MWH
LABORATORIES
A Division of MWH Americas, Inc.

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

Laboratory Report

for

Tronox LLC
PO Box 55
Henderson, NV 89009
Attention: Susan Crowley
Fax: 702-651-2310

Date of Issue
10/11/2010
Linda Geddes
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

LXG: Linda Geddes

Project Manager

Report#: 344858
Project: CWA-RCRA
Group: Weekly
Influent-effluent-quick
TAT-#KERRUS

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 Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

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

Customer Code: TRONOX
Group #: 344858
Project #: CWA-RCRA
Sample Group: Weekly Influent-effluent-quick
TAT-#KERRUS
Project Manager: Linda Geddes
Phone: (626) 386-1163

The following samples were received from you on **September 28, 2010**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
201009290034	Effluent	27-Sep-2010 0830

Ammonia Nitrogen	Chlorate by IC	Nitrate as Nitrogen by IC
Nitrite Nitrogen by IC	Perchlorate	Total Inorganic Nitrogen-Calc

201009290035	Influent	27-Sep-2010 0900

Ammonia Nitrogen	Chlorate by IC	Nitrate as Nitrogen by IC
Nitrite Nitrogen by IC	Perchlorate	Total Inorganic Nitrogen-Calc
Total Nitrate Nitrite-N CALC		

Test Description

344858

MONTGOMERY WATSON LABORATORIES — CHAIN OF CUSTODY RECORD

750 Royal Oaks dr. Suite 100 Monrovia, Ca., 91016-3629
(626) 386-1100 (800) 566-5227

MWLABS USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED/LOGGED IN BY: MP / JS

SAMPLE TEMP, RECEIPT AT LAB: 3 °C

BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___ WET ICE

TO BE COMPLETED BY SAMPLER:

COMPANY / PROJECT NAME	PROJECT JOB # / P.O.#
TRONOX	CWA-RCRA

Sampler Signature: Michele Brown — Michele Brown

Susan Crowley (702) 651-2234

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

REFER TO ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes)

ANALYSES REQUIRED (mark an 'X' in all tests required for each sample line)

TIME	DATE	LOCATION	IDENTIFIER, STATE ID#	MATRIX *	GRAB	COMP	CLO4	Ammonia Nitrogen	CLO3	NO3-N, NO2-N, INOR	Sterile filtered CLO4											SAMPLER COMMENTS
8:30 AM	9/27/2010		EFFLUENT	RSW	X		X	X	X	X	X											
9:00	9/27/2010		INFLUENT	RSW	X		X	X	X	X	X											

* MATRIX TYPES:

Reported by Volume:
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
RGW = Raw Ground Water
RSW = Raw Surface Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
SW = Storm Water

Reported by Weight:
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Michelle Brown	Michele Brown	Veolia Water NA for Tronox LLC - Henderson Plant	9/27/2010	12:00 PM
RECEIVED BY:		M. DeGroot	Veolia	9-28-10	10:48
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# _____

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

Bottle Order for Tronox LLC

Group#
Date Sampled
Date Received

Linda Geddes Your MWHL Project Manager

BO #: 22379

Created By: LXG
Order Date: 09/06/2010
Bottle Orders

Sampler: please return this paper with your samples

Client Code TRONOX
Project Code BOTTLES Bottle Orders
Group Name Weekly Influent-effluent-quick TAT-#KERRUS
PO# / Job#

Ship By:
08/27/2010

Ship Sample Kits to
Veolia Water-Tronox LLC
Gate 1
560 West Lake Mead Pkwy
Henderson, NV 89015

Attn: Wendy Prescott
Phone:
Fax:

Send Report to
Tronox LLC
PO Box 55
Henderson, NV 89009

Attn: Susan Crowley
Phone: 702-651-2234
Fax: 702-651-2310

Billing Address
Tronox LLC
PO Box 55
Henderson, NV 89009

Attn: Susan Crowley
Phone: 702-651-2234
Fax: 702-651-2310

# of Samples	Tests	Qteline#	Bottles - Qty for each sample, type & preservative if any	UN DOT #
2	Ammonia Nitrogen	17	1 250ml poly 0.5ml H_2SO_4 (50%)	
2	Chlorate by IC		1 60mL poly 0.60mL 5% EDA sol'n	
2	Nitrate as Nitrogen by IC, Nitrite Nitrogen by IC, Total Inorganic Nitrogen-Calc		1 125ml poly no preservative	
2	Perchlorate Sterile Filtered		1 125 ml poly + syringe, filter 125ml STERILE bottle	

Comments

Weekly short quick TAT for Inf and eff.
Influent and effluent gets clo4, clo3, No2, NO3, N-Inor, NH3

Code Status Date Shipped Via Tracking # # of Coolers Prepared By

MWH

BUILDING A BETTER WORLD

October 11, 2010

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

Subject: Case Narrative report 344858

Sample receipt: The samples arrived at MWH Laboratories, Monrovia, CA on September 28, 2010 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:

Other Observations:

There were no unusual observations on this sample set.

Sincerely,

Linda Geddes
Project Manager

750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016
TEL 626-3865-1100
FAX 626-386-1101
www.mwhlabs.com

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Laboratory Comments
Report: #344858

Tronox LLC
Susan Crowley
PO Box 55
Henderson, NV 89009

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: 

The Comments Report may be blank if there are no comments for this report.

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Laboratory
Hits Report: 344858

Tronox LLC
Susan Crowley
PO Box 55
Henderson, NV 89009

Samples Received on:
09/28/2010

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
		201009290034 Effluent				
10/05/2010 18:56	Ammonia Nitrogen		3.7		mg/L	0.25
10/06/2010 10:09	Total Inorganic Nitrogen-Calc		3.7		mg/L	0.2
		201009290035 Influent				
10/04/2010 18:57	Ammonia Nitrogen		7.8		mg/L	0.5
09/30/2010 19:15	Chlorate by IC		260000		ug/L	10000
09/28/2010 12:52	Nitrate as Nitrogen by IC		15	10	mg/L	5
09/28/2010 12:52	Nitrate as NO3 (calc)		66	45	mg/L	22
10/08/2010 04:11	Perchlorate		180000	6	ug/L	40000
10/06/2010 11:10	Total Inorganic Nitrogen-Calc		23		mg/L	0.2
09/28/2010 12:52	Total Nitrate, Nitrite-N, CALC		15		mg/L	5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 344858

Tronox LLC
Susan Crowley
PO Box 55
Henderson, NV 89009

Samples Received on:
09/28/2010

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MDL	MRL	SQL	Dilution
Effluent (201009290034)							**Sampled on 09/27/2010 0830**			
			EPA 300.0 - Total Inorganic Nitrogen-Calc							
10/06/2010	10:09		(EPA 300.0)	Total Inorganic Nitrogen-Calc	3.7	mg/L	0.20	0.2	0.20	1
			EPA 350.1 - Ammonia Nitrogen							
10/05/2010	18:56	571651	(EPA 350.1)	Ammonia Nitrogen	3.7	mg/L	0.0030	0.25	0.015	5
			EPA 300.0 - Nitrate, Nitrite by EPA 300.0							
09/28/2010	13:05	570843	(EPA 300.0)	Nitrate as Nitrogen by IC	ND	mg/L	0.0050	0.63	0.25	50
09/28/2010	13:05	570843	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.0040	22	0.20	50
			EPA 300.0 - Disinfection ByProducts by 300.0							
09/30/2010	18:50	571184	(EPA 300.0)	Chlorate by IC	ND	ug/L	1.3	50	6.5	5
			EPA 314.0 - Perchlorate							
10/08/2010	03:50	572166	(EPA 314.0)	Perchlorate	ND	ug/L	0.25	10	2.5	10
Influent (201009290035)							**Sampled on 09/27/2010 0900**			
			EPA 300.0 - Total Inorganic Nitrogen-Calc							
10/06/2010	11:10		(EPA 300.0)	Total Inorganic Nitrogen-Calc	23	mg/L	0.20	0.2	0.20	1
			EPA 350.1 - Ammonia Nitrogen							
10/04/2010	18:57	571648	(EPA 350.1)	Ammonia Nitrogen	7.8	mg/L	0.0030	0.5	0.030	10
			EPA 300.0 - Nitrate, Nitrite by EPA 300.0							
09/28/2010	12:52	570843	(EPA 300.0)	Nitrate as Nitrogen by IC	15	mg/L	0.0050	5	0.25	50
09/28/2010	12:52	570843	(EPA 300.0)	Nitrate as NO3 (calc)	66	mg/L	0.022	22	1.1	50
09/28/2010	12:52	570843	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.0040	0.63	0.20	50
09/28/2010	12:52	570843	(EPA 300.0)	Total Nitrate, Nitrite-N, CALC	15	mg/L	0.0050	5	0.25	50
			EPA 300.0 - Disinfection ByProducts by 300.0							
09/30/2010	19:15	571184	(EPA 300.0)	Chlorate by IC	260000	ug/L	1.3	10000	1300	1000
			EPA 314.0 - Perchlorate							
10/08/2010	04:11	572166	(EPA 314.0)	Perchlorate	180000	ug/L	0.25	40000	2500	10000

Rounding on totals after summation.
(c) - indicates calculated results

Sample Quantitation Limit (SQL) = MDL * Dilution Factor

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QC Ref # 570843 - Nitrate, Nitrite by EPA 300.0 — **Analysis Date: 09/28/2010**

201009290034	Effluent	Analyzed by: SXK
201009290035	Influent	Analyzed by: SXK

QC Ref # 571184 - Disinfection ByProducts by 300.0 — **Analysis Date: 09/30/2010**

201009290034	Effluent	Analyzed by: LUPE
201009290035	Influent	Analyzed by: LUPE

QC Ref # 571648 - Ammonia Nitrogen — **Analysis Date: 10/04/2010**

201009290035	Influent	Analyzed by: NJR

QC Ref # 571651 - Ammonia Nitrogen — **Analysis Date: 10/05/2010**

201009290034	Effluent	Analyzed by: NJR

QC Ref # 572166 - Perchlorate — **Analysis Date: 10/08/2010**

201009290034	Effluent	Analyzed by: AZS
201009290035	Influent	Analyzed by: AZS

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Laboratory
QC Report: 344858

Tronox LLC

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 570843 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0							**Analysis Date: 09/28/2010**		
LCS1	Nitrate as Nitrogen by IC		2.5	2.49	mg/L	100	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.49	mg/L	100	(90-110)	20	0.0
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0507	mg/L	101	(50-150)		
MS_201009280133	Nitrate as Nitrogen by IC	5.2	1.3	6.52	mg/L	109	(80-120)		
MS_201009290136	Nitrate as Nitrogen by IC	ND	1.3	2.71	mg/L	108	(80-120)		
MSD_201009280133	Nitrate as Nitrogen by IC	5.2	1.3	6.52	mg/L	109	(80-120)	20	0.0
MSD_201009290136	Nitrate as Nitrogen by IC	ND	1.3	2.68	mg/L	107	(80-120)	20	0.93
LCS1	Nitrite Nitrogen by IC		1.0	0.946	mg/L	95	(90-110)		
LCS2	Nitrite Nitrogen by IC		1.0	0.943	mg/L	94	(90-110)	20	0.32
MBLK	Nitrite Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrite Nitrogen by IC		0.05	0.0496	mg/L	99	(50-150)		
MS_201009280133	Nitrite Nitrogen by IC	ND	0.5	0.447	mg/L	89	(80-120)		
MS_201009290136	Nitrite Nitrogen by IC	ND	0.5	0.936	mg/L	94	(80-120)		
MSD_201009280133	Nitrite Nitrogen by IC	ND	0.5	0.449	mg/L	90	(80-120)	20	0.56
MSD_201009290136	Nitrite Nitrogen by IC	ND	0.5	0.928	mg/L	93	(80-120)	20	0.86
QC Ref# 571184 - Disinfection ByProducts by 300.0 by EPA 300.0							**Analysis Date: 09/30/2010**		
LCS1	Chlorate by IC		200	199	ug/L	99	(90-110)		
LCS2	Chlorate by IC		200	198	ug/L	99	(90-110)	20	0.50
MBLK	Chlorate by IC			<10	ug/L				
MRL_CHK	Chlorate by IC		10	8.76	ug/L	88	(75-125)		
MS_201009270166	Chlorate by IC	310	100	410	ug/L	97	(80-120)		
MS_201009290063	Chlorate by IC	ND	100	101	ug/L	101	(80-120)		
MSD_201009270166	Chlorate by IC	310	100	410	ug/L	97	(80-120)	15	0.10
MSD_201009290063	Chlorate by IC	ND	100	96.2	ug/L	96	(80-120)	15	4.9
QC Ref# 571648 - Ammonia Nitrogen by EPA 350.1							**Analysis Date: 10/04/2010**		
LCS1	Ammonia Nitrogen		1.0	1.08	mg/L	108	(90-110)		
LCS2	Ammonia Nitrogen		1.0	1.08	mg/L	108	(90-110)	20	0.0
MBLK	Ammonia Nitrogen			<0.05	mg/L				
MRL_CHK	Ammonia Nitrogen		0.05	0.0390	mg/L	78	(50-150)		
MS_201009300435	Ammonia Nitrogen	0.31	1.0	1.34	mg/L	103	(90-110)		
MS2_201009290380	Ammonia Nitrogen	ND	1.0	1.06	mg/L	106	(90-110)		
MSD_201009300435	Ammonia Nitrogen	0.31	1.0	1.34	mg/L	103	(90-110)	20	0.0
QC Ref# 571651 - Ammonia Nitrogen by EPA 350.1							**Analysis Date: 10/05/2010**		
LCS1	Ammonia Nitrogen		1.0	1.07	mg/L	107	(90-110)		

Spike recovery is already corrected for native results.
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.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

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Laboratory
QC Report: 344858

Tronox LLC
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Ammonia Nitrogen		1.0	1.07	mg/L	107	(90-110)	20	0.0
MBLK	Ammonia Nitrogen			<0.05	mg/L				
MRL_CHK	Ammonia Nitrogen		0.05	0.0430	mg/L	86	(50-150)		
MS_201009300438	Ammonia Nitrogen	0.22	1.0	1.28	mg/L	106	(90-110)		
MS2_201010010146	Ammonia Nitrogen	ND	1.0	1.08	mg/L	108	(90-110)		
MSD_201009300438	Ammonia Nitrogen	0.22	1.0	1.3	mg/L	108	(90-110)	20	1.9
QC Ref# 572166 - Perchlorate by EPA 314.0							**Analysis Date: 10/07/2010**		
LCS	Perchlorate		10	10.6	ug/L	106	(85-115)		
LCSD	Perchlorate		10	10.9	ug/L	109	(85-115)	15	2.8
MBLK	Perchlorate			<4	ug/L				
MRL_CHK	Perchlorate		4.0	4.37	ug/L	109	(75-125)		
MS2_201009290108	Perchlorate	ND	25	25.9	ug/L	104	(80-120)		
MSD2_201009290108	Perchlorate	ND	25	26.4	ug/L	105	(80-120)	15	0.96

Spike recovery is already corrected for native results.
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.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)