

750 Royal Oaks Drive, Sulte 100 Morrovia, California 91016-3629 Tel: 626 386 1100 Fax: 626 386 1101 1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Tronox LLC - Henderson PO Box 55

Henderson , NV 89009

Attention: Susan Crowley Fax: (405) 302-4607

DATE OF ISSUE Jul 15 2009 MWH LABORATORIES

ADE Andy Eaton Project Manager



This report shall not be reproduced except in full, without the written approval of the laboratory.

Laboratory certifies that the test results meet all NELAC requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments, QC Report, QC Summary, Data Report, Hits Report, totaling 7 page[s].



July 15, 2009

Ms. Susan Crowley Tronox PO Box 55 Henderson, NV 89009

Subject: Case Narrative report 272306

Sample receipt: The samples arrived at MWH on June 27, 2009, with proper chain of custody. All containers were received without any visible signs of tampering or breakage at proper temperature. Samples are identified on the acknowledgement, which is part of the report package, along with the chain of custody.

Case Narrative:

For the MWH Laboratories data the following issues were observed:

None

Note that for ion chromatography tests such as perchlorate, the exact analysis time is not shown on the report. Only the date of analysis appears. The time normally defaults to 00:00.

If you have any questions, do not hesitate to contact us.

Sincerely yours,

Endrew Eaton

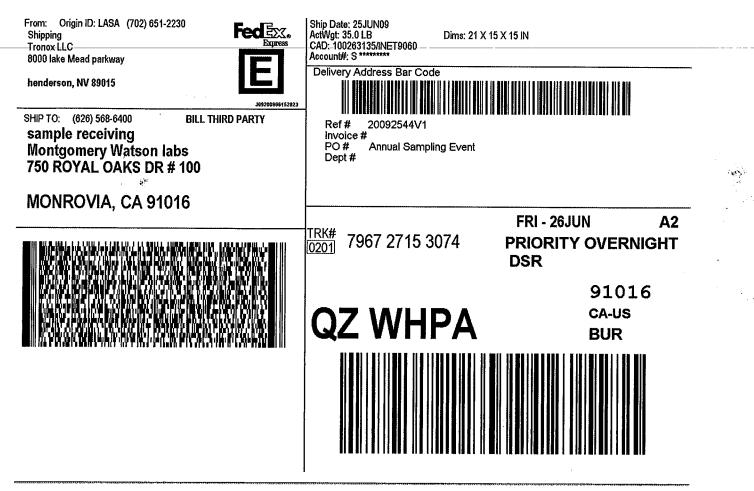
Andrew Eaton, PhD Project Manager

750 Royal Oaks Drive Suite 100 Monrovia, CA 91016

TEL 626-3865-1100 FAX 626-386-1101 www.mwhlabs.com 113

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(626) 568-6400	00	(800) 566-5227	SCANNA S					<i>נס</i> ו	AMPLE	SAMPLE TEMP, RECEIPT AT LAB:	PT AT LAB:	0		
									BLUE ICE:	: FROZEN	EN PARTIALLY FROZEN		THAWED	
TO BE COMPLETED BT SAMPLER: COMPANY / PROJECT NAME	O.IFCT NAN	AMPLEK:												
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Tranox LLC			Annual Groundwater Sampling - April / May					ANALYSE	S REQUIF	ted (mark an	ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)	ired for each sau	mple line)	
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<del>Brian Ho / S</del> usan Crowley	san Crowk		(702) 651-2234 Henderson, NV 89009					hromiu	*OI	90				SAMPLER
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1035		PC-94	06250				X							
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1215		1-20	PU-1,062509			X	X		X					
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		EW =	CEW = Chlor(am)inated Finished Water FW = Other Finished Water		RGW = Raw Ground Water RSW = Raw Surface Water	v Ground \ / Surface \	Nater Nater	030	CWW = Ch WW = Of SW = Sfr	CWW = Chlorinated Waste Water WW = Other Waste Water SW = Strom Water	ste Water iter	월 8 일 역	Reported by Weight: so = Soil sL = Sludge	<u>sight:</u>
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#### After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is \$500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

# ACKNOWLEDGMENT OF SAMPLES RECEIVED

Tronox LLC Henderson Plant P.O. Box 55 Henderson, NV 89009 Attn: Susan Crowley Phone: (702) 651-2234

Customer Code: KERRMCGEE-NV PO#: SMC-06109901 Group#: 272306 Project#: CLO4 Proj Mgr: Andrew Eaton Phone: (626) 386-1125

The following samples were received from you on **06/26/09**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample	ЪТ			Matrix		Sample 1	Date
bamproff	bampro		Tests Scl	heduled				
2906270007	PC-94		-		Water		25-jun-2	2009 10:35:00
			CLO4 TDS	CR6010	EC9050	P	PH9040	T
2906270008	PC-2				Water		25-jun-:	2009 11:40:00
			CLO4	CR6010	EC9050	Р	PH9040	T
			TDS					
2906270009	PC-1				Water		25-jun-2	2009 12:15:00
			CL039056	CLO4	CR6010	EC9050	P	PH9040
			Т	TDS				
			Test 2	Acronym	Descriptio	n		

Test Acronym	Description
CLO39056	Chlorate by IC
CLO4	Perchlorate
CR6010	Chromium, Total, ICAP
EC9050	Specific Conductance Metals sample pH
PH9040	PH (H3=past HT, not compliant)
Т	Metals Turbidity
TDS	Total Dissolved Solid (TDS)

Page 1 Group #	Date Sampled Date Received	dress rson Plant 009 Comments	don't need an ice chest - send via first overnight service please.
	ProjectName	Billing Address Tronox LLC Henderson Plant PO.Box 55 Henderson. NV 89009 UN DOT # Comm	UN 1604
Order for Tranex LLC. Henderson. Plant	NWL Project Manager Client Code KERRMCGEE-NV   Phone/Voice Mail Project Code CLQ4   Phone/Voice Mail PO# / Job#   SC-1 SC-1   Sampler: please return this paper with your samples	Send Report to   Tronox LLC Henderson Plant   PO.Box 55.   PO.Box 55.   Henderson. NV 89009   Henderson. NV 89009   ATTN: Susan Crowley.   PHONE: 702-651-2234   FAX: 702-651-2234   Bottles-Qty for each sample, type & preservative if any	1 60ml poly+0.60 mL 5% EDA sol'n 1 0 0 0 Tracking # 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
MVH Laboratories, a Divsion of MWH Americas, Inc. <b>Bottle Order</b> 750 Royal Oaks Drive Suite 100 Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124	Your N Direct	Ship Sample Kits to Tronox LLC 8000 West Lake Mead Drive Henderson. NV 89015 Henderson. Susan. Crowley ATTN: Susan. Crowley PHONE: 702-651-2234 Tests Qteline# Bottles-Qty fo	Date Shipped
MWH Laborat 750 Royal Oak Monrovia CA 5	Andrew Eaton (626).386-1125 BO# <b>51795</b>	Created by ADE Order Date 06/24/09 Date Needed by Client 06/25/09 Date Samples to Arrive at MWL 06/26/09 # of Samples	1   CLO39056     Close   Status



Report Comments #272306

750 Royal Oaks Drive, Suite 100 Monrovia, California 91016-3629 Tel: 626 386 1100 Fax: 626 386 1101 1 800 566 LABS (1 800 566 5227)

## Client Specific Comments

I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein.

Signature: A



Laboratory Hits Report #272306

750 Royal Oaks Drive, Suite 100 Monrovia, California 91016-3629 Tel: 626 386 1100 Fax: 626 386 1101 1 800 566 LABS (1 800 566 5227)

Tronox LLC - Henderson Susan Crowley PO Box 55 Henderson , NV 89009 Samples Received 26-jun-2009 12:40:00

Analyzed	Sample#	Sample	ID	Result	Federal MCL	UNITS	MRL
	2906270007	PC-94					
07/10/09 06/26/09 07/03/09 06/30/09 06/29/09	Chromium, To PH (H3=past Perchlorate Specific Con Total Dissol	HT, not co ductance	-	0.067 7.5 4930 6800 5880	500	mg/l Units ug/l umho/cm mg/l	0.010 0.0010 400 2.0 10
	2906270008	PC-2					
07/10/09 07/07/09 06/26/09 07/03/09 06/30/09 06/29/09	Chromium, To Metals diges PH (H3=past Perchlorate Specific Con Total Dissol	tion perfo HT, not co ductance	ompliant)	0.21 Y 7.6 5590 7280 6050	500	mg/l Yes/No Units ug/l umho/cm mg/l	0.010 0.0010 400 2.0 10
	2906270009	PC-4					
07/10/09 07/10/09 07/07/09 06/29/09 06/26/09 07/03/09 06/30/09 06/29/09	Chlorate by Chromium, To Metals diges Nitrate as N PH (H3=past ) Perchlorate Specific Cone Total Dissol	tal, ICAP tion perfo itrogen by HT, not co ductance	r IC ompliant)	107000 0.14 Y 23.5 7.5 8260 8870 7540	500	ug/l mg/l Yes/No mg/l Units ug/l umho/cm mg/l	2000 0.010 2.5 0.0010 400 2.0 10

SUMMARY OF POSITIVE DATA ONLY.



750 Royal Oaks Drive, Suite 100 Monrovia, California 91016-3629 Tel: 626 386 1100 Fax: 626 386 1101 1 800 566 LABS (1 800 566 5227)

Tronox LLC - Henderson Susan Crowley PO Box 55 Henderson , NV 89009 Laboratory Data Report #272306

Samples Received 06/26/09

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
PC-94	(29062700	07)	Sampled	on 06/25/09 10:35				
	07/03/09 00:00	489429	( EPA 314	) Perchlorate	4930	ug/l	400	100
07/06/09	07/10/09 00:00	489749	( ML/EPA 6010B	) Chromium, Total, ICAP	0.067	mg/l	0.010	1
	06/30/09 10:02	489127	( ML/EPA 9050A	) Specific Conductance	6800	umho/cm	2.0	1
	06/26/09 15:50	489019	( ML/EPA 9040B	) PH (H3≃past HT, not compliant)	7.5	Units	0.0010	1
06/29/09	06/29/09 20:20	489478	( E160.1/SM25400	) Total Dissolved Solid (TDS)	5880	mg/l	10	1
PC-2	(290627000	8)	Sampled o	on 06/25/09 11:40				
	07/03/09 00:00	489429	( EPA 314	) Perchlorate	5590	ug/l	400	100
07/06/09	07/10/09 00:00	489749	( ML/EPA 6010B	) Chromium, Total, ICAP	0.21	mg/l	0.010	1
	07/07/09 13:22		( EPA 200 Prep	) Metals digestion performed.	¥	Yes/No	0	1
	06/30/09 10:02	489127	( ML/EPA 9050A	) Specific Conductance	7280	umho/cm	2.0	1
	06/26/09 15:50	489019	( ML/EPA 9040B	) PH (H3=past HT, not compliant)	7.6	Units	0.0010	1
06/29/09	06/29/09 20:20	489478	( E160.1/SM25400	) Total Dissolved Solid (TDS)	6050	mg/l	10	1
PC-4	(290627000	9)	Sampled o	on 06/25/09 12:15				
	07/10/09 00:00	489736	( ML/EPA 9056	) Chlorate by IC	107000	ug/l	2000	200
	07/03/09 00:00	489429	( EPA 314	) Perchlorate	8260	ug/l	400	100
07/06/09	07/10/09 00:00	489749	( ML/EPA 6010B	) Chromium, Total, ICAP	0.14	mg/l	0.010	1
	07/07/09 13:22		( EPA 200 Prep	) Metals digestion performed.	Y	Yes/No	0	1
	06/30/09 10:02	489127	( ML/BPA 9050A	) Specific Conductance	8870	umho/cm	2.0	1
	06/29/09 13:23	489116	( ML/EPA 9056	) Nitrate as Nitrogen by IC	23.5	mg/l	2.5	25
	06/26/09 15:50	489019	( ML/EPA 9040B	) PH (H3=past HT, not compliant)	7.5	Units	0.0010	1
06/29/09	06/29/09 20:20	489478	( E160.1/SM25400	) Total Dissolved Solid (TDS)	7540	mg/l	10	1



Laboratory QC Summary #272306

750 Royal Oaks Drive, Suite 100 Monrovia, California 91016-3629 Tel: 626 386 1100 Fax: 626 386 1101 1 800 566 LABS (1 600 566 5227)

Tronox LLC - Henderson

QC Ref #489019 - PH (H3=past HT, not compliant)Analysis Date: 06/26/2009 2906270007 PC-94 Analyzed by: nem 2906270008 PC-2 Analyzed by: nem 2906270009 PC-4 Analyzed by: nem QC Ref #489116 - Nitrate as Nitrogen by IC Analysis Date: 06/29/2009 2906270009 PC-4 Analyzed by: sxk QC Ref #489127 - Specific Conductance Analysis Date: 06/30/2009 2906270007 PC-94 Analyzed by: sar 2906270008 PC-2 Analyzed by: sar 2906270009 PC-4 Analyzed by: sar QC Ref #489429 - Perchlorate Analysis Date: 07/03/2009 2906270007 PC-94 Analyzed by: ser 2906270008 PC-2 Analyzed by: ser 2906270009 PC-4 Analyzed by: ser QC Ref #489478 - Total Dissolved Solid (TDS) Analysis Date: 06/29/2009 2906270007 PC-94 Analyzed by: jrf 2906270008 PC-2 Analyzed by: jrf 2906270009 PC-4 Analyzed by: jrf QC Ref #489736 - Chlorate by IC Analysis Date: 07/10/2009 2906270009 PC-4 Analyzed by: ser QC Ref #489749 - Chromium, Total, ICAP Analysis Date: 07/10/2009 2906270007 PC-94 Analyzed by: csk PC-2 Analyzed by: csk 2906270008 2906270009 PC-4 Analyzed by: csk



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Tronox LLC - Henderson

QC Ref #489019

PH (H3=past HT, not compliant)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	PH (H3=past HT, not compliant)	7.83	7.76	UNIT		( 0-20 )	0.9

QC Ref #489116

Nitrate as Nitrogen by IC

QC	Analyte	Spiked	Recovered Un	hits Yield (%)	Limits (%) RPD (%)
AASPKSMP	Spiked sample	Lab # 29	200906290088MG	¥L.	( 0-0 )
LCS1	Nitrate as Nitrogen by IC	2.5	2.40 MG	£L 96.0	( 90-110 )
LCS2	Nitrate as Nitrogen by IC	2.5	2.41 MG	96.4	( 90-110 )
MBLK	Nitrate as Nitrogen by IC	ND	<0.10 MG	н.	
MRL_CHK	Nitrate as Nitrogen by IC	0.050	0.0454 MG	90.8	( 50-150 )
MS	Nitrate as Nitrogen by IC	1.25	1.34 MG	Ъ 107.2	( 87-121 )
MSD	Nitrate as Nitrogen by IC	1.25	1.33 MG	L 106.4	( 87-121 )
RPD_LCS	Nitrate as Nitrogen by IC	96.000	96.400 MG	SL 0.4	( 0-20 )
RPD_MS	Nitrate as Nitrogen by IC	107.200	106.400 MG	SL 0.7	( 0-20 )

QC Ref #489127

Specific Conductance

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
DUP	Specific Conductance	1360	1360	UMHO		( 0-20 )	0.0
MRL_CHK	Specific Conductance	2.000	1.90	UMHO	95.0	( 50-150 )	

QC Ref #489429 Perchlorate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 29	06300163	UGL		( 0-0 )	
LCS1	Perchlorate	25.0	24.3	UGL	97.2	( 85-115 )	
LCS2	Perchlorate	25.0	24.3	UGL	97.2	( 85-115 )	
LCS3	Perchlorate	4	4.58	UGL	114.5	( 75-125 )	
MBLK	Perchlorate	ND	<4.0	UGL			
MS	Perchlorate	25.0	22.4	UGL	89.6	( 80-120 )	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by <u>Underlining</u>. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.



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Tronox LLC - Henderson (continued)

MSD	Perchlorate	25.0	22.5	UGL	90.0	( 80-120 )
RPD_LCS	Perchlorate	97.200	97.200	UGL	0.0	( 0-15 )
RPD_MS	Perchlorate	89.600	90.000	UGL	1.0	( 0-15 )

### QC Ref #489478

## Total Dissolved Solid (TDS)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
AASPKSMP	Spiked sample	Lab # 29	0906250222	MGL		( 0-0 )	
DUP	Total Dissolved Solid (TDS)	884	890	MGL		( 0-10 )	0.7
LCS1	Total Dissolved Solid (TDS)	175	178	MGL	101.7	( 80-114 )	
LCS2	Total Dissolved Solid (TDS)	700	704	MGL	100.6	( 80-114 )	
MBLK	Total Dissolved Solid (TDS)	ND	<10	MGL			
MRL_CHK	Total Dissolved Solid (TDS)	10.0	13	MGL	130.0	( 50-150 )	
RPD_LCS	Total Dissolved Solid (TDS)	101.714	100.571	MGL	1.1	( 0-20 )	

QC Ref #489736

Chlorate by IC

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%) RPD (%)
AASPKSMP	Spiked sample	Lab # 29	06240333	UGL		( 0-0 )
LCS1	Chlorate by IC	200	198	UGL	99.0	( 90-110 )
LCS2	Chlorate by IC	200	198	UGL	99.0	( 90-110 )
MBLK	Chlorate by IC	ND	<10	UGL		
MRL_CHK	Chlorate by IC	10.000	8.58	UGL	85.8	( 50-150 )
MS	Chlorate by IC	100	99.1	UGL	99.1	( 75-125 )
MSD	Chlorate by IC	100	99.0	UGL	99.0	( 75-125 )
RPD_LCS	Chlorate by IC	99.000	99.000	UGL	0.0	( 0-20 )
RPD_MS	Chlorate by IC	99.100	99.000	UGL	0.1	( 0-20 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by <u>Underlining</u>. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.



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Tronox LLC - Henderson (continued)

# QC Ref #489749

## Chromium, Total, ICAP

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%) RPD (%)
AASPKSMP	Spiked sample	Lab # 29	06300071	MGL		( 0-0 )
LCS1	Chromium, Total, ICAP	1.00	1.06	MGL	106.0	( 85-115 )
LCS2	Chromium, Total, ICAP	1.00	1.07	MGL	107.0	( 85-115 )
MBLK	Chromium, Total, ICAP	ND	<0.010	MGL		
MRL_CHK	Chromium, Total, ICAP	0.010	0.0106	MGL	106.0	( 50-150 )
MS	Chromium, Total, ICAP	1.00	0.992	MGL	99.2	( 70-130 )
MSD	Chromium, Total, ICAP	1.00	0.983	MGL	98.3	( 70-130 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by <u>Underlining</u>. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.