

**Donovan Well
Test Pumping Summary Report**



**WASHOE COUNTY
DEPARTMENT OF WATER RESOURCES**

4930 ENERGY WAY RENO, NEVADA 89502



**Donovan Well
Test Pumping Summary Report**

Prepared by:
Washoe County Department of Water Resources
Water Resources Planning Division
May 2006

Jones, Alan

From: Evans, Ed
Sent: Tuesday, May 16, 2006 2:13 PM
To: Jones, Alan; Dragan, Dan; Warner, Rick
Subject: Donovan Well

My recommended pumping rate for the Donovan Well is 300 gpm. At this rate the drawdown would be 46 feet after 90-days of continuous pumping with an equivalent pumping level of 156 feet. The pump setting depends on what we plan to do in the future. The well log states the well is 217 feet deep. Carson Pump tagged bottom in the well at 188 feet when they installed the pump currently being used. If we do nothing to the well the pump should be set to around 175 feet to allow 20-feet+ submergence and watch how things run. The pumping level flattens out even at this rate but what would be a concern is the future decline in the water table.

To reduce this problem we should upon actual transfer of ownership, have Carson Pump bail the well and see what we have for an actual total depth. We should also video log the well to make sure it looks sound although the recent pumping test indicates the well is performing fine. If the total depth is near what is stated in the drilling log, we could set the pump around 190 feet and gain an additional 15 feet of submergence. Based on what records we have the well yielded over 400 gpm when the Donovan's would first turn on the pump but flow dropped off to around the 350 gpm once the pumping level had stabilized and they had their pump set around 160 feet.

We obviously would like better submergence for more available drawdown but this is impossible due to the small amount of blank casing used and shallow total depth of the well. The positive spin is the well was always a reliable, sand free source for the Donovan operation in this pumping range so we can assume some productivity based on the well's operational history.

Ed

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1.0 Summary and Conclusions

In 2004 Washoe County Department of Water Resources (WCDWR) arranged with Barker-Coleman Homes to take ownership of the Donovan Well. The well was part of a property purchase from the R.T. Donovan Company for creation of the Donovan Ranch subdivision. The well was previously associated with the Donovan Pit operations with records indicating the historical pumping rate between 300-500 gpm. A short-term pumping test was arranged to verify capacity. WCDWR was not able to perform the test of the well until April 2006 due to construction and well operation agreements between the owner and Syncon Homes. Carson Pump was contracted to configure the wellhead for testing. The Donovan Well location is shown in Figure 1.

1.1 Results

A 7-hour step test was conducted on April 26 at the pumping rates of 100, 200, 300 and 380 gpm. Well efficiency ranged from 99% at 100 gpm to 94% at 380 gpm. A 48-hour constant discharge test and recovery test were conducted from April 27-May 1, 2006. Static water level in the well was measured at 100.67 feet prior to start of constant discharge testing. An aquifer transmissivity of 39,000 gallons per day per foot (gpd/ft) was calculated for the well. An aquifer storativity was not determined since observation well data was not collected. Measured sand content peaked at <3 parts per million (ppm) at 10 minutes from start of testing and remained below 1.5 ppm for the remainder of the pumping test.

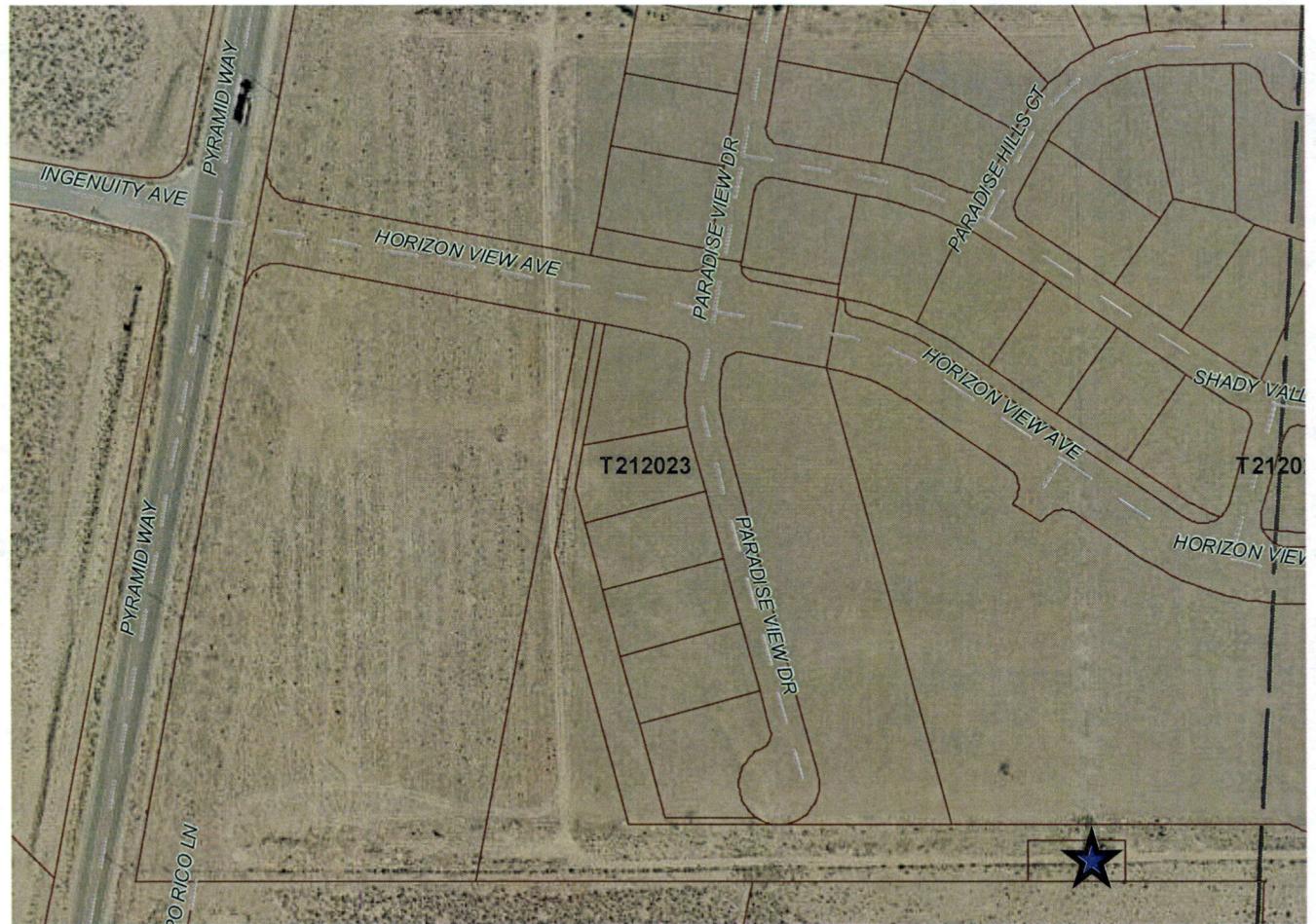
A water sample for complete organic and inorganic compound testing was collected after 24-hours of continuous pumping. Water quality test analyses show the Donovan Well meets primary and secondary drinking water standards for the State of Nevada as well as all requirements specified by the Safe Drinking Water Act. Complete analyses are included in the appendix.

1.2 Recommended Pumping Rate

The Donovan Well can be equipped at 300 gpm. A pumping level of approximately 156 feet with 44 feet of drawdown after 60 days of continuous pumping is predicted at this rate. Carson Pump determined in previous work that the well is only 188 feet deep instead of the reported 217 feet. The recommended pumping rate assumes that the well can be cleaned to the documented total depth. If this is successful the pump should be set between 190-200 feet from top of casing. If the well is only 188 feet deep, the pump should be set at 175 feet with the pumping capacity reduced to 250-275 gpm depending on suction head requirements for the installed pump.

2.0 Well Construction

Armstrong Brothers Drilling constructed the Donovan Well in 1976 to a total depth of 217 feet. As previously stated, it was determined during the pump installation that the well's total depth is 188 feet however it is unknown if this is actual casing bottom or top of accumulated fill. The lithologic log on the driller's report states the well is constructed entirely in decomposed granite with little



DONOVAN WELL

COORDINATES

NORTHING: 14918427

EASTING: 2311229

SCALE: 1" = 300'

N.T.S.



indication of the driller encountering competent granite. The driller's report is found in the appendix. A well construction summary is found in Table 1.

Construction Item	Diameter	Interval	Length
Production Casing Borehole	26-Inches	0 to 217 feet	217 feet
Blank Production Casing	12.75-Inches	+2 to 137 feet	135 feet
Full-Flow Louver, 3-3/4" x 2"	12.75-Inches	137 to 217 feet	80 feet
Sanitary Surface Seal	Annulus	0 to 50 feet	50 feet

Table 1-Well Construction Summary

3.0 Aquifer Testing

The existing pumping equipment was used for all testing after slight modification of the well discharge head by Carson Pump. A 30-horsepower submersible pump was installed at a pump setting of 174 feet. A ¾-inch PVC sounding tube was installed to 168 feet. The discharge rate was measured using a McCrometer in-line flow meter with instantaneous flow indicator and totalizer. A Rossum sand-testing device was installed in front of the flow meter and before the gate valve on the discharge pipe. Approximately 400 feet of 6-inch aluminum irrigation pipe directed the pumping discharge to a storm drain in the subdivision where it was then conveyed to a detention pond. A schematic from Carson Pump for the pumping equipment configuration is found in the appendix.

A Waterline 300 electric sounder was used to measure draw down during the step test. An In-Situ Mini-Troll 100 pressure transducer was installed in the pumping well to record draw down during constant discharge testing. Water levels were also hand measured periodically in the test well using the electric sounder as a back-up data source in case of data logger failure. A summary of pumping tests performed is found in Table 2.

Test	Date	Start (Hour)	Stop (Hour)	Duration (min)	Rate (gpm)
Step Test	4/26/06	0920	1600	400(6.5 hrs)	100, 200 300, 380
Constant Discharge	4/27/06 4/29/06	0930	0930	2,880(48 hrs)	300
Recovery	4/29/06 5/1/06	0930	0930	2,880(48 hrs)	0

Table 2-Pumping Tests Performed

3.1 Step Drawdown Test

A step drawdown test was performed to determine pumping level, specific capacity, and well efficiency at different pumping rates. A discharge rate for the aquifer stress test was selected on the results of the step drawdown test. The step drawdown data were analyzed with AquiferWin32 Analytical software using the Eden & Hazel, 1973 method. Table 3 summarizes the step drawdown analysis.

Step	Pumping Rate (gpm)	Drawdown (ft.) @ 100 minutes	Spec. Capacity (gpm/foot)	Spec. Drawdown (feet/gpm)	Well Efficiency (%)
1	100	15.74	6.4	0.156	99
2	200	24.28	8.3	0.120	96
3	300	38.62	7.8	0.128	95
4	380	55.25	6.9	0.145	94

Table 3-Step Drawdown Test Summary

A total drawdown and well loss graph is shown in Figure 2. The small percentage of well loss compared to aquifer loss indicates the well was completely developed during construction. Well efficiency (E) was calculated using the formula: $E = \text{Aquifer Loss} / \text{Total Drawdown}$. The high well efficiency is typical for wells constructed in uniform material such as sorted sand or in this case decomposed granite.

3.2 Constant Discharge Test

A constant discharge test was performed on the Donovan Well for 48-hours at a constant pumping rate of 300 gpm. The well was essentially sand free immediately upon start-up with a sand content of <1 ppm measured after 10 minutes. A maximum drawdown of 42.57 feet at a pumping level of 153.24 feet was measured at the end of testing.

Aquifer parameters were determined graphically in the field during testing using the following Cooper-Jacob straight-line equation for transmissivity (T) in gallons per day per foot (gpd/ft):

$$(T) = 264Q/\Delta s^2$$

Aquifer parameters from the constant discharge test and all predicted drawdowns were calculated using the AquiferWIN32 computer program.

3.3 Transmissivity

A final value for aquifer transmissivity from the constant discharge and recovery tests was determined using the Theis (1935) model in the AquiferWIN³² computer program. A transmissivity of 37,000 gal/day/ft (rounded to the nearest 1,000) was derived from the constant discharge test data using this method. Figure 3 shows the observed and simulated drawdown versus time plot from the constant discharge test for the Donovan Well.

3.4 Recovery Test

Recovery test analysis for the Donovan Well yielded a transmissivity of 39,000 gal/day/ft (rounded to the nearest 1,000). Water levels recovered to within 95% of the pre-test static water level 90 minutes after test shut off. The rapid recovery in conjunction with the proportionately greater aquifer loss component could indicate water movement through a decomposed granite formation that becomes more competent and fractured towards the bottom of the well. A recovery test graph for the new production well is found in Figure 4.

Figure 2
Donovan Well
Step Drawdown Test, Total Drawdown Graph

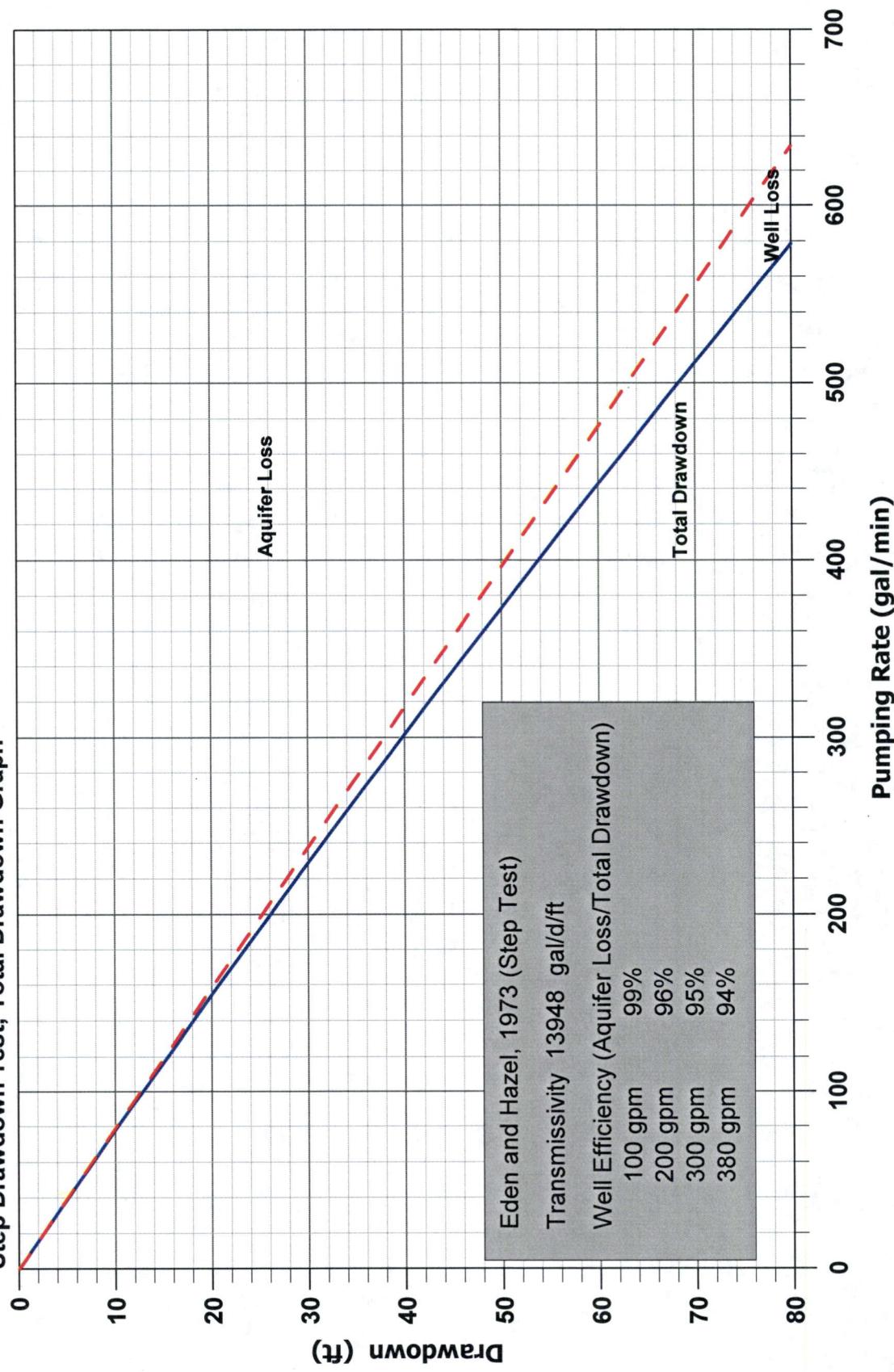


Figure 3
Donovan Well
Constant Discharge Test

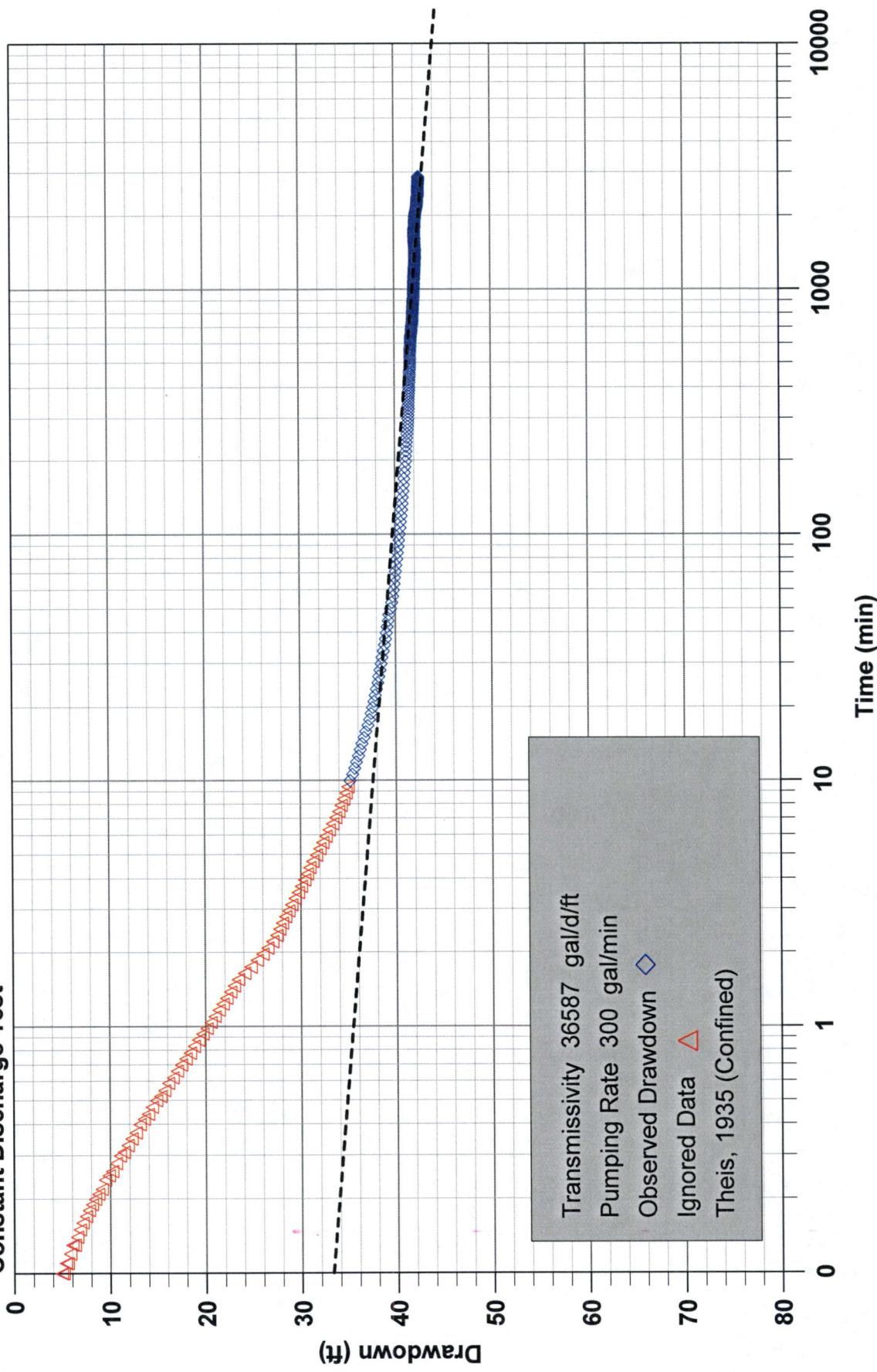
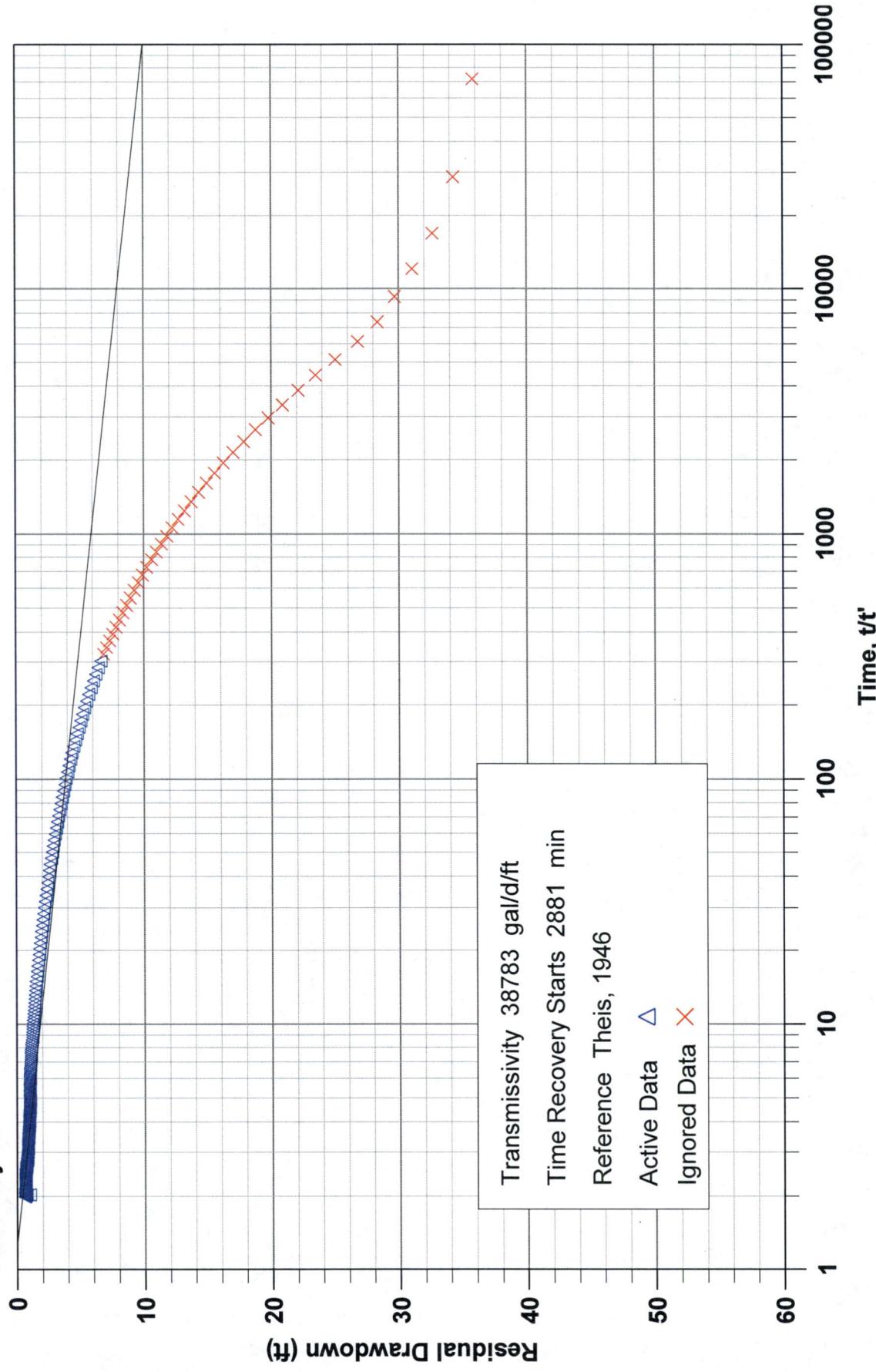


Figure 4
Donovan Well
Recovery Test



4.0 Predicted Drawdown Estimates

The aquifer parameters from the constant discharge test were used to predict drawdown at various pumping rates. Estimates for drawdown in the well after 30 and 60 days of continuous pumping were calculated using AquiferWin32 and are shown in Figure 5. A summary of estimated drawdown and pumping level for increasing pumping rates is found in Table 4. The predicted draw down for the design rate is bold highlighted.

Pumping Rate GPM	60 Day Drawdown (Feet)	60 Day Pumping Level* (Feet)
225	34.10	145
250	37.89	148
275	41.68	152
300	45.46	156

Table 4-Predicted Drawdown

*Rounded to nearest foot

5.0 Water Quality

Water quality samples for inorganic compounds, volatile organic compounds and synthetic organic compounds were collected 24 hours after start of the constant discharge test. The new well meets State and federal drinking water standards for all parameters tested. The complete water quality analysis for the well is found in the appendix.

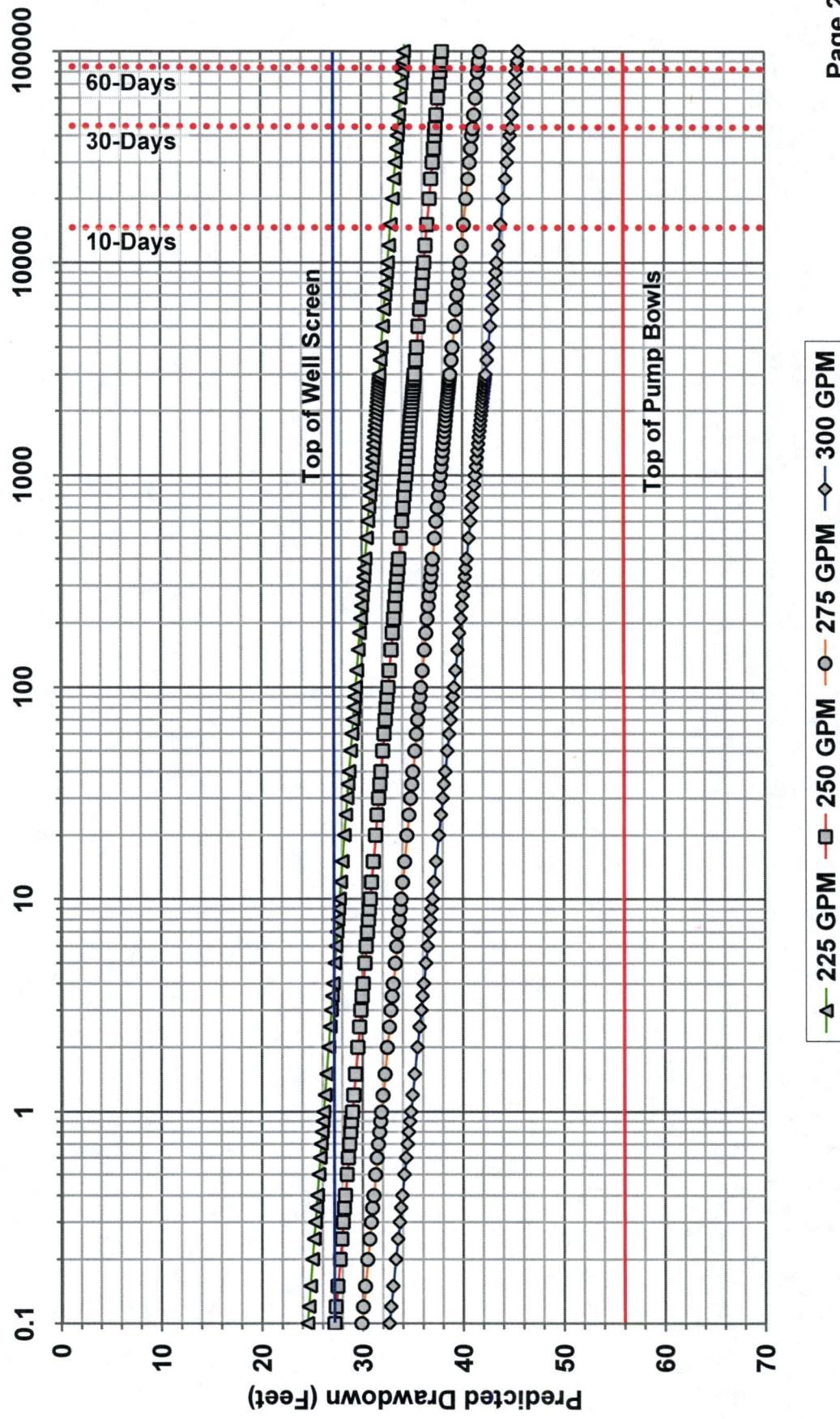
6.0 Design Recommendations

Staff recommends the following when equipping the new well. All recommendations are estimated after 60 days of continuous pumping with a static water level of 110.50 feet. The recommendations are also based on the assumption that the well can be cleaned and the original total depth of 217 feet recovered.

Pump Capacity:	300 GPM	Pump Intake Setting:	180 Feet
Drawdown	46 Feet	Pumping Level:	156 Feet
Pump Submergence:	25 Feet	Well Efficiency:	94%

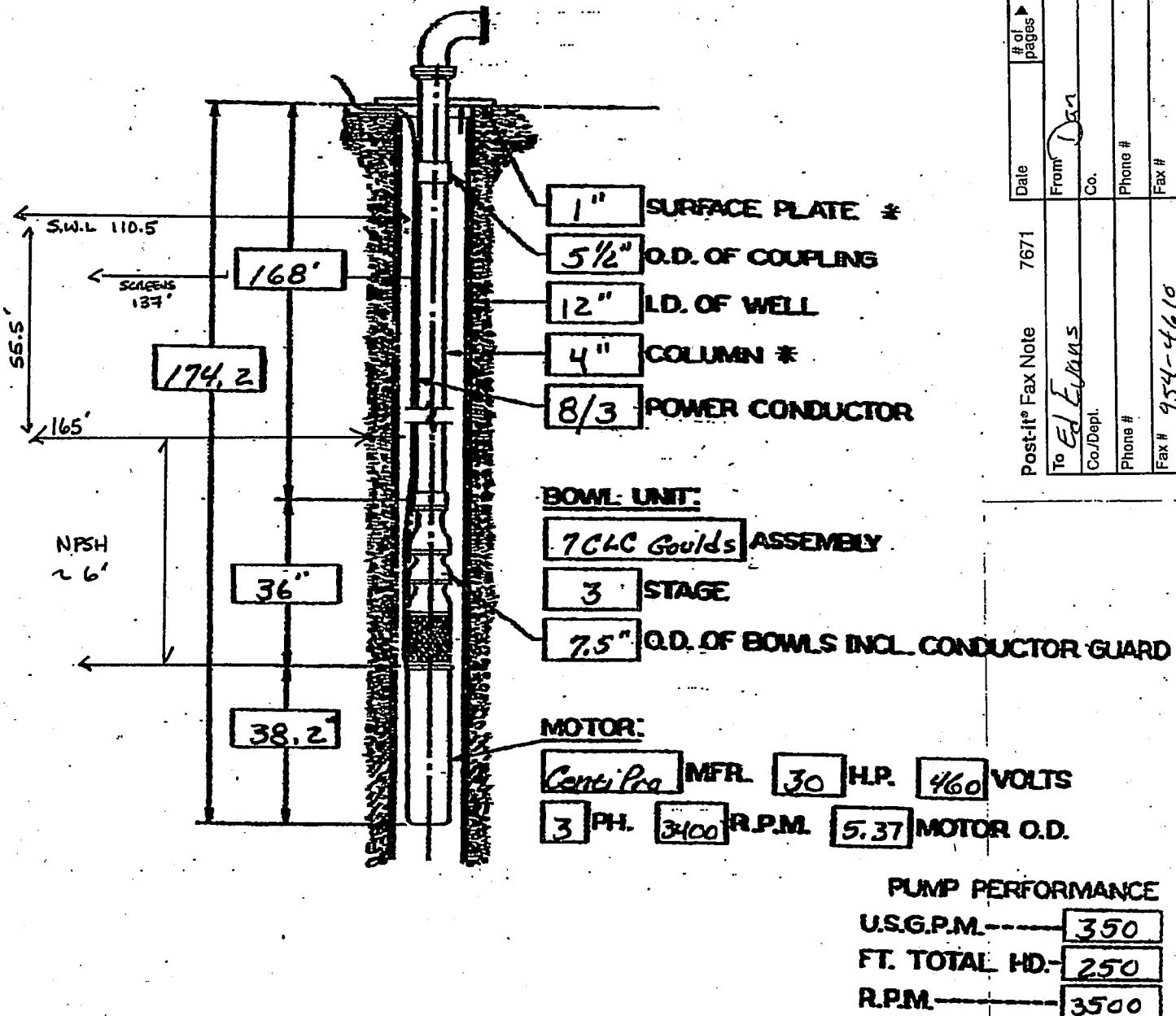
Well rehabilitation should be done to remove any fill to verify actual total depth of the well. A video survey is also necessary to determine well construction and condition even though the pumping test indicates the well is operationally sound. A spinner log could be done to determine contributing flow zones into the well. This procedure would help in determining the aquifer potential at this location and whether construction of a replacement well is worth pursuing.

Figure 5
Donovan Well
Predicted Drawdown



APPENDIX

**Syncon Homes – Donavan Ranch submersible pump
Installed 7/26/05**



Goulds model 7CLC, 3 stage pump s/n FR500924
Motor is a Centri-Pro 30 hp, 460 volt, s/n A05-G89249E
well was measured 168' deep. Water level 112'. 3/4" pvc
sounder tube is 168' deep also. It removed 160' of
6" Johnson turbine pump from well.



Laboratory Report

Report ID: 75540

Sierra
Environmental
Monitoring, Inc.

Washoe County Dept. of Water Resources
Attn: John Hulett
4930 Energy Way
Reno, NV 89520

Date: 6/7/2006
Client: WAS-500
Taken by: E. Evans
PO #: 5500001829

Dear John Hulett,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

General Comments:

- There are no general comments for this report.

Individual Sample Comments:

- There are no specific comments that are associated with these samples.

Approved By:

A handwritten signature in black ink, appearing to read "John Kobza".

Date:

6/7/2006

Sierra Environmental Monitoring, Inc.

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.

John Kobza, Ph.D.
Laboratory Director

Page 1 of 5

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sem@sem-analytical.com

John C. Seher
Special Consultant
Quality Assurance Manager



Laboratory Report
Report ID: 75540

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Attn: John Hulett
4930 Energy Way
Reno, NV 89520

Date: 6/7/2006
Client: WAS-500
Taken by: E. Evans
PO #: 5500001829

Analysis Report

Sample ID: S200604-1594	Customer Sample ID Donovan Well			Date Sampled 4/28/2006	Time Sampled 12:00 PM	Date Received 4/28/2006	Date Analyzed	Data Flag
	Parameter	Method	Result	Units	MCL	Analyst		
Alkalinity, Total	SM 2320 B	160	mg/L CaCO ₃			Pacheco	4/28/2006	
Alkalinity/Bicarbonate	SM 2320 B	160	mg/L CaCO ₃			Pacheco	4/28/2006	
Alkalinity/Carbonate	SM 2320 B	<2	mg/L CaCO ₃			Pacheco	4/28/2006	
Alkalinity/Hydroxide	SM 2320 B	<2	mg/L CaCO ₃			Pacheco	4/28/2006	
Aluminum - ICP-OES	EPA 200.7	<0.05	mg/L	0.05 to 0.2 mg/L		Keller	5/2/2006	
Antimony - ICP-MS	EPA 200.8	<0.001	mg/L	0.006 mg/L		Li	5/4/2006	
Arsenic - ICP-MS	EPA 200.8	0.006	mg/L	0.01 mg/L		Li	5/4/2006	
Barium - ICP-MS	EPA 200.8	0.12	mg/L	2.0 mg/L		Li	5/4/2006	
Beryllium - ICP-MS	EPA 200.8	<0.001	mg/L	0.004 mg/L		Li	5/4/2006	
Boron - ICP-OES	EPA 200.7	<0.05	mg/L			Keller	5/2/2006	
Cadmium - ICP-MS	EPA 200.8	<0.001	mg/L	0.005 mg/L		Li	5/4/2006	
Calcium - ICP-OES	EPA 200.7	43	mg/L			Keller	5/2/2006	
Carbamates (ML531) (EPA 531.1)	Subcontract	See Report					5/22/2006	
Chloride - Ion Chromatography	EPA 300.0	23	mg/L	250 mg/L		Henderson	4/28/2006	
Chromium - ICP-MS	EPA 200.8	0.005	mg/L	0.1 mg/L		Li	5/4/2006	
Color Apparent	EPA 110.2	<5	Color Units	15		Pacheco	5/2/2006	
Copper - ICP-MS	EPA 200.8	<0.001	mg/L	1.0 mg/L		Li	5/4/2006	
Cyanide,Total	SM 4500 CN C	<0.005	mg/L	0.2 mg/L		Hellmann	5/4/2006	
Diquat (EPA 549.2)	Subcontract	See Report					5/22/2006	
EDB-DBC (EPA 504.1)	Subcontract	See Report					5/22/2006	
Endothall (EPA 548.1)	Subcontract	See Report					5/22/2006	
Fluoride - Ion Chromatography	EPA 300.0	0.2	mg/L	2.0/4.0 mg/L		Henderson	4/28/2006	
Glyphosate (EPA 547)	Subcontract	See Report					5/22/2006	
Gross Alpha and Beta Radiological	Subcontract	See Report					6/7/2006	
Herbicides (NPS3) (EPA 515.1)	Subcontract	See Report					5/22/2006	
Iron - ICP-OES	EPA 200.7	<0.05	mg/L	0.3 mg/L		Keller	5/2/2006	
Lead - ICP-MS	EPA 200.8	<0.001	mg/L	0.015 mg/L		Li	5/4/2006	
Magnesium - ICP-OES	EPA 200.7	15	mg/L	125 mg/L		Keller	5/2/2006	
Manganese - ICP-MS	EPA 200.8	<0.001	mg/L	0.05 mg/L		Li	5/4/2006	
MBAS Surfactants	SM 5540 C	<0.05	mg/L	0.5 mg/L		Hellmann	4/30/2006	
Mercury - AA Cold Vapor	EPA 245.1	<0.0002	mg/L	0.002 mg/L		Kleinworth	5/15/2006	
Nickel - ICP-MS	EPA 200.8	<0.001	mg/L	0.1 mg/L		Li	5/4/2006	
Nitrate-N - Ion Chromatography	EPA 300.0	4.9	mg/L N	10 mg/L as N		Henderson	4/28/2006	
Nitrite-N - Ion Chromatography	EPA 300.0	<0.05	mg/L N	1 mg/L as N		Henderson	4/28/2006	

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Laboratory Director

John C. Seher
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Quality Assurance Manager



Laboratory Report

Report ID: 75540

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Attn: John Hulett
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Reno, NV 89520

Date: 6/7/2006
Client: WAS-500
Taken by: E. Evans
PO #: 5500001829

Analysis Report

Sample ID:	Customer Sample ID		Date Sampled	Time Sampled	Date Received	Date Analyzed	Data Flag
S200604-1594	Donovan Well		4/28/2006	12:00 PM	4/28/2006		
Parameter	Method	Result	Units	MCL	Analyst		
NO ₃ + NO ₂	EPA 300.0	4.9	mg/L N		Henderson	4/28/2006	
Odor	SM 2150	0	T.O.N.	3 T.O.N.	Hellmann	4/29/2006	
Pesticides and PCBs (PESTSDW) (E)	Subcontract	See Report				5/22/2006	
pH	SM 4500 H+B	8.09	pH Units	6.5 to 8.5	Pacheco	4/28/2006	
pH - Temperature	SM 4500 H+B	19.8	°C		Pacheco	4/28/2006	
Potassium - ICP-OES	EPA 200.7	3.6	mg/L		Keller	5/2/2006	
Radium 226 - Radiological	Subcontract	See Report				6/7/2006	
Radium 228 - Radiological	Subcontract	See Report				6/7/2006	
Selenium - ICP-MS	EPA 200.8	<0.005	mg/L	0.05 mg/L	Li	5/4/2006	
Silver - ICP-MS	EPA 200.8	<0.001	mg/L	0.1 mg/L	Li	5/4/2006	J1
Sodium - ICP-OES	EPA 200.7	18	mg/L		Keller	5/2/2006	
Sulfate - Ion Chromatography	EPA 300.0	14	mg/L	500 mg/L	Henderson	4/28/2006	
SVOCs (ML525) (EPA 525)	Subcontract	See Report				5/22/2006	
Thallium - ICP-MS	EPA 200.8	<0.0005	mg/L	0.002 mg/L	Li	5/4/2006	
Total Dissolved Solids	SM 2540 C	280	mg/L	500/1000 mg/L	Pacheco	5/3/2006	
Total Recoverable Metals - Acid Dig	EPA 200.2	Completed			Kleinworth	5/8/2006	
Turbidity	SM 2130 B	0.3	NTU		Hellmann	4/29/2006	
Uranium - ICP-MS	EPA 200.8	0.016	mg/L	0.03 mg/L	Li	5/15/2006	
VOCs (VOASDWA) (EPA 524.2)	Subcontract	See Report				5/22/2006	
Zinc - ICP-MS	EPA 200.8	<0.005	mg/L	5 mg/L	Li	5/4/2006	

SAMPLE WATER AS TESTED DID DID NOT MEET DRINKING WATER STANDARDS.

Data Flag Legend:

J1 - The batch MS and/or MSD were outside acceptance limits. The batch LCS was acceptable.

John Kobza, Ph.D.
Laboratory Director

Page 3 of 5
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Quality Control Report

Parameter	LCS, % Recovery	MS, % Recovery	MSD, % Recovery	RPD, %	Method Blank
Alkalinity, Total	103.0			2.87	
Alkalinity/Bicarbonate				0.92	
Alkalinity/Carbonate				0.00	
Alkalinity/Hydroxide				0.00	
Aluminum - ICP-OES	102.0	98.0	99.0	0.41	
Antimony - ICP-MS	105.0	80.0	78.0	1.90	<0.001 mg/L
Arsenic - ICP-MS	102.0	82.0	80.0	1.85	<0.001 mg/L
Barium - ICP-MS	103.0	86.0	83.0	4.13	<0.001 mg/L
Beryllium - ICP-MS	100.0	91.0	86.0	5.65	<0.001 mg/L
Boron - ICP-OES	102.0	98.0	100.0	1.41	
Cadmium - ICP-MS	101.0	86.0	82.0	4.73	<0.001 mg/L
Calcium - ICP-OES	99.0	90.0	88.0	2.25	
Chloride - Ion Chromatography	103.0	103.0	104.0	0.97	<0.5 mg/L
Chromium - ICP-MS	106.0	85.0	80.0	6.69	<0.001 mg/L
Copper - ICP-MS	102.0	84.0	80.0	4.26	<0.001 mg/L
Cyanide,Total	92.0	89.0			<0.005 mg/L
Fluoride - Ion Chromatography	103.0	101.0	102.0	0.99	<0.1 mg/L
Iron - ICP-OES	102.0	98.0	100.0	1.21	
Lead - ICP-MS	104.0	86.0	83.0	2.97	<0.001 mg/L
Magnesium - ICP-OES	101.0	95.0	94.0	0.53	
Manganese - ICP-MS	104.0	84.0	79.0	6.13	<0.001 mg/L
MBAS Surfactants	97.0				<0.05 mg/L
Mercury - AA Cold Vapor	101.0	104.0	105.0	1.03	<0.0002 mg/L
Nickel - ICP-MS	102.0	82.0	78.0	4.97	<0.001 mg/L
Nitrate-N - Ion Chromatography	106.0	104.0	105.0	0.96	<0.1 mg/L
Nitrite-N - Ion Chromatography	102.0	100.0	100.0	0.50	<0.1 mg/L
NO ₃ + NO ₂				0.60	
pH				1.52	
pH - Temperature					
Potassium - ICP-OES	100.0	99.0	99.0	0.00	



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Quality Control Report

Parameter	LCS, % Recovery	MS, % Recovery	MSD, % Recovery	RPD, %	Method Blank
Selenium - ICP-MS	103.0	81.0	80.0	1.11	<0.005 mg/L
Silver - ICP-MS	106.0	24.0	16.0	37.97	<0.001 mg/L
Sodium - ICP-OES	98.0	98.0	98.0	0.00	
Sulfate - Ion Chromatography	102.0	100.0	100.0	0.00	<0.2 mg/L
Thallium - ICP-MS	102.0	76.0	77.0	0.65	<0.0005 mg/L
Total Dissolved Solids		101.0		2.30	<10 mg/L
Turbidity	102.0			0.23	
Uranium - ICP-MS	100.0	104.0	102.0	1.95	<0.001 mg/L
Zinc - ICP-MS	107.0	86.0	82.0	5.95	<0.005 mg/L

Legend: LCS- Laboratory Control Standard
RPD- Relative Percent Difference

MS- Matrix Spike

MSD- Matrix Spike Duplicate

05/17/2006

John Kobza
Sierra Environmental Monitoring
1135 Financial Blvd
Reno, NV 89502



Dear John Kobza,

Thank you for selecting BSK Analytical Laboratories for your analytical testing needs. We have prepared this report in response to your request for analytical services. Please find enclosed the following sections for your complete laboratory report, each uniquely paginated:

CASE NARRATIVE: An overview of the work performed.

CERTIFICATE OF ANALYSIS: Analytical results.

QUALITY CONTROL (QC) SUMMARY: QC supporting the results presented herein.

REPORT OF SAMPLE INTEGRITY

CHAIN OF CUSTODY FORM

Certification: I certify that this data package is in compliance with NELAC Standards for applicable analyses under NELAP Certificate #04227CA, and is in compliance with ELAP Standards for applicable certified analyses under ELAP Certificate #1180, except for the conditions listed.

If additional clarification of any information is required, please contact your Client Services Representative, Debra Skelton, at (800) 877-8310 or (559) 497-2888.

BSK ANALYTICAL LABORATORIES

Debra Skelton
Client Services Representative

Cynthia Hamilton
Quality Assurance Specialist



Case Narrative

BSK Submission Number: 2006050087

SAMPLE AND RECEIPT INFORMATION

The sample(s) was received, prepared, and analyzed within the method specified holding times unless otherwise noted on the Certificate of Analysis. Samples, when shipped, arrived within acceptable temperature requirements of 0° to 6° Celsius unless otherwise noted on the Report of Sample Integrity. Samples collected by BSK Analytical Laboratories were collected in accordance with the BSK Sampling and Collection Standard Operating Procedures.

QUALITY CONTROL

All analytical quality controls are within established method criteria except when noted in the Quality Control section or on the Certificate of Analysis. All positive results for EPA Methods 504.1, 502.2, and 524.2 require the analysis of a Field Reagent Blank (FRB) to confirm that the results are not a contamination error from field sampling steps. If Field Reagent Blanks were not submitted with the samples, this method requirement has not been performed. OC samples may include analytes not requested in this submission.

<u>RUN</u>	<u>ORDER</u>	<u>TEST</u>	<u>ANALYTE</u>	<u>COMMENT</u>
112105	718123	EPA 505	Aldrin	MS recovery was affected by the matrix.
112105	718121	EPA 505	Hexachlorocyclopentadiene	LCS recovery was out of the acceptance range, however the LCSD recovery was within the acceptance range, therefore the data was reported.
112105	718114	EPA 505	Hexachlorocyclopentadiene	One of 3 CCVs was biased low for this analyte, but was within 5% of the LCL.

SAMPLE RESULT INFORMATION

Samples are analyzed as received (wet weight basis) unless noted here. The results relate only to the items tested. Any exceptions to be considered when evaluating these results are also listed here, if applicable. Results contained in this package shall not be reproduced, except in full, without written approval of BSK Analytical Laboratories.

<u>ORDER</u>	<u>TEST</u>	<u>ANALYTE</u>	<u>COMMENT</u>
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BSK ANALYTICAL LABORATORIES

John Kobza
 Sierra Environmental Monitoring
 1135 Financial Blvd
 Reno, NV 89502

Certificate of Analysis NELAP Certificate #04227CA ELAP Certificate #1180



Report Issue Date: 05/17/2006

BSK Submission #: 2006050087

BSK Sample ID #: 715974

Project ID:

Project Desc:

Submission Comments:

Sample Type: Liquid

Sample Description: S200604-1594 Donovan Well

Sample Comments:

Date Sampled: 04/28/2006

Time Sampled: 1200

Date Received: 05/02/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Dibromochloropropane	EPA 504.1	ND	µg/L	0.01	1	0.01	05/05/06	05/05/06
Ethylenedibromide	EPA 504.1	ND	µg/L	0.02	1	0.02	05/05/06	05/05/06
Aldrin	EPA 505	ND	µg/L	0.075	1	0.075	05/04/06	05/07/06
Chlordane	EPA 505	ND	µg/L	0.1	1	0.1	05/04/06	05/07/06
Chlorothalonil (Daconil, Bravo)	EPA 505	ND	µg/L	5.0	1	5.0	05/04/06	05/07/06
Dieldrin	EPA 505	ND	µg/L	0.02	1	0.02	05/04/06	05/07/06
Endrin	EPA 505	ND	µg/L	0.1	1	0.1	05/04/06	05/07/06
Heptachlor	EPA 505	ND	µg/L	0.01	1	0.01	05/04/06	05/07/06
Heptachlor epoxide	EPA 505	ND	µg/L	0.01	1	0.01	05/04/06	05/07/06
Hexachlorobenzene	EPA 505	ND	µg/L	0.50	1	0.50	05/04/06	05/07/06
Hexachlorocyclopentadiene	EPA 505	ND	µg/L	1.0	1	1.0	05/04/06	05/07/06
Lindane	EPA 505	ND	µg/L	0.2	1	0.2	05/04/06	05/07/06
Methoxychlor	EPA 505	ND	µg/L	10	1	10	05/04/06	05/07/06
PCBs: Arochlor Screen	EPA 505	ND	µg/L	0.5	1	0.5	05/04/06	05/07/06
Toxaphene	EPA 505	ND	µg/L	1.0	1	1.0	05/04/06	05/07/06
Trifluralin	EPA 505	ND	µg/L	1.0	1	1.0	05/04/06	05/07/06
2,4,5-T	EPA 515.3	ND	µg/L	1.0	1	1.0	05/10/06	05/10/06
2,4,5-TP (Silvex)	EPA 515.3	ND	µg/L	1.0	1	1.0	05/10/06	05/10/06
2,4-D	EPA 515.3	ND	µg/L	10	1	10	05/10/06	05/10/06
Bentazon (Basagran)	EPA 515.3	ND	µg/L	2.0	1	2.0	05/10/06	05/10/06
Dalapon	EPA 515.3	ND	µg/L	10	1	10	05/10/06	05/10/06
Dicamba (Banvel)	EPA 515.3	ND	µg/L	1.5	1	1.5	05/10/06	05/10/06
Dinoseb (DNBP)	EPA 515.3	ND	µg/L	2.0	1	2.0	05/10/06	05/10/06
Pentachlorophenol (PCP)	EPA 515.3	ND	µg/L	0.2	1	0.2	05/10/06	05/10/06
Picloram	EPA 515.3	ND	µg/L	1.0	1	1.0	05/10/06	05/10/06
1,1,1,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1,1-Trichloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1,2,2-Tetrachloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA 524.2	ND	µg/L	10	1	10	05/03/06	05/03/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting

: PQL x Dilution

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pCi/L: Picocurie per Liter

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES

John Kobza
 Sierra Environmental Monitoring
 1135 Financial Blvd
 Reno, NV 89502

BSK Submission #: 2006050087

BSK Sample ID #: 715974

Project ID:

Project Desc:

Submission Comments:

Sample Type: Liquid

Sample Description: S200604-1594 Donovan Well

Sample Comments:

Certificate of Analysis

NELAP Certificate #04227CA
 ELAP Certificate #1180



Report Issue Date: 05/17/2006

Date Sampled: 04/28/2006

Time Sampled: 1200

Date Received: 05/02/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
1,1,2-Trichloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1-Dichloro-2-propanone	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
1,1-Dichloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1-Dichloroethene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,1-Dichloropropene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2,3-Trichlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2,3-Trichloropropane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2,4-Trichlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2,4-Trimethylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2-Dichlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2-Dichloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,2-Dichloropropane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,3,5-Trimethylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,3-Dichlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,3-Dichloropropane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1,4-Dichlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
1-Chlorobutane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
2,2-Dichloropropane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
2-Butanone	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
2-Chlorotoluene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
2-Hexanone	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
3-Chloropropene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
4-Chlorotoluene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
4-Methyl-2-pentanone	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
Acetone	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
Benzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Bromobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Bromochloromethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

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PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting

: PQL x Dilution

ND: None Detected at DLR

pCi/L: Picocurie per Liter

H: Analyzed outside of hold time

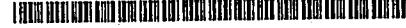
P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES

John Kobza
 Sierra Environmental Monitoring
 1135 Financial Blvd
 Reno, NV 89502

BSK Submission #: 2006050087

BSK Sample ID #: 715974

Project ID:

Project Desc:

Submission Comments:

Sample Type: Liquid

Sample Description: S200604-1594 Donovan Well

Sample Comments:

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180



Report Issue Date: 05/17/2006

Date Sampled: 04/28/2006

Time Sampled: 1200

Date Received: 05/02/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Bromodichloromethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Bromoform	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Bromomethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Carbon Disulfide	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Carbontetrachloride	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Chlorobenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Chloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Chloroform	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Chloromethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
cis-1,2-Dichloroethene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
cis-1,3-Dichloropropene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Dibromochloromethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Dibromomethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Dichlorodifluoromethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Diethyl ether	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Ethyl t-Butyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	05/03/06	05/03/06
Ethylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Ethylmethacrylate	EPA 524.2	ND	µg/L	5.0	1	5.0	05/03/06	05/03/06
Hexachlorobutadiene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Hexachloroethane	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Iodomethane	EPA 524.2	ND	µg/L	5.0	1	5.0	05/03/06	05/03/06
Isopropylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
m,p-Xylenes	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Methylacrylate	EPA 524.2	ND	µg/L	5.0	1	5.0	05/03/06	05/03/06
Methylene Chloride	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Methylmethacrylate	EPA 524.2	ND	µg/L	5.0	1	5.0	05/03/06	05/03/06
Methyl-t-Butyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	05/03/06	05/03/06
Naphthalene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
n-Butylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

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ND: None Detected at DLR

pCi/L: Picocurie per Liter

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES

John Kobza
 Sierra Environmental Monitoring
 1135 Financial Blvd
 Reno, NV 89502

BSK Submission #: 2006050087

BSK Sample ID #: 715974

Project ID:

Project Desc:

Submission Comments:

Sample Type: Liquid

Sample Description: S200604-1594 Donovan Well

Sample Comments:

Certificate of Analysis

NELAP Certificate #04227CA

ELAP Certificate #1180



Report Issue Date: 05/17/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Nitrobenzene	EPA 524.2	ND	µg/L	10.0	1	10	05/03/06	05/03/06
n-Propylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
o-Xylene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
p-Isopropyltoluene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
sec-Butylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Styrene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
t-Amyl Methyl Ether	EPA 524.2	ND	µg/L	3.0	1	3.0	05/03/06	05/03/06
tert-Butylbenzene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Tetrachloroethene (PCE)	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Toluene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Total 1,3-Dichloropropene	EPA 524.2	ND	µg/L	0.5	1	0.5		
Total Trihalomethanes	EPA 524.2	ND	µg/L	0.5	1	0.5		
Total Xylene Isomers	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
trans-1,2-Dichloroethene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
trans-1,3-Dichloropropene	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Trichloroethene (TCE)	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Trichlorofluoromethane	EPA 524.2	ND	µg/L	5.0	1	5.0	05/03/06	05/03/06
Vinyl Chloride	EPA 524.2	ND	µg/L	0.5	1	0.5	05/03/06	05/03/06
Alachlor (Alanex)	EPA 525.2	ND	µg/L	1.0	1	1.0	05/06/06	05/11/06
Atrazine (AArex)	EPA 525.2	ND	µg/L	0.5	1	0.5	05/06/06	05/11/06
Benzo(a)pyrene	EPA 525.2	ND	µg/L	0.1	1	0.1	05/06/06	05/11/06
bis(2-ethylhexyl) adipate	EPA 525.2	ND	µg/L	3.0	1	3.0	05/06/06	05/11/06
bis(2-ethylhexyl) phthalate	EPA 525.2	ND	µg/L	3.0	1	3.0	05/06/06	05/11/06
Bromacil (Hyvar)	EPA 525.2	ND	µg/L	10	1	10	05/06/06	05/11/06
Butachlor	EPA 525.2	ND	µg/L	0.38	1	0.38	05/06/06	05/11/06
Diazinon	EPA 525.2	ND	µg/L	0.25	1	0.25	05/06/06	05/11/06
Dimethoate (Cygon)	EPA 525.2	ND	µg/L	10	1	10	05/06/06	05/11/06
Metolachlor	EPA 525.2	ND	µg/L	0.5	1	0.5	05/06/06	05/11/06
Metribuzin	EPA 525.2	ND	µg/L	0.5	1	0.5	05/06/06	05/11/06

mg/L: Milligrams/Liter (ppm)

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µg/L: Micrograms/Liter (ppb)

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BSK ANALYTICAL LABORATORIES

John Kobza
 Sierra Environmental Monitoring
 1135 Financial Blvd
 Reno, NV 89502

BSK Submission #: 2006050087

BSK Sample ID #: 715974

Project ID:

Project Desc:

Submission Comments:

Sample Type: Liquid

Sample Description: S200604-1594 Donovan Well

Sample Comments:

Certificate of Analysis
NELAP Certificate #04227CA
ELAP Certificate #1180



Report Issue Date: 05/17/2006

Date Sampled: 04/28/2006

Time Sampled: 1200

Date Received: 05/02/2006

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date/Time	Analysis Date/Time
Molinate (Ordram)	EPA 525.2	ND	µg/L	2.0	1	2.0	05/06/06	05/11/06
Propachlor	EPA 525.2	ND	µg/L	0.5	1	0.5	05/06/06	05/11/06
Simazine (Princep)	EPA 525.2	ND	µg/L	1.0	1	1.0	05/06/06	05/11/06
Thiobencarb (Bolero)	EPA 525.2	ND	µg/L	1.0	1	1.0	05/06/06	05/11/06
3-Hydroxycarbofuran	EPA 531.1	ND	µg/L	3.0	1	3.0	05/04/06	05/04/06
Aldicarb	EPA 531.1	ND	µg/L	3.0	1	3.0	05/04/06	05/04/06
Aldicarb Sulfone	EPA 531.1	ND	µg/L	2.0	1	2.0	05/04/06	05/04/06
Aldicarb Sulfoxide	EPA 531.1	ND	µg/L	3.0	1	3.0	05/04/06	05/04/06
Carbaryl	EPA 531.1	ND	µg/L	5.0	1	5.0	05/04/06	05/04/06
Carbofuran	EPA 531.1	ND	µg/L	5.0	1	5.0	05/04/06	05/04/06
Methomyl	EPA 531.1	ND	µg/L	2.0	1	2.0	05/04/06	05/04/06
Oxamyl	EPA 531.1	ND	µg/L	20.0	1	20	05/04/06	05/04/06
Glyphosate	EPA 547	ND	µg/L	25	1	25	05/08/06	05/09/06
Endothall	EPA 548.1	ND	µg/L	45	1	45	05/03/06	05/09/06
Diquat	EPA 549.2	ND	µg/L	4	1	4	05/04/06	05/10/06

Surrogate

Bromoform	EPA 504.1	98	% Rec	-	1	N/A	05/05/06	05/05/06
Tetrachloro-m-xylene	EPA 505	76	% Rec	-	1	N/A	05/04/06	05/07/06
DCPAA	EPA 515.3	98	% Rec	-	1	N/A	05/10/06	05/10/06
1,2-Dichlorobenzene-d4	EPA 524.2	100	% Rec	-	1	N/A	05/03/06	05/03/06
4-Bromofluorobenzene	EPA 524.2	100	% Rec	-	1	N/A	05/03/06	05/03/06
1,3-Dimethyl-2-nitrobenzene	EPA 525.2	99	% Rec	-	1	N/A	05/06/06	05/11/06
BDMC	EPA 531.1	100	% Rec	-	1	N/A	05/04/06	05/04/06
AMPA	EPA 547	110	% Rec	-	1	N/A	05/08/06	05/09/06

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting

: PQL x Dilution

ND: None Detected at DLR

pCi/L: Picocurie per Liter

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Case Narrative for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006

Project ID :

Project Desc :

NELAP Certificate #04227CA
 ELAP Certificate #1180

BSK StarLims Run #: 111906

Analyst Initials: MICHAELK

Analyte	QC Type	Matrix	Spike ID	Result	Units	% Rec or RPD	Method Number: 5242			UCL	LCL	Date
							Spike RPD	Spk Conc	Matrix Conc			
1,1-Dichloroethene	LCS	N/A	4.76	µg/L	95	5	ND	130	70	05/03/06	Acceptable	
Benzene	LCS	N/A	4.75	µg/L	95	5	ND	130	70	05/03/06	Acceptable	
Bromoform	LCS	N/A	4.38	µg/L	87	5	ND	130	70	05/03/06	Acceptable	
Chlorobenzene	LCS	N/A	4.65	µg/L	93	5	ND	130	70	05/03/06	Acceptable	
Methyl-t-Butyl Ether	LCS	N/A	9.62	µg/L	96	10	ND	130	70	05/03/06	Acceptable	
Tetrachloroethene (PCE)	LCS	N/A	4.59	µg/L	91	5	ND	130	70	05/03/06	Acceptable	
Toluene	LCS	N/A	4.49	µg/L	89	5	ND	130	70	05/03/06	Acceptable	
Trichloroethene (TCE)	LCS	N/A	4.66	µg/L	93	5	ND	130	70	05/03/06	Acceptable	
1,1-Dichloroethane	LCSD	N/A	4.71	µg/L	94	N/A	5	ND	130	70	05/03/06	Acceptable
Benzene	LCSD	N/A	4.68	µg/L	93	1.4	5	ND	130	70	05/03/06	Acceptable
Bromoform	LCSD	N/A	4.53	µg/L	90	3.3	5	ND	130	70	05/03/06	Acceptable
Chlorobenzene	LCSD	N/A	4.82	µg/L	96	3.6	5	ND	130	70	05/03/06	Acceptable
Methyl-t-Butyl Ether	LCSD	N/A	8.85	µg/L	88	8.3	10	ND	130	70	05/03/06	Acceptable
Tetrachloroethene (PCE)	LCSD	N/A	4.85	µg/L	97	5.6	5	ND	130	70	05/03/06	Acceptable
Toluene	LCSD	N/A	4.65	µg/L	93	3.6	5	ND	130	70	05/03/06	Acceptable
Trichloroethene (TCE)	LCSD	N/A	4.82	µg/L	96	3.3	5	ND	130	70	05/03/06	Acceptable
1,1,1,2-Tetrachloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1,1-Trichloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1,2,2-Tetrachloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1,2-Trichloro-1,2,2-Trifluoroethane	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06	Acceptable
1,1,2-Trichloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1-Dichloro-2-propanone	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06	Acceptable
1,1-Dichloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1-Dichloroethene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,1-Dichloropropene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2,3-Trichlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2,3-Trichloropropane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2,4-Trichlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2,4-Trimethylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2-Dibromo-3-chloropropane (DBCP)	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2-Dichlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2-Dichloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,2-Dichloropropane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,3,5-Trimethylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,3-Dichlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable
1,3-Dichloropropane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06	Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

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LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

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MS: Matrix Spike

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RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

Project Desc :

BSK StarLims Run #: 111906

Analyst Initials: MICHAELK

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Method Number: 5242			UCL	LCL	Date
						Spike RPD	Spk Conc	Matrix Conc			
1,4-Dichlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 ,Acceptable
1-Chlorobutane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
2,2-Dichloropropane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
2-Butanone	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06 Acceptable
2-Chlorotoluene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
2-Hexanone	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06 Acceptable
3-Chloropropene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
4-Chlorotoluene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
4-Methyl-2-pentanone	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06 Acceptable
Acetone	RBLK	N/A	4.55	µg/L	< 10				10	N/A	05/03/06 Acceptable
Benzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Bromobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Bromochloromethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Bromodichloromethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Bromoform	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Bromomethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Carbon Disulfide	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Carbontetrachloride	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Chlorobenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Chloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Chloroform	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Chloromethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
cis-1,2-Dichloroethene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
cis-1,3-Dichloropropene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Dibromochloromethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Dibromomethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Dichlorodifluoromethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Diethyl ether	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Ethyl t-Butyl Ether	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/03/06 Acceptable
Ethylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Ethylmethacrylate	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/03/06 Acceptable
Hexachlorobutadiene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Hexachloroethane	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Iodomethane	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/03/06 Acceptable
Isopropylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
m,p-Xylenes	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Methyl-t-Butyl Ether	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/03/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 111906

Analyst Initials: MICHAELK

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Methylacrylate	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/03/06 Acceptable
Methylene Chloride	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Methylmethacrylate	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/03/06 Acceptable
n-Butylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
n-Propylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Naphthalene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Nitrobenzene	RBLK	N/A	0	µg/L	< 10				10	N/A	05/03/06 Acceptable
o-Xylene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
p-Isopropyltoluene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
sec-Butylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Styrene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
t-Amyl Methyl Ether	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/03/06 Acceptable
tert-Butylbenzene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Tetrachloroethene (PCE)	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Toluene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Total 1,3-Dichloropropene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Total Trihalomethanes	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Total Xylene Isomers	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
trans-1,2-Dichloroethene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
trans-1,3-Dichloropropene	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Trichloroethene (TCE)	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable
Trichlorofluoromethane	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/03/06 Acceptable
Vinyl Chloride	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/03/06 Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result			UCL	LCL	Date	
1,2-Dichlorobenzene-d4	LCS	N/A	101	% Rec		110	130	70 05/03/06 Acceptable
4-Bromofluorobenzene	LCS	N/A	101	% Rec		100	130	70 05/03/06 Acceptable
1,2-Dichlorobenzene-d4	LCSD	N/A	106	% Rec		110	130	70 05/03/06 Acceptable
4-Bromofluorobenzene	LCSD	N/A	103	% Rec		100	130	70 05/03/06 Acceptable
1,2-Dichlorobenzene-d4	RBLK	N/A	109	% Rec		N/A	N/A	05/03/06 Acceptable
4-Bromofluorobenzene	RBLK	N/A	104	% Rec		N/A	N/A	05/03/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

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Parent Sample: Sample used as background matrix for MS/MSD

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MS: Matrix Spike

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Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

Project Desc :

NELAP Certificate #04227CA
 ELAP Certificate #1180

StarLims Run 111906 includes the following BSK Sample ID#:

715974 716416 716478 716528 716674 716675 716676

BSK StarLims Run #: 112049

Analyst Initials: JENNIFERD

Analyte Results

Analyte	QC Type	Matrix	Spike ID	Result	Units	Method Number: 531.1			UCL	LCL	Date
						% Rec or RPD	Spike RPD	Spk Conc			
3-Hydroxycarbofuran	LCS	N/A		32.03	µg/L	106		30	ND	130	70 05/04/06 Acceptable
Aldicarb	LCS	N/A		31.12	µg/L	103		30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfone	LCS	N/A		28.36	µg/L	94		30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfoxide	LCS	N/A		30.91	µg/L	103		30	ND	130	70 05/04/06 Acceptable
Carbaryl	LCS	N/A		32.15	µg/L	107		30	ND	130	70 05/04/06 Acceptable
Carbofuran	LCS	N/A		32.64	µg/L	108		30	ND	130	70 05/04/06 Acceptable
Methomyl	LCS	N/A		30.98	µg/L	103		30	ND	130	70 05/04/06 Acceptable
Oxamyl	LCS	N/A		35.21	µg/L	117		30	ND	130	70 05/04/06 Acceptable
3-Hydroxycarbofuran	LCSD	N/A		29.85	µg/L	99	200	30	ND	130	70 05/04/06 Acceptable
Aldicarb	LCSD	N/A		31.57	µg/L	105	1.4	30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfone	LCSD	N/A		30.52	µg/L	101	7.3	30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfoxide	LCSD	N/A		31.75	µg/L	105	2.7	30	ND	130	70 05/04/06 Acceptable
Carbaryl	LCSD	N/A		32.17	µg/L	107	0.062	30	ND	130	70 05/04/06 Acceptable
Carbofuran	LCSD	N/A		32.63	µg/L	108	0.03	30	ND	130	70 05/04/06 Acceptable
Methomyl	LCSD	N/A		31.28	µg/L	104	0.97	30	ND	130	70 05/04/06 Acceptable
Oxamyl	LCSD	N/A		34.23	µg/L	114	2.9	30	ND	130	70 05/04/06 Acceptable
3-Hydroxycarbofuran	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Aldicarb	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Aldicarb Sulfone	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Aldicarb Sulfoxide	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Carbaryl	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Carbofuran	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Methomyl	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
Oxamyl	LDUP	717122	0		µg/L	N/A			ND	30	N/A 05/04/06 Acceptable
3-Hydroxycarbofuran	MS	714745	33.30		µg/L	110		30	ND	130	70 05/04/06 Acceptable
Aldicarb	MS	714745	32.87		µg/L	109		30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfone	MS	714745	31.31		µg/L	104		30	ND	130	70 05/04/06 Acceptable
Aldicarb Sulfoxide	MS	714745	32.85		µg/L	109		30	ND	130	70 05/04/06 Acceptable
Carbaryl	MS	714745	32.29		µg/L	107		30	ND	130	70 05/04/06 Acceptable
Carbofuran	MS	714745	33.80		µg/L	112		30	ND	130	70 05/04/06 Acceptable
Methomyl	MS	714745	32.79		µg/L	109		30	ND	130	70 05/04/06 Acceptable
Oxamyl	MS	714745	35.68		µg/L	118		30	ND	130	70 05/04/06 Acceptable
3-Hydroxycarbofuran	MSD	714745	30.70		µg/L	102	8.1	30	ND	130	70 05/04/06 Acceptable

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BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112049

Analyst Initials: JENNIFERD

Analyte Results	Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Method Number: 531.1			UCL	LCL	Date
							Spike RPD	Spk Conc	Matrix Conc			
Aldicarb	MSD	714745	30.58	µg/L	101	7.2	30	ND	130	70	05/04/06	Acceptable
Aldicarb Sulfone	MSD	714745	30.61	µg/L	102	2.2	30	ND	130	70	05/04/06	Acceptable
Aldicarb Sulfoxide	MSD	714745	31.04	µg/L	103	5.7	30	ND	130	70	05/04/06	Acceptable
Carbaryl	MSD	714745	31.34	µg/L	104	3	30	ND	130	70	05/04/06	Acceptable
Carbofuran	MSD	714745	32.36	µg/L	107	4.3	30	ND	130	70	05/04/06	Acceptable
Methomyl	MSD	714745	31.21	µg/L	104	5	30	ND	130	70	05/04/06	Acceptable
Oxamyl	MSD	714745	32.76	µg/L	109	8.6	30	ND	130	70	05/04/06	Acceptable
3-Hydroxycarbofuran	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/04/06	Acceptable
Aldicarb	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/04/06	Acceptable
Aldicarb Sulfone	RBLK	N/A	0	µg/L	< 2.0				2.0	N/A	05/04/06	Acceptable
Aldicarb Sulfoxide	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/04/06	Acceptable
Carbaryl	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/04/06	Acceptable
Carbofuran	RBLK	N/A	0	µg/L	< 5.0				5.0	N/A	05/04/06	Acceptable
Methomyl	RBLK	N/A	0	µg/L	< 2.0				2.0	N/A	05/04/06	Acceptable
Oxamyl	RBLK	N/A	0	µg/L	< 20				20	N/A	05/04/06	Acceptable

Surrogate Results

Analyte	QC Type	Sur. Result			UCL	LCL	Date
BDMC	LCS	N/A	106	% Rec	97	130	70 05/04/06 Acceptable
BDMC	LCSD	N/A	104	% Rec	97	130	70 05/04/06 Acceptable
BDMC	LDUP	717122	110	% Rec	100	130	70 05/04/06 Acceptable
BDMC	MS	714745	109	% Rec	110	130	70 05/04/06 Acceptable
BDMC	MSD	714745	104	% Rec	110	130	70 05/04/06 Acceptable
BDMC	RBLK	N/A	97	% Rec	N/A	N/A	05/04/06 Acceptable

StarLims Run 112049 includes the following BSK Sample ID#:

714745 715969 715974 716502 716669 716692 716904 716905 716906 717122 717697 717698 717699 717700 717701 717860

BSK StarLims Run #: 112087

Analyst Initials: PAULK

Analyte Results	Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Method Number: 504.1			UCL	LCL	Date
							Spike RPD	Spk Conc	Matrix Conc			
Dibromochloropropane	LCS	N/A	0.280	µg/L	112		.25	ND	130	70	05/05/06	Acceptable
Ethylenedibromide	LCS	N/A	0.263	µg/L	105		.25	ND	130	70	05/05/06	Acceptable
Dibromochloropropane	LCSD	N/A	0.261	µg/L	104	7	.25	ND	130	70	05/05/06	Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112087

Analyst Initials: PAULK

Analyte	QC Type	Matrix Spike ID	Result	Units	Method Number: 504.1				UCL	LCL	Date
					% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc			
Ethylenedibromide	LCSD	N/A	0.248	µg/L	99	5.9	.25	ND	130	70	05/05/06 Acceptable
Dibromochloropropane	LDUP	709730	2.06	µg/L	9.7			1.9	30	N/A	05/05/06 Acceptable
Ethylenedibromide	LDUP	709730	1.38	µg/L	10			1.2	30	N/A	05/05/06 Acceptable
Dibromochloropropane	MS	715333	0.280	µg/L	112		.25	ND	130	70	05/05/06 Acceptable
Ethylenedibromide	MS	715333	0.262	µg/L	104		.25	ND	130	70	05/05/06 Acceptable
Dibromochloropropane	MSD	715333	0.263	µg/L	105	6.2	.25	ND	130	70	05/05/06 Acceptable
Ethylenedibromide	MSD	715333	0.252	µg/L	100	3.9	.25	ND	130	70	05/05/06 Acceptable
Dibromochloropropane	RBLK	N/A	0	µg/L	< 0.01				0.01	N/A	05/05/06 Acceptable
Ethylenedibromide	RBLK	N/A	0	µg/L	< 0.02				0.02	N/A	05/05/06 Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result				UCL	LCL	Date
Bromoform	LCS	N/A	113	% Rec		100	130	70 05/05/06 Acceptable
Bromoform	LCSD	N/A	98	% Rec		100	130	70 05/05/06 Acceptable
Bromoform	LDUP	709730	101	% Rec		100	130	70 05/05/06 Acceptable
Bromoform	MS	715333	104	% Rec		110	130	70 05/05/06 Acceptable
Bromoform	MSD	715333	102	% Rec		110	130	70 05/05/06 Acceptable
Bromoform	RBLK	N/A	103	% Rec		N/A	N/A	05/05/06 Acceptable

StarLims Run 112087 includes the following BSK Sample ID#:

709730 714987 714991 714992 714993 714994 715318 715333 715867 715974 717976 717977 717978 717979 717980 717981

BSK StarLims Run #: 112105

Analyst Initials: RACHELM

Analyte	QC Type	Matrix Spike ID	Result	Units	Method Number: 505				UCL	LCL	Date
					% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc			
Aldrin	LCS	N/A	0.151	µg/L	86		0.175	ND	130	70	05/05/06 Acceptable
Chlorothalonil (Daconil,Bravo)	LCS	N/A	1.789	µg/L	102		1.75	ND	130	70	05/05/06 Acceptable
Dieldrin	LCS	N/A	0.170	µg/L	97		0.175	ND	130	70	05/05/06 Acceptable
Endrin	LCS	N/A	0.169	µg/L	96		0.175	ND	130	70	05/05/06 Acceptable
Heptachlor	LCS	N/A	0.161	µg/L	92		0.175	ND	130	70	05/05/06 Acceptable
Heptachlor epoxide	LCS	N/A	0.169	µg/L	96		0.175	ND	130	70	05/05/06 Acceptable
Hexachlorobenzene	LCS	N/A	0.678	µg/L	96		0.7	ND	130	70	05/05/06 Acceptable
Hexachlorocyclopentadiene	LCS	N/A	0.305	µg/L	58		0.52	ND	130	70	05/05/06 OOS-Low
Lindane	LCS	N/A	0.169	µg/L	96		0.175	ND	130	70	05/05/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112105

Analyst Initials: RACHELM

Analyte	QC Type	Matrix	Spike ID	Result	Units	% Rec or RPD	Method Number: 505			UCL	LCL	Date	
							Spike RPD	Spk Conc	Matrix Conc				
Methoxychlor	LCS	N/A	0.168	µg/L	96		0.175	ND	130	70	05/05/06	Acceptable	
Aldrin	LCSD	N/A	0.176	µg/L	100		15	0.175	ND	130	70	05/05/06	Acceptable
Chlorothalonil (Daconil,Bravo)	LCSD	N/A	1.898	µg/L	108		6	1.75	ND	130	70	05/05/06	Acceptable
Dieldrin	LCSD	N/A	0.173	µg/L	98		1.8	0.175	ND	130	70	05/05/06	Acceptable
Endrin	LCSD	N/A	0.171	µg/L	97		1.1	0.175	ND	130	70	05/05/06	Acceptable
Heptachlor	LCSD	N/A	0.177	µg/L	101		9.4	0.175	ND	130	70	05/05/06	Acceptable
Heptachlor epoxide	LCSD	N/A	0.176	µg/L	100		4	0.175	ND	130	70	05/05/06	Acceptable
Hexachlorobenzene	LCSD	N/A	0.742	µg/L	106		9	0.7	ND	130	70	05/05/06	Acceptable
Hexachlorocyclopentadiene	LCSD	N/A	0.367	µg/L	70		18	0.52	ND	130	70	05/05/06	Acceptable
Lindane	LCSD	N/A	0.174	µg/L	99		3	0.175	ND	130	70	05/05/06	Acceptable
Methoxychlor	LCSD	N/A	0.174	µg/L	99		3.6	0.175	ND	130	70	05/05/06	Acceptable
Aldrin	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Chlordane	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Chlorothalonil (Daconil,Bravo)	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Dieldrin	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Endrin	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Heptachlor	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Heptachlor epoxide	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Hexachlorobenzene	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Hexachlorocyclopentadiene	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Lindane	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Methoxychlor	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
PCBs: Arochlor Screen	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Toxaphene	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Trifluralin	LDUP	715974	0	µg/L	N/A				ND	30	N/A	05/07/06	Acceptable
Aldrin	MS	715969	0.241	µg/L	137		0.175	ND	130	70	05/07/06	OOS-High	
Chlorothalonil (Daconil,Bravo)	MS	715969	1.784	µg/L	101		1.75	ND	130	70	05/07/06	Acceptable	
Dieldrin	MS	715969	0.176	µg/L	100		0.175	ND	130	70	05/07/06	Acceptable	
Endrin	MS	715969	0.167	µg/L	95		0.175	ND	130	70	05/07/06	Acceptable	
Heptachlor	MS	715969	0.207	µg/L	118		0.175	ND	130	70	05/07/06	Acceptable	
Heptachlor epoxide	MS	715969	0.176	µg/L	100		0.175	ND	130	70	05/07/06	Acceptable	
Hexachlorobenzene	MS	715969	0.855	µg/L	122		0.7	ND	130	70	05/07/06	Acceptable	
Hexachlorocyclopentadiene	MS	715969	0.489	µg/L	94		0.52	ND	130	70	05/07/06	Acceptable	
Lindane	MS	715969	0.175	µg/L	100		0.175	ND	130	70	05/07/06	Acceptable	
Methoxychlor	MS	715969	0.166	µg/L	94		0.175	ND	130	70	05/07/06	Acceptable	
Aldrin	RBLK	N/A	0	µg/L	<0.075				0.075	N/A	05/05/06	Acceptable	
Chlordane	RBLK	N/A	0	µg/L	<0.1				0.1	N/A	05/05/06	Acceptable	

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087

NELAP Certificate #04227CA

Client : Sierra Environmental Monitorin
Date Submitted : 05/02/2006

ELAP Certificate #1180

Project ID :

Project Desc :

BSK StarLims Run #: 112105

Analyst Initials: RACHELM

Method Number: 505

Analyte Results	Matrix	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Analyte	QC Type	Spike ID	Result	Units				
Chlorothalonil (Daconil,Bravo)	RBLK	N/A	0	µg/L	< 5.0		5.0	N/A 05/05/06 Acceptable
Dieldrin	RBLK	N/A	0	µg/L	< 0.02		0.02	N/A 05/05/06 Acceptable
Endrin	RBLK	N/A	0	µg/L	< 0.1		0.1	N/A 05/05/06 Acceptable
Heptachlor	RBLK	N/A	0	µg/L	< 0.01		0.01	N/A 05/05/06 Acceptable
Heptachlor epoxide	RBLK	N/A	0	µg/L	< 0.01		0.01	N/A 05/05/06 Acceptable
Hexachlorobenzene	RBLK	N/A	0	µg/L	< 0.50		0.50	N/A 05/05/06 Acceptable
Hexachlorocyclopentadiene	RBLK	N/A	0	µg/L	< 1.0		1.0	N/A 05/05/06 Acceptable
Lindane	RBLK	N/A	0	µg/L	< 0.2		0.2	N/A 05/05/06 Acceptable
Methoxychlor	RBLK	N/A	0	µg/L	< 10		10	N/A 05/05/06 Acceptable
PCBs: Arochlor Screen	RBLK	N/A	0	µg/L	< 0.5		0.5	N/A 05/05/06 Acceptable
Toxaphene	RBLK	N/A	0	µg/L	< 1.0		1.0	N/A 05/05/06 Acceptable
Trifluralin	RBLK	N/A	0	µg/L	< 1.0		1.0	N/A 05/05/06 Acceptable

Run	Test	Analyte
112105	505	Aldrin
112105	505	HCCPD
112105	505	HCCPD

Comment

MS recovery was affected by the matrix.

LCS recovery was out of the acceptance range, however the LCSD recovery was within the acceptance range, therefore the data was reported.

One of 3 CCVs was biased low for this analyte, but was within 5% of the LCL.

Surrogate Results

Analyte	QC Type	Surr. Result			UCL	LCL	Date
Tetrachloro-m-xylene	LCS	N/A	94.7	% Rec	83	130	70 05/05/06 Acceptable
Tetrachloro-m-xylene	LCSD	N/A	88.2	% Rec	83	130	70 05/05/06 Acceptable
Tetrachloro-m-xylene	LDUP	715974	98.9	% Rec	76	130	70 05/07/06 Acceptable
Tetrachloro-m-xylene	MS	715969	167.8	% Rec	100	130	70 05/07/06 OOS-High
Tetrachloro-m-xylene	RBLK	N/A	82.9	% Rec	N/A	N/A	05/05/06 Acceptable

StarLims Run 112105 includes the following BSK Sample ID#:

715969 715974 716502 716692 716904 716905 716906 718113 718114 718121 718122 718123

BSK StarLims Run #: 112243

Method Number: 548

Analyst Initials: DANB

Analyte Results	Matrix	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Analyte	QC Type	Spike ID	Result	Units				
Endothall	LCS	N/A	69.5	µg/L	69	100	ND	141 34 05/09/06 Acceptable
Endothall	LCSD	N/A	83.6	µg/L	83	18	100	ND
Endothall	LDUP	716479	0	µg/L	N/A		ND	50 N/A 05/09/06 Acceptable
Endothall	MS	714746	69.7	µg/L	69	100	ND	141 34 05/09/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Page 8 of 14

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112243

Analyst Initials: DANB

Analyte Results	Matrix	QC Type	Spike ID	Result	Units	% Rec or RPD	Method Number:	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Endothall	MSD	714746	70	µg/L		70	548	0.42	100	ND	141	34	05/09/06 Acceptable
Endothall	RBLK	N/A	0	µg/L		<45				45	N/A	05/09/06	Acceptable

StarLims Run 112243 includes the following BSK Sample ID#:

714746 714924 715333 715451 715969 715974 716443 716469 716475 716479 719083 719084 719085 719086 719087 719088

BSK StarLims Run #: 112265

Analyst Initials: DANB

Analyte Results	Matrix	QC Type	Spike ID	Result	Units	% Rec or RPD	Method Number:	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Diquat	LCS	N/A	34.1	µg/L		85	549.2		40	ND	150	50	05/10/06 Acceptable
Diquat	LCSD	N/A	35.2	µg/L		88		3.1	40	ND	150	50	05/10/06 Acceptable
Diquat	LDUP	715974	0	µg/L		N/A				ND	50	N/A	05/10/06 Acceptable
Diquat	MS	715969	28.2	µg/L		70		40	ND	150	50	05/10/06 Acceptable	
Diquat	MSD	715969	28.7	µg/L		71		1.8	40	ND	150	50	05/10/06 Acceptable
Diquat	RBLK	N/A	0	µg/L		<4				4	N/A	05/10/06	Acceptable

StarLims Run 112265 includes the following BSK Sample ID#:

715969 715974 716502 716692 716713 716714 719277 719278 719279 719280 719281 719282

BSK StarLims Run #: 112317

Analyst Initials: RACHELM

Analyte Results	Matrix	QC Type	Spike ID	Result	Units	% Rec or RPD	Method Number:	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
2,4,5-T	LCS	N/A	3.01	µg/L		100	5153		3	ND	130	70	05/10/06 Acceptable
2,4,5-TP (Silvex)	LCS	N/A	3.21	µg/L		110		3	ND	130	70	05/10/06 Acceptable	
2,4-D	LCS	N/A	30.47	µg/L		100		30	ND	130	70	05/10/06 Acceptable	
Bentazon (Basagran)	LCS	N/A	6.06	µg/L		100		6	ND	130	70	05/10/06 Acceptable	
Dalapon	LCS	N/A	29.3	µg/L		97		30	ND	130	70	05/10/06 Acceptable	
Dicamba (Banvel)	LCS	N/A	4.25	µg/L		97		4.38	ND	130	70	05/10/06 Acceptable	
Dinoseb (DNBP)	LCS	N/A	5.2	µg/L		86		6	ND	130	70	05/10/06 Acceptable	
Pentachlorophenol (PCP)	LCS	N/A	0.62	µg/L		100		0.6	ND	130	70	05/10/06 Acceptable	
Picloram	LCS	N/A	2.81	µg/L		93		3	ND	130	70	05/10/06 Acceptable	

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112317

Analyst Initials: RACHELM

Analyte Results	Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Method Number: 5153			UCL	LCL	Date
							Spike RPD	Spk Conc	Matrix Conc			
2,4,5-T		LCSD	N/A	3.24	µg/L	110	7.3	3	ND	130	70	05/10/06 Acceptable
2,4,5-TP (Silvex)		LCSD	N/A	3.4	µg/L	110	5.8	3	ND	130	70	05/10/06 Acceptable
2,4-D		LCSD	N/A	33.7	µg/L	110	10	30	ND	130	70	05/10/06 Acceptable
Bentazon (Basagran)		LCSD	N/A	6.44	µg/L	110	6	6	ND	130	70	05/10/06 Acceptable
Dalapon		LCSD	N/A	33.64	µg/L	110	13	30	ND	130	70	05/10/06 Acceptable
Dicamba (Banvel)		LCSD	N/A	4.6	µg/L	110	8	4.38	ND	130	70	05/10/06 Acceptable
Dinoseb (DNBP)		LCSD	N/A	5.54	µg/L	92	6.3	6	ND	130	70	05/10/06 Acceptable
Pentachlorophenol (PCP)		LCSD	N/A	0.65	µg/L	110	4.8	0.6	ND	130	70	05/10/06 Acceptable
Picloram		LCSD	N/A	3.31	µg/L	110	16	3	ND	130	70	05/10/06 Acceptable
2,4,5-T		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
2,4,5-TP (Silvex)		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
2,4-D		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Bentazon (Basagran)		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Dalapon		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Dicamba (Banvel)		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Dinoseb (DNBP)		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Pentachlorophenol (PCP)		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
Picloram		LDUP	715974	0	µg/L	N/A			ND	30	N/A	05/10/06 Acceptable
2,4,5-T		MS	715969	2.96	µg/L	98		3	ND	130	70	05/10/06 Acceptable
2,4,5-TP (Silvex)		MS	715969	3.24	µg/L	110		3	ND	130	70	05/10/06 Acceptable
2,4-D		MS	715969	30.60	µg/L	100		30	ND	130	70	05/10/06 Acceptable
Bentazon (Basagran)		MS	715969	6.14	µg/L	100		6	ND	130	70	05/10/06 Acceptable
Dalapon		MS	715969	28.83	µg/L	96		30	ND	130	70	05/10/06 Acceptable
Dicamba (Banvel)		MS	715969	4.34	µg/L	99		4.38	ND	130	70	05/10/06 Acceptable
Dinoseb (DNBP)		MS	715969	5.13	µg/L	85		6	ND	130	70	05/10/06 Acceptable
Pentachlorophenol (PCP)		MS	715969	0.62	µg/L	100		0.6	ND	130	70	05/10/06 Acceptable
Picloram		MS	715969	2.82	µg/L	94		3	ND	130	70	05/10/06 Acceptable
2,4,5-T		MSD	715969	2.98	µg/L	99	0.68	3	ND	130	70	05/10/06 Acceptable
2,4,5-TP (Silvex)		MSD	715969	3.26	µg/L	110	0.62	3	ND	130	70	05/10/06 Acceptable
2,4-D		MSD	715969	30.69	µg/L	100	0.29	30	ND	130	70	05/10/06 Acceptable
Bentazon (Basagran)		MSD	715969	6.11	µg/L	100	0.48	6	ND	130	70	05/10/06 Acceptable
Dalapon		MSD	715969	30.27	µg/L	100	4.9	30	ND	130	70	05/10/06 Acceptable
Dicamba (Banvel)		MSD	715969	4.39	µg/L	100	1.1	4.38	ND	130	70	05/10/06 Acceptable
Dinoseb (DNBP)		MSD	715969	5.01	µg/L	83	2.3	6	ND	130	70	05/10/06 Acceptable
Pentachlorophenol (PCP)		MSD	715969	0.63	µg/L	110	1.7	0.6	ND	130	70	05/10/06 Acceptable
Picloram		MSD	715969	2.97	µg/L	99	5.1	3	ND	130	70	05/10/06 Acceptable
2,4,5-T		RBLK	N/A	0	µg/L	< 1.0				1.0	N/A	05/10/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Page 10 of 14

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112317

Analyst Initials: RACHELM

Analyte Results	Matrix	QC Type	Spike ID	Result	Units	% Rec or RPD	Method Number:	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
2,4,5-TP (Silvex)	RBLK	N/A	0	µg/L	< 1.0						1.0	N/A	05/10/06 Acceptable
2,4-D	RBLK	N/A	0	µg/L	< 10						10	N/A	05/10/06 Acceptable
Bentazon (Basagran)	RBLK	N/A	0	µg/L	< 2.0						2.0	N/A	05/10/06 Acceptable
Dalapon	RBLK	N/A	0	µg/L	< 10						10	N/A	05/10/06 Acceptable
Dicamba (Banvel)	RBLK	N/A	0	µg/L	< 1.5						1.5	N/A	05/10/06 Acceptable
Dinoseb (DNBP)	RBLK	N/A	0	µg/L	< 2.0						2.0	N/A	05/10/06 Acceptable
Pentachlorophenol (PCP)	RBLK	N/A	0	µg/L	< 0.2						0.2	N/A	05/10/06 Acceptable
Picloram	RBLK	N/A	0	µg/L	< 1.0						1.0	N/A	05/10/06 Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result			UCL	LCL	Date
DCPAA	LCS	N/A	103	% Rec	100	130	70 05/10/06 Acceptable
DCPAA	LCSD	N/A	104	% Rec	100	130	70 05/10/06 Acceptable
DCPAA	LDUP	715974	99	% Rec	98	130	70 05/10/06 Acceptable
DCPAA	MS	715969	105	% Rec	97	130	70 05/10/06 Acceptable
DCPAA	MSD	715969	96	% Rec	97	130	70 05/10/06 Acceptable
DCPAA	RBLK	N/A	102	% Rec	N/A	N/A	05/10/06 Acceptable

StarLims Run 112317 includes the following BSK Sample ID#:

715969 715974 716502 716669 716713 716904 716905 716906 717122 717123 719714 719715 719726 719727 719728 719729

BSK StarLims Run #: 112325

Analyst Initials: DANB

Analyte Results	Matrix	QC Type	Spike ID	Result	Units	% Rec or RPD	Method Number:	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Alachlor (Alanex)	LCS	N/A	2.51	µg/L	100			2.5	ND	130	70	05/11/06	Acceptable
Benzo(a)pyrene	LCS	N/A	1.75	µg/L	120			1.5	ND	130	70	05/11/06	Acceptable
bis(2-ethylhexyl) adipate	LCS	N/A	2.32	µg/L	92			2.5	ND	130	70	05/11/06	Acceptable
bis(2-ethylhexyl) phthalate	LCS	N/A	2.61	µg/L	100			2.5	ND	130	70	05/11/06	Acceptable
Butachlor	LCS	N/A	1.71	µg/L	110			1.5	ND	130	70	05/11/06	Acceptable
Diazinon	LCS	N/A	1.36	µg/L	54			2.5	ND	110	10	05/11/06	Acceptable
Metolachlor	LCS	N/A	2.55	µg/L	100			2.5	ND	130	70	05/11/06	Acceptable
Molinate (Ordram)	LCS	N/A	2.3	µg/L	92			2.5	ND	130	70	05/11/06	Acceptable
Propachlor	LCS	N/A	2.48	µg/L	99			2.5	ND	130	70	05/11/06	Acceptable
Thiobencarb (Bolero)	LCS	N/A	2.51	µg/L	100			2.5	ND	130	70	05/11/06	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112325

Analyst Initials: DANB

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	Method Number: 525				UCL	LCL	Date
					% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc			
Alachlor (Alanex)	LCSD	N/A	2.56	µg/L	100	2	2.5	ND	130	70	05/11/06 Acceptable
Benzo(a)pyrene	LCSD	N/A	1.82	µg/L	120	4	1.5	ND	130	70	05/11/06 Acceptable
bis(2-ethylhexyl) adipate	LCSD	N/A	2.59	µg/L	100	10	2.5	ND	130	70	05/11/06 Acceptable
bis(2-ethylhexyl) phthalate	LCSD	N/A	2.72	µg/L	110	4.1	2.5	ND	130	70	05/11/06 Acceptable
Butachlor	LCSD	N/A	1.77	µg/L	120	3.4	1.5	ND	130	70	05/11/06 Acceptable
Diazinon	LCSD	N/A	1.31	µg/L	87	3.8	1.5	ND	110	10	05/11/06 Acceptable
Metolachlor	LCSD	N/A	2.68	µg/L	110	5	2.5	ND	130	70	05/11/06 Acceptable
Molinate (Ordrum)	LCSD	N/A	2.46	µg/L	98	6.8	2.5	ND	130	70	05/11/06 Acceptable
Propachlor	LCSD	N/A	2.63	µg/L	110	5.9	2.5	ND	130	70	05/11/06 Acceptable
Thiobencarb (Bolero)	LCSD	N/A	2.44	µg/L	97	2.9	2.5	ND	130	70	05/11/06 Acceptable
Alachlor (Alanex)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Atrazine (AAtrax)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Benzo(a)pyrene	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
bis(2-ethylhexyl) adipate	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
bis(2-ethylhexyl) phthalate	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Bromacil (Hyvar)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Butachlor	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Diazinon	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Dimethoate (Cygon)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Metolachlor	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Metribuzin	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Molinate (Ordrum)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Prometryn (Caparol)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Propachlor	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Simazine (Princep)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Thiobencarb (Bolero)	LDUP	715351	0	µg/L	N/A			ND	30	N/A	05/11/06 Acceptable
Alachlor (Alanex)	MS	715333	2.41	µg/L	96		2.5	ND	130	70	05/11/06 Acceptable
Benzo(a)pyrene	MS	715333	2.11	µg/L	84		2.5	ND	130	70	05/11/06 Acceptable
bis(2-ethylhexyl) adipate	MS	715333	2.6	µg/L	100		2.5	ND	130	70	05/11/06 Acceptable
bis(2-ethylhexyl) phthalate	MS	715333	2.93	µg/L	120		2.5	ND	130	70	05/11/06 Acceptable
Butachlor	MS	715333	1.53	µg/L	100		1.5	ND	130	70	05/11/06 Acceptable
Diazinon	MS	715333	1.96	µg/L	78		2.5	ND	110	10	05/11/06 Acceptable
Metolachlor	MS	715333	2.61	µg/L	100		2.5	ND	130	70	05/11/06 Acceptable
Molinate (Ordrum)	MS	715333	2.13	µg/L	85		2.5	ND	130	70	05/11/06 Acceptable
Prometryn (Caparol)	MS	715333	2.03	µg/L	81		2.5	ND	130	70	05/11/06 Acceptable
Propachlor	MS	715333	2.38	µg/L	95		2.5	ND	130	70	05/11/06 Acceptable
Thiobencarb (Bolero)	MS	715333	2.27	µg/L	90		2.5	ND	130	70	05/11/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112325

Analyst Initials: DANB

Method Number: 525

Analyte Results	Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
	Alachlor (Alanex)	RBLK	N/A	0	µg/L	< 1.0				1.0	N/A	05/11/06 Acceptable
	Atrazine (AAtrex)	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/11/06 Acceptable
	Benzo(a)pyrene	RBLK	N/A	0	µg/L	< 0.1				0.1	N/A	05/11/06 Acceptable
	bis(2-ethylhexyl) adipate	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/11/06 Acceptable
	bis(2-ethylhexyl) phthalate	RBLK	N/A	0	µg/L	< 3.0				3.0	N/A	05/11/06 Acceptable
	Bromacil (Hyvar)	RBLK	N/A	0	µg/L	< 10				10	N/A	05/11/06 Acceptable
	Butachlor	RBLK	N/A	0	µg/L	< 0.38				0.38	N/A	05/11/06 Acceptable
	Diazinon	RBLK	N/A	0	µg/L	< 0.25				0.25	N/A	05/11/06 Acceptable
	Dimethoate (Cygon)	RBLK	N/A	0	µg/L	< 10				10	N/A	05/11/06 Acceptable
	Metolachlor	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/11/06 Acceptable
	Metribuzin	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/11/06 Acceptable
	Molinate (Ordram)	RBLK	N/A	0	µg/L	< 2.0				2.0	N/A	05/11/06 Acceptable
	Prometryn (Caparol)	RBLK	N/A	0	µg/L	< 2.0				2.0	N/A	05/11/06 Acceptable
	Propachlor	RBLK	N/A	0	µg/L	< 0.5				0.5	N/A	05/11/06 Acceptable
	Simazine (Princep)	RBLK	N/A	0	µg/L	< 1.0				1.0	N/A	05/11/06 Acceptable
	Thiobencarb (Bolero)	RBLK	N/A	0	µg/L	< 1.0				1.0	N/A	05/11/06 Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result			UCL	LCL	Date
1,3-Dimethyl-2-nitrobenzene	LCS	N/A	101.2	%Rec	100	130	70 05/11/06 Acceptable
1,3-Dimethyl-2-nitrobenzene	LCSD	N/A	97	%Rec	100	130	70 05/11/06 Acceptable
1,3-Dimethyl-2-nitrobenzene	LDUP	715351	93.3	%Rec	100	130	70 05/11/06 Acceptable
1,3-Dimethyl-2-nitrobenzene	MS	715333	91.1	%Rec	110	130	70 05/11/06 Acceptable
1,3-Dimethyl-2-nitrobenzene	RBLK	N/A	99.8	%Rec	N/A	N/A	05/11/06 Acceptable

StarLims Run 112325 includes the following BSK Sample ID#:

714746 715333 715351 715390 715969 715974 716502 716669 716692 716713 719795 719796 719797 719798 719799

BSK StarLims Run #: 112380

Analyst Initials: PAULK

Method Number: 547

Analyte Results	Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
	Glyphosate	LCS	N/A	227.5	µg/L	110		200	ND	130	70	05/09/06 Acceptable
	Glyphosate	LCSD	N/A	214.1	µg/L	110	6	200	ND	130	70	05/09/06 Acceptable
	Glyphosate	LDUP	717122	0	µg/L	N/A			ND	30	N/A	05/09/06 Acceptable

%Rec: Percent Recovered

RPD: Relative Percent Difference

UCL: Upper Control Limit

LCL: Lower Control Limit

LCS: Laboratory Control Sample

LCSD: Laboratory Control Sample Duplicate

LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD

OOS-High: QC Result Above UCL

OOS-Low: QC Result Below LCL

MS: Matrix Spike

MSD: Matrix Spike Duplicate

RBLK: Reagent (Method) Blank

Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

BSK ANALYTICAL LABORATORIES



QC Summary Report

05/17/2006

BSK Submission : 2006050087
 Client : Sierra Environmental Monitorin
 Date Submitted : 05/02/2006
 Project ID :

NELAP Certificate #04227CA
 ELAP Certificate #1180

Project Desc :

BSK StarLims Run #: 112380

Analyst Initials: PAULK

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
Glyphosate	MS	715391	206.6	µg/L	100		200	ND	130	70	05/09/06 Acceptable
Glyphosate	MSD	715391	205.2	µg/L	100	0.68	200	ND	130	70	05/09/06 Acceptable
Glyphosate	RBLK	N/A	0	µg/L	< 25				25	N/A	05/09/06 Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result				UCL	LCL	Date
AMPA	LCS	N/A	114	% Rec		120	130	70 05/09/06 Acceptable
AMPA	LCSD	N/A	115	% Rec		120	130	70 05/09/06 Acceptable
AMPA	LDUP	717122	107	% Rec		120	130	70 05/09/06 Acceptable
AMPA	MS	715391	115	% Rec		110	130	70 05/09/06 Acceptable
AMPA	MSD	715391	115	% Rec		110	130	70 05/09/06 Acceptable
AMPA	RBLK	N/A	120	% Rec		N/A	N/A	05/09/06 Acceptable

StarLims Run 112380 includes the following BSK Sample ID#:

715391 715969 715974 716502 716669 716692 716904 716905 716906 717122 720251 720252 720253 720254 720255 720256

Approved by:

Cynthia Hamilton

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate
 LDUP: Laboratory Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank
 Surrogate results for QC standards are not evaluated for acceptability (due to definition of a surrogate standard)

Sample IntegrityPg. 1 of 2

CLIE

2006050087

05/02/2006

SIERRA ENV

TAT: Standard

52013

Pr

Date Received

5/2/06

Section 1- Sampled Same Day

Sample Transport: Walk In SJVC BSK-Courier Transported In: Ice Chest Box Hand

Has chilling process begun? Y N Samples Received: Chilled to Touch / Ambient / On Ice

Section 2- Sampled Previously

Sample Transport: CAO UPS SJVC Walk-In BSK-Courier GSO Fed Exp. Other:

No. Coolers/Ice Chests:

Temperature(s): 4

Was Temperature In Range Y N

Received On Ice: Wet Blue

Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other:

Were ice chest custody seals present? Y N

Intact: Y N

Section 3- COC Info.Completed
Yes NoInfo From
ContainerCompleted
Yes NoInfo From
Container

Was COC Received	/	/	Analysis Requested	/	/
Date Sampled	/	/	Any hold times less than 72hr	/	/
Time Sampled	/	/	Client Name	/	/
Sample ID	/	/	Address	/	/
Special Storage/Handling Ins.	/	/	Telephone #	/	/

Section 4- Bottles / Analysis	Yes	No	N/A	Comment
Did all bottles arrive unbroken and intact?:	/	/	/	
Were bottle custody seals present?	/	/	/	
Were bottle custody seals intact?	/	/	/	
Did all bottle labels agree with COC?:	/	/	/	
Were correct containers used for the tests requested?:	/	/	/	
Were correct preservations used for the tests requested?:	/	/	/	
Was a sufficient amount of sample sent for tests indicated?:	/	/	/	
Were bubbles present in VOA Vials?: (Volatile Methods Only)	/	/	/	
Were Ascorbic Acid Bottles received with the VOAs	/	/	/	

Section 5- Comments / Discrepancies

Sample(s) Split/Preserve: Yes No Container: Preservation: Init.:

Was Client Service Rep. notified of discrepancies: Yes No N/A CSR: Notified By:

Explanations / Comments

Report Comment Entered: *JM*

Sample Integrity Pg ____ of ____

SB-EL-0002-01

BSK Bottles

Yes

No

2006050087

05/02/2006

TAT: Standard

SIERRA ENV

52013

8oz (A) 16oz (B) 32oz (C) Amber Glass (AG)

Container(s) Received	
Bact Na ₂ S ₂ O ₃	
None (p) White Cap	
None (p) Blue Cap	
HNO ₃ (p) Red Cap	
H ₂ SO ₄ (p) Yellow Cap	
NaOH (p) Green Cap	
Other:	
Dissolved Oxygen 300ml (g)	
250ml (AG) None	
250ml (AG) H ₂ SO ₄ COD Yellow Label	
250ml (AG) Na ₂ S ₂ O ₃ 515,547 Blue Label	2
250ml (AG) Na ₂ S ₂ O ₃ + MCAA 531.1 Orange Label	
250ml (AG) NH ₄ Cl 552 Purple Label	
250ml (AG) EDA DBPs Brown Label	
250ml (AG) Other	
500ml (AG) None	
500ml (AG) H ₂ SO ₄ TPH-Diesel Yellow Label	
500ml (AG) Other	
1 Liter (AG) None	
1 Liter (AG) H ₂ SO ₄ O&G Yellow Label	
1 Liter (AG) Na ₂ SO ₃ 525 N-Green Label	2
1 Liter (AG) Na ₂ S ₂ O ₃ 548 Blue Label	1
1 Liter (P) Na ₂ S ₂ O ₃ + H ₂ SO ₄ 549	1
1 Liter (AG) NaOH+ZnAc Sulfide	
1 Liter (AG) Other	
40ml VOA Vial Clear - HCL	3
40ml VOA Vial Amber - Na ₂ S ₂ O ₃	
40ml VOA Vial Clear - None	
40ml VOA Vial Clear - Na ₂ S ₂ O ₃ 504, 505	10
40ml VOA Vial Clear - H ₃ PO ₄	
Other:	
Asbestos 1-Liter Plastic/Foil	
Radiological GA / GB (½ Gal Plastic)	
Radiological 226 / 228 (32 oz plastic N-BSK)	
Radon 200ml Clear (g)	
Low Level Hg/Metals Double Baggie	
THM-FP 4-40ml VOA None	
250 Clear Glass Jar	
500 Clear Glass Jar	
1 Liter Clear Glass Jar	
Plastic Bag	
Soil Tube Brass / Steel / Plastic	
Tedlar Bags	5/2

Sierra Environmental Monitoring, Inc.

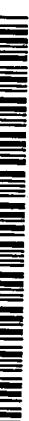
1135 Financial Blvd. - Reno - Nevada - 89502

Phone: (775) 857-2400 Fax: (775) 857-2404 Email: sem@sem-analytical.com

BSK Labo

52013

SIERRA ENV TAT: Standard PO #06-253



PO #06-253

dy Report

Date Sampled	Time Sampled	Sample Type	Sample Identification	Analyses Requested	Remarks	Turn Around Time
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Carbamates (ML531) (EPA 531.1)	NVS Sample	Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Diquat (EPA 549.2)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	EDB-DBC (EPA 504.1)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Endothall (EPA 548.1)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Glyphosate (EPA 547)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Herbicides (NFS3) (EPA 515.1)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Pesticides and PCBs (FESTSDW) (EPA 508)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	SVOCs (MLS25) (EPA 525)		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	VOCs (VOASDW) (EPA 524.2)		Normal

Signature	Print Name	Company	Date	Time
Relinquished By:				
Received By:				
Relinquished By:				
Received By:	D. O'Neal	BSK	5/2/06	0730

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for

SEMI001 Sierra Environmental Monitoring, Inc.

Client SDG: 162045 GEL Work Order: 162045

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- D Sample has been diluted and reanalyzed after initially exceeding inst. calibration range
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- P The response between the confirmation and the primary columns is >40% Different.
- R Sample results are rejected.
- U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- Z Paint Filter qualifier: Particulates passed through the filter. No free liquids were observed.
- d The 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.
- ND The analyte concentration is not detected above the reporting limit.

The above sample is reported on an "as received" basis.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

** Indicates the analyte is a surrogate compound.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Joanne Harley.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Sierra Env. Monitoring, Inc
Address : 1135 Financial Boulevard
Reno, Nevada 89502

Report Date: June 1, 2006

Contact: Mr. John Kobza

Project: Drinking Water Radiochem Analysis

Client Sample ID: Donovan Well S200604-1594
Sample ID: 162045001
Matrix: Drinking Water (Potable)
Collect Date: 28-APR-06 12:00
Receive Date: 03-MAY-06
Collector: Client

Project: SEMI00204
Client ID: SEMI001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
<i>Gross Alpha/Beta in Drinking Water EPA 900.0</i>												
Alpha		7.01	+/-2.31	3.15	3.00	pCi/L		CXO1	05/30/06	0836	532439	
Beta		7.76	+/-1.92	3.19	4.00	pCi/L					1	
<i>Radium-228 in Drinking Water EPA 904.0</i>												
Radium-228	U	-0.0558	+/-0.179	0.450	1.00	pCi/L		PXP1	05/25/06	1244	532212	
Rad Radium-226												
<i>Radium-226 in Drinking Water EPA 903.1 (De-emanati</i>												
Radium-226	U	0.443	+/-0.461	0.726	1.00	pCi/L		DFA1	05/08/06	1335	526666	
3											3	

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EPA 900.0	
2	EPA 904.0	
3	EPA 903.1	

Surrogate/Tracer recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Radium-228	Radium-228 in Drinking Water EPA 904.0			72	(25%-125%)

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: June 1, 2006

Page 1 of 2

Sierra Env. Monitoring, Inc
1135 Financial Boulevard
Reno, Nevada

Contact: Mr. John Kobza

Workorder: 162045

Paramname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
Rad Gas Flow												
Batch	532212											
Radium-228	QC1201098099	162046001	DUP									
				U	-0.0807 +/-0.176	U	-0.0282 +/-0.195	pCi/L	0	(0%-20%)	PXP1	
Radium-228	QC1201098101	LCS					8.19 +/-0.811	pCi/L	96	(75%-125%)	05/25/06	13:03
Radium-228	QC1201098098	MB					U	-0.133 +/-0.148	pCi/L			05/25/06 12:43
Radium-228	QC1201098100	162046001	MS				30.1	U	-0.0807 +/-0.176	27.4 +/-2.80	pCi/L	91 (75%-125%)
Batch	532439											
Alpha	QC1201098707	162046002	DUP					U	0.0451 +/-0.898	U	-0.473 +/-0.768	pCi/L
Beta								U	-1.1 +/-1.60	U	-1.3 +/-1.59	pCi/L
Alpha	QC1201098709	LCS					71.9			86.3 +/-8.19	120	(75%-125%)
Beta							210			241 +/-10.9	115	(75%-125%)
Alpha	QC1201098706	MB						U		-0.373 +/-0.344	pCi/L	
Beta								U		1.05 +/-0.864	pCi/L	
Alpha	QC1201098708	162046002	MS				71.9	U	0.0451 +/-0.898	47.7 +/-7.30	pCi/L	66* (75%-125%)
Beta							210	U	-1.1 +/-1.60	239 +/-11.3	pCi/L	114 (75%-125%)
Alpha	QC1201098710	162046002	MSD				71.9	U	0.0451 +/-0.898	53.7 +/-8.19	pCi/L	12 75
Beta							210	U	-1.1 +/-1.60	249 +/-11.6	pCi/L	4 119
Rad Ra-226												
Batch	526666											
Radium-226	QC1201085087	160333001	DUP					U	0.753 +/-0.612	U	0.171 +/-0.432	pCi/L
	QC1201085089	LCS										

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 162045

Page 2 of 2

Parname	NOM	Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Ra-226 Batch	526666										
Radium-226		41.9		49.2 +/-3.27	pCi/L		118	(75%-125%)			
QC1201085086 MB Radium-226				U -0.133 +/-0.452	pCi/L				DFA1	05/08/06	14:35
QC1201085088 160333001 MS Radium-226	41.9	U	0.753 +/-0.612	50.7 +/-5.19	pCi/L		121	(75%-125%)		05/08/06	16:10

Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL, MDA, or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- d The 2:1 depletion requirement was not met for this sample
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

[^]The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Sierra Environmental Monitoring, Inc.

1135 Financial Blvd. - Reno - Nevada - 89502

Phone: (775) 857-2400 Fax: (775) 857-2404 Email: sem@sem-analytical.com

General Engineering Sub-Contract Chain of Custody Report

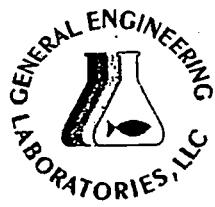
PO #06-252

Compliance:

Date Sampled	Time Sampled	Sample Type	Sample Identification	Analyses Requested	Remarks	Turn Around Time
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Gross Alpha and Beta Radiological		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Radium 226 - Radiological		Normal
4/28/2006	12:00:00 PM	Drinking Water	S200604-1594 - Donovan Well	Radium 228 - Radiological		Normal

①

Relinquished By	Print Name	Company	Date	Time
<i>Marian Gifford</i>	<i>Marian Gifford</i>	<i>SEM</i>	4-28-06	1530
<i>Marian Gifford</i>	<i>Marian Gifford</i>	<i>SEM</i>	5-3-06	930
Received By:				



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client:	Sierra
Date Received:	5/3/06
Received By:	<i>[Signature]</i>

SDG/ARCO/C Work Order: 162045%
 PM(A) Review (ensure non-conforming items are resolved prior to signing): *[Signature]*

Sample Receipt Criteria			Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)							
1	Shipping containers received intact and sealed?		/			Circle Applicable: seals broken damaged container leaking container other (describe)							
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		/			Circle Coolant # ice bags blue ice dry ice none other describe <i>Linking material 18°C</i>							
3	Chain of custody documents included with shipment?												
4	Sample containers intact and sealed?		/			Circle Applicable: seals broken damaged container leaking container other (describe)							
5	Samples requiring chemical preservation at proper pH?		/			Sample ID's, containers affected and observed pH:							
6	VOA vials free of headspace (defined as < 6mm bubble)?			/		Sample ID's and containers affected:							
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				/								
8	Samples received within holding time?		/			Id's and tests affected:							
9	Sample ID's on COC match ID's on bottles?		/			Sample ID's and containers affected:							
10	Date & time on COC match date & time on bottles?		/			Sample ID's affected:							
11	Number of containers received match number indicated on COC?			/		Sample ID's affected: <i>Received 4 samples each per ID#</i>							
12	COC form is properly signed in relinquished/received sections?			/									
14	Air Bill , Tracking #'s, & Additional Comments												

Suspected Hazard Information			Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____					
A Radiological Classification?			/			*If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.					
B PCB Regulated?			/			Maximum Counts Observed*: <i>CPM 40</i>					
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.			/			Comments: _____					
PM (or PMA) review of Hazard classification.						Hazard Class Shipped: _____ UN#: <i>513161</i>					
						Initials <i>[Signature]</i> Date: <i>5/3/06</i>					

SIERRA ENVIRONMENTAL MONITORING, INC.

1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502



CHAIN OF CUSTODY RECORD

PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

Purchase Order

Address

Client Name

City

State

Zip

Report Attention:

Phone/Fax #

Sampled by:

ED EVANS - WCDWIR

Signature

Analyses Requested

Turnaround Time

Compliance Monitoring

Standard:

Other:

Yes:

No:

Date Sampled

Time Sampled

Sample Type*

Sample Identification

Preservative*

See Key Below

Number of Containers

TOC II

TOCH

Secondaries

NV gen Min

Gross K + B, As

Radium 226 + 228

Uox

Sox

24 Hr

48 Hr

Remarks

pH

<2

>12

SS

SS

Lab Use Only

Sub-Sample

Signature

Print Name

Company

Date

Time

Relinquished By:

ED EVANS

WCDWIR

4/28/06

1325

Received By:

Relinquished By:

Received By:

Relinquished By:

Received By Laboratory:

Shelly Smithson

SEM

4/28/06

1325

Custody Seal Intact

Yes No None

Comments: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.

Terms: Net thirty days on approved credit.

Sample Temperature

Degrees C

16°C

*KEY:

Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=RCRA, 7=Other

Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

Form Revised

0201



WASHOE COUNTY

DEPARTMENT OF WATER RESOURCES
UTILITY SERVICES DIVISION

Department of
Water Resources

PUMPING TEST DATA

WELL DONOVAN WELL - STEP TEST
PUMPING / OBSERVATION WELL
PUMPING / RECOVERY DATA
PAGE 1 OF 3

TYPE OF PUMPING TEST STEP TEST

HOW Q MEASURED MICROMETER FLOWMETER

M.P. for WL's 3/4" PVC STILLWELL elev. _____

HOW WL'S MEASURED ELECTRIC SOUNDER

DEPTH OF PUMP/AIRLINE _____ wrt _____

PUMPED WELL NO. DONOVAN WELL

% SUBMERGENCE: initial _____ pumping _____

RADIUS of PUMPED WELL _____

PUMP ON: date 4/26/06 time 0920

DISTANCE from PUMPED WELL SCREENS @ 137' OR 26.55' (S)

PUMP OFF: date 4/26/06 time 1600

CLOCK TIME	TIME at t'=0			WATER LEVEL DATA					WATER PRODUCT	COMMENTS	
	CLOCK TIME	ELAPSED TIME	t	t'/t	READING	CONVERSIONS or CORRECTIONS	WATER LEVEL	(S) or S'	SAND ml		
0921			1		119.60	STEP I		9.15		80	110.53' BACKUP SOUNDER
0922			2		122.10			11.65		75	015866 (x100) METER
0923			3		123.07			12.62			
0924			4		123.76			13.31		80	
0925	5	-	5		124.13			13.68			
0926			6		124.48			14.03		QT	
0927			7		124.77			14.32			
0928			8		125.05			14.60			
0929			9		125.26			14.81			
0930	10	-	10		125.42			14.97	<1ml	80	15875 METER = 90 gpm
0932	12	-	12		125.66			15.21			e
0934	14	-	14		125.84			15.39			
0936	16	-	16		125.97			15.52			
0938	18	-	18		125.97			15.52		Q↓	85
0940	20	-	20		125.96			15.51	0.08 (20ml)	15884500	95 gpm
0945	25	-	25		126.10			15.65		5.8	15890 0 (6min) 90 gpm
0950	30	-	30		126.10			15.65			Q↓
0955	35	-	35		126.12			15.67		85	1589900 (0956)
1000	40	-	40		126.18			15.73		80	1590400 (1001) 100 gpm
1005	45	-	45		126.26			15.81		85	
1010	50	-	50		126.30			15.85		80	Q↓
1020	60	-	60		126.23			15.78		80-85	Q↓ e 1016
1030	70	-	70		126.24			15.79			
1040	80	-	80		126.25			15.80		85	Q↓ (82 psi)
1050	90	-	90		126.18			15.73		85	
1100	40	1	100		126.19			15.74			
1101	101	1	1		131.60	STEP Z		21.15		180	(66 psi)
1102	102	2			132.85			22.40			
1103	103	3			133.47			23.02		180	
1104	104	4			133.86			23.41			
1105	105	5			133.94			23.49		Q↓	
	106	6			133.93			23.48			
	107	7			134.02			23.57			
	108	8			134.05			23.60			
	109	9			134.10			23.65	<01		
1110	50	1	10		134.16			23.71			
1112	112	12			134.16			23.71		Q↓	
1114	114	14			134.20			23.75			
1116	116	16			134.26			23.81			1598900 @ 1115 1 200
1118	118	18			134.27			23.82		7.5	180 1599700 @ 1117 34mw
1120	120	20			134.31			23.86			
1125	5	2	125		134.34			23.89			1601650 @ 1129 2 200
1130	130	30			134.40			23.95			1602250 @ 1132 1
1135	135	35			134.49			24.04			



WASHOE COUNTY

DEPARTMENT OF WATER RESOURCES UTILITY SERVICES DIVISION

Department of
Water Resources

PUMPING TEST DATA

WELL DONOVAN WELL

PUMPING / OBSERVATION WELL

(PUMPING / RECOVERY DATA)

PAGE 2 OF 3

TYPE OF PUMPING TEST STEP TEST

HOW Q MEASURED McCROMETER FLOWMETER

HOW WL's MEASURED WATERLINE 300' ELECTRIC SOUNDER

PUMPED WELL NO. DONOVAN WELL

RADIUS of PUMPED WELL

DISTANCE from PUMPED WELL SCREEN @ S=2L5'

M.P. for WL's TOP 3/4" PVC SNL WELL elev.

DEPTH OF PUMP/AIRLINE wrt

% SUBMERGENCE: initial pumping

PUMP ON: date 4/26/06 time 0920

PUMP OFF: date 4/26/06 time 1600

TIME $t =$ at $t=0$			WATER LEVEL DATA STATIC WATER LEVEL 110.45.					WATER PRODUCT		COMMENTS	
CLOCK TIME	ELAPSED TIME mins hrs	t	t'	READING	CONVERSIONS or CORRECTIONS	WATER LEVEL	S or S'	SAND ML	Q/S	Q	(NOTE ANY CHANGES IN OBSERVERS)
1140	20 2	140	40	134.56		24.11				180	
1145	25 2	145	45	134.61		24.16				185	Q↓
1150	30 2	150	50	134.54		24.09					1605550 11497
1200	40 2	160	60	134.57		24.12			7.5	180	1606150 1152 300 GPM
1210	50 2	170	70	134.61		24.16					
1220	— 3	180	80	134.65		24.20				180+	1611800 @ 12217
1230	10 3	190	90	134.69		24.24					1613750 @ 1231.1 145 gpm
1240	20 3	200	100	134.73		24.28					
1241		201	1	140.30	STEP 3	29.85				280	40 PSI
1242		202	2	142.80		32.35					
1243		203	3	144.31		33.86					
1244		204	4	145.12		34.67					
1245	25 3	205	5	145.73		35.28					
1246		206	6	146.16		35.71					
1247		207	7	146.51		36.06					
1248		208	8	146.84		36.39					
1249		209	9	147.07		36.62					
1250	30 3	210	10	147.25		36.80				TRACE	
1252	32 3	212	12	147.50		37.05		IN 10 MIN	7.6		1619350 @ 1253
1254	34 3	214	14	147.69		37.24					1619950 @ 1255 300 GPM
1256	36 3	216	16	147.83		37.38					
1258	38 3	218	18	147.95		37.50				280	
1300	40 3	220	20	148.05		37.60					
1305	45 3	225	25	148.22		37.77			7.4		1623500 @ 1307
1310	50 3	230	30	148.36		37.91				280	1626500 @ 1317 300 GPM
1315	55 3	235	35	148.45		38.00					
1320	— 4	240	40	148.54		38.09					
1325	5 4	245	45	148.61		38.16					
1330	10 4	250	50	148.66		38.21				280	
1340	20 4	260	60	148.79		38.34					
1350	30 4	270	70	148.87		38.42				280	
1400	40 4	280	80	148.95		38.50				280	
1410	50 4	290	90	149.01		38.56					1643200 @ 1413
1420	— 5	300	100	149.07		38.62					1645000 @ 1419
1421		301	1	155.15	STEP 4	44.70				370	<5 PSI
1423		303	3	161.30		50.85					
		304	4	162.40		51.95					
		305	5	163.00		52.55					
		306	6	163.15		52.70				360	
		307	7	163.09		52.64				360	8 PSI
		308	8	163.21		52.76					
1430	10 5	310	10	163.50		53.05				TRACE	
1432	12 5	312	12	163.72		53.27		IN 10 MIN			



WASHOE COUNTY

**DEPARTMENT OF WATER RESOURCES
UTILITY SERVICES DIVISION**

WELL Donovan Well

PUMPING / OBSERVATION WELL

(PUMPING) RECOVERY DATA

PAGE 3 OF 3

PUMPING TEST DATA

TYPE OF PUMPING TEST STEP TEST

HOW Q MEASURED MICROMETER FLOWMETER

HOW WL's MEASURED WATERLINE 300 ELECTRIC SOUNDER

PUMPED WELL NO. 1

RADIUS of PLUMPED WELL

DISTANCE from PLUMBED WELL

M.P. for WL's TD? 3/4" PVC still well elev.

DEPTH OF PLIMP/AIRLINE

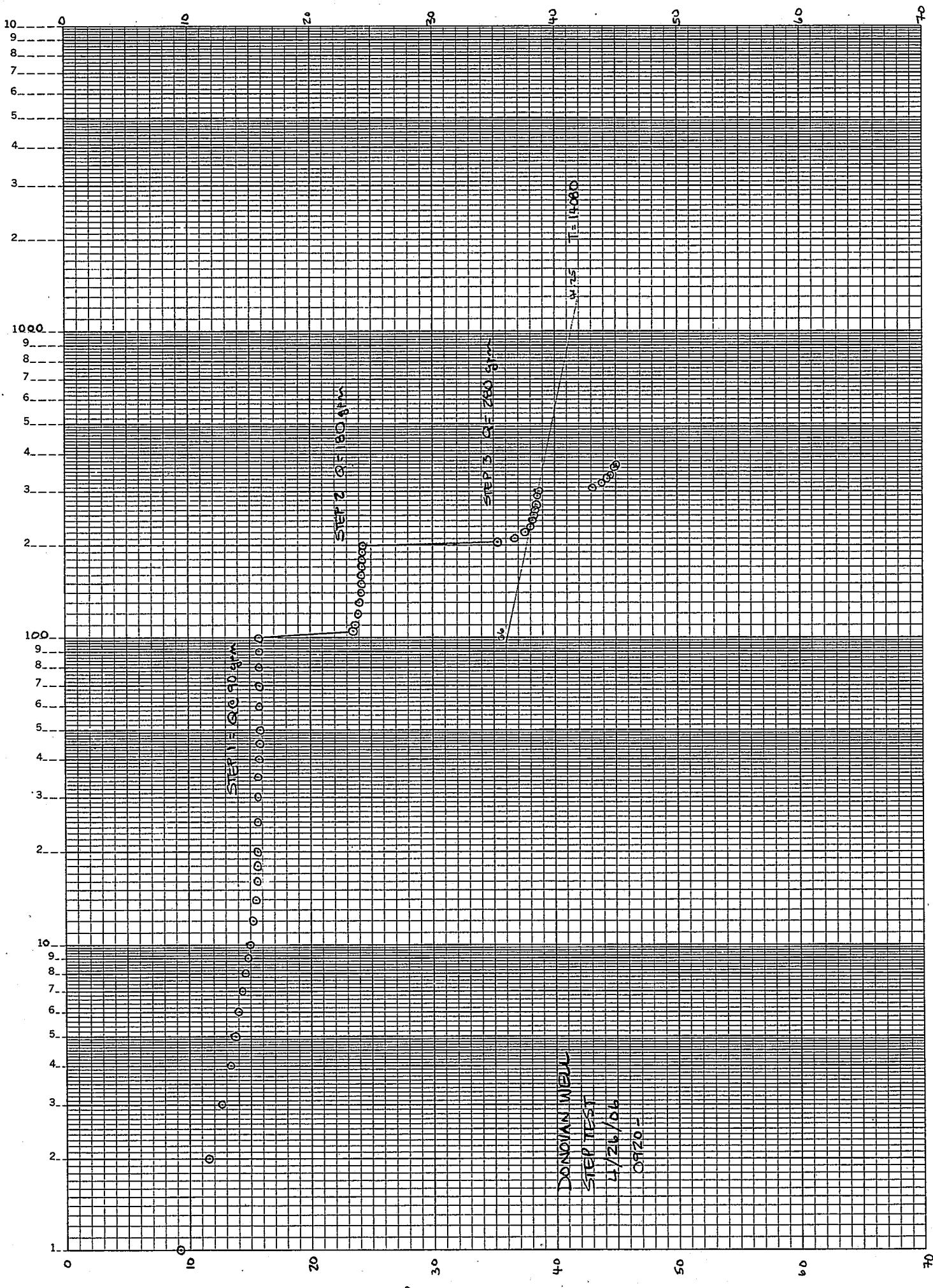
% SUBMERGENCE: initial

REMARKS: date 4/24/06 time 0920

PLUMR ON: date 4/20/86 time 5:12P

K-E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 6010





WASHOE COUNTY

DEPARTMENT OF WATER RESOURCES UTILITY SERVICES DIVISION

Department of
Water Resources

PUMPING TEST DATA

WELL DONOVAN WELL

~~PUMPING~~ OBSERVATION WELL

~~PUMPING~~ RECOVERY DATA

PAGE 1 OF 2

TYPE OF PUMPING TEST CONSTANT Q

HOW Q MEASURED FLOWMETER

M.P. for WL's TOP PVC STIL WELL elev. _____

HOW WL's MEASURED MINITROLL 100

DEPTH OF PUMP/AIRLINE 168 wrt _____

PUMPED WELL NO. DONOVAN WELL

% SUBMERGENCE: initial _____ pumping _____

RADIUS of PUMPED WELL _____

PUMP ON: date 4/27/06 time 0930

DISTANCE from PUMPED WELL _____

PUMP OFF: date 4/29/06 time 0930

CLOCK TIME	TIME		WATER LEVEL DATA				WATER PRODUCT	(NOTE ANY CHANGES IN OBSERVERS)
	mins	hrs	t	t'	READING	CONVERSIONS or CORRECTIONS	WATER LEVEL	
			1		131.20		20.53	
			2		136.86		26.19	
			3		139.55		28.88	
			4		141.29		30.62	
			5		142.52		31.85	
			6		143.58		32.91	
			7		144.46		33.79	
			8		145.14		34.47	
			9		145.65		34.98	
			10		146.08		35.41	
			12		146.79		36.12	
			14		147.30		36.63	
			16		147.79		37.12	
			18		148.18		37.51	
			20		148.47		37.80	End < 0.05 ml
			25		149.00		38.33	
1600	30	-	30		149.38		38.71	
			35		149.73		39.06	
1010			40		149.98		39.31	
1020			50		150.42		39.75	
1030		-1	60		150.73		40.06	
1040			70		150.95		40.28	
1050			80		151.13		40.46	
1100	30	-1	90		151.29		40.62	
1110			100		151.40		40.73	
1130	-2		120		151.61		40.94	Fuel tank 3 gal/hr
1150			140		151.73		41.06	
1210	40	-2	160		151.86		41.19	
1240	10	-2	190		152.01		41.34	
1250	20	-3	200		152.06		41.39	
1320	50	-3	230		152.17		41.50	
1340	10	-4	250		152.22		41.55	
1430	-5		300		152.34		41.67	
1520	50	-5	350		152.41		41.74	1796.500 @ 1520 = 315
1610	40	6	400		152.48		41.81	SC = 7.19
1700	30	7	450		152.54		41.87	
1750	20	8	500		152.57		41.90	1847.800 @ 1750 = 315
1840	10	9	550		152.60		41.93	
1930	-10		600		152.64		41.97	
2020	50	10	650		152.70		42.03	
2130	-12		720		152.80		42.13	
2205			755		152.87		42.20	DAN
2315			825		152.91		42.24	
0005			875		152.96		42.29	
0105			935		153.01		42.34	



WASHOE COUNTY

**DEPARTMENT OF WATER RESOURCES
UTILITY SERVICES DIVISION**

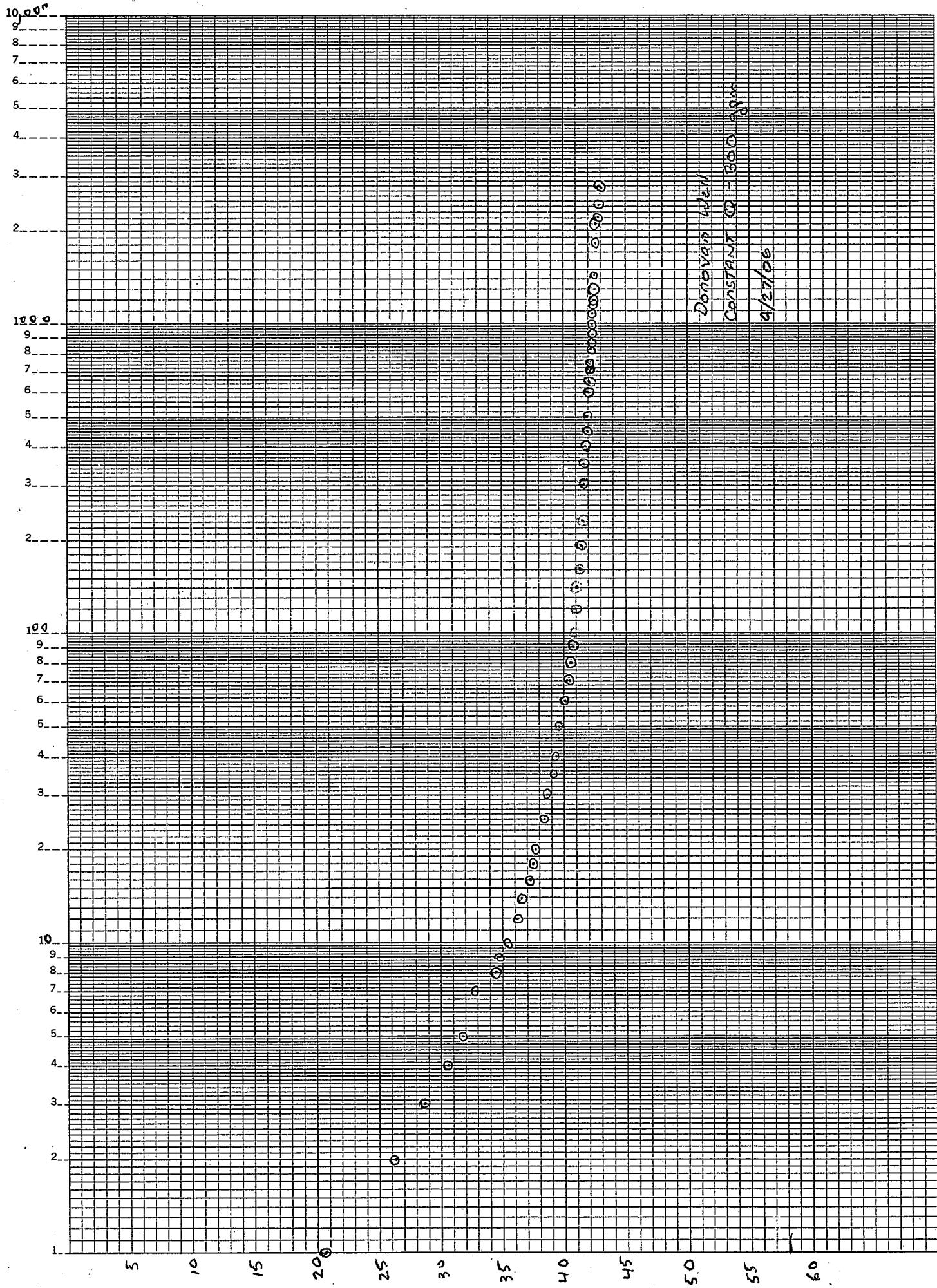
WELL Danovan
PUMPING) OBSERVATION WELL
PUMPING / RECOVERY DATA
PAGE 2 OF 2

PUMPING TEST DATA

TYPE OF PUMPING TEST Constant Q
 HOW Q MEASURED FLOWMETER
 HOW WL's MEASURED MINITROLL 100
 PUMPED WELL NO. DONOVAN WELL
 RADIUS of PUMPED WELL _____
 DISTANCE from PUMPED WELL _____
 M.P. for WL's TOP PVC STYL WELL elev. _____
 DEPTH of PUMP/AIRLINE 168 wrt _____
 % SUBMERGENCE: initial _____ pumping _____
 PUMP ON: date 4/27/06 time 0930
 PUMP OFF: date 4-29-06 time 0930

K.E. SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

46 6010



time (minutes)