

2nd Qtr. 07

94218

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Fredrick R. Stater  
Plant Manager

JUL 27 2007

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July 24, 2007

ENVIRONMENTAL PROTECTION

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

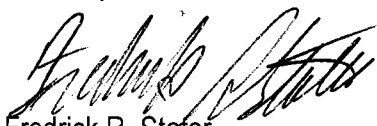
Subject: UIC Permit # UNEV94218 Permit – Second Quarter 2007

Tronox LLC, Tronox, maintains Underground Injection Control (UIC) Permit #NEV94218 for groundwater remediation at its Henderson, Nevada, facility. Pursuant to Section I.A.3, samples of the Lake Mead water added to the recharge trenches were collected and analyzed for the second quarter of 2007. Please see Attachment 1 for an analytical summary and Attachment 2 for the electronic analytical reports.

Section I.A.3 requires quarterly groundwater monitoring; this information is provided in Attachment 2, as both an analytical summary and electronic analytical reports. Section I.A.3 also requires monitoring of the injection and the extraction monthly rate averages. Average flows of Lake Mead water injection and groundwater extraction are listed in Attachment 2.

Please feel free to contact Susan Crowley at (702) 651-2234 or [susan.crowley@tronox.com](mailto:susan.crowley@tronox.com) if you have any questions regarding this information. Thank you.

Sincerely,

  
Fredrick R. Stater  
Plant Manager

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cc: Please see attached distribution sheet

  
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Attachments

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Updated: 10-May-07

**Document Name:** UIC Quarterly Report \*

\* Cover letter includes everything but the analytical reports on CD (Data) - and is reproduced in a 2-sided transmittal

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## ATTACHMENT 1

### Lake Mead Water Added to Recharge Trenches Analytical Information (Analytical reports included on CD)



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Analytical Summary

**UIC Permit UNEV94218 - 2nd Quarter 2007 - Stabilized Water Injection Analytical Summary**

Sample Date	Sample ID	Analyte	Result	UNIT	MRL	UNIT	Method
4/9/2007	STABILIZED WATER	Alkalinity in CaCO3 units	140	MGL		2 MGL	SM2320B/ 310.1
4/9/2007	STABILIZED WATER	Anion Sum - Calculated	11	MEQL	0.005	MEQL	ML/SM1030E
4/9/2007	STABILIZED WATER	Arsenic, Total, ICAP/MS	2.9	UGL		1 UGL	ML/EPA 200.8
4/9/2007	STABILIZED WATER	Boron, Total, ICAP	0.16	MGL	0.05	MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Barium, Total, ICAP/MS	150	UGL		2 UGL	ML/EPA 200.8
4/9/2007	STABILIZED WATER	Ionic Balance - Calculated	4.3	PCT		0 PCT	ML/SM1030E
4/9/2007	STABILIZED WATER	Calcium, Total, ICAP	83	MGL		1 MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Cation Sum - Calculated	12	MEQL	0.001	MEQL	ML/SM1030E
4/9/2007	STABILIZED WATER	Chloride	95	MGL		5 MGL	ML/EPA 300.0
4/9/2007	STABILIZED WATER	Perchlorate	5	UGL		4 UGL	EPA 314
4/9/2007	STABILIZED WATER	Specific Conductance	1063	UMHO		2 UMHO	SM2510B
4/9/2007	STABILIZED WATER	Fluoride	0.37	MGL		0.05 MGL	SM 4500F-C
4/9/2007	STABILIZED WATER	Iron, Total, ICAP	0.067	MGL	0.02	MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Bicarb.Alkalinity as HCO3,calc	170	MGL		2 MGL	SM2330B
4/9/2007	STABILIZED WATER	Potassium, Total, ICAP	5.4	MGL		1 MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Magnesium, Total, ICAP	32	MGL		0.1 MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Sodium, Total, ICAP	110	MGL		1 MGL	ML/EPA 200.7
4/9/2007	STABILIZED WATER	Nitrate as Nitrogen by IC	0.72	MGL		0.5 MGL	ML/EPA 300.0
4/9/2007	STABILIZED WATER	PH (H3=past HT, not compliant)	8.1	UNIT	0.001	UNIT	SM4500-HB
4/9/2007	STABILIZED WATER	Sulfate	270	MGL		2.5 MGL	ML/EPA 300.0
4/9/2007	STABILIZED WATER	Total Dissolved Solid (TDS)	678	MGL		10 MGL	E160.1/SM2540C
5/14/2007	STABILIZED WATER	Alkalinity in CaCO3 units	135	MGL		2 MGL	SM2320B/ 310.1
5/14/2007	STABILIZED WATER	Anion Sum - Calculated	11	MEQL	0.005	MEQL	ML/SM1030E
5/14/2007	STABILIZED WATER	Arsenic, Total, ICAP/MS	2.4	UGL		1 UGL	ML/EPA 200.8
5/14/2007	STABILIZED WATER	Boron, Total, ICAP	0.14	MGL	0.05	MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Barium, Total, ICAP/MS	160	UGL		2 UGL	ML/EPA 200.8
5/14/2007	STABILIZED WATER	Calcium, Total, ICAP	80	MGL		1 MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Cation Sum - Calculated	11	MEQL	0.001	MEQL	ML/SM1030E
5/14/2007	STABILIZED WATER	Chloride	97	MGL		5 MGL	ML/EPA 300.0
5/14/2007	STABILIZED WATER	Perchlorate	5.2	UGL		4 UGL	EPA 314
5/14/2007	STABILIZED WATER	Specific Conductance	1070	UMHO		2 UMHO	SM2510B
5/14/2007	STABILIZED WATER	Fluoride	0.33	MGL		0.05 MGL	SM 4500F-C
5/14/2007	STABILIZED WATER	Iron, Total, ICAP	0.028	MGL	0.02	MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Bicarb.Alkalinity as HCO3,calc	160	MGL		2 MGL	SM2330B
5/14/2007	STABILIZED WATER	Potassium, Total, ICAP	5.2	MGL		1 MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Magnesium, Total, ICAP	31	MGL		0.1 MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Sodium, Total, ICAP	97	MGL		1 MGL	ML/EPA 200.7
5/14/2007	STABILIZED WATER	Nitrate as Nitrogen by IC	0.68	MGL		0.5 MGL	ML/EPA 300.0
5/14/2007	STABILIZED WATER	PH (H3=past HT, not compliant)	8.2	UNIT	0.01	UNIT	SM4500-HB
5/14/2007	STABILIZED WATER	Sulfate	270	MGL		2.5 MGL	ML/EPA 300.0
5/14/2007	STABILIZED WATER	Metals Turbidity	0.44	NTU		0.02 NTU	HACH
5/14/2007	STABILIZED WATER	Total Dissolved Solid (TDS)	702	MGL		10 MGL	E160.1/SM2540C
6/11/2007	STABILIZED WATER	Chloroform (Trichloromethane)	1.4	UGL		0.5 UGL	ML/EPA 624
6/11/2007	STABILIZED WATER	Dibromochloromethane	1.2	UGL		0.5 UGL	ML/EPA 624
6/11/2007	STABILIZED WATER	Dichlorobromomethane	1.4	UGL		0.5 UGL	ML/EPA 624
6/11/2007	STABILIZED WATER	Alkalinity in CaCO3 units	137	MGL		2 MGL	SM2320B/ 310.1
6/11/2007	STABILIZED WATER	Anion Sum - Calculated	11	MEQL	0.005	MEQL	ML/SM1030E
6/11/2007	STABILIZED WATER	Arsenic, Total, ICAP/MS	2.5	UGL		1 UGL	ML/EPA 200.8
6/11/2007	STABILIZED WATER	Boron, Total, ICAP	0.16	MGL	0.05	MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	Barium, Total, ICAP/MS	160	UGL		2 UGL	ML/EPA 200.8
6/11/2007	STABILIZED WATER	Calcium, Total, ICAP	84	MGL		1 MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	Cation Sum - Calculated	11	MEQL	0.001	MEQL	ML/SM1030E
6/11/2007	STABILIZED WATER	Chloride	95	MGL		5 MGL	ML/EPA 300.0
6/11/2007	STABILIZED WATER	Perchlorate	6.2	UGL		4 UGL	EPA 314
6/11/2007	STABILIZED WATER	Chromium, Total, ICAP/MS	1	UGL		1 UGL	ML/EPA 200.8
6/11/2007	STABILIZED WATER	Specific Conductance	1060	UMHO		2 UMHO	SM2510B
6/11/2007	STABILIZED WATER	Fluoride	0.32	MGL		0.05 MGL	SM 4500F-C
6/11/2007	STABILIZED WATER	Iron, Total, ICAP	0.028	MGL	0.02	MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	Bicarb.Alkalinity as HCO3,calc	170	MGL		2 MGL	SM2330B
6/11/2007	STABILIZED WATER	Potassium, Total, ICAP	5.6	MGL		1 MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	Magnesium, Total, ICAP	31	MGL		0.1 MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	Sodium, Total, ICAP	100	MGL		1 MGL	ML/EPA 200.7
6/11/2007	STABILIZED WATER	PH (H3=past HT, not compliant)	7.8	UNIT	0.01	UNIT	SM4500-HB
6/11/2007	STABILIZED WATER	Sulfate	270	MGL		2.5 MGL	ML/EPA 300.0
6/11/2007	STABILIZED WATER	Total Dissolved Solid (TDS)	710	MGL		10 MGL	E160.1/SM2540C

## ATTACHMENT 2

### Groundwater Monitoring

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



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Water Levels – 2<sup>nd</sup> Q 07



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Summary of Monitoring Well Information

**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-94 TOC: 1695.07	
	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	12.73	1682.34
Feb-05	31.96	1727.97	30.41	1729.32	27.16	1718.89	27.04	1715.49	25.39	1718.84	12.07	1683
May-05	32.73	1727.2	30.77	1728.96	27.62	1718.43	27.73	1714.8	28.73	1715.5	12.71	1682.36
Aug-05	30.24	1729.69	30.11	1729.62	27.38	1718.67	26.53	1716	26.18	1718.05	11.48	1683.59
Nov-05	31.09	1728.84	30.28	1729.45	25.51	1720.54	26.1	1716.43	27.98	1716.25	11.4	1683.67
Feb-06	30.93	1729.00	30.35	1729.38	25.33	1720.72	25.48	1717.05	29.23	1715	11.62	1683.45
May-06	31.15	1728.78	30.51	1729.22	24.61	1721.44	25.13	1717.4	29.34	1714.89	11.55	1683.52
Aug-06	32.06	1727.87	31.65	1728.08	24.97	1721.08	26.12	1716.41	29.24	1714.99	11.59	1683.48
Nov-06	32.18	1727.75	31.01	1728.72	25.84	1720.21	26.09	1716.44	29.89	1714.34	11.4	1683.67
Feb-07	32.56	1727.37	31.03	1728.7	27.31	1718.74	26.75	1715.78	30	1714.23	11.64	1683.43
May-07	32.97	1726.96	31.13	1728.6	29.06	1716.99	27.59	1714.94	31.09	1713.14	11.62	1683.45
	-	-	-	-	-	-	-	-	-	-	-	-

**Tronox LLC  
Henderson, Nevada Facility**

**UIC PERMIT MONITORING WELLS  
QUARTERLY GROUNDWATER ELEVATIONS (feet)**

M-96		M-98		M-99		M-100		M-102	
TOC: 1693.49		TOC: 1731.91		TOC: 1730.74		TOC: 1730.93		TOC: 1740.24	
DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11.62	1681.9	33.02	1698.88	30.53	1700.21	28.83	1702.1	39.18	1701.06
10.2	1683.32	32.97	1698.93	29.96	1700.78	27.98	1702.95	37.73	1702.51
10.89	1682.63	32.98	1698.92	30.09	1700.65	28.47	1702.46	39.44	1700.8
9.79	1683.73	30.81	1701.09	28.74	1702	26.71	1704.22	36.51	1703.73
9.75	1683.77	30.4	1701.5	28.3	1702.44	26.22	1704.71	36.14	1704.1
10.1	1683.42	29.95	1701.95	27.97	1702.77	26	1704.93	36.48	1703.76
10.03	1683.49	28.66	1703.24	27.85	1702.89	25.98	1704.95	36.91	1703.33
10.1	1683.42	29.9	1702	27.89	1702.85	26.02	1704.91	37.33	1702.91
9.93	1683.59	30	1701.9	27.97	1702.77	26.27	1704.66	37.66	1702.58
10.25	1683.27	29.93	1701.97	28.07	1702.67	26.21	1704.72	37.76	1702.48
10.2	1683.32	30.11	1701.79	28.32	1702.42	26.77	1704.16	38.05	1702.19
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**UIC Permit UNEV94218 - 2nd Quarter 2007 - Monitor Well Analytical Summary**

Sample Date	Sample ID	Analyte	Result	UNIT	MRL	UNIT	Method
4/30/2007	M-44	Perchlorate	754000	UGL	200000	UGL	EPA 314
4/30/2007	M-44	Chromium, Total, ICAP	0.92	MGL	0.02	MGL	ML/EPA 6010B
4/30/2007	M-44	Hexavalent chromium (Cr VI)	0.98	MGL	0.05	MGL	ML/EP6 7196
4/30/2007	M-44	PH (H3=past HT, not compliant)	7.6	UNIT	0.001	UNIT	ML/EPA 9040B
4/30/2007	M-44	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
4/30/2007	M-44	Total Dissolved Solid (TDS)	7240	MGL	10	MGL	E160.1/SM2540C
4/30/2007	M-94	Perchlorate	681000	UGL	40000	UGL	EPA 314
4/30/2007	M-94	Chromium, Total, ICAP	0.73	MGL	0.02	MGL	ML/EPA 6010B
4/30/2007	M-94	Hexavalent chromium (Cr VI)	0.78	MGL	0.05	MGL	ML/EP6 7196
4/30/2007	M-94	PH (H3=past HT, not compliant)	7.6	UNIT	0.001	UNIT	ML/EPA 9040B
4/30/2007	M-94	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
4/30/2007	M-94	Total Dissolved Solid (TDS)	7620	MGL	10	MGL	E160.1/SM2540C
5/1/2007	M-37	Chlorate by IC	19200	UGL	5000	UGL	ML/EPA 9056
5/1/2007	M-37	Perchlorate	3310000	UGL	200000	UGL	EPA 314
5/1/2007	M-37	Chromium, Total, ICAP	0.032	MGL	0.02	MGL	ML/EPA 6010B
5/1/2007	M-37	Nitrate as Nitrogen by IC	84.1	MGL	2.5	MGL	ML/EPA 9056
5/1/2007	M-37	PH (H3=past HT, not compliant)	7.4	UNIT	0.001	UNIT	ML/EPA 9040B
5/1/2007	M-37	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/1/2007	M-37	Total Dissolved Solid (TDS)	6180	MGL	10	MGL	E160.1/SM2540C
5/2/2007	M-11	Chlorate by IC	434000	UGL	50000	UGL	ML/EPA 9056
5/2/2007	M-11	Perchlorate	25100	UGL	4000	UGL	EPA 314
5/2/2007	M-11	Chromium, Total, ICAP	2.7	MGL	0.02	MGL	ML/EPA 6010B
5/2/2007	M-11	Hexavalent chromium (Cr VI)	2.7	MGL	0.1	MGL	ML/EP6 7196
5/2/2007	M-11	Nitrate as Nitrogen by IC	3.01	MGL	1	MGL	ML/EPA 9056
5/2/2007	M-11	PH (H3=past HT, not compliant)	7.9	UNIT	0.001	UNIT	ML/EPA 9040B
5/2/2007	M-11	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/2/2007	M-11	Total Dissolved Solid (TDS)	3180	MGL	10	MGL	E160.1/SM2540C
5/3/2007	M-12A	Chlorate by IC	1980000	UGL	500000	UGL	ML/EPA 9056
5/3/2007	M-12A	Perchlorate	283000	UGL	4	UGL	EPA 314
5/3/2007	M-12A	Chromium, Total, ICAP	12	MGL	0.05	MGL	ML/EPA 6010B
5/3/2007	M-12A	Hexavalent chromium (Cr VI)	14	MGL	0.5	MGL	ML/EP6 7196
5/3/2007	M-12A	Nitrate as Nitrogen by IC	18.2	MGL	5	MGL	ML/EPA 9056
5/3/2007	M-12A	PH (H3=past HT, not compliant)	7.9	UNIT	0.001	UNIT	ML/EPA 9040B
5/3/2007	M-12A	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/3/2007	M-12A	Total Dissolved Solid (TDS)	7910	MGL	10	MGL	E160.1/SM2540C
5/3/2007	M-36	Chlorate by IC	6620000	UGL	500000	UGL	ML/EPA 9056
5/3/2007	M-36	Perchlorate	1510000	UGL	200000	UGL	EPA 314
5/3/2007	M-36	Chromium, Total, ICAP	34	MGL	0.2	MGL	ML/EPA 6010B
5/3/2007	M-36	Hexavalent chromium (Cr VI)	38	MGL	1	MGL	ML/EP6 7196
5/3/2007	M-36	Nitrate as Nitrogen by IC	59.4	MGL	5	MGL	ML/EPA 9056
5/3/2007	M-36	PH (H3=past HT, not compliant)	7.1	UNIT	0.001	UNIT	ML/EPA 9040B
5/3/2007	M-36	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/3/2007	M-36	Total Dissolved Solid (TDS)	15400	MGL	10	MGL	E160.1/SM2540C
5/3/2007	M-84	Perchlorate	4100	UGL	4	UGL	EPA 314
5/3/2007	M-84	Chromium, Total, ICAP	0.042	MGL	0.02	MGL	ML/EPA 6010B
5/3/2007	M-84	Hexavalent chromium (Cr VI)	0.046	MGL	0.005	MGL	ML/EP6 7196
5/3/2007	M-84	PH (H3=past HT, not compliant)	7.6	UNIT	0.001	UNIT	ML/EPA 9040B
5/3/2007	M-84	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/3/2007	M-84	Total Dissolved Solid (TDS)	1250	MGL	10	MGL	E160.1/SM2540C
5/3/2007	M-100	Perchlorate	12900	UGL	2000	UGL	EPA 314
5/3/2007	M-100	Chromium, Total, ICAP	0.24	MGL	0.02	MGL	ML/EPA 6010B
5/3/2007	M-100	Hexavalent chromium (Cr VI)	0.27	MGL	0.005	MGL	ML/EP6 7196
5/3/2007	M-100	PH (H3=past HT, not compliant)	8	UNIT	0.001	UNIT	ML/EPA 9040B
5/3/2007	M-100	Metals Turbidity	9.99	NTU	0.02	NTU	HACH
5/3/2007	M-100	Total Dissolved Solid (TDS)	546	MGL	10	MGL	E160.1/SM2540C



Tronox LLC  
Henderson, Nevada Facility

UIC PERMIT UNEV94218  
EXTRACTION AND INJECTION RATES (gpm)

MONTH	EXTRATION RATE	INJECTION RATE			MONTHLY RATIO
	(gpm)	(gpm)			
	Monthly Average	Monthly Average	Daily High	Daily Low	*
April 2007	68.1	33.1	67.4	23.5	2.2
May 2007	66.2	29.2	31.7	24.9	2.3
June 2007	64.3	28.8	30.5	18.9	2.3

\* Ratio = average extraction rate / average injection rate