) Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 11:02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7J01004 - EPA 3005A

LCS (7J01004-BS1) Continued Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 11:02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.5		0.01	mg/L	0.500		104	82-117			
Barium	0.53	B	0.01	mg/L	0.500		106	72-125			
Beryllium	0.26		0.001	mg/L	0.250		106	75-121			
Cadmium	0.27		0.001	mg/L	0.250		107	72-120			
Chromium	0.5		0.01	mg/L	0.500		108	78-119			
Cobalt	0.5		0.01	mg/L	0.500		104	76-117			
Copper	0.26		0.01	mg/L	0.250		104	80-117			
Iron	5		0.05	mg/L	5.00		105	84-133			
Lead	0.5		0.01	mg/L	0.500		105	72-121			
Manganese	0.3		0.01	mg/L	0.250		104	76-123			
Nickel	0.5		0.01	mg/L	0.500		109	78-116			
Selenium	0.5		0.01	mg/L	0.500		105	82-127			
Silver	0.05		0.01	mg/L	0.0500		97	80-128			
Vanadium	0.3		0.01	mg/L	0.250		102	78-117			
Zinc	0.5		0.01	mg/L	0.500		104	80-120			

Matrix Spike (7J01004-MS1) Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 11:20

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.5		0.01	mg/L	0.500	-0.006	105	64-126			
Barium	0.74	B	0.01	mg/L	0.500	0.24	101	74-119			
Beryllium	0.26		0.001	mg/L	0.250	-0.002	107	70-131			
Cadmium	0.26		0.001	mg/L	0.250	0.004	104	68-121			
Chromium	0.5		0.01	mg/L	0.500	-0.008	102	73-120			
Cobalt	0.5		0.01	mg/L	0.500	0.02	104	76-120			
Copper	0.25		0.01	mg/L	0.250	-0.0002	102	75-123			
Iron	5		0.05	mg/L	5.00	0.4	99	48-144			
Lead	0.5		0.01	mg/L	0.500	0.0001	102	68-126			
Manganese	2.2		0.01	mg/L	0.250	2.0	85	55-146			
Nickel	0.5		0.01	mg/L	0.500	0.005	105	64-126			
Selenium	0.5		0.01	mg/L	0.500	-0.004	106	65-129			
Silver	0.05		0.01	mg/L	0.0500	0.0003	96	69-121			
Vanadium	0.2		0.01	mg/L	0.250	-0.01	102	71-130			
Zinc	0.5		0.01	mg/L	0.500	0.02	104	63-131			

Matrix Spike Dup (7J01004-MSD1) Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 11:26

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	0.5		0.01	mg/L	0.500	-0.006	104	64-126	1	12	
Barium	0.74	B	0.01	mg/L	0.500	0.24	100	74-119	0.6	11	
Beryllium	0.26		0.001	mg/L	0.250	-0.002	105	70-131	2	21	
Cadmium	0.26		0.001	mg/L	0.250	0.004	103	68-121	1	12	
Chromium	0.5		0.01	mg/L	0.500	-0.008	101	73-120	1	10	
Cobalt	0.5		0.01	mg/L	0.500	0.02	102	76-120	1	17	
Copper	0.25		0.01	mg/L	0.250	-0.0002	101	75-123	0.4	16	
Iron	5		0.05	mg/L	5.00	0.4	99	48-144	0.4	23	

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7J01004 - EPA 3005A

Matrix Spike Dup (7J01004-MSD1) Continued Prepared: 10/01/2007 09:53 Analyzed: 10/03/2007 11:26

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	0.5		0.01	mg/L	0.500	0.0001	102	68-126	0.1	19	
Manganese	2.2		0.01	mg/L	0.250	2.0	74	55-146	1	19	
Nickel	0.5		0.01	mg/L	0.500	0.005	103	64-126	1	12	
Selenium	0.5		0.01	mg/L	0.500	-0.004	106	65-129	0.2	10	
Silver	0.05		0.01	mg/L	0.0500	0.0003	96	69-121	0.2	12	
Vanadium	0.2		0.01	mg/L	0.250	-0.01	100	71-130	1	16	
Zinc	0.5		0.01	mg/L	0.500	0.02	103	63-131	1	24	

Batch 7J01005 - EPA 3005A

Blank (7J01005-BLK1) Prepared: 10/01/2007 09:57 Analyzed: 10/05/2007 13:28

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	1.00	U	5.00	ug/L							
Thallium	0.400	U	2.00	ug/L							

LCS (7J01005-BS1) Prepared: 10/01/2007 09:57 Analyzed: 10/05/2007 13:30

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.03		0.002	mg/L	0.0250		100	85-115			
Thallium	0.023		0.001	mg/L	0.0250		92	85-115			

Matrix Spike (7J01005-MS1) Prepared: 10/01/2007 09:57 Analyzed: 10/05/2007 13:35

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.02		0.002	mg/L	0.0250	0.0002	99	85-115			
Thallium	0.022		0.001	mg/L	0.0250	0.00007	86	85-115			

Matrix Spike Dup (7J01005-MSD1) Prepared: 10/01/2007 09:57 Analyzed: 10/05/2007 13:38

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Antimony	0.02		0.002	mg/L	0.0250	0.0002	95	85-115	4	20	
Thallium	0.021		0.001	mg/L	0.0250	0.00007	85	85-115	1	20	

Batch 7J04012 - EPA 7470A

Blank (7J04012-BLK1) Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:02

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.11	U	0.20	ug/L							

LCS (7J04012-BS1) Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

QUALITY CONTROL

Metals by EPA 6000/7000 Series Methods - Quality Control

Batch 7J04012 - EPA 7470A

LCS (7J04012-BS1) Continued Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.90		0.20	ug/L	5.00		98	87-123			

Matrix Spike (7J04012-MS1) Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:10

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.01		0.20	ug/L	5.00	0.11 U	100	63-132			

Matrix Spike Dup (7J04012-MSD1) Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:13

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	5.39		0.20	ug/L	5.00	0.11 U	108	63-132	7	10	

Post Spike (7J04012-PS1) Prepared: 10/04/2007 10:57 Analyzed: 10/05/2007 12:15

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.79		0.20	ug/L	5.00	0.02	96	85-115			

Batch 7K01010 - EPA 3005A

Blank (7K01010-BLK1) Prepared: 11/01/2007 09:47 Analyzed: 11/01/2007 16:00

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	0.50	U	1.00	ug/L							

LCS (7K01010-BS1) Prepared: 11/01/2007 09:47 Analyzed: 11/01/2007 16:07

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	257		1.00	ug/L	250		103	72-120			

Matrix Spike (7K01010-MS1) Prepared: 11/01/2007 09:47 Analyzed: 11/01/2007 16:21

Source: C714529-08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	260		1.00	ug/L	250	0.50 U	104	68-121			

Matrix Spike Dup (7K01010-MSD1) Prepared: 11/01/2007 09:47 Analyzed: 11/01/2007 16:28

Source: C714529-08

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Cadmium	257		1.00	ug/L	250	0.50 U	103	68-121	1	12	

Classical Chemistry Parameters - Quality Control

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 7I26007 - NO PREP

Blank (7I26007-BLK1) Prepared & Analyzed: 10/01/2007 10:30

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	5.2	U	15	mg/L							

LCS (7I26007-BS1) Prepared: 10/01/2007 10:30 Analyzed: 10/01/2007 10:58

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	95		15	mg/L	100		95	80-120			

Matrix Spike (7I26007-MS1) Prepared: 10/01/2007 10:30 Analyzed: 10/01/2007 11:13

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	100		15	mg/L	100	15	90	80-120			

Matrix Spike Dup (7I26007-MSD1) Prepared: 10/01/2007 10:30 Analyzed: 10/01/2007 11:14

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	110		15	mg/L	100	15	93	80-120	3	25	

Batch 7J01012 - NO PREP

Blank (7J01012-BLK1) Prepared: 10/01/2007 13:15 Analyzed: 10/02/2007 12:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	10	U	10	mg/L							

LCS (7J01012-BS1) Prepared: 10/01/2007 13:15 Analyzed: 10/02/2007 12:04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	310		10	mg/L	300		104	90-110			

Duplicate (7J01012-DUP1) Prepared: 10/01/2007 13:15 Analyzed: 10/02/2007 12:04

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Dissolved Solids	500		10	mg/L		480			5	10	

Batch 7J04002 - NO PREP

Blank (7J04002-BLK1) Prepared & Analyzed: 10/04/2007 10:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	2.0	U	2.0	mg/L							

LCS (7J04002-BS1) Prepared & Analyzed: 10/04/2007 10:43

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 7J04002 - NO PREP

LCS (7J04002-BS1) Continued Prepared & Analyzed: 10/04/2007 10:43

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	120		2.0	mg/L	125		95	80-120			

Matrix Spike (7J04002-MS1) Prepared & Analyzed: 10/04/2007 10:43

Source: C714262-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	140		2.0	mg/L	125	26	93	80-120			

Matrix Spike Dup (7J04002-MSD1) Prepared & Analyzed: 10/04/2007 10:43

Source: C714262-03

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Alkalinity	140		2.0	mg/L	125	26	93	80-120	0.7	25	

QUALITY CONTROL

Classical Chemistry Parameters - Quality Control

Batch 7J01019 - NO PREP

Blank (7J01019-BLK1) Prepared: 10/01/2007 13:53 Analyzed: 10/01/2007 18:50

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate	0.03	U	2.0	mg/L							
Chloride	**0.53**	**J**	1.0	mg/L							

LCS (7J01019-BS1) Prepared: 10/01/2007 13:53 Analyzed: 10/01/2007 19:06

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate	240		2.0	mg/L	250		96	90-115			
Chloride	250		1.0	mg/L	250		101	85-118			

Matrix Spike (7J01019-MS1) Prepared: 10/01/2007 13:53 Analyzed: 10/01/2007 19:22

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate	320		2.0	mg/L	255	58	102	90-115			
Chloride	480		1.0	mg/L	255	210	108	85-118			

Matrix Spike Dup (7J01019-MSD1) Prepared: 10/01/2007 13:53 Analyzed: 10/01/2007 19:38

Source: C712999-04

Analyte	Result	Flag	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Sulfate	320		2.0	mg/L	255	58	105	90-115	2	10	
Chloride	490		1.0	mg/L	255	210	110	85-118	0.8	10	

FLAGS/NOTES AND DEFINITIONS

B	The analyte was detected in the associated method blank.
D	The sample was analyzed at dilution.
J	The reported value is between the laboratory method detection limit (MDL) and the laboratory method reporting limit (MRL), adjusted for actual sample preparation data and moisture content, where applicable.
U	The analyte was analyzed for but not detected to the level shown, adjusted for actual sample preparation data and moisture content, where applicable.
MRL	Method Reporting Limit. The MRL is roughly equivalent to the practical quantitation limit (PQL) and is based on the low point of the calibration curve, when applicable, sample preparation factor, dilution factor, and, in the case of soil samples, moisture content.

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr. Orlando, FL 32824 (407) 826-5314 Fax (407) 850-6945
4810 Executive Park Court Suite 211 Jacksonville, FL 32216-6069 (904) 296-3007 Fax (904) 296-6210
8016 Paragon Way Cary, NC 27513 (919) 677-1669 Fax (919) 677-1040

Client Name: Golder Associates, Inc. (GO007)	Project Number: 073-96033507.100
Address: the Wiegace Building 4900 Koger Blvd., Suite 14	Project Name/Desc: WI- Red Rock
City/ST/Zip: Greensboro, NC 27407	PO # / Billing Info
Tel: (336) 852-4903 Fax: (336) 852-4904	Reporting Contact: Rachel Kirkman
Sampler(s) Name, Affiliation (Pty): B. Draper / R. Stringfellow	Billing Contact: John Demary
Sampler(s) Signature: [signature]	Facility # (if required): 98-28

Requested Analyses: 8260B Appendix 1; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Hg,Mn,Ni,Pb,Sb,Se,Tl,V,Zn; Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Pb,Sb,Se,Tl,V,Zn; Alkalinity 310.2, TDS 160.1; Chloride 300, Sulfate 300

Requested Turnaround Times: Note: Rush requests subject to acceptance by the facility. ✓ Standard 7-10 Day TAT; ___ Expedited; Due __/__/__

Lab Workorder: C712999

Bottle #	Sample ID (Field/Location)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B App 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Hg,Mn,Ni,Pb,Sb,Se,Tl,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Pb,Sb,Se,Tl,V,Zn	Alkalinity 310.2, TDS 160.1	Chloride 300, Sulfate 300	Sample Comments
	9828-MW2T	9-27-2007	13:15	G	Water	6	X	X		X	X	NC App. I + Hg, Mn, Fe, Chloride, Sulfate, Alkalinity, TDS
	9828-MW3	9-27-2007	13:45	G	Water	6	X	X		X	X	
	9828-MW4	9-27-2007	12:45	G	Water	6	X	X		X	X	
	9828-MW5 (ms/msd)	9-27-2007	12:05	G	Water	9	X	X		X	X	
	9828-MW6T	9-27-2007	11:35	G	Water	6	X	X		X	X	
	9828-MW10	9-27-2007	9:35	G	Water	6	X	X		X	X	
	9828-SW1	9-27-2007	15:15	DRY	Water	4	X		X			DRY NO SAMPLE
	9828-SW2	9-27-2007	14:05	DRY	Water	4	X		X			DRY NO SAMPLE
	9828-SW3	9-27-2007	12:15	DRY	Water	4	X		X			DRY NO SAMPLE
	Field Blank	9-27-2007	16:20	G	Water	4	X		X			NC App. E
	Trip Blank	—	—	G	Water	2	X					NC App. E VOCs Only

<- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		[signature]	9-28-2007 / 8:00		
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time

Comments:
1. Please provide "Level 2" Data Report
2. Need 7-10 Day TAT No Surcharge per Client Request.
3. Bill Directly to Waste Industries (Lept + Sent to Golder)

Cooler #'s & Temps on Receipt:

Condition Upon Receipt: ___ Acceptable ___ Unacceptable

Matrix: GW-Groundwater SO-Soil SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservative: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note: All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreement exist.

www.encolabs.com

WORK ORDER

Printed: 10/10/2007 3:29:17PM

C712999

ENCO Cary

Sample Receipt Conditions

Client: Golder Associates, Inc. (GO007)	**Lab Project Mgr:** Stephanie Franz
Project: WI- Red Rock	**Project Number:** 073-96033507.100
PO #:	

Report To:
Golder Associates, Inc. (GO007)
Rachel Kirkman
The Wingate Building 4900 Koger Blvd., Suite 140
Greensboro, NC 27407
Phone: (336) 852-4903
Fax: (336) 852-4904

Invoice To:
Waste Industries - Red Rock Disposal (WA023)
Don Plessinger
7130 New Landfill Drive
Holly Springs, NC 27540
Phone :919/557-9583
Fax: (919) 557-9583

Received By:	Derek Williams	Date Received:	28-Sep-07 16:30
Logged In By:	Derek Williams	Date Logged In:	28-Sep-07 17:12

Workorder Comments:

CC-11 received at 4.1°C

Containers Intact	Y	Containers Properly Preserved	Y	Proper Containers Received	Y	All Samples in PreLog Received	Y	COC/Labels Agree	Y
Custody Seals Intact	Y	Volatile Containers Preserved	Y	Volatile Containers Headspace Free	Y	Aqueous Samples Checked for Residual Cl	N		

ENVIRONMENTAL CONSERVATION LABORATORIES CHAIN-OF-CUSTODY RECORD

10775 Central Port Dr.
Orlando, FL 32824
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4810 Executive Park Court, Suite 211
Jacksonville, FL 32216-6069
(904) 296-3007 Fax (904) 296-6210

1015 Passport Way
Cary, NC 27513
(919) 677-1669 Fax (919) 677-9846

Client Name: Golder Associates, Inc. (GO007)	Project Number: 073-96033507.100
Address: The Wingate Building 4900 Koger Blvd., Suite 140	Project Name/Desc: WI- Red Rock
City/ST/Zip: Greensboro, NC 27407	PO # / Billing Info:
Tel: (336) 852-4903 / Fax: (336) 852-4904	Reporting Contact: Rachel Kirkman
Sampler(s) Name, Affiliation (Print): B. Draper / R. Stringfellow	Billing Contact: John Demary
Sampler(s) Signature: [signature]	Facility # (if required): 98-28

Requested Turnaround Times

Note : Rush requests subject to acceptance by the facility

✓ Standard 7-10 Day TAT

___ Expedited

Due ___/___/___

Lab Workorder: C712999

Requested Analyses / Preservation (See Codes) (Combine as necessary)

Item #	Sample ID (Field Identification)	Collection Date	Collection Time	Comp / Grab	Matrix (see codes)	Total # of Containers	8260B Appendix 1	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Fe,Hg,Mn,Ni,Pb,Sb,Se,Tl,V,Zn	Ag,As,Ba,Be,Cd,Co,Cr,Cu,Ni,Pb,Sb,Se,Tl,V,Zn	Alkalinity 310.2,TDS 160.1	Chloride 300,Sulfate 300						Sample Comments
	9828-MW2T	9-27-2007	13:15	G	Water	6	X	X		X	X						NC App I + Hg, Mn, Fe, Chloride, Sulfate, Alkalinity, TDS
	9828-MW3	9-27-2007	13:45	G	Water	6	X	X		X	X						
	9828-MW4	9-27-2007	12:45	G	Water	6	X	X		X	X						
	9828-MW5 (ms/msd)	9-27-2007	12:05	G	Water	9	X	X		X	X						
	9828-MW6T	9-27-2007	11:35	G	Water	6	X	X		X	X						
	9828-MW10	9-27-2007	9:35	G	Water	6	X	X		X	X						
	9828-SW1	9-27-2007	15:15	DRY	Water	4	X		X								DRY NO SAMPLE
	9828-SW2	9-27-2007	14:05	DRY	Water	4	X		X								DRY NO SAMPLE
	9828-SW3	9-27-2007	12:15	DRY	Water	4	X		X								DRY NO SAMPLE
	Field Blank	9-27-2007	16:20	G	Water	4	X		X								NC App. I
	Trip Blank	—	—	G	Water	2	X										NC App. I VOCs Only

<-- Total # of Containers

Sample Kit Prepared By	Date/Time	Relinquished By	Date/Time	Received By	Date/Time
		[signature]	9-28-2007 / 8:00	[signature]	9/28/07 16:30
		Relinquished By	Date/Time	Received By	Date/Time
		Relinquished By	Date/Time	Received By	Date/Time

Comments
1. Please provide "Level 2" Data Report
2. Need 7-10 Day TAT No Surcharge per Client Request.
3. Bill Directly to Waste Industries (Report Sent to Golder)

Cooler #'s & Temps on Receipt: CC-11 4.1 °C

Condition Upon Receipt: X Acceptable ___ Unacceptable

Matrix : GW-Groundwater SO-Soil SE-Sediment SW-Surface Water WW-Wastewater A-Air O-Other (detail in comments)

Preservation: I-Ice H-HCl N-HNO3 S-H2SO4 NO-NaOH O-Other (detail in comments)

Note : All samples submitted to ENCO Labs are in accordance with the terms and conditions listed on the reverse of this form, unless prior written agreements exist

GOLDER ASSOCIATES NC, INC.
QUALITY ASSURANCE & QUALITY CONTROL
LABORATORY DATA REVIEW

Project Name: Red Rock Disposal, LLC C&D Landfill – Waste Industries USA

Project Reference Number: 073-9603507.100

Sampling Event Date: September 27, 2007

Review Date: October 29, 2007 *Initials:* JD

Review Date: November 7, 2007 *Initials:* DR

Report #: C712999

Person(s) performing the review are to initial each item on this form as acknowledgement of data acceptance, or as acknowledgement of a review issue. In the case of the latter, a brief explanation should follow the applicable item.

Golder Associates Inc. has reviewed the laboratory certificates of analysis, chain-of-custody form, and laboratory provided sample group quality assurance and quality control data for the above referenced sample group to identify potential bias or inaccuracy, in general accordance with the following United States Environmental Protection Agency documents:

- Region III Modifications to Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration, September 1994;
- Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, April 1993; and
- Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, July 1998.

COMPLIANCE ANALYTE LIST(S) (check all that apply)

X NC Closed Facility/C & D List (plus mercury)

___ NC Appendix I

___ NC Appendix I + Detects

___ NC Appendix II

___ NC Subtitle D Leachate List

Other: _____

1.0 CHAIN OF CUSTODY (COC) REVIEW

JD DR COC was properly signed by all parties.

JD DR Correct project name and number are on the form.

- ***Incorrect project number listed on the "chain-of-custody" and lab report, the project number should be 073-9603507.100.***

JD DR Sample receipt condition at laboratory was acceptable.

JD DR Each sample and blank submitted for analysis appears in the report.

Notes: _____

2.0 SAMPLE HOLDING TIMES

JD DR Holding times for extraction and/or analysis were met for each analytical Method (see below for reference).

Notes: _____

Review Criteria		
Method	**Analytes**	**Holding Time**
SW-846 Method 8260 and 8011	VOCs	14 days
SW-846 Methods 8270, 8080, 8081, 8082, and 8151	SVOCs, PCBs, pesticides and herbicides	7 days for extraction, 40 days from extraction for analysis
SW-846 Methods 6000 and 7000 Series	Metals except mercury	6 months (no temperature requirements)
SW-846 Method 7470	Mercury	28 days
SW-846 Method 376.1	Sulfide	7 days
SW-846 Method 9010	Cyanide	14 days
EPA Method 300	Nitrate/Sulfate	48 hours/28 days
EPA Method 405.1	BOD	48 hours
EPA Method 410.4	COD	28 days
EPA Method 365.4	Phosphorous	28 days
EPA Method 160.1	TDS	7 days
EPA Method 325.3	Chloride	28 days

3.0 LABORATORY QUALITY CONTROL REVIEW

JD DR Laboratory analyzed at least one internal blank for each method, where applicable.

JD DR Laboratory blank is interference-free.

Method Blank (7J08028-BLK1):
- ***Acetone @ 2.0 µg/L (J)***

Method Blank (7J01004-BLK1):
- ***Barium @ 0.2 µg/L (J)***

Method Blank (7J01019-BLK1):
- ***Chloride @ 0.53 µg/L (J)***

JD DR Surrogate recoveries are provided for each analytical method, where applicable.

JD DR Surrogate recoveries for each method are within the acceptable limits (i.e., at least

50% of the surrogates were within range).

JD DR MS/MSD/LCS data results are provided for each analytical method.

JD DR MS/MSD/LCS recoveries for each method are within the acceptable limits (i.e., at least 1 of the 3 were within range).

Notes: _____

4.0 ANALYTE LISTS/METHODS

JD DR The proper number of constituents are present for each analyte list as identified above (including detects where applicable).

JD DR Proper EPA SW-846 analytical methods were used for analysis.

Notes: _____

5.0 DATA REPORTING

JD DR All analytical reporting associated with the event was performed by the contracted lab.

JD DR Trip, field and/or equipment, and laboratory blank results have all been reported. All detects for blanks are listed below by constituent. All laboratory method blanks, if any, have been 'flagged' with a 'B' where detected in other samples as appropriate and a laboratory narrative was provided. If the sample was flagged by the laboratory and is not within 5X of the concentration in the blank (or 10X for commonly detected laboratory contaminants-acetone, methylene chloride and phthalates), list below with explanation if flags should be removed. If flags need to be added for samples, also list below.

Method Blanks:

- ***Acetone @ 2.0 µg/L (J)***
- ***Barium @ 0.2 µg/L (J)***
- ***Chloride @ 0.53 µg/L (J)***

****Note the detection of Acetone in MW-2T needs a B-Flag.***

Field Blanks:

- ***Acetone @ 5.2 µg/L (J)***
- ***Barium @ 0.3 µg/L (J)***
- ***Thallium @ 0.066 µg/L (J)***

Note the detections of Acetone in MW-2T and Thallium in MW-2T, MW-3, MW-4, MW-5 and MW-10 need B-Flags.

JD DR It is clear from the laboratory report that samples have or have not been diluted during analysis, and if the samples have been diluted, the result is reported as a multiple of the dilution (e.g., a sample diluted 10x resulting in an analytical detection of 1.0 should be reported as 10). Those that have been diluted are listed below with the dilution factor.

MW-2T:
- ***Chloride and sulfate diluted @ 5:1 dilution factor***

MW-3:
- ***Chloride and sulfate diluted @ 10:1 dilution factor***

MW-6T:
- ***Chloride and sulfate diluted @ 10:1 dilution factor***

MW-10:
- ***Chloride and sulfate diluted @ 2:1 dilution factor***

JD DR The report provides the reporting limit for each constituent.

JD DR The results were reported at or below their proper reporting limits (e.g., NC Solid Waste Section approved RLs). Those that are not reported correctly are listed below (by constituent) with the proper reporting limit listed beside them. State if the reporting limit error is due to dilutions.

JD DR No inorganic and organic constituents were reported above their respective NC 2L Drinking Water Standards or Groundwater Protection Standards (GWPS) in wells or Surface Water Standards in surface points, or field/equipment/trip blanks.

- ***The following inorganic constituents were detected above 2L or GWPS standards (Surface Water monitoring points SW-1, SW-2 and SW-3 were dry during this event)***

MW-2T:
- ***Chloride: 430000 µg/L (2L = 250000 µg/L)***
- ***TDS: 1200000 µg/L (2L = 500000 µg/L)***

MW-3:
- ***Chloride: 1600000 µg/L (2L = 250000 µg/L)***
- ***TDS: 3100000 µg/L (2L = 500000 µg/L)***
- ***Vanadium: 29.6 µg/L (GWPS = 3.5 µg/L)***

MW-4:

- ***Iron: 21800 µg/L (2L = 300 µg/L)***
- ***Lead: 15.9 µg/L (2L = 15 µg/L)***
- ***Manganese: 498 µg/L (2L = 50 µg/L)***
- ***TDS: 1400000 µg/L (2L = 500000 µg/L)***
- ***Vanadium: 23.2 µg/L (2L = 3.5 µg/L)***

MW-5:

- ***Iron: 436 µg/L (2L = 300 µg/L)***
- ***Manganese: 2040 µg/L (2L=50 µg/L)***

MW-6T:

- ***Chloride: 1700000 µg/L (2L = 250000 µg/L)***
- ***Manganese: 1580 µg/L (2L=50 µg/L)***
- ***TDS: 3200000 µg/L (2L = 500000 µg/L)***

MW-10:

- ***Manganese: 251 µg/L (2L=1,370 µg/L)***

JD DR No inorganic and organic constituents were detected in a well or surface water point at concentrations outside of their historical range (more than 5X previous concentrations or first-time detections).

- ***The following organic constituents were detected for the first time:***

MW-2T:
Acetone

- ***The following inorganic constituents were detected for the first time:***

MW-2T:
Thallium

MW-3:
Thallium

MW-4:
Thallium, Vanadium

MW-6T:
Thallium, Zinc

- ***The following inorganic constituents were detected at the highest historical detection:***

MW-2T:
Iron, Sulfate, Total Alkalinity, TDS

MW-3:
Manganese, Sulfate, Total Alkalinity, Vanadium

MW-4:
Barium, Iron, TDS, Zinc

MW-5:
Barium, Chloride, Nickel, Sulfate

MW-6T:
Barium, Manganese, Sulfate

JD DR Other report issues/Communications with laboratory/etc.:

Notes: _____

APPENDIX III

STATISTICAL EVALUATION WORKSHEETS

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Analyte: Barium

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/31/01	MW-1	909		500
2	06/11/02	MW-1	ND		500
3	11/01/02	MW-1	ND		500
4	03/06/03	MW-1	ND		500
5	09/23/03	MW-1	1046		500
6	03/11/04	MW-1	752		500
7	06/11/02	MW-10	ND		500
8	11/01/02	MW-10	ND		500
9	03/06/03	MW-10	ND		500
10	09/23/03	MW-10	ND		500
11	03/11/04	MW-10	707		500
12	09/23/04	MW-10	ND		500
13	03/10/05	MW-10	872		500
14	09/22/05	MW-10	ND		500
15	03/06/06	MW-10	590		500
16	09/19/06	MW-10	ND		500
17	03/21/07	MW-10	901		100
18	09/28/07	MW-10	488		100

Number of Data	18
Number of Truncated Data	10
Percentage of Truncated Data	56%

Nonparametric Prediction Interval: **1046** ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Analyte: Barium (MW-3 Intrawell)

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	10/31/01	MW-3	1650	500
2	06/11/02	MW-3	1547	500
3	11/01/02	MW-3	1733	500
4	03/06/03	MW-3	1939	500
5	09/23/03	MW-3	2090	500
6	03/11/04	MW-3	1881	500
7	09/23/04	MW-3	1830	500
8	03/10/05	MW-3	2129	500
9	09/22/05	MW-3	1871	500
10	03/06/06	MW-3	1838	500
11	09/19/06	MW-3	2090	500
12	03/21/07	MW-3	2080	100

Number of Data	12
Number of Truncated Data	0
Percentage of Truncated Data	0%

UPL = **2242** ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Probability Plots to determine the distribution of Barium (MW-3 Intrawell)

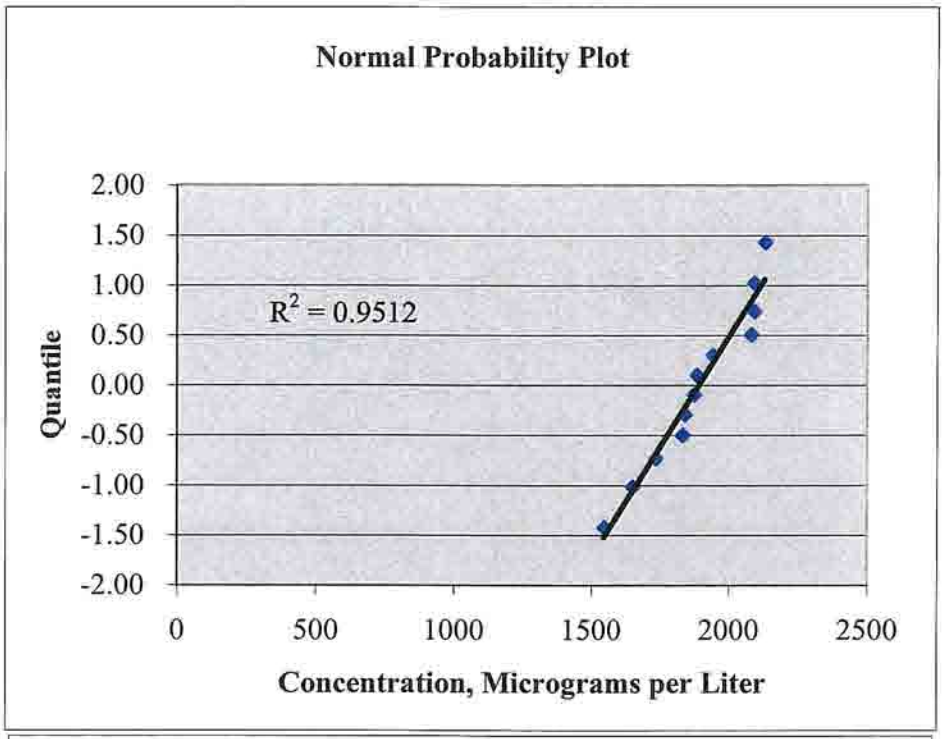
Complete the following table where:

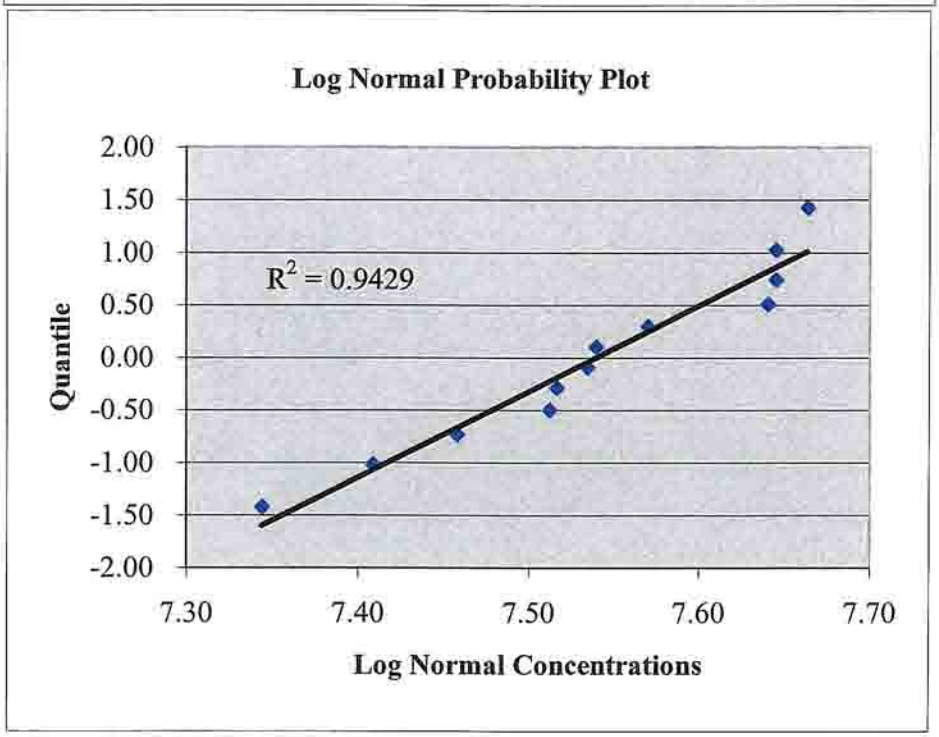
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 12

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
1547	7.34	1	1	0.077	-1.43
1650	7.41	2	2	0.154	-1.02
1733	7.46	3	3	0.231	-0.74
1830	7.51	4	4	0.308	-0.50
1838	7.52	5	5	0.385	-0.29
1871	7.53	6	6	0.462	-0.10
1881	7.54	7	7	0.538	0.10
1939	7.57	8	8	0.615	0.29
2080	7.64	9	9	0.692	0.50
2090	7.64	10	10	0.769	0.74
2090	7.64	11	11	0.846	1.02
2129	7.66	12	12	0.923	1.43

Project Name: Red Rock Disposal, LLC C&D I
Project No: 073-9603507
Date: 11/01/07

Probability Plots to determine the distribution of Barium (MW-3 Intrawell)





Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Determination of reported background value as an outlier

Analyte: Barium (MW-3 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)		Quantitation Limit (ug/l)
1	10/31/01	MW-3	1650.0		500
2	06/11/02	MW-3	1547.0		500
3	11/01/02	MW-3	1733.0		500
4	03/06/03	MW-3	1939.0		500
5	09/23/03	MW-3	2090.0		500
6	03/11/04	MW-3	1881.0		500
7	09/23/04	MW-3	1830.0		500
8	03/10/05	MW-3	2129.0		500
9	09/22/05	MW-3	1871.0		500
10	03/06/06	MW-3	1838.0		500
11	09/19/06	MW-3	2090.0		500
12	03/21/07	MW-3	2080.0		100

mean = 1889.833
STD = 186.417

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

Tn = (Xn - mean) / STD

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For
Xn = 2129.000
mean = 1889.833
STD = 186.417

Tn = 1.283

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples = 12
Tc = 2.285

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Shapiro Wilk Test Statistic (W) for normality of total Barium (MW-3 Intrawell)

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	1547.00	2129.00	582	0.5475	318.65
2	1650.00	2090.00	440	0.3325	146.30
3	1733.00	2090.00	357	0.2347	83.79
4	1830.00	2080.00	250	0.1586	39.65
5	1838.00	1939.00	101	0.0922	9.31
6	1871.00	1881.00	10	0.0303	0.30
7	1881.00	1871.00			
8	1939.00	1838.00			
9	2080.00	1830.00			
10	2090.00	1733.00			
11	2090.00	1650.00			
12	2129.00	1547.00			

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	598.00
SD =	standard deviation of the data group	=	186.42
n =	number of samples	=	12

W = 0.935

Compare this value to the critical value in Table A-2 of Statistical Analysisof Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance (Draft) July, 1992, to determine if the data is normally distributed.

From Table A-2 with (n) samples and a 95% confidence level, the critical value is

W(crit) = 0.859
and the calculated W = 0.935

Therefore the data set is Normal

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Parametric Prediction Interval for normally distributed data

Analyte: Barium (MW-3 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	10/31/01	MW-3	1650.00	500.00
2	06/11/02	MW-3	1547.00	500.00
3	11/01/02	MW-3	1733.00	500.00
4	03/06/03	MW-3	1939.00	500.00
5	09/23/03	MW-3	2090.00	500.00
6	03/11/04	MW-3	1881.00	500.00
7	09/23/04	MW-3	1830.00	500.00
8	03/10/05	MW-3	2129.00	500.00
9	09/22/05	MW-3	1871.00	500.00
10	03/06/06	MW-3	1838.00	500.00
11	09/19/06	MW-3	2090.00	500.00
12	03/21/07	MW-3	2080.00	100.00

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Prediction Limit can be determined using:

Upper Prediction Limit = (Mean Conc) + t(n-1,k,.95) x (Std Dev) x SQRT(1/m+1/n)

where:
Mean Conc = mean concentration background samples
t(n-1k,.95) = Bonferroni t-statistic with
n-1 = degrees of freedom (number of samples - 1)
k = number of downgradient samples per event
.95 = confidence interval
Std Dev = standard deviation of background samples
m = number independent samples from each sampling point
n = number of background samples

For:
Mean Conc = 1889.833
Std Dev = 186.417
t(n-1,k,.95)*sqrt(1/m+1/n) = 1.890
k = 1
m = 1
n = 12

UPL = 2242 ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Parametric Tolerance Interval for normally distributed data

Analyte: Barium (MW-3 Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	10/31/01	MW-3	1650.00	500.00
2	06/11/02	MW-3	1547.00	500.00
3	11/01/02	MW-3	1733.00	500.00
4	03/06/03	MW-3	1939.00	500.00
5	09/23/03	MW-3	2090.00	500.00
6	03/11/04	MW-3	1881.00	500.00
7	09/23/04	MW-3	1830.00	500.00
8	03/10/05	MW-3	2129.00	500.00
9	09/22/05	MW-3	1871.00	500.00
10	03/06/06	MW-3	1838.00	500.00
11	09/19/06	MW-3	2090.00	500.00
12	03/21/07	MW-3	2080.00	100.00

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Tolerance Limit can be determined using:

Upper Tolerance Limit = (Mean Concentration) + K x (Standard Deviation Samples)

where: Mean Conc = mean concentration background samples
K = factor for constructing one sided normal tolerance limit taken from table 4-2, page 87, Statistical Methods for Groundwater Monitoring, Gibbons, 1994
n = number of background samples
STDS = Standard Deviation Samples

For:

n =	12
K =	2.736
Mean Conc =	1889.83
STDS =	186.42

UTL = 2400 ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Analyte: Barium (MW-6T Intrawell)

Sample No.	Sample Date	Location	Concentration (ug/L)	Quantitation Limit (ug/L)
1	06/11/02	MW-6T	837	500
2	11/01/02	MW-6T	787	500
3	03/06/03	MW-6T	936	500
4	09/23/03	MW-6T	1066	500
5	03/11/04	MW-6T	966	500
6	09/23/04	MW-6T	977	500
7	03/10/05	MW-6T	1164	500
8	09/22/05	MW-6T	1018	500
9	03/06/06	MW-6T	1458	500
10	09/19/06	MW-6T	1787	500
11	03/21/07	MW-6T	1700	100

Number of Data	11
Number of Truncated Data	0
Percentage of Truncated Data	0%

UPL = **1810** ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Probability Plots to determine the distribution of Barium (MW-6T Intrawell)

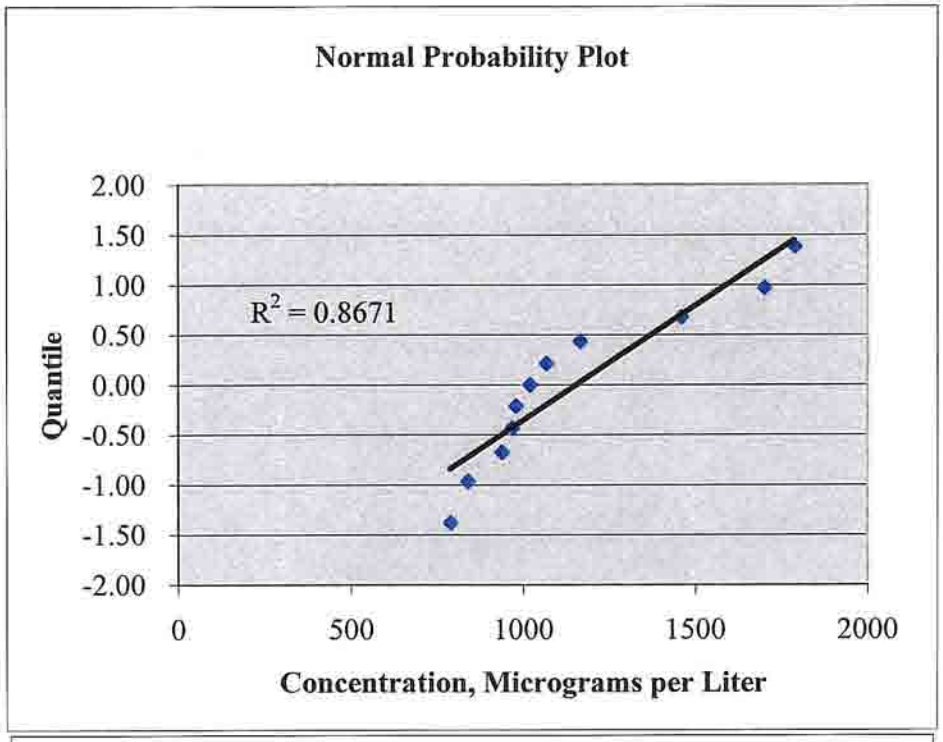
Complete the following table where:

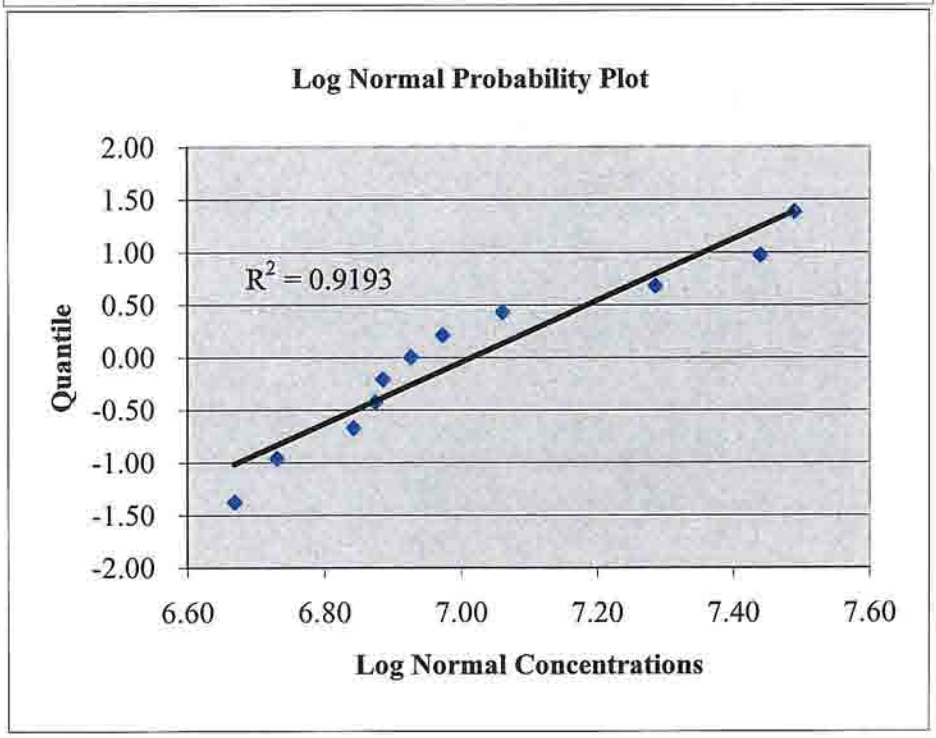
i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
LN[X(i)] = Natural Log Value of sample concentrations arranged from smallest to largest
[i/(n+1)] = Cumulative probability
n = number of samples = 11

X(i)	LN[X(i)]	i	Rank	[Rank/(n+1)]	Quantiles
787	6.67	1	1	0.083	-1.38
837	6.73	2	2	0.167	-0.97
936	6.84	3	3	0.250	-0.67
966	6.87	4	4	0.333	-0.43
977	6.88	5	5	0.417	-0.21
1018	6.93	6	6	0.500	0.00
1066	6.97	7	7	0.583	0.21
1164	7.06	8	8	0.667	0.43
1458	7.28	9	9	0.750	0.67
1700	7.44	10	10	0.833	0.97
1787	7.49	11	11	0.917	1.38

Project Name: Red Rock Disposal, LLC C&D I
Project No: 073-9603507
Date: 11/01/07

Probability Plots to determine the distribution of Barium (MW-6T Intrawell)





Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Determination of reported background value as an outlier

Analyte: Barium (MW-6T Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	06/11/02	MW-6T	837.0	500
2	11/01/02	MW-6T	787.0	500
3	03/06/03	MW-6T	936.0	500
4	09/23/03	MW-6T	1066.0	500
5	03/11/04	MW-6T	966.0	500
6	09/23/04	MW-6T	977.0	500
7	03/10/05	MW-6T	1164.0	500
8	09/22/05	MW-6T	1018.0	500
9	03/06/06	MW-6T	1458.0	500
10	09/19/06	MW-6T	1787.0	500
11	03/21/07	MW-6T	1700.0	100

mean = 1154.182
STD = 341.604

Note: All concentrations are micrograms per liter

Using the data listed above, form the statisitc Tn:

Tn = (Xn - mean) / STD

where:
Xn = largest observed sample value
mean = mean of the background values
STD = standard deviation of the background values

For
Xn = 1787.000
mean = 1154.182
STD = 341.604

Tn = 1.852

From Table 8 included in the Staistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Interim Final Guidance, the critical value for the given sample group is

Number of samples = 11
Tc = 2.234

Since Tc>Tn, the sample result is not considered to be an outlier

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Shapiro Wilk Test Statistic (W) for normality of total Barium (MW-6T Intrawell)

Complete the following table where

i = ordered value of sample, arranged from smallest to largest
X(i) = sample values arranged from smallest to largest
X(n-i+1) = sample values arranged from largest to smallest
A(n-i+1) = coefficient from table A-1, Statistical Analysis of Ground-Water Data at RCRA Facilities
B(i) = summation of (X(n-i+1)-X(i))A(n-i+1)

i	X(i)	X(n-i+1)	X(n-i+1) - X(i)	A(n-i+1)	B(i)
1	787.00	1787.00	1000	0.5601	560.10
2	837.00	1700.00	863	0.3315	286.08
3	936.00	1458.00	522	0.226	117.97
4	966.00	1164.00	198	0.1429	28.29
5	977.00	1066.00	89	0.0695	6.19
6	1018.00	1018.00	0	0	0.00
7	1066.00	977.00			
8	1164.00	966.00			
9	1458.00	936.00			
10	1700.00	837.00			
11	1787.00	787.00			

The test statistic W can be found using:

W = SQR[B/(SD x SQRT(n-1))]

where:

B =	summation of (X(n-i+1)-X(i))A(n-i+1)	=	998.64
SD =	standard deviation of the data group	=	341.60
n =	number of samples	=	11

W = 0.855

Compare this value to the critical value in Table A-2 of Statistical Analysisof Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance (Draft) July, 1992, to determine if the data is normally distributed.

From Table A-2 with (n) samples and a 95% confidence level, the critical value is

W(crit) = 0.85
and the calculated W = 0.855

Therefore the data set is Normal

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Parametric Prediction Interval for normally distributed data

Analyte: Barium (MW-6T Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	06/11/02	MW-6T	837.00	500.00
2	11/01/02	MW-6T	787.00	500.00
3	03/06/03	MW-6T	936.00	500.00
4	09/23/03	MW-6T	1066.00	500.00
5	03/11/04	MW-6T	966.00	500.00
6	09/23/04	MW-6T	977.00	500.00
7	03/10/05	MW-6T	1164.00	500.00
8	09/22/05	MW-6T	1018.00	500.00
9	03/06/06	MW-6T	1458.00	500.00
10	09/19/06	MW-6T	1787.00	500.00
11	03/21/07	MW-6T	1700.00	100.00

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Prediction Limit can be determined using:

Upper Prediction Limit = (Mean Conc) + t(n-1,k,.95) x (Std Dev) x SQRT(1/m+1/n)

where:
Mean Conc = mean concentration background samples
t(n-1k,.95) = Bonferroni t-statistic with
n-1 = degrees of freedom (number of samples - 1)
k = number of downgradient samples per event
.95 = confidence interval
Std Dev = standard deviation of background samples
m = number independent samples from each sampling point
n = number of background samples

For:
Mean Conc = 1154.182
Std Dev = 341.604
t(n-1,k,.95)*sqrt(1/m+1/n) = 1.920
k = 1
m = 1
n = 11

UPL = 1810.06 ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Parametric Tolerance Interval for normally distributed data

Analyte: Barium (MW-6T Intrawell)

Background Data

Sample No.	Sample Date	Location	Concentration (ug/l)	Quantitation Limit (ug/l)
1	06/11/02	MW-6T	837.00	500.00
2	11/01/02	MW-6T	787.00	500.00
3	03/06/03	MW-6T	936.00	500.00
4	09/23/03	MW-6T	1066.00	500.00
5	03/11/04	MW-6T	966.00	500.00
6	09/23/04	MW-6T	977.00	500.00
7	03/10/05	MW-6T	1164.00	500.00
8	09/22/05	MW-6T	1018.00	500.00
9	03/06/06	MW-6T	1458.00	500.00
10	09/19/06	MW-6T	1787.00	500.00
11	03/21/07	MW-6T	1700.00	100.00

Note: All sample concentrations are micrograms per liter

Using the background data, the upper Tolerance Limit can be determined using:

Upper Tolerance Limit = (Mean Concentration) + K x (Standard Deviation Samples)

where:
Mean Conc = mean concentration background samples
K = factor for constructing one sided normal tolerance limit taken from table 4-2, page 87, Statistical Methods for Groundwater Monitoring, Gibbons, 1994
n = number of background samples
STDS = Standard Deviation Samples

For:
n = 11
K = 2.815
Mean Conc = 1154.18
STDS = 341.60

UTL = 2116 ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Analyte: Lead

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/31/01	MW-1	ND		10
2	06/11/02	MW-1	ND		10
3	11/01/02	MW-1	ND		10
4	03/06/03	MW-1	ND		10
5	09/23/03	MW-1	ND		10
6	03/11/04	MW-1	ND		10
7	06/11/02	MW-10	ND		10
8	11/01/02	MW-10	ND		10
9	03/06/03	MW-10	ND		10
10	09/23/03	MW-10	ND		10
11	03/11/04	MW-10	ND		10
12	09/23/04	MW-10	ND		10
13	03/10/05	MW-10	ND		10
14	09/22/05	MW-10	ND		10
15	03/06/06	MW-10	ND		10
16	09/19/06	MW-10	ND		10
17	03/21/07	MW-10	ND		10
18	09/28/07	MW-10	ND		10

Number of Data	18
Number of Truncated Data	18
Percentage of Truncated Data	100%

Nonparametric Prediction Interval: **10** ug/L

Project Name: Red Rock Disposal, LLC C&D Landfill
Project No: 073-9603507
Date: 11/1/07

Analyte: Lead (MW-4 Intrawell)

Sample No.	Sample Date	Location	Concentration (ug/L)		Quantitation Limit (ug/L)
1	10/31/01	MW-6T	14		10
2	06/11/02	MW-6T	17		10
3	11/01/02	MW-6T	ND		10
4	03/06/03	MW-6T	ND		10
5	09/23/03	MW-6T	ND		10
6	03/11/04	MW-6T	ND		10
7	09/23/04	MW-6T	ND		10
8	03/10/05	MW-6T	ND		10
9	09/22/05	MW-6T	ND		10
10	03/06/06	MW-6T	ND		10
11	09/19/06	MW-6T	ND		10
12	03/21/07	MW-6T	ND		10

Number of Data	12
Number of Truncated Data	10
Percentage of Truncated Data	83%

Nonparametric Prediction Interval: **17** ug/L