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Level IV Data Package

MWH Group 236536

Method: TDS

2804080743
2804080745
2804080746
2804080747
2804080748
2804080749
2804080750
2804080751
2804080752
2804080753
2804080754
2804080755
2804080756
2804080757
2804080758
2804080759
2804080760
2804080761
2804080762
2804080763

MWH Laboratories
750 Royal Oaks Drive, Suite 100
Menlo Park, CA 94025
SM 2540C

TOTAL DISSOLVED SOLIDS (TDS)

Standards:
NaCl MW=58.44g/mol True Value Exp. Date
175 mg/L 12/14/08
Na2SO4 MW=142.04g/mol
700 mg/L 12/14/08
NaCl MW=58.44g/mol
10 mg/L 12/14/08

Oven Temp (100 ± 2°C): Start 160 C End 180 C
Oven Mfr: Precision STM 135° Ser no.: 11AW-9
Dry Time (hrs): 1.5

10:00
Analysis Start Date: 11/10/08 End: 11/11/08
Reviewed By: [Signature]
LIMS Check By: [Signature]
Was QC Criteria Met: Y N
Was QIR Needed: Y N

Run #	Sample ID	Client Name	Client Name	Sample Volume (mL)	Crucible Number	Crucible Weight (g)	Crucible + residue 1st wt (g)	Crucible + residue 2nd wt (g)	Residue CA (g)	pH	EC	3rd Weighing/Comments
1	Blank	N/A	N/A	50	077	52.0741	52.0735	52.0738	0.0003	N/A	N/A	52.0741
2	MRL 1 - 10 mg/L	N/A	N/A	100	NP	71.6928	71.6929	71.6935	0.0007	N/A	N/A	71.6935
3	MRL 1 - 10 mg/L DUP	N/A	N/A	100	AD	79.5454	79.5458	79.5460	0.0004	N/A	N/A	79.5458
4	LCS 1 - 175 mg/L	N/A	N/A	50	F	50.3171	50.3171	50.3170	0.0082	N/A	N/A	50.3170
5	LCS 2 - 300 mg/L	N/A	N/A	50	TS	51.3055	51.3055	51.3056	0.0344	N/A	N/A	51.3056
6	2804080743	Kroger	Kroger	50	A	68.7922	68.7922	68.7924	0.0161	7	11480	68.7924
7	743			50	CK	73.4453	73.4453	73.4455	0.0174		11480	73.4455
8	745			50	7	69.0988	69.0988	69.0984	0.0199		13770	69.0984
9	746			50	B	72.9423	72.9423	72.9425	0.0182		11560	72.9425
10	747			50	X	69.7314	69.7314	69.7311	0.1582		7960	69.7311
11	748			50	1	49.6730	49.6730	49.6728	0.1118		2640	49.6728
12	749			10	RF	51.3634	51.3634	51.3633	0.0792		9550	51.3633
13	750			2	9	50.7387	50.7387	50.7387	0.0217		13990	50.7387
14	751			25	18	52.6352	52.6352	52.6351	0.0195		13550	52.6351
15	752			25	5	73.1236	73.1236	73.1234	0.1164		64109	73.1234
16	753			50	L	74.2186	74.2186	74.2188	0.1194		16720	74.2188
17	754			50	H4	66.5280	66.5280	66.5277	0.1023		5660	66.5277
18	754			50	P1	67.6466	67.6466	67.6462	0.1033		6660	67.6462
19	754			50	E	73.2580	73.2580	73.2581	0.0802		4520	73.2581
20	754			10	Y	65.9586	65.9586	65.9582	0.0619		8690	65.9582
21	755			25	E3	74.6022	74.6022	74.6020	0.0776		4300	74.6020
22	756			50	Z4	72.2033	72.2033	72.2030	0.1040		5990	72.2030
23	757			50	W	79.2893	79.2893	79.2921	0.0758		5990	79.2921
24	758			50	HA	68.2993	68.2993	68.2990	0.1285		3740	68.2990
25	759			50	Z4	68.1534	68.1534	68.1531	0.1292		3770	68.1531
26	760			50	VW	75.3110	75.3110	75.3107	0.1404		3860	75.3107
27	761			10	NP	75.2175	75.2175	75.2172	0.0802		9570	75.2172
28	762			10	NP	75.2175	75.2175	75.2172	0.0802		9570	75.2172

Calculations:
TDS (mg/L) = (C-A) × 1,000,000 / B
%RPD = |(S1-S2) / S1| × 100

Recoveries:
Blank - < 0.5 mg
MRL - 90 - 150%
LCS - 90 - 114%
Duplicates - < 10% RPD

MRL: 10 mg/L
**EC: (0.55 - 0.7): Expected TDS Value
Merck/Millipore: 0.5 mg - 200 mg
Holding time: 7 day from sampling date
Residuals must be within 0.5 mg of each other

**Standard
Preparation
Worksheet
&
Certificate of
Analysis**

Reagent Preparation Documentation

Page: _____

Reagent: TDS 175 ppm
Date Received/Prepped: 8/20/08 9/4/08 9/20/08 10/24/08 11/14/08 11/22/08
Date Expired: 8/20/08 9/4/08 9/20/08 10/24/08 11/14/08 11/22/08
Manufacturer: _____
Storage Condition: _____

AXA080404-1

MW #: AXA080220-1
By: AXA
Matrix: AQ
Amount: 1L
Lot #: _____

Component	Comment	Standard	Concentration
10000ppm NaCl	17.5ml & dilute to 1L w/ DI H ₂ O	R2D1617	
"	"	"	
"	"	"	
"	"	"	
"	"	"	

Comment: _____

Reagent: TDS 100ppm
Date Received/Prepped: 9/28/08 10/4/08 10/14/08 10/20/08 10/24/08 10/28/08
Date Expired: 9/28/08 10/4/08 10/14/08 10/20/08 10/24/08 10/28/08
Manufacturer: _____
Storage Condition: _____

MW #: axa080225-3
By: Andrea
Matrix: AQ
Amount: 1L
Lot #: _____

Component	Comment	Standard	Concentration
500ppm NaCl	20ml dilute in 1L DI H ₂ O	axa0571127	
"	"	"	
"	"	"	
"	"	"	
"	"	"	

Comment: _____

Reagent: TDS 100ppm
Date Received/Prepped: 4/1/08 4/4/08 4/10/08 4/10/08 5/1/08 5/4/08
Date Expired: 10/1/08 10/4/08 10/10/08 10/10/08 11/2/08 11/4/08
Manufacturer: _____
Storage Condition: _____

AXA080404-3

MW #: AXA080401-3
By: Andrea
Matrix: AQ
Amount: 1L
Lot #: _____

Component	Comment	Standard	Concentration
500ppm NaCl	20ml dilute in 1L DI H ₂ O		
"	"		
"	"		
"	"		
"	"		

Comment: _____

Reagent Preparation Documentation

Reagent: TDS 700ppm
Date Received/Prepped: 4/4/08 1 4/17/08 1 5/3/08 1 5/4/08 1 5/19/08 1 5/30/08
Date Expired: 10/4/08 1 10/17/08 1 11/2/08 1 11/4/08 1 11/15/08 1 11/30/08
Manufacturer: _____
Storage Condition: _____

MW #: AXD080417-2
By: Andrea
Matrix: AA
Amount: 1L
Lot #: 46282709

Component	Comment	Standard	Concentration
<u>Sodium sulfate</u>	<u>Weight 0.7003g & dilute w</u>		
	<u>1L of DI H₂O</u>		
	<u>2.70 0.6995g to 1L DI H₂O</u>	<u>AXD080417-2</u>	

Comment: _____

Reagent: TDS 10ppm
Date Received/Prepped: 4/15/08 1 4/17/08 1 4/23/08 1 4/29/08 1 5/1/08 1 5/7/08
Date Expired: 10/15/08 1 10/17/08 1 10/23/08 1 10/29/08 1 11/1/08 1 11/7/08
Manufacturer: _____
Storage Condition: _____

MW #: AXD080415
By: AXD
Matrix: AG
Amount: 1L
Lot #: _____

Component	Comment	Standard	Concentration
<u>500ppm Salin</u>	<u>20 ml dilute in 1000 ml DI H₂O</u>	<u>AXD071213-2</u>	
<u>"</u>	<u>"</u>		
<u>"</u>	<u>"</u>	<u>AXD080423-3</u>	

Comment: _____

Reagent: TSS 10ppm
Date Received/Prepped: 4/30/08 1 5/12/08 1 5/21/08 1 5/21/08 1 6/10/08 1 6/30/08 1 7/25/08
Date Expired: 10/30/08 1 11/12/08 1 11/21/08 1 12/10/08 1 12/30/08 1 1/25/09
Manufacturer: _____
Storage Condition: _____

MW #: AXA080430-2
By: Andrea
Matrix: _____
Amount: _____
Lot #: _____

Component	Comment	Standard	Concentration
<u>0.0118g celite</u>	<u>dilute in 1L of DI H₂O</u>	<u>R200030</u>	<u>10</u>
<u>"</u>	<u>"</u>	<u>↓</u>	<u>↓</u>
<u>"</u>	<u>"</u>		
<u>"</u>	<u>"</u>		

Comment: R 200030

Reagent Preparation Documentation

AXA090423-3

Reagent:
Date Received/Prepped:
Date Expired:
Manufacturer:
Storage Condition:

TDS 500 ppm Intermediate

11/27/07	1	1	1	1
5/27/08	1	1	1	1

MW #: AKA07427
 By: Andre
 Matrix: AQ
 Amount: 1L
 Lot #: 070196

Component	Comment	Standard	Concentration
<u>10000 ppm NaCl</u>	<u>Take 30ml + dilute to 1L of DI H₂O</u>	<u>R201617</u>	

Comment:

Reagent:
Date Received/Prepped:
Date Expired:
Manufacturer:
Storage Condition:

TDS 10 ppm

2/5/08	2/17/08	3/3/08	3/17/08	3/24/08	3/29/08
5/5/08	8/17/08	9/3/08	9/17/08	9/20/08	9/29/08

MW #: AKA030205-2
 By: Andre
 Matrix: AQ
 Amount: 1L
 Lot #:

Component	Comment	Standard	Concentration
<u>0.0189 Pelite</u>	<u>dilute in 1L of DI H₂O</u>	<u>R200030</u>	<u>(10 ppm)</u>

Comment: Pelite 545 (R200030)

Reagent:
Date Received/Prepped:
Date Expired:
Manufacturer:
Storage Condition:

TDS 175 ppm

2/5/08	3/3/08	4/25/08	5/12/08	5/17/08	8/5/08
8/5/08	9/3/08	10/25/08	11/12/08	11/17/08	2/5/09

MW #: AKA080A05-1
 By: Andre
 Matrix: AQ
 Amount: 1L
 Lot #:

Component	Comment	Standard	Concentration
<u>0.1753 Pelite</u>	<u>diluted in 1L of DI H₂O</u>	<u>2000.30</u>	<u>175 ppm</u>
<u>0.1752 Pelite</u>			
<u>0.1750 Pelite</u>			
<u>0.1751 Pelite</u>			
<u>0.1752 Pelite</u>			
<u>0.1753 Pelite</u>			

Comment:

Reagent Documentation

Reagent:
Date Received:
Date Expired:
Manufacturer:
Storage Condition:

DPD Free Chlorine Reagent
20 April
March 2010
HACH
10-25°C

Reagent #: 201615
By: TLH
Matrix: solid
Amount: 15 x 47g
Lot #: A7078

Component	Comment	Standard	Concentration
	HACH # 21055-60		
	10 inorganics 5 GC		

Comment:

Reagent:
Date Received:
Date Expired:
Manufacturer:
Storage Condition:

TOX Organic Standard
April 24 07
Oct 23 07
CPI
room temp

Reagent #: 201616
By: TLH
Matrix: aq
Amount: 100mL
Lot #: 122206

Component	Comment	Standard	Concentration
	CPI # 805-001		

Comment:

Reagent:
Date Received:
Date Expired:
Manufacturer:
Storage Condition:

10,000µg/mL NaCl Std
24 April 07
Oct 08
CPI
room temp

Reagent #: 201617
By: TLH
Matrix: aq
Amount: 2 x 500mL
Lot #: 07D196

Component	Comment	Standard	Concentration
	CPI # 4400-05104RHA2		

Comment:

R201617 rec'd 4-24-01



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in Analytical Science and
Technology*

Expiry: 10/23/2008

Certificate of Analysis

Part Number: 4400-051014RH02
Lot Number: 07D196
Shelf Life: 18 months

MWH
Custom NaCl
H2O

Concentrations in ug/mL \pm 0.5%

NaCl 10000

This standard solution was prepared using high-purity starting materials, high-purity acid (if required) and 18-megaohm de-ionized water. The starting materials were weighed to five significant figures and diluted in volumetric glassware calibrated to five significant figures.

Starting materials were analyzed at 1000 μ g/mL by ICP-MS for trace impurities. The standard solution concentrations were certified instrumentally against the National Institute of Standards and Technology's SRM 3100 series, NIST approved second source and/or gravimetrically.

Accuracy and stability are guaranteed to within plus or minus 0.5% of the certified value for the stated shelf life from the date of shipment. The solution should be kept tightly capped and stored under normal laboratory conditions. See attached MSDS for proper handling information.

For questions or comments please call 1-800-878-7654 in the USA, +31 20 638 05 97 in Europe or visit our web-site at www.cpiinternational.com.