



MWH Laboratories

A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3829
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
Jun 12 2009
MWH LABORATORIES

ADE Andy Eaton
Project Manager



Report#: 270564
Project: CL04
PO#: Susan Crowle

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 6 page[s].



BUILDING A BETTER WORLD

June 16, 2009

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

Subject: Case Narrative report 270564

Sample receipt: The samples arrived at MWH Laboratories, Monrovia, CA on May 8, 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:

Several TDS samples were reported from past hold time re-analyses because initial analyses did not match historical data and sample volumes used for the test are very small due to high TDS, increasing potential for error.

Note that for ion chromatography analyses such as perchlorate, the exact analysis time is not typically shown on the report. Either a 00:00 is shown or the time of injection of the first sample in the batch.

Sincerely,

Andrew Eaton, PhD
Project Manager



MWH Laboratories, a Division of MWH Americas, Inc.
 750 Royal Oaks Avenue Suite 100
 Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Tronox LLC- Henderson Standing

Andrew Eaton..... Your MWL Project Manager
 (626) 386-1125..... Direct Phone/Voice Mail

Client Code KERRMCGEE-MP
 Project Code CLO4
 PO# / Job# GWREMEDICATION
 Blanket PO

Period

SO# 47684 12374 RS

Sampler: Please Return this Paper with your samples

Created by GJY

0 Ship Sample Kits to

Send Report to

Billing Address

Order Date
 04/16/09

Veolia Water-Tronox LLC
 Gate 1
 8000 West Lake Mead Drive
 Henderson, NV 89015

Tronox LLC-Henderson Plant
 PO Box 55
 Henderson, NV 89009

Tronox LLC
 Attn: Accounts Payable
 PO BOX 268859
 Oklahoma City, OK 73126-8859

Date Needed by Client
 Date Samples to Arrive at MWL
 SHIP LOCATION

ATTN: Susan Crowley
 PHONE: 702-651-2234
 ATTN: Susan Crowley
 PHONE: 702-651-2234
 FAX: 702-651-2310

Quote#

GJY

of Samples Tests

Bottles-Qty for each sample, type & preservative if any

UN#

Important Comments

# of Samples	Tests	Bottles-Qty for each sample, type & preservative if any	UN#	Important Comments
41	CLO4, TDS	1 250 ml poly /no preservative		These sites are monthly till further notice.
-	SHEET OF LABELS WITH WELL-IDS	see comments section		Shipping - please send bottles in cooler rather than a box
-				PC-86, PC-89, PC-91, PC-95, PC-97, PC-10, PC-12, PC-17, PC-18, PC-55, PC-101R
-				L-635, L-637
-				MW-K2, MW-K4
-				ARP-1, ARP-2, ARP-3, ARP-4
-				ARP-5, ARP-6, ARP-7, PC-53
-				PC-103, MW-K5, M-83
-				M-87, PC-98R; PC-56, PC-58;
-				PC-59, PC-60, PC-62, PC-68, PC-122
-				Do NOT prelabel bottles with site, but provide pre-printed labels for client to stick on
-				EXTRA BOTTLES INCLUDED
-				client code changed 7/25/03
-				bottle order and IDs updated 9/9/03

MWH Laboratories
 750 Royal Oaks Drive, Monrovia, CA 91016
 PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Tronox LLC - Henderson
 PO Box 55
 Henderson, NV 89009
 Attn: Susan Crowley
 Phone: 702-651-2234

Customer Code: KERRMCGEE-MP
 PO#: Susan Crowley PO
 Group#: 270564
 Project#: CLO4
 Proj Mgr: Andrew Eaton
 Phone: (626) 386-1125

The following samples were received from you on 05/08/09. 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 Id	Tests Scheduled	Matrix	Sample Date
2905110076	HMW9	CLO4 TDS	Water	07-may-2009 08:50:00
2905110077	PC-96	CLO4 TDS	Water	07-may-2009 09:50:00
2905110078	PC-112	CLO4 TDS	Water	07-may-2009 12:20:00
2905110079	PC-110	CLO4 TDS	Water	07-may-2009 14:00:00
2905110080	PC-107	CLO4 TDS	Water	07-may-2009 15:20:00

Test Acronym Description

Test Acronym	Description
CLO4	Perchlorate
TDS	Total Dissolved Solid (TDS)



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Report
Comments
#270564

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: _____

(QC Ref#: 2905110078)

Test: Perchlorate (EPA 314)

2905110078 was analysed within holding time using a 50x dilution, based on historical data. No peak was detected. The sample was reanalysed on 6.8.09 using a 2x dilution. The reanalysis result is reported.
HA - Initial analysis within holding time. Reanalysis was past holding time.



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Laboratory
Hits Report
#270564

Tronox LLC - Henderson
Susan Crowley
PO Box 55
Henderson , NV 89009

Samples Received
08-may-2009 11:00:00

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2905110076	HMW-9				
06/03/09	Perchlorate		5060		ug/l	400
05/14/09	Total Dissolved Solid (TDS)		5250	500	mg/l	10
	2905110077	PC-96				
06/03/09	Perchlorate		2630		ug/l	200
05/14/09	Total Dissolved Solid (TDS)		3350	500	mg/l	10
	2905110078	PC-112				
05/14/09	Total Dissolved Solid (TDS)		2600	500	mg/l	10
	2905110079	PC-110				
05/28/09	Perchlorate		1630		ug/l	200
05/14/09	Total Dissolved Solid (TDS)		4040	500	mg/l	10
	2905110080	PC-107				
06/03/09	Perchlorate		60000		ug/l	4000
05/14/09	Total Dissolved Solid (TDS)		4020	500	mg/l	10

SUMMARY OF POSITIVE DATA ONLY.



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Laboratory
Data Report
#270564

Tronox LLC - Henderson
Susan Crowley
PO Box 55
Henderson , NV 89009

Samples Received
05/08/09

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
HMW-9 (2905110076) Sampled on 05/07/09 08:50								
	06/03/09 10:17	486887	(EPA 314)	Perchlorate	5060	ug/l	400	100
05/14/09	05/14/09 10:10	484912	(E160.1/SM2540C)	Total Dissolved Solid (TDS)	5250	mg/l	10	1
PC-96 (2905110077) Sampled on 05/07/09 09:50								
	06/03/09 10:17	486887	(EPA 314)	Perchlorate	2630	ug/l	200	50
05/14/09	05/14/09 10:10	484912	(E160.1/SM2540C)	Total Dissolved Solid (TDS)	3350	mg/l	10	1
PC-112 (2905110078) Sampled on 05/07/09 12:20								
	06/08/09 19:25	487685	(EPA 314)	Perchlorate	ND(HA)	ug/l	8.0	2
05/14/09	05/14/09 10:55	484913	(E160.1/SM2540C)	Total Dissolved Solid (TDS)	2600	mg/l	10	1
PC-110 (2905110079) Sampled on 05/07/09 14:00								
	05/28/09 17:36	486371	(EPA 314)	Perchlorate	1630	ug/l	200	50
05/14/09	05/14/09 10:55	484913	(E160.1/SM2540C)	Total Dissolved Solid (TDS)	4040	mg/l	10	1
PC-107 (2905110080) Sampled on 05/07/09 15:20								
	06/03/09 10:17	486887	(EPA 314)	Perchlorate	60000	ug/l	4000	1000
05/14/09	05/14/09 10:55	484913	(E160.1/SM2540C)	Total Dissolved Solid (TDS)	4020	mg/l	10	1



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Laboratory
QC Summary
#270564

Tronox LLC - Henderson

QC Ref #484912 - Total Dissolved Solid (TDS) Analysis Date: 05/14/2009

2905110076	HMW-9	Analyzed by: maria
2905110077	PC-96	Analyzed by: maria

QC Ref #484913 - Total Dissolved Solid (TDS) Analysis Date: 05/14/2009

2905110078	PC-112	Analyzed by: maria
2905110079	PC-110	Analyzed by: maria
2905110080	PC-107	Analyzed by: maria

QC Ref #486371 - Perchlorate Analysis Date: 05/28/2009

2905110079	PC-110	Analyzed by: ser
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QC Ref #486887 - Perchlorate Analysis Date: 06/03/2009

2905110076	HMW-9	Analyzed by: ser
2905110077	PC-96	Analyzed by: ser
2905110080	PC-107	Analyzed by: ser

QC Ref #487685 - Perchlorate Analysis Date: 06/08/2009

2905110078	PC-112	Analyzed by: ser
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Laboratory
QC Report
#270564

Tronox LLC - Henderson

QC Ref #484912 Total Dissolved Solid (TDS)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
AASPKSMP	Spiked sample	Lab # 29	05080019	MGL		(0-0)	
DUP	Total Dissolved Solid (TDS)	534	530	MGL		(0-10)	0.8
LCS1	Total Dissolved Solid (TDS)	175	170	MGL	97.1	(80-114)	
LCS2	Total Dissolved Solid (TDS)	700	640	MGL	91.4	(80-114)	
MBLK	Total Dissolved Solid (TDS)	ND	<10	MGL			
MRL_CHK	Total Dissolved Solid (TDS)	10.0	11	MGL	110.0	(50-150)	
RPD_LCS	Total Dissolved Solid (TDS)	97.143	91.429	MGL	6.1	(0-20)	

QC Ref #484913 Total Dissolved Solid (TDS)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
AASPKSMP	Spiked sample	Lab # 29	05110078	MGL		(0-0)	
DUP	Total Dissolved Solid (TDS)	2610	2600	MGL		(0-10)	0.4
LCS1	Total Dissolved Solid (TDS)	175	186	MGL	106.3	(80-114)	
LCS2	Total Dissolved Solid (TDS)	700	712	MGL	101.7	(80-114)	
MBLK	Total Dissolved Solid (TDS)	ND	<10	MGL			
MRL_CHK	Total Dissolved Solid (TDS)	10.0	10	MGL	100.0	(50-150)	
RPD_LCS	Total Dissolved Solid (TDS)	106.286	101.714	MGL	4.4	(0-20)	

QC Ref #486371 Perchlorate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 29	05150094	UGL		(0-0)	
LCS1	Perchlorate	25.0	24.8	UGL	99.2	(85-115)	
LCS2	Perchlorate	25.0	24.7	UGL	98.8	(85-115)	
LCS3	Perchlorate	4	3.72	UGL	93.0	(75-125)	
MBLK	Perchlorate	ND	<4.0	UGL			
MS	Perchlorate	25.0	23.6	UGL	94.4	(80-120)	
MSD	Perchlorate	25.0	23.9	UGL	95.6	(80-120)	
RPD_LCS	Perchlorate	99.200	98.800	UGL	0.4	(0-15)	
RPD_MS	Perchlorate	94.400	95.600	UGL	1.0	(0-15)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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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Laboratory
QC Report
#270564

Tronox LLC - Henderson
(continued)

QC Ref #486887

Perchlorate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 29	06020022	UGL		(0-0)	
LCS1	Perchlorate	25.0	25.2	UGL	100.8	(85-115)	
LCS2	Perchlorate	25.0	24.5	UGL	98.0	(85-115)	
LCS3	Perchlorate	4	4.64	UGL	116.0	(75-125)	
MBLK	Perchlorate	ND	<4.0	UGL			
MS	Perchlorate	25.0	26.1	UGL	104.4	(80-120)	
MSD	Perchlorate	25.0	24.7	UGL	98.8	(80-120)	
RPD_LCS	Perchlorate	100.800	98.000	UGL	2.8	(0-15)	
RPD_MS	Perchlorate	104.400	98.800	UGL	0.9	(0-15)	

QC Ref #487685

Perchlorate

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 29	0603044	UGL		(0-0)	
LCS1	Perchlorate	25.0	23.5	UGL	94.0	(85-115)	
LCS2	Perchlorate	25.0	23.2	UGL	92.8	(85-115)	
LCS3	Perchlorate	4	3.02	UGL	75.5	(75-125)	
MBLK	Perchlorate	ND	<4.0	UGL			
MS	Perchlorate	25.0	24.4	UGL	97.6	(80-120)	
MSD	Perchlorate	25.0	24.0	UGL	96.0	(80-120)	
RPD_LCS	Perchlorate	94.000	92.800	UGL	1.3	(0-15)	
RPD_MS	Perchlorate	97.600	96.000	UGL	1.0	(0-15)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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.