

# ENVIRON

July 22, 2011

UIC Compliance Coordinator  
Nevada Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, NV 89701-5249

Subject: UIC Permit # UNEV 94218 Permit – First and Second Quarter 2011

On January 12, 2009, Tronox Incorporated and 14 of its affiliates (collectively, "Tronox") filed petitions with the United States Bankruptcy Court, Southern District of New York under Chapter 11 of the Bankruptcy Code. Pursuant to its joint plan of reorganization, Tronox entered into an environmental settlement agreement and related agreements by which Tronox transferred all of its right, title, and interest with respect to remedial obligations at Henderson, Nevada to the Nevada Environmental Response Trust (the "Trust"). This transfer occurred on February 14, 2011 and NDEP has in turn transferred Permit #UNEV 94218 to the Trust.

The Trust now maintains Underground Injection Control (UIC) Permit #UNEV 94218 for groundwater remediation at the Henderson, Nevada, facility. Note that injection of the stabilized Lake Mead water was suspended as of September 16, 2010 due to soil removal surrounding the recharge trench. This soil excavation is described in the NDEP-Bureau of Corrective Actions approved RZ-D Excavation Plan for the Tronox Henderson facility and is in response to soil remedial efforts which are on-going at the site. Resumption of the injection of stabilized Lake Mead water is under evaluation, but is currently not occurring. Pursuant to the permit's Section I.A.4 Attachment A samples of the Lake Mead water, which is permitted for injection into the recharge trenches, were collected and analyzed for the subject period. Please see Attachment 1 for the Lake Mead water analytical summary, the Permit's checklist and the Lake Mead water sample information form. Supporting electronic analytical reports are provided on the CD in Attachment 3.

Section I.A.4 Attachment A requires quarterly groundwater monitoring and collection of groundwater elevations. This information is provided in Attachment 2, together with a monitor well sample information form. The supporting electronic analytical reports are provided on the CD in Attachment 3. Section I.A.4 Attachment A requires monitoring of the injection and the extraction monthly rate averages. This information is included in Attachment 2. Section I.A.4 Attachment A requires preparation of a potentiometric surface map each quarter. Maps were prepared for both subject quarters, based upon water levels measured in the respective quarter and are included in Attachment 4.

Please feel free to contact Susan Crowley at (702) 592-7727 or [smcrowley@cox.net](mailto:smcrowley@cox.net) if you have any questions regarding this information. Thank you.

Sincerely,



Allan DeLorme, PE  
Managing Principal

Overnight Mail

UIC Compliance Coordinator  
July 22, 2011  
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cc: Please see attached distribution sheet



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Attachments

Tronox Document Distribution List

Updated: 24-Jan-11

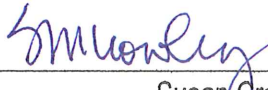
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Prescot	Barry	GEI		X	
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UIC Permit UNEV 94218 – 1<sup>st</sup> and 2<sup>nd</sup> Q 2011  
CEM Certification

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and, to the best of my knowledge, comply with all applicable federal, state and local statutes, regulations and ordinances.

 7-15-11

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Susan Crowley  
CEM 1428, expires 3-8-13



# ATTACHMENT 1

## Lake Mead Water Available to Add to Recharge Trenches Analytical Information (Analytical reports included on Attachment 3 CD)



Stabilized.xlsx



Stabilized  
Water.xlsx

### Analytical Summary



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Documents\Word Doc

### UIC Permit - Attachment A Checklist



Form U230 -  
Stabilized - 7-12-11.p

### Injected Water Sample Information Form

**UIC Permit UNEV 94218 - 2nd Quarter 2011 - Lake Mead Water Analytical Summary**

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Units</u>	<u>Method</u>
4/4/2011	Stabilized Water	Total Dissolved Solids (TDS)	630	mg/L	10	mg/L	E160.1/SM2540C
4/4/2011	Stabilized Water	Boron Total ICAP	0.12	mg/L	0.05	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Calcium Total ICAP	77	mg/L	1	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Iron Total ICAP	ND	mg/L	0.02	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Magnesium Total ICAP	27	mg/L	0.1	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Potassium Total ICAP	4.7	mg/L	1	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Sodium Total ICAP	87	mg/L	1	mg/L	EPA 200.7
4/4/2011	Stabilized Water	Aluminum Total ICAP/MS	ND	ug/L	20	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Antimony Total ICAP/MS	ND	ug/L	1	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Arsenic Total ICAP/MS	2.5	ug/L	1	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Barium Total ICAP/MS	120	ug/L	2	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Beryllium Total ICAP/MS	ND	ug/L	1	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Cadmium Total ICAP/MS	ND	ug/L	0.5	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Chromium Total ICAP/MS	ND	ug/L	1	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Copper Total ICAP/MS	95	ug/L	2	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Lead Total ICAP/MS	ND	ug/L	0.5	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Manganese Total ICAP/MS	ND	ug/L	2	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Nickel Total ICAP/MS	ND	ug/L	5	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Selenium Total ICAP/MS	ND	ug/L	5	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Thallium Total ICAP/MS	ND	ug/L	1	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Zinc Total ICAP/MS	100	ug/L	20	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Silver Total ICAP/MS	ND	ug/L	0.5	ug/L	EPA 200.8
4/4/2011	Stabilized Water	Mercury	ND	ug/L	0.2	ug/L	EPA 245.1
4/4/2011	Stabilized Water	Chloride	83	mg/L	1	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Nitrate as Nitrogen by IC	0.62	mg/L	0.1	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Nitrate as NO3 (calc)	2.7	mg/L	0.44	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Nitrite Nitrogen by IC	ND	mg/L	0.05	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Sulfate	230	mg/L	0.5	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Total Nitrate, Nitrite-N, CALC	0.62	mg/L	0.1	mg/L	EPA 300.0
4/4/2011	Stabilized Water	Perchlorate	ND	ug/L	4	ug/L	EPA 314.0
4/4/2011	Stabilized Water	1,1,1-Trichloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,1,2-Trichloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,1-Dichloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,1-Dichloroethylene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,2-Dichloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	1,2-Dichloropropane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	2-Butanone (MEK)	ND	ug/L	5	ug/L	EPA 624
4/4/2011	Stabilized Water	2-Hexanone	ND	ug/L	10	ug/L	EPA 624
4/4/2011	Stabilized Water	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	ug/L	EPA 624
4/4/2011	Stabilized Water	Acetone	ND	ug/L	10	ug/L	EPA 624
4/4/2011	Stabilized Water	Acrolein (Screen)	ND	ug/L	5	ug/L	EPA 624
4/4/2011	Stabilized Water	Acrylonitrile (Screen)	ND	ug/L	2	ug/L	EPA 624
4/4/2011	Stabilized Water	Benzene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Bromodichloromethane	0.94	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Bromoform	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Bromomethane (Methyl Bromide)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Carbon disulfide	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Carbon Tetrachloride	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Chlorobenzene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Chlorodibromomethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Chloroethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Chloroform (Trichloromethane)	1.4	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	cis-1,2-Dichloroethylene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	cis-1,3-Dichloropropene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Dichlorodifluoromethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Dichloromethane	ND	ug/L	0.5	ug/L	EPA 624

UIC Permit UNEV 94218 - 2nd Quarter 2011 - Lake Mead Water Analytical Summary

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Units</u>	<u>Method</u>
4/4/2011	Stabilized Water	Ethyl benzene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	m,p-Xylenes	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	o-Xylene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Styrene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Tetrachloroethylene (PCE)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Tetrahydrofuran	ND	ug/L	10	ug/L	EPA 624
4/4/2011	Stabilized Water	Toluene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Total 1,3-Dichloropropene	ND	ug/L	1	ug/L	EPA 624
4/4/2011	Stabilized Water	trans-1,2-Dichloroethylene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	trans-1,3-Dichloropropene	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Trichloroethylene (TCE)	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Trichlorofluoromethane	ND	ug/L	0.5	ug/L	EPA 624
4/4/2011	Stabilized Water	Vinyl Acetate	ND	ug/L	10	ug/L	EPA 624
4/4/2011	Stabilized Water	Vinyl chloride (VC)	ND	ug/L	0.3	ug/L	EPA 624
4/4/2011	Stabilized Water	Anion Sum - Calculated	9.8	meq/L	0.001	meq/L	SM 1030E
4/4/2011	Stabilized Water	Cation Sum - Calculated	10	meq/L	0.001	meq/L	SM 1030E
4/4/2011	Stabilized Water	Alkalinity in CaCO3 units	130	mg/L	2	mg/L	SM 2320B
4/4/2011	Stabilized Water	pH of CaCO3 saturation(25C)	7.4	Units	0.1	Units	SM 2330B
4/4/2011	Stabilized Water	pH of CaCO3 saturation(60C)	6.9	Units	0.1	Units	SM 2330B
4/4/2011	Stabilized Water	Total Hardness as CaCO3 by ICP (calc)	300	mg/L	3	mg/L	SM 2340B
4/4/2011	Stabilized Water	Fluoride	0.31	mg/L	0.05	mg/L	SM 4500F-C
4/4/2011	Stabilized Water	Bicarb.Alkalinity as HCO3calc	160	mg/L	2	mg/L	SM2330B
4/4/2011	Stabilized Water	Carbonate as CO3, Calculated	2.1	mg/L	2	mg/L	SM2330B
4/4/2011	Stabilized Water	Hydroxide as OH Calculated	ND	mg/L	2	mg/L	SM2330B
4/4/2011	Stabilized Water	Specific Conductance, 25 C	1000	umho/cm	2	umho/cm	SM2510B
4/4/2011	Stabilized Water	Weak Acid Dissociable Cyanide	ND	mg/L	0.005	mg/L	SM4500CN-I
4/4/2011	Stabilized Water	Carbon Dioxide,Free(25C)-Calc.	ND	mg/L	2	mg/L	SM4500-CO2-D
4/4/2011	Stabilized Water	PH (H3=past HT not compliant)	8.3	Units	0.1	Units	SM4500-HB

## UIC Permit UNEV94218 - 1st Quarter 2011 - Lake Mead Water Analytical Summary

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>UNITs</u>	<u>Method</u>
1/3/2011	Stabilized Water	Total Dissolved Solids (TDS)	590	mg/L	E160.1/SM2540C
1/3/2011	Stabilized Water	Boron Total ICAP	0.13	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Calcium Total ICAP	73	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Iron Total ICAP	0.052	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Magnesium Total ICAP	27	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Potassium Total ICAP	4.6	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Sodium Total ICAP	88	mg/L	EPA 200.7
1/3/2011	Stabilized Water	Aluminum Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Antimony Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Arsenic Total ICAP/MS	2.4	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Barium Total ICAP/MS	120	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Beryllium Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Cadmium Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Chromium Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Copper Total ICAP/MS	68	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Lead Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Manganese Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Nickel Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Selenium Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Silver Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Thallium Total ICAP/MS	ND	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Zinc Total ICAP/MS	160	ug/L	EPA 200.8
1/3/2011	Stabilized Water	Mercury	ND	ug/L	EPA 245.1
1/3/2011	Stabilized Water	Chloride	83	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Nitrate as Nitrogen by IC	0.64	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Nitrate as NO3 (calc)	2.8	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Nitrite Nitrogen by IC	ND	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Sulfate	220	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Total Nitrate, Nitrite-N, CALC	0.64	mg/L	EPA 300.0
1/3/2011	Stabilized Water	Perchlorate	ND	ug/L	EPA 314.0
1/3/2011	Stabilized Water	1,1,1-Trichloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,1,2,2-Tetrachloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,1,2-Trichloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,1-Dichloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,1-Dichloroethylene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,2-Dichloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	1,2-Dichloropropane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	2-Butanone (MEK)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	2-Hexanone	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Acetone	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Acrolein (Screen)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Acrylonitrile (Screen)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Benzene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Bromodichloromethane	1.1	ug/L	EPA 624
1/3/2011	Stabilized Water	Bromoform	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Bromomethane (Methyl Bromide)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Carbon disulfide	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Carbon Tetrachloride	ND	ug/L	EPA 624

## UIC Permit UNEV94218 - 1st Quarter 2011 - Lake Mead Water Analytical Summary

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>UNITs</u>	<u>Method</u>
1/3/2011	Stabilized Water	Chlorobenzene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Chlorodibromomethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Chloroethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Chloroform (Trichloromethane)	2.6	ug/L	EPA 624
1/3/2011	Stabilized Water	Chloromethane(Methyl Chloride)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	cis-1,2-Dichloroethylene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	cis-1,3-Dichloropropene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Dichlorodifluoromethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Dichloromethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Ethyl benzene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	m,p-Xylenes	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Methyl Tert-butyl ether (MTBE)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	o-Xylene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Styrene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Tetrachloroethylene (PCE)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Tetrahydrofuran	15	ug/L	EPA 624
1/3/2011	Stabilized Water	Toluene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Total 1,3-Dichloropropene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	trans-1,2-Dichloroethylene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	trans-1,3-Dichloropropene	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Trichloroethylene (TCE)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Trichlorofluoromethane	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Vinyl Acetate	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Vinyl chloride (VC)	ND	ug/L	EPA 624
1/3/2011	Stabilized Water	Anion Sum - Calculated	9.6	meq/L	SM 1030E
1/3/2011	Stabilized Water	Cation Sum - Calculated	9.8	meq/L	SM 1030E
1/3/2011	Stabilized Water	Alkalinity in CaCO3 units	130	mg/L	SM 2320B
1/3/2011	Stabilized Water	Langelier Index - 25 degree	0.68	None	SM 2330B
1/3/2011	Stabilized Water	Langelier Index at 60 degrees C	1.1	None	SM 2330B
1/3/2011	Stabilized Water	pH of CaCO3 saturation(25C)	7.4	Units	SM 2330B
1/3/2011	Stabilized Water	pH of CaCO3 saturation(60C)	6.9	Units	SM 2330B
1/3/2011	Stabilized Water	Total Hardness as CaCO3 by ICP (calc)	290	mg/L	SM 2340B
1/3/2011	Stabilized Water	Fluoride	0.29	mg/L	SM 4500F-C
1/3/2011	Stabilized Water	Bicarb.Alkalinity as HCO3calc	160	mg/L	SM2330B
1/3/2011	Stabilized Water	Carbonate as CO3, Calculated	ND	mg/L	SM2330B
1/3/2011	Stabilized Water	Hydroxide as OH Calculated	ND	mg/L	SM2330B
1/3/2011	Stabilized Water	Specific Conductance, 25 C	980	umho/cm	SM2510B
1/3/2011	Stabilized Water	Carbon Dioxide,Free(25C)-Calc.	2.5	mg/L	SM4500-CO2-D
1/3/2011	Stabilized Water	PH (H3=past HT not compliant)	8	Units	SM4500-HB
1/3/2011	Stabilized Water	Weak Acid Dissociable Cyanide	ND	mg/L	SM4500CN-I



**ATTACHMENT A**

**UNEV 94218: Monitoring Report Requirements**

The Permittee shall submit **quarterly reports** on a continuous basis, **whether actively injecting or not**, which contain the following data (please check all information included in the attached report):

- The UIC permit number and Attachment A.
- The results of the chemical analyses as required by Table 1.

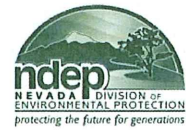
**Table 1**

PARAMETER	FREQUENCY	LOCATION	LIMITATIONS
VOCs, Total Perchlorate, and Profile I Analysis	Quarterly	Lake Mead Water at Discharge Pipe Prior to Injection	State and Federal Drinking Water Standards. Injectate must not degrade the Groundwater Quality
Total and Hexavalent Chromium	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
Total Perchlorate, Including NaClO <sub>4</sub> and NH <sub>4</sub> ClO <sub>4</sub>	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
TDS	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
Injection Rate into Injection trenches and Total Volume injected	Continuously	Discharge Pipe Prior to Injection	100 gpm monthly average. Must be equivalent or less than total extraction rate and volume
Extraction Rate and Total Volume extracted	Continuously	Extraction Wells located Upgradient of Injection Trenches	Cumulative extraction rate must be equivalent or greater than injection rate and volume
Groundwater Elevation and Depth	Quarterly	M-25, M-38, M-80, M-82, M-86, M-95, M-96, M-98, M-99, M-100, and M-102	Monitor and Report

For each month in the reporting period document injection rate (gpm), volume, date, and time injected of Lake Mead water into two injection trenches.

Water level, contour map illustrating groundwater gradient and flow direction.

Summary narrative report of monitoring activities for that reporting period. The report shall include, but not be limited to, any problems encountered with the injection system, the results of any tests performed during that period, and any changes noted to the groundwater. If no injection has occurred, report the non-injection status and the reason the system is not in operation.



## UIC Form U230 – Field Sampling & Monitoring Summary

**This form is to be completed in the field while sampling to document the sampling location facts and events, and submitted with the sample results.**

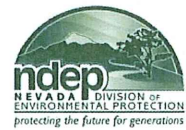
**Sample Date:** (mm/dd/yy) 01-03-11 and 04-04-11

**Complete All Applicable Blanks – Water samples can be rejected if information not provided.**

FACILITY AND PERMIT INFORMATION	
Well Name & No.: Injected stabilized Lake Mead water	UIC Permit No.: UNEV94218
Is there any well name or identification at the wellhead?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, label should be placed on or near wellhead
Project/Facility Name: Perchlorate Remediation - Nevada Environmental Response Trust, Henderson, NV	
Well Location (Section/TR or Lat/Long): Section 12 T22S - R62E	
City/Valley: Henderson, NV	County: Clark
Sample for (circle one): <del>NEW WELL</del> ROUTINE REPORTING Other: _____	
Reporting Frequency: <input checked="" type="checkbox"/> Semi-annually <input type="checkbox"/> Annually <input type="checkbox"/> Other _____	
WELL or SAMPLE LOCATION INFORMATION	
(Note: If sample location is not a well (e.g. spring), please provide all relevant data on sample location in the space below)	
Well Type:	<del>Water Distribution</del> <del>Monitoring</del> <del>Geo-Prod</del> Geo-Injection <del>Geo-Observation</del>
Completion date of well: NA	
Diameter of casing: NA	Type of Casing: Steel PVC Other: <u>ABS Plastic</u>
Total depth of well: ~ 4 foot to horizontal distribution piping	
Bottom depth of cement for last cemented casing string: NA	
Screened or open hole interval (top/bottom depths): NA	
STATUS OF WELL	
Condition or Activity of well during past week/month, prior to sampling: operating normally	
Discuss any field conditions the Division should be aware of with regard to this sample: both samples (July 15, 2010 and October 4, 2010 taken during normal operations)	
Was the well secured upon arrival?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Was there any problems or damage to the well upon arrival?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Was well in an artesian condition prior to sampling? :	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
WATER LEVEL – WELL GAUGING	
Last date well gauged (mm/dd/yy): NA	Depth to water - last event: NA
Method used to gauge well? :	<del>Cap Tube</del> <del>Tape Measure</del> NA
Measured Water Level :	NA



**Nevada Division of Environmental Protection**  
**Bureau of Water Pollution Control**  
**Underground Injection Control Program**  
 901 S. Stewart St Ste 4001  
 Carson City Nevada 89701  
 Ph: 775-687-9418 Fx: 775-687-4684



**UIC Form U230 – Field Sampling & Monitoring Summary**

SAMPLING INFORMATION			
Date sample collected (mm/dd/yy) :	01-03-11 and 04-04-11	Time Sampled :	morning
Name of Sampler :	Veolia Water NA operator		
Location sample taken (be specific) "sample port in pipeline 10 feet from wellhead" :	Sample port at the remedial process ~ 200 ft from injection point		
Type of Sample (circle one) :	Grab <del>Composite</del> other (specify):		
Collection method (circle one) :	<del>wellbore</del> <del>water pumped</del> <del>artesian flow</del> <del>air gas lift</del> valved flow from active water supply		
How much fluid (gallons or well volumes) was discharged / purged before collecting sample? :	~ 1 gallon - this is an active supply line		
<b>Filtering Note:</b> UIC requirements specify water samples shall not be filtered, unless previously approved. If filtration is approved, sample shall be filtered with a 1.0 micron filter, not 0.45 micron. If approved, document date of approval: _____			
Was the sample filtered? :	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
Was conductivity measured during discharge to establish stabilized conditions?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO this is an active water supply line		
Was decontamination procedures (reference O & M?) followed during sampling of multiple wells	<input type="checkbox"/> YES <input type="checkbox"/> NO NA		
<b>FIELD MEASUREMENTS</b>			
pH :			
S. Conductivity :			
Temperature :			
What UIC Sample List is required:	<del>1</del>	<del>2</del>	Other**: <u>VOC, perchlorate and Profile 1</u>
** Other constituent listed must have prior UIC approval before using			
Were any holding times exceeded?	pH	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>In Final sample documentation, ensure all results are reported with appropriate units. If measurements are below detection limits, indicate detection limit value.</b>			
<b>DO NOT REPORT VALUES AS NON-DETECT OR ND, INSTEAD REPORT as &lt;(Detection Limit Value)</b>			
FORM PREPARATION			
Project Manager:	Susan Crowley		
Company:	Crowley Environmental on behalf of Trust		
Telephone No.:	702-592-7727	eMail Address:	smcrowley@cox.net
Signature:	Date: January 24, 2011		
Qualified Sample Person:	Michele Brown		
Company:	Veolia Water NA		
Telephone No.:	702-289-5533	eMail Address:	michele.brown@veoliawaterna.com
Signature:	Date:		

Attachments:

## ATTACHMENT 2

### Groundwater Monitoring

#### Analytical Information (Analytical reports included on Attachment 3 CD)



C:\SMC\My  
Documents\Excel Spr

Water Levels – 1<sup>st</sup> and 2<sup>nd</sup> Quarter 2011



UIC Monitoring  
Wells.xlsx



UIC Monitoring  
Wells.xlsx

Summary of Monitoring Well Information



Form U230 - Monitor  
Wells - 7-12-11.pdf

Sample Information Form for Monitoring Wells



Tronox LLC  
Henderson, Nevada Facility

UIC PERMIT MONITORING WELLS  
QUARTERLY GROUNDWATER ELEVATIONS (feet)

Date	M-25 TOC: 1759.93		M-38 TOC: 1759.73		M-80 TOC: 1746.04		M-79 TOC: 1740.21		M-86 TOC: 1744.23		M-95 * TOC: 1693.49		M-96 TOC: 1693.49		M-98 TOC: 1731.91		M-99 TOC: 1730.74		M-100 TOC: 1730.93		M-102 TOC: 1740.24		
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	
Nov-04	32.63	1727.48	30.79	1728.94	29.68	1716.37	28.16	1714.37	27.34	1716.89			11.62	1681.9	33.02	1698.88	30.53	1700.21	28.83	1702.1	39.18	1701.06	
Feb-05	31.96	1727.97	30.41	1729.32	27.16	1718.89	27.04	1715.49	25.39	1718.84			10.2	1683.32	32.97	1698.93	29.96	1700.78	27.98	1702.95	37.73	1702.51	
May-05	32.73	1727.2	30.77	1728.96	27.62	1718.43	27.73	1714.8	28.73	1715.5			10.89	1682.63	32.98	1698.92	30.09	1700.65	28.47	1702.46	39.44	1700.8	
Aug-05	30.24	1729.69	30.11	1729.62	27.38	1718.67	26.53	1716	26.18	1718.05			9.79	1683.73	30.81	1701.09	28.74	1702	26.71	1704.22	36.51	1703.73	
Nov-05	31.09	1728.84	30.28	1729.45	25.51	1720.54	26.1	1716.43	27.98	1716.25			9.75	1683.77	30.4	1701.5	28.3	1702.44	26.22	1704.71	36.14	1704.1	
Feb-06	30.93	1729.00	30.35	1729.38	25.33	1720.72	25.48	1717.05	29.23	1715			10.1	1683.42	29.95	1701.95	27.97	1702.77	26	1704.93	36.48	1703.76	
May-06	31.15	1728.78	30.51	1729.22	24.61	1721.44	25.13	1717.4	29.34	1714.89			10.03	1683.49	28.66	1703.24	27.85	1702.89	25.98	1704.95	36.91	1703.33	
Aug-06	32.06	1727.87	31.65	1728.08	24.97	1721.08	26.12	1716.41	29.24	1714.99			10.1	1683.42	29.9	1702	27.89	1702.85	26.02	1704.91	37.33	1702.91	
Nov-06	32.18	1727.75	31.01	1728.72	25.84	1720.21	26.09	1716.44	29.89	1714.34			9.93	1683.59	30	1701.9	27.97	1702.77	26.27	1704.66	37.66	1702.58	
Feb-07	32.56	1727.37	31.03	1728.7	27.31	1718.74	26.75	1715.78	30	1714.23			10.25	1683.27	29.93	1701.97	28.07	1702.67	26.21	1704.72	37.76	1702.48	
May-07	32.97	1726.96	31.13	1728.6	29.06	1716.99	27.59	1714.94	31.09	1713.14			10.2	1683.32	30.11	1701.79	28.32	1702.42	26.77	1704.16	38.05	1702.19	
Aug-07	33.44	1726.49	31.43	1728.3	31.46	1714.59	29.42	1713.11	32.51	1711.72			10.47	1683.05	28.71	1703.19	29.57	1701.17	28.66	1702.27	39.38	1700.86	
Nov-07	33.97	1725.96	31.54	1728.19	31.9	1714.15	30.05	1712.48	34.13	1710.1			10.37	1683.15	33.13	1698.77	31.34	1699.4	30.47	1700.46	40.67	1699.57	
Feb-08	33.82	1726.11	31.52	1728.21	32.92	1713.13	30.63	1711.9	35.19	1709.04			11.32	1682.2	33.29	1698.61	32.68	1698.06	33.72	1697.21	41.99	1698.25	
May-08	33.82	1726.11	31.46	1728.27	24.91	1721.14	25.66	1716.87	32.33	1711.9			11.86	1681.66	33.19	1698.71	33.6	1697.14	32.72	1698.21	42.05	1698.19	
Aug-08	33.64	1726.29	31.37	1728.36	25.15	1720.9	23.45	1719.08	damaged	-			10.46	1683.06	33.38	1698.52	31.92	1698.82	30.77	1700.16	43.31	1696.93	
Nov-08	33.68	1726.25	31.37	1728.36	28.35	1717.7	24.96	1717.57	"	-	12.62	1680.87	12.68	1680.84	33.1	1698.8	31.17	1699.57	30.42	1700.51	43.23	1697.01	
Feb-09	33.61	1726.32	31.3	1728.43	29.77	1716.28	26.5	1716.03	"	-	12.63	1680.86	12.76	1680.76	dry	-	31.58	1699.16	30.81	1700.12	43.11	1697.13	
May-09	33.58	1726.35	31.37	1728.36	31.58	1714.47	28.33	1714.2	"	-	12.75	1680.74	12.85	1680.67	dry	-	31.9	1698.84	31.27	1699.66	43.21	1697.03	
Aug-09	33.52	1726.41	31.19	1728.54	28.98	1717.07	26.73	1715.8	"	-	damaged	-	13.02	1680.5	dry	-	32.66	1698.08	32.79	1698.14	43.45	1696.79	
Nov-09	33.27	1726.66	30.97	1728.76	26.14	1719.91	23.96	1718.57	"	-	13.29	1680.2	13.35	1680.17	dry	-	31.44	1699.3	30.23	1700.7	43.51	1696.73	
Feb-10	33.28	1726.65	30.94	1728.79	24.31	1721.74	23.00	1719.53	"	-	12.91	1680.58	12.99	1680.53	dry	-	30.31	1700.43	29.21	1701.72	43.31	1696.93	
May-10	32.48	1727.45	30.92	1728.81	23.28	1722.77	21.78	1720.75	"	-	12.22	1681.27	12.35	1681.17	dry	-	29.32	1701.42	27.72	1703.21	43.12	1697.12	
Aug-10	32.98	1726.95	31.05	1728.68	23.94	1722.11	21.94	1720.59	"	-	12.19	1681.3	12.41	1681.11	dry	-	28.68	1702.06	26.93	1704	42.46	1697.78	
Nov-10	33	1726.93	31.96	1727.77	32.64	1713.41	32.64	1709.89	"	-	12.14	1681.35	13.3	1680.22	dry	-	28.97	1701.77	27.84	1703.09	damaged	-	
Feb-11	33.41	1726.52	31.28	1728.45	35.52	1710.53	-	-	"	-	12.23	1681.26	12.47	1681.05	dry	-	30.71	1700.03	inaccessible	1703.09	damaged	-	
May-11	33.56	1726.37	31.32	1728.41	35.84	1710.21	-	-	"	-	12.83	1680.66	12.91	1680.61	dry	-	34.69	1696.05	33.3	1697.63	damaged	-	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\* Monitoring Well M-94 was replaced by monitoring well M-95 in November 2008 correspondence from NDEP. Future reports will list M-95.

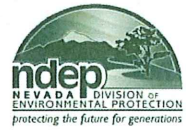


## UIC Permit UNEV 94218 - 1st Quarter 2011 Monitor Well Analytical Summary

<u>Sampled</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>UNITs</u>	<u>Me.</u>
2/7/2011	M-44	Total Dissolved Solids (TDS)	7200	mg/L	E160.1/SA
2/7/2011	M-44	Perchlorate	510000	ug/L	EPA 314
2/7/2011	M-44	Chromium Total ICAP	0.62	mg/L	EPA 6010
2/7/2011	M-44	Hexavalent chromium (Cr VI)	0.66	mg/L	EPA 7196
2/7/2011	M-44	PH (H3=past HT not compliant)	7.5	Units	EPA 9040
2/7/2011	M-95	Total Dissolved Solids (TDS)	6500	mg/L	E160.1/SM2540C
2/7/2011	M-95	Perchlorate	440000	ug/L	EPA 314.0
2/7/2011	M-95	Chromium Total ICAP	0.8	mg/L	EPA 6010
2/7/2011	M-95	PH (H3=past HT not compliant)	7.4	Units	EPA 9040
2/8/2011	M-99	Total Dissolved Solids (TDS)	4200	mg/L	E160.1/SM2540C
2/8/2011	M-99	Perchlorate	380000	ug/L	EPA 314.0
2/8/2011	M-99	Chromium Total ICAP	0.71	mg/L	EPA 6010
2/8/2011	M-99	PH (H3=past HT not compliant)	7.4	Units	EPA 9040
2/8/2011	M-37	Total Dissolved Solids (TDS)	4000	mg/L	E160.1/SM2540C
2/8/2011	M-37	Perchlorate	1500000	ug/L	EPA 314.0
2/8/2011	M-37	Chromium Total ICAP	0.026	mg/L	EPA 6010
2/8/2011	M-37	Hexavalent chromium (Cr VI)	0.08	mg/L	EPA 7196
2/8/2011	M-37	PH (H3=past HT not compliant)	7.2	Units	EPA 9040
2/9/2011	M-12A	Total Dissolved Solids (TDS)	7000	mg/L	E160.1/SM2540C
2/9/2011	M-12A	Perchlorate	220000	ug/L	EPA 314.0
2/9/2011	M-12A	Chromium Total ICAP	11	mg/L	EPA 6010
2/9/2011	M-12A	Hexavalent chromium (Cr VI)	11	mg/L	EPA 7196
2/9/2011	M-12A	PH (H3=past HT not compliant)	8.3	Units	EPA 9040
2/9/2011	M-11	Total Dissolved Solids (TDS)	3100	mg/L	E160.1/SM2540C
2/9/2011	M-11	Perchlorate	29000	ug/L	EPA 314.0
2/9/2011	M-11	Chromium Total ICAP	2.9	mg/L	EPA 6010
2/9/2011	M-11	Hexavalent chromium (Cr VI)	2.9	mg/L	EPA 7196
2/9/2011	M-11	PH (H3=past HT not compliant)	7.9	Units	EPA 9040
2/10/2011	M-36	Total Dissolved Solids (TDS)	17000	mg/L	E160.1/SM2540C
2/10/2011	M-36	Perchlorate	1500000	ug/L	EPA 314.0
2/10/2011	M-36	Chromium Total ICAP	30	mg/L	EPA 6010
2/10/2011	M-36	Hexavalent chromium (Cr VI)	31	mg/L	EPA 7196
2/10/2011	M-36	PH (H3=past HT not compliant)	7.2	Units	EPA 9040

UIC Permit UNEV 94218 - 2nd Quarter 2011 - Monitoring Well Analytical Summary

<u>Sample Date</u>	<u>Sample ID</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>Units</u>	<u>Method</u>
5/13/2011	M-11	Total Dissolved Solids (TDS)	2700	mg/L	10	mg/L	E160.1/SM2540C
5/13/2011	M-11	Nitrate as Nitrogen by IC	2.9	mg/L	0.013	mg/L	EPA 300.0
5/13/2011	M-11	Nitrate as NO3 (calc)	13	mg/L	0.055	mg/L	EPA 300.0
5/13/2011	M-11	Perchlorate	25000	ug/L	4	ug/L	EPA 314.0
5/13/2011	M-11	Chromium Total ICAP	2.4	mg/L	0.01	mg/L	EPA 6010
5/13/2011	M-11	Hexavalent chromium (Cr VI)	2.1	mg/L	0.005	mg/L	EPA 7196
5/13/2011	M-11	pH	8	Units	0.1	Units	EPA 9040
5/13/2011	M-11	Chlorate by IC	320000	ug/L	10	ug/L	EPA 9056
5/13/2011	M-11	Nitrate as Nitrogen by IC	2.9	mg/L	0.013	mg/L	EPA 9056
5/13/2011	M-11	Nitrate as NO3 (calc)	13	mg/L	0.055	mg/L	EPA 9056
5/12/2011	M-12A	Total Dissolved Solids (TDS)	7100	mg/L	10	mg/L	E160.1/SM2540C
5/12/2011	M-12A	Perchlorate	250000	ug/L	4	ug/L	EPA 314.0
5/12/2011	M-12A	Chromium Total ICAP	11	mg/L	0.01	mg/L	EPA 6010
5/12/2011	M-12A	Hexavalent chromium (Cr VI)	11	mg/L	0.005	mg/L	EPA 7196
5/12/2011	M-12A	pH	8.2	Units	0.1	Units	EPA 9040
5/12/2011	M-12A	Chlorate by IC	2300000	ug/L	10	ug/L	EPA 9056
5/12/2011	M-12A	Nitrate as Nitrogen by IC	ND	mg/L	0.013	mg/L	EPA 9056
5/12/2011	M-36	Total Dissolved Solids (TDS)	15000	mg/L	10	mg/L	E160.1/SM2540C
5/12/2011	M-36	Perchlorate	1700000	ug/L	4	ug/L	EPA 314.0
5/12/2011	M-36	Chromium Total ICAP	30	mg/L	0.01	mg/L	EPA 6010
5/12/2011	M-36	Hexavalent chromium (Cr VI)	30	mg/L	0.005	mg/L	EPA 7196
5/12/2011	M-36	pH	7.5	Units	0.1	Units	EPA 9040
5/12/2011	M-36	Chlorate by IC	7900000	ug/L	10	ug/L	EPA 9056
5/12/2011	M-36	Nitrate as Nitrogen by IC	ND	mg/L	0.013	mg/L	EPA 9056
5/9/2011	M-37	Total Dissolved Solids (TDS)	4000	mg/L	10	mg/L	E160.1/SM2540C
5/9/2011	M-37	Perchlorate	1500000	ug/L	4	ug/L	EPA 314.0
5/9/2011	M-37	Chromium Total ICAP	0.025	mg/L	0.01	mg/L	EPA 6010
5/9/2011	M-37	Hexavalent chromium (Cr VI)	ND	mg/L	0.005	mg/L	EPA 7196
5/9/2011	M-37	pH	7.2	Units	0.1	Units	EPA 9040
5/9/2011	M-37	Chlorate by IC	350000	ug/L	10	ug/L	EPA 9056
5/9/2011	M-37	Nitrate as Nitrogen by IC	120	mg/L	0.1	mg/L	EPA 9056
5/5/2011	M-44	Total Dissolved Solids (TDS)	7100	mg/L	10	mg/L	E160.1/SM2540C
5/5/2011	M-44	Perchlorate	480000	ug/L	4	ug/L	EPA 314.0
5/5/2011	M-44	Chromium Total ICAP	0.57	mg/L	0.01	mg/L	EPA 6010
5/5/2011	M-44	Hexavalent chromium (Cr VI)	0.59	mg/L	0.005	mg/L	EPA 7196
5/5/2011	M-44	pH	7.5	Units	0.1	Units	EPA 9040
5/4/2011	M-95	Total Dissolved Solids (TDS)	6700	mg/L	10	mg/L	E160.1/SM2540C
5/4/2011	M-95	Perchlorate	440000	ug/L	4	ug/L	EPA 314.0
5/4/2011	M-95	Chromium Total ICAP	0.8	mg/L	0.01	mg/L	EPA 6010
5/4/2011	M-95	Hexavalent chromium (Cr VI)	0.82	mg/L	0.005	mg/L	EPA 7196
5/4/2011	M-95	pH	7.6	Units	0.1	Units	EPA 9040



## UIC Form U230 – Field Sampling & Monitoring Summary

**This form is to be completed in the field while sampling to document the sampling location facts and events, and submitted with the sample results.**

**Sample Date:** (mm/dd/yy) 02-07-11 and 05-04-11

**Complete All Applicable Blanks – Water samples can be rejected if information not provided.**

FACILITY AND PERMIT INFORMATION	
Well Name & No.: M-11, M-12A, M-36, M-37, M-44, 84, M-95, M-100	UIC Permit No.: UNEV 94218
Is there any well name or identification at the wellhead?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, label should be placed on or near wellhead
Project/Facility Name: Perchlorate Remediation - Nevada Environmental Response Trust, Henderson, NV	
Well Location (Section TR or Lat/Long): Section 12 T22S - R62E	
City/Valley: Henderson, NV	County: Clark
Sample for (circle one): <del>NEW WELL</del> ROUTINE REPORTING Other: _____	
Reporting Frequency: <input checked="" type="checkbox"/> Semi-annually <input type="checkbox"/> Annually <input type="checkbox"/> Other _____	
WELL or SAMPLE LOCATION INFORMATION	
(Note: If sample location is not a well (e.g. spring), please provide all relevant data on sample location in the space below)	
Well Type:	<del>Water Distribution Well</del> Monitoring <del>Geo-Prod</del> <del>Geo-Injection</del> <del>Geo-Observation</del>
Completion date of well: 1983 to 1997	
Diameter of casing: 2 inch	Type of Casing: <del>Steel</del> PVC Other: _____
Total depth of well: ~ 45 foot	
Bottom depth of cement for last cemented casing string: NA	
Screened or open hole interval (top/bottom depths): ~ bottom 20 foot	
STATUS OF WELL	
Condition or Activity of well during past week/month, prior to sampling: operating normally	
Discuss any field conditions the Division should be aware of with regard to this sample: both month's samples taken during normal operations	
Was the well secured upon arrival?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Was there any problems or damage to the well upon arrival	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
Was well in an artesian condition prior to sampling? :	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
WATER LEVEL – WELL GAUGING	
Last date well gauged (mm/dd/yy) : sample date - 05-13-11	Depth to water - last event:
Method used to gauge well? :	<del>Cap Tube</del> <del>Tape Measure</del> NA
Measured Water Level :	DTW .... M-11=43.81', M-36=31.96', M-37=31.45', M-44=19.32', M-84=24.49', M-95=12.14', M-100=27.84



## UIC Form U230 – Field Sampling & Monitoring Summary

SAMPLING INFORMATION			
Date sample collected (mm/dd/yy) :	02-07-11 and 05-4-11	Time Sampled :	daylight
Name of Sampler :	Veolia Water NA operator		
Location sample taken (be specific) "sample port in pipeline 10 feet from wellhead" :	monitor well head		
Type of Sample (circle one) :	Grab <del>Composite</del> other (specify):		
Collection method (circle one) :	<del>skipped</del> water pumped <del>static flow</del> <del>slug</del>		
How much fluid (gallons or well volumes) was discharged / purged before collecting sample? :	~ three casing volumes		
<b>Filtering Note:</b> UIC requirements specify water samples shall not be filtered, unless previously approved. If filtration is approved, sample shall be filtered with a 1.0 micron filter, not 0.45 micron. If approved, document date of approval: _____			
Was the sample filtered? :	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
Was conductivity measured during discharge to establish stabilized conditions? :	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO this is an active water supply line		
Was decontamination procedures (reference O & M?) followed during sampling of multiple wells	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
<b>FIELD MEASUREMENTS</b>			
pH :			
S. Conductivity :			
Temperature :			
What UIC Sample List is required:	<del>1</del>	<del>2</del>	Other**: <u>Cr, Cr+6, perchlorate, TDS</u>
** Other constituent listed must have prior UIC approval before using			
Were any holding times exceeded?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
<b>In Final sample documentation, ensure all results are reported with appropriate units. If measurements are below detection limits, indicate detection limit value.</b>			
<b>DO NOT REPORT VALUES AS NON-DETECT OR ND, INSTEAD REPORT as &lt;(Detection Limit Value)&gt;</b>			
FORM PREPARATION			
Project Manager:	Susan Crowley		
Company:	Crowley Environmental on behalf of Tronox LLC		
Telephone No.:	702-592-7727	eMail Address:	smcrowley@cox.net
Signature:		Date:	July 12, 2011
Qualified Sample Person:	Michele Brown		
Company:	Veolia Water NA		
Telephone No.:	702-289-5533	eMail Address:	michele.brown@veoliawaterna.com
Signature:		Date:	

Attachments:

Tronox LLC  
Henderson, Nevada Facility

UIC PERMIT UNEV 94218  
EXTRACTION AND INJECTION RATES (gpm)

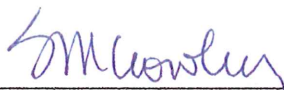
MONTH	EXTRACTION RATE	INJECTION RATE		
	(gpm) Monthly Average	(gpm) Monthly Average	Daily High	Daily Low
January 2011	69.3	0	0	0
February 2011	67.3	0	0	0
March 2011	65.0	0	0	0
April 2011	67.1	0	0	0
May 2011	65.4	0	0	0
June 2011	66.2	0	0	0



## ATTACHMENT 3

### Supporting Electronic Analytical Reports UIC Permit UNEV 94218 Report – 1<sup>st</sup> and 2<sup>nd</sup> Q 2011

I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein, exceptions and corresponding justifications are provided below.



---

Susan Crowley  
CEM 1428, expires 3-8-13

7/15/11  
Date

# ATTACHMENT 4



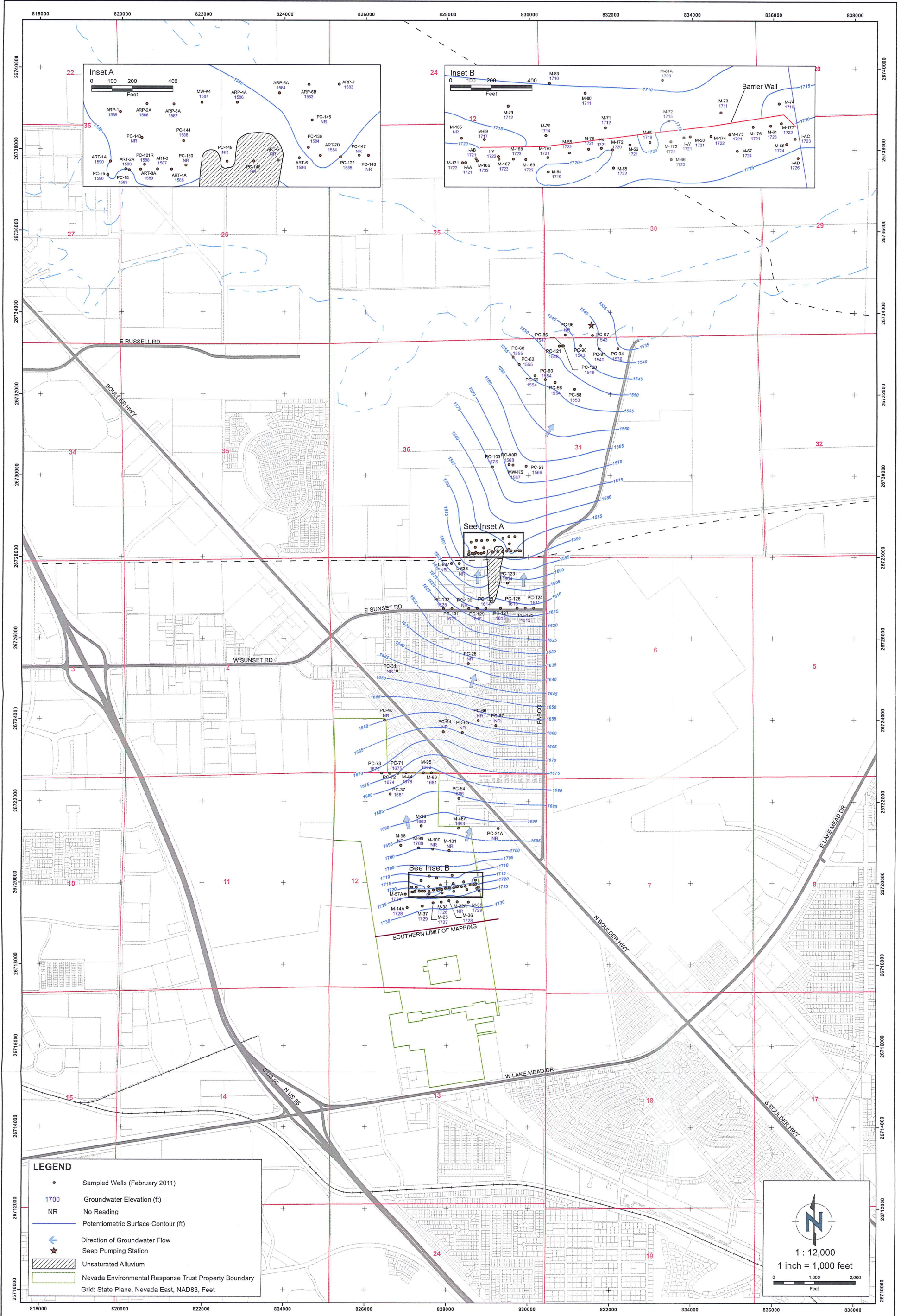
Potentiometric  
Surface Map - 1st Q



Potentiometric  
Surface Map - 2nd Q

## Potentiometric Surface Maps


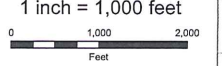




Path: H:\a\pelomano\NERT\GIS\Map\UIC Permi\Pot Surf Map\Allyum.mxd

**LEGEND**

- Sampled Wells (February 2011)
- 1700 Groundwater Elevation (ft)
- NR No Reading
- Potentiometric Surface Contour (ft)
- ↔ Direction of Groundwater Flow
- ★ Seep Pumping Station
- ▨ Unsaturated Alluvium
- ▭ Nevada Environmental Response Trust Property Boundary
- Grid: State Plane, Nevada East, NAD83, Feet

  
 1 : 12,000  
 1 inch = 1,000 feet  


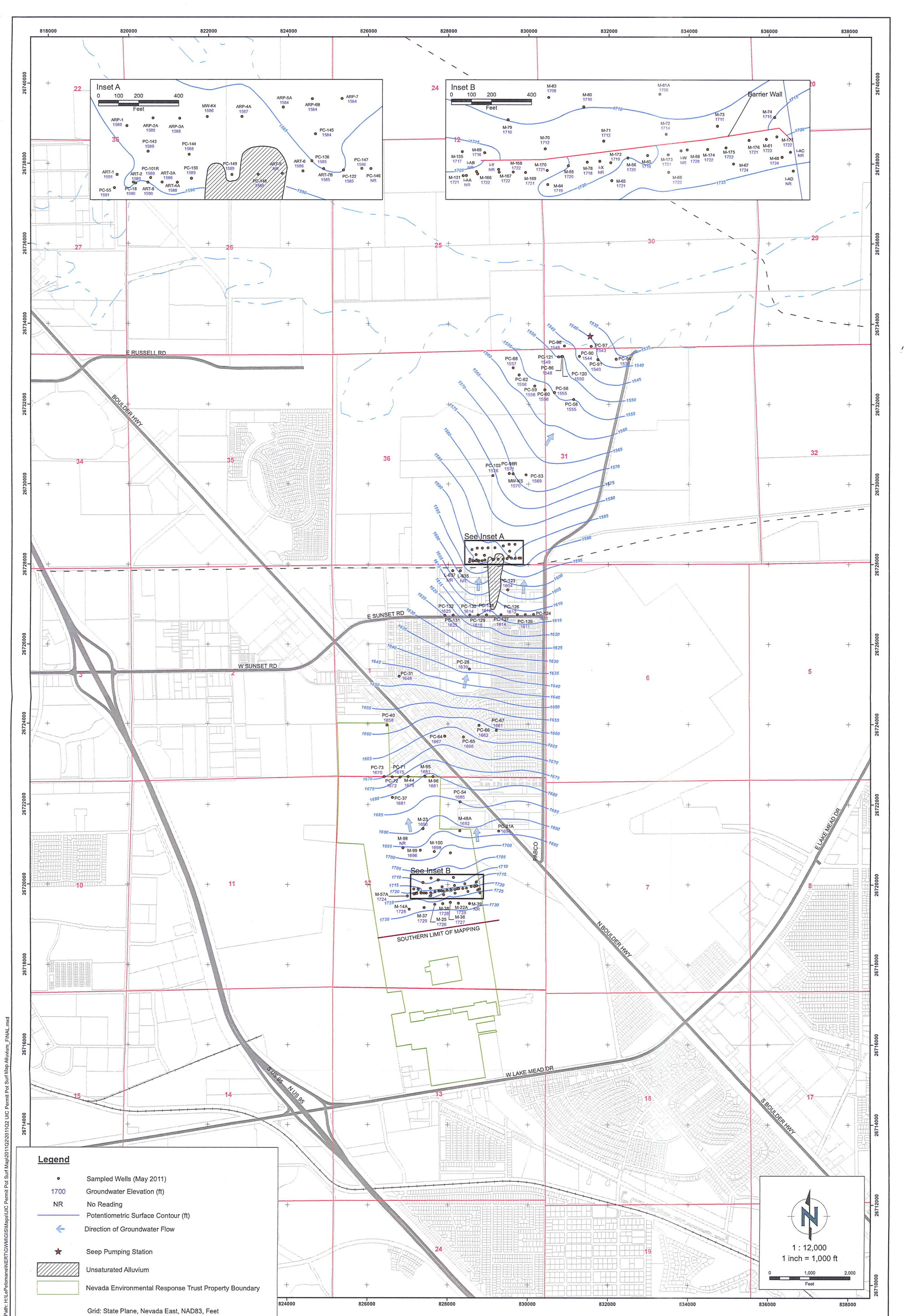
**Figure 1**  
PROJECT: 21-26719F

**POTENTIOMETRIC SURFACE MAP  
QUATERNARY ALLUVIUM AQUIFER  
FIRST QUARTER 2011**  
UIC Permit #JUNEV94218 Report  
Nevada Environmental Response Trust (NERT)  
Henderson, Nevada

DESIGNED BY:		NO.		REVISIONS		DATE:		BY:	
DRAWN BY:				DESCRIPTION:					
EARS									
CHECKED BY:									
APPROVED BY:									






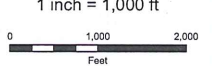


Path: H:\LePete\name\NERT\GIS\Maps\UIC Permi\Pot Surf Map\Map2011Q2\2011Q2 UIC Permi Pot Surf Map Alluvium\_FINAL.mxd

**Legend**

- Sampled Wells (May 2011)
- 1700 Groundwater Elevation (ft)
- NR No Reading
- Potentiometric Surface Contour (ft)
- ← Direction of Groundwater Flow
- ★ Seep Pumping Station
- ▨ Unsaturated Alluvium
- ▭ Nevada Environmental Response Trust Property Boundary

Grid: State Plane, Nevada East, NAD83, Feet

  
 1 : 12,000  
 1 inch = 1,000 ft  


**Figure**  
**2**  
PROJECT: 21-26719F

**POTENTIOMETRIC SURFACE MAP  
QUATERNARY ALLUVIUM AQUIFER  
SECOND QUARTER 2011**  
UIC Permit #NUEV94218 Report  
Nevada Environmental Response Trust (NERT)  
Henderson, Nevada

DESIGNED BY:	EK	NO.	DESCRIPTION:	DATE:	BY:
DRAWN BY:	EK/RS				
CHECKED BY:					
APPROVED BY:					

