

APPENDIX A

Laboratory Data Reports



10/17/13

Technical Report for

AECOM, INC.

PPG-Site 186 RAM, Jersey City, NJ

60238842 186.RAM

Accutest Job Number: JB50090



Sampling Date: 10/14/13

Report to:

AECOM, INC. 30 Knightsbridge Road Suite 520 Piscataway, NJ 08854 NJlabdata@aecom.com; Lisa.Krowitz@aecom.com; Justin.Webster@aecom.com; Alfred.LoPilato@aecom.com ATTN: Lisa Krowitz

Total number of pages in report: 53



Mancy F. Cole

Nancy Cole Laboratory Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

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Sections:

Sample Summary

AECOM, INC.

Job No: JB50090

PPG-Site 186 RAM, Jersey City, NJ Project No: 60238842 186.RAM

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
JB50090-1	10/14/13	08:30 AL	10/14/13	AQ	Field Blank Soil	186-FB20131014
JB50090-2	10/14/13	11:05 AL	10/14/13	SO	Soil	186-MFHT1-4-2.0-2.5
JB50090-3	10/14/13	10:15 AL	10/14/13	SO	Soil	186-MFHT1-3-2.0-2.5
JB50090-4	10/14/13	09:15 AL	10/14/13	SO	Soil	186-MFHT1-2-2.0-2.5
JB50090-5	10/14/13	08:31 AL	10/14/13	SO	Soil	186-MFHT1-2.0-2.5X
JB50090-6	10/14/13	08:30 AL	10/14/13	SO	Soil	186-MFHT1-2.0-2.5

Soil samples reported on a dry weight basis unless otherwise indicated on result page.





CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	AECOM, INC.	Job No	JB50090
Site:	PPG-Site 186, Jersey City, NJ	Report Date	10/15/2013 5:37:56 P

On 10/14/2013, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB50090 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Wet Chemistry By Method ASTM D1498-76

Matrix: AQ	Batch ID: GN93240

Sample(s) JB50090-1DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method ASTM D1498-76M

Matrix	: SO	Batch ID:	GN93230

Sample(s) JB50090-2DUP were used as the QC samples for Redox Potential Vs H2.

Wet Chemistry By Method SM2540 G-97

Matrix: SO	Batch ID:	GN93189
The data for SM2540 G-97 mee	ts quality control requirem	ements

Wet Chemistry By Method SM4500H+ B-11

	Matrix: AQ	Batch ID:	R127133
--	------------	-----------	---------

The data for SM4500H+ B-11 meets quality control requirements.

JB50090-1 for pH: Sample received out of holding time for pH analysis.

Wet Chemistry By Method SW846 3060A/7196A

	Matrix: SO	Batch ID:	GP75260
-	All samples were prepared withi	n the recommended metho	od holding time.

An samples were prepared within the recommended method notating th

All method blanks for this batch meet method specific criteria.

Sample(s) JB50090-4DUP, JB50090-4MS were used as the QC samples for Chromium, Hexavalent.

- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (85.8%) on this sample.
- GP75260-S2 for Chromium, Hexavalent: Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

Wet Chemistry By Method SW846 7196A

Matrix: AQ	Batch ID:	GN93212

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JB50113-1DUP, JB50113-1MS were used as the QC samples for Chromium, Hexavalent.



Wet Chemistry By Method SW846 9045C,D

Matrix: SO

Batch ID: GN93229

Sample(s) JB50090-2DUP were used as the QC samples for pH.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



Summary of Hits

Job Number:	JB50090
Account:	AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ
Collected:	10/14/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB50090-1	186-FB20131014					
Redox Potential V pH ^a	/s H2	349 6.75			mv su	ASTM D1498-76 SM4500H+ B-11
JB50090-2	186-MFHT1-4-2.0	-2.5				
Chromium, Hexa Redox Potential V pH	valent /s H2	5.8 345 7.70	0.47	0.081	mg/kg mv su	SW846 3060A/7196A ASTM D1498-76M SW846 9045C,D
JB50090-3	186-MFHT1-3-2.0	-2.5				
Chromium, Hexa Redox Potential V pH	valent /s H2	24.1 365 7.37	0.47	0.081	mg/kg mv su	SW846 3060A/7196A ASTM D1498-76M SW846 9045C,D
JB50090-4	186-MFHT1-2-2.0	-2.5				
Chromium, Hexa Redox Potential V pH	valent /s H2	1.1 355 7.70	0.44	0.076	mg/kg mv su	SW846 3060A/7196A ASTM D1498-76M SW846 9045C,D
JB50090-5	186-MFHT1-2.0-2	.5X				
Chromium, Hexa Redox Potential V pH	valent /s H2	5.6 316 7.86	0.45	0.078	mg/kg mv su	SW846 3060A/7196A ASTM D1498-76M SW846 9045C,D
JB50090-6	186-MFHT1-2.0-2.	.5				
Chromium, Hexa Redox Potential V pH	valent /s H2	4.7 313 7.87	0.45	0.077	mg/kg mv su	SW846 3060A/7196A ASTM D1498-76M SW846 9045C,D

(a) Sample received out of holding time for pH analysis.

ω



Section 4

4



Sample Results

Report of Analysis



pH ^a

			Repo	rt of An	alysis			Page 1 of 1
Client Sample ID: Lab Sample ID: Matrix:	186-FB20 JB50090- AQ - Fiel)131014 1 ld Blank Soil				Date S Date I	Sampled: 10/14/13 Received: 10/14/13	
Project:	PPG-Site	186 RAM, Je	ersey City,	NJ		Perce	nt Sonds: n/a	
General Chemistry	r							
Analyte		Result	RL	MDL	Units	DF	Analyzed By M	Aethod
Chromium, Hexava Redox Potential Vs	lent H2	0.0024 U 349	0.010	0.0024	mg/l mv	1 1	10/14/13 22:25 MH S 10/15/13 11:36 AA	W846 7196A STM D1498-76

1

su

(a) Sample received out of holding time for pH analysis.

6.75

4

10/14/13 13:08 SUB SM4500H+ B-11



Solids, Percent

pН

Client Sample ID:	186-MFHT1-4-2.0-2.: IB50090-2	5			Date S	Sampled: 10/14/13
Matrix:	SO - Soil				Date I Date I Percer	Received: 10/14/13 nt Solids: 85.5
Project:	PPG-Site 186 RAM, J	lersey City,	, NJ			
General Chemistry	r					
Analyte	Result	RL	MDL	Units	DF	Analyzed By Method

Report of Analysis

Chromium, Hexavalent 5.8 0.47 0.081 mg/kg 1 10/15/13 09:42 BP SW846 3060A/7196A Redox Potential Vs H2 345 mv 1 10/15/13 11:09 AA ASTM D1498-76M 85.5 % 1 10/14/13 15:21 AR SM2540 G-97 7.70 1 10/15/13 10:58 AA SW846 9045C,D su



Page 1 of 1

4.2

Client Sample ID: Lab Sample ID: Matrix: Project:	186-MFHT1-3-2.0-2. JB50090-3 SO - Soil PPG-Site 186 RAM, J	5 Jersey City.	, NJ		Date S Date I Percer	Sampled: 10/14/13 Received: 10/14/13 nt Solids: 84.9
General Chemistry Analyte	Result	RL	MDL	Units	DF	Analyzed By Method

Chromium, Hexavalent	24.1	0.47	0.081	mg/kg	1	10/15/13 09:42 BP	SW846 3060A/7196A
Redox Potential Vs H2	365			mv	1	10/15/13 11:09 AA	ASTM D1498-76M
Solids, Percent	84.9			%	1	10/14/13 15:21 AR	SM2540 G-97
pH	7.37			su	1	10/15/13 10:58 AA	SW846 9045C,D

Report of Analysis



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4.3

4

Chromium, Hexavalent

Redox Potential Vs H2

Solids, Percent

pН

1.1

355

90.8

7.70

Client Sample ID:	186-MFHT1-2-2.0-2.	5					
Lab Sample ID:	JB50090-4				Date S	Sampled:	10/14/13
Matrix:	SO - Soil				Date H	Received:	10/14/13
					Percer	nt Solids:	90.8
Project:	PPG-Site 186 RAM,	Jersey City,	, NJ				
General Chemistry	7						
Analyte	Result	RL	MDL	Units	DF	Analyze	ed By Method

0.076

mg/kg

mv

%

su

1

1

1

1

0.44

Report of Analysis



Page 1 of 1

10/15/13 09:37 BP SW846 3060A/7196A

10/15/13 11:09 AA ASTM D1498-76M

10/14/13 15:21 AR SM2540 G-97

10/15/13 10:58 AA SW846 9045C,D



Chromium, Hexavalent

Redox Potential Vs H2

Solids, Percent

pН

Client Sample ID: Lab Sample ID: Matrice	186-MFHT1-2.0-2.52 JB50090-5	X			Date S	Sampled: 10/14/13	
	50 - 5011				Percer	nt Solids: 88.8	
Project:	PPG-Site 186 RAM,	Jersey City	, NJ				
General Chemistry	7						
Analyte	Result	RL	MDL	Units	DF	Analyzed By Method	

0.078

mg/kg

mv

%

su

1

1

1

1

0.45

5.6

316

88.8

7.86

Report of Analysis



4.5

Page 1 of 1

10/15/13 09:42 BP SW846 3060A/7196A

10/15/13 11:09 AA ASTM D1498-76M

10/14/13 15:21 AR SM2540 G-97

10/15/13 10:58 AA SW846 9045C,D



Redox Potential Vs H2

Solids, Percent

pН

313

89.8

7.87

Client Semple ID:	186 MEH	TT1 2 0 2 5							
Lah Sample ID:	IB50090-	6				Date S	Sampled:	10/14/	13
Matrix:	SO - Soil	0				Date I	Received:	10/14/2	13
						Perce	nt Solids:	89.8	
Project:	PPG-Site	186 RAM, .	Jersey City,	NJ					
General Chemistry									
Analyte		Result	RL	MDL	Units	DF	Analyze	ed By	Method
Chromium, Hexava	lent	4.7	0.45	0.077	mg/kg	1	10/15/13	09:42 BP	SW846 3060A/7196A

1

1

1

mv

%

su

Report of Analysis

Page 1 of 1

10/15/13 11:09 AA ASTM D1498-76M

10/14/13 15:21 AR SM2540 G-97

10/15/13 10:58 AA SW846 9045C,D

4.6 **4**

Section 5

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Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



A <i>ECOM</i>	50	6	CHAIN-	5F-CU 20	STODY / An 13-10-14	alytical Request SITE186 C	t Docun OC	nent					Page:	J	1 R ぐC	of 090	
	r	0	The Chain-of-C	ustody is a	LEGAL DOCUMENT	All relevant fields must be con	npleted and ac	curate.	Tas	k:	Site 18	3			<i></i>		
					Oth an In (Total #	of Samp	les: 6					
b Information:	Project Info	mation:			Other Infor	nation:	tz /l isa k	(rowitz@aecom.com)		TAT	peri	P.O.		Rus	h	SEE BE	LOW
b: Accutest, Dayton NJ	Site ID #:	5/10 186	BE RAM		Address	100 Red School	ouse Ro	ad Suite B-1		Notes: F	Field F	iltered , I	H= Hold				
08810	Site	00230042.140A.1	00.104.00		City/State	Chestnut Ridge	B. NY	Phone #: 845,425,4980	1								
	Address:					10977-671	5		- 1								
b PM: Matt Cordova	City Jersey PM Name	City State, Zip	NJ	07304	Send EDD	O: NULABDATA	Daecom.c	2m	3								
one/Fax: //32-324-0200//32-324-3446/3460	Phone/Fax:	845-425-4980			CC Hardco	y to No Hardo	opy Nee	ded	_ tag						1		
b Quote #: 46011607	PM Email:	Alfred.LoPileto@seco	m.com		CC Hardco	by to			Preser								
Field Sample f	No. /Identifica	ation	MATRIX CODE	G*GRAB C=COMP		SAMPLE DATE	#OF CONTAINERS	Comment	Analysis	GARA-HexChrom	GARA-pH-ORP						
1 186-FB20131014			so	G	10/14	/2013 08:30	2	2 Containera: 1 Cr+8, 1 pH-ORP		х	х	- 1	pu	674	6	k	
2 186-MFHT1-4-2.0-2.5			so	G	10/12	/2013 11:05	1	1 Jar		х	x	- 2					
3 186-MFHT1-3-2.0-2.5			so	G	10/12	/2013 10:15	1	1 Jar		X	×	- 3					
4 186-MFHT1-2-2.0-2.5			so	G	10/12	2/2013 09:15	2	MS/MSD - 2 Jans		х	×	- 4					
5 186-MFHT1-2.0-2.5X			so	G	10/1:	2/2013 08:31	1	1 Jar		Х	×	- 5					
6 186-MFHT1-2.0-2.5			so	G	10/1:	2/2013 08:30	1	1 Jar		X	×	-6				-	
																	Cu
														ļ	ļ		62
									_								MZ
															 		
dilianal Commente (Special Instru	ctions:		RELINO	JISHED	BY / AFFILIAT	ON DATE	TIME	ACCEPTED B / / AFFILIATION			DATE	TIME	Sar	nple Rec	elpt Cond	litions	
DAY TAT			May	the the	STAEG	10/14/1	3	Bhinlene 10/14/13	3	103	10			Y	'/N	Y/N	Y/1
			TR	hist	2mo	0/11/3/	255	10/14/1	3			125	T	Y	'/N	Y/N	Y/N
					- V		-					ļ		-+ Y	'/N	Y/N	Y/N
															<u>//N</u>	Y/N	+ 11
			NAN	IE OF S	AMPLER:			DATE/TIME:						np in OC	ites on Ice.	ple intact?	p Blank?
			SIGNA	TURE O	F SAMPLER	-		Custody Seal(s):						-te	Samp	Sam	1 ¹ ¹

JB50090: Chain of Custody Page 1 of 3



5.<u>1</u>

G



Accutest Laboratories Sample Receipt Summary

Accutest Job Number:	JB50090	Client:		Project:	
Date / Time Received:	10/14/2013	Delivery	Method:	Airbill #'s:	
Cooler Temps (Initial/Ac	djusted): <u>#1: (3.</u>	<u>5/3.5); 0</u>			
Cooler Security 1. Custody Seals Present: 2. Custody Seals Intact:	<u>Y or N</u> ✓ □ ✓ □ 4	3. COC Present: 4. Smpl Dates/Time OK	<u>Y</u> or N ✓ □ ✓ □	Sample Integrity - Documentation 1. Sample labels present on bottles: 2. Container labeling complete:	Y or N V □
Cooler Temperature	Y or	<u>N_</u>		3. Sample container label / COC agree:	
 Temp criteria achieved: Cooler temp verification Cooler media: No. Coolers: 	.: IR Gu ICCE (Ba	ag)		Sample Integrity - Condition 1. Sample recvd within HT: 2. All containers accounted for: 3. Condition of sample:	YorN ✓ □ ✓ □ Intact
Quality Control_Preserv 1. Trip Blank present / coo 2. Trip Blank listed on COO	<u>vatio Y or</u> ler: □ C: □	<u>N N/A</u> ☑ □ ☑ □		Sample Integrity - Instructions 1. Analysis requested is clear: 2. Bottles received for unspecified tests	<u>Y or N N/A</u>

3. Sufficient volume recvd for analysis:

4. Compositing instructions clear:

5. Filtering instructions clear:

Comments

3. Samples preserved properly:

4. VOCs headspace free:

✓

✓

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JB50090: Chain of Custody Page 2 of 3

✓

✓

✓



Reversited Date: (0/15/2013) Received Date: (0/14/2003) Account Name: AcCOM, INC: Due Date: (0/14/2003) Project Description: ProSite 160, Juercey Cay, NJ Due Date: (0/15/2013) Project Description: ProSite 160, Juercey Cay, NJ Due Date: (0/15/2013) Crist: x ellippi Trt (Dows): 1 Crist: Juercey Cay, NJ Deliverable: 1 Crist: Juercey Cay, NJ Econocit 1 Crist: Juercey Cay, NJ Proverable: 1 Crist: Juercey Cay, NJ Proverable: 1 Simple #: Justocococht efficiencienciencienciencienciencienciencie		JTEST BORATORIES	Job Change Order:	JB5	0600
Account Name: Account Name: Account Name: Due Date: 00/152013 Project Description: PG-Site 166, Jaresey City, NJ Deliverable: PLIT1 CSI: Kellyp TAT (Days): 1 CSI: Kellyp Change: 1 Sample #: JB50000-2 thu 6 Change: 1 Ample #: JB50000-4 Change: 1	Requested Date:	10/15/2013		Received Date:	10/14/2013
Project Description: Project Description: Prof. 1 CKS: Kellyp TAT (Duys): 1 CKS: Kellyp TAT (Duys): 1 Sample #: JB0000-2 thu 6 Change:	Account Name:	AECOM, INC.		Due Date:	10/15/2013
CR: M(D) TAT (Dov): 1 Simple #: JE00002 thu 6 Tations: 1 Simple #: JE00002 thu 6 Change: 1 Simple #: JE00002 thu 6 Change: 1 Simple #: JE00002 thu 6 Change: 1 Simple #: JE00004 Change: 1 Simple #: JE00004 Change: 1 JE0HT1-22.02.5 JE0004 Please relog for XXCRAR, FE0/7, SULFS, and TOCLK JE0HT1-22.02.5 JE0004 JE0004 JE0014 JE0004 JE0004	Project Description:	PPG-Site 186, Jers	sey City, NJ	Deliverable:	FULT1
Simple #. JS0000.2 htu 6 Change: Der: Eesee relog for XXCRAR, FE27, SULFS, and TOCLK Simple #: JS0000.4 Change: Simple #: JS0000.4 Simple #: JS0000.4	CSR:	keliyp		TAT (Days):	Ł
Det: Please reling for XXCRAR, FE2/7, SULFS, and TOCLK Sample: #: JB500004 Sample: #: JB500004 Sample: #: JB500004 Sample: #: JB500004 Plase reling for XXCRAR, FE2/7, SULFS, and TOCLK Sample: #: JB50004 Sample: #: JB171-12-10-15	Sample #: JB5005	30-2 thru 6	Change:		
Simple #: JB500904 Change: Simple #: JB500904 Ease relog for XXCRAR, FE2/T, SULFS, and TOCLK Dep: Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK 18-MFHT1-2:20:21 Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK Tease relog for XXCRAR, FE2/T, SULFS, and TOCLK	Dept:		Please relog for XX	CRAR	
Simple #: J500004 Change: Dep:: Pease relog for XXCRAR, FE2/, SULFS, and TOCLK 16:-MFHT1-2:0:25 16:-MFHT1-2:0:25 16:-MFHT1-2:0:25					
166-MFHT1-2:0:2.5 166-MFHT1-2:0:2.5 10.15/2:0.1 Date: Date:	Sample #: JB5009 Dept:	90-4	Change: Please relog for XX	(CRAR, FE2/7, SULFS	s, and TOCLK
Above Changes Per: Lisa Krowitz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.	186-MFHT1-2-2.0-2.	Ŷ			
Above Changes Per: Lisa Krowitz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative Page 1 of 1					
Above Changes Per: Lisa Krowitz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative Page 1 of 1					
To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative. Page 1 of 1	Above Changes P	er: Lisa Kro	owitz	Dat	te: 10/15/2013
Page 1 of 1	To Client: This Change C	Order is confirmation of t	the revisions, previously discussed wit	th the Accutest Client Se	ervice Representative
					Page 1 of 1

JB50090: Chain of Custody Page 3 of 3



5.1

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Internal Sample Tracking Chronicle

AECOM,	INC.					T.L. N	ID50000
PPG-Site Project N	186 RAM, Jersey C o: 60238842 186.R	ity, NJ AM				JOD 1NO:	JB20090
Sample Number	Method	Analyzed	By	Prepped I	By	Test Codes	
JB50090-1 186-FB2013	Collected: 14-OCT-13 31014	08:30 By: AL	Receiv	ved: 14-OCT-1	3 By:	AS	
JB50090-1 JB50090-1 JB50090-1	SM4500H+ B-11 SW846 7196A ASTM D1498-76	14-OCT-13 13:08 14-OCT-13 22:25 15-OCT-13 11:36	SUB MH AA			PH XCR EH	
JB50090-2 186-MFHT	Collected: 14-OCT-13 1-4-2.0-2.5	11:05 By: AL	Receiv	ved: 14-OCT-1	3 By:	AS	
JB50090-2 JB50090-2 JB50090-2 JB50090-2	SM2540 G-97 SW846 3060A/7196A SW846 9045C,D ASTM D1498-76M	14-OCT-13 15:21 15-OCT-13 09:42 15-OCT-13 10:58 15-OCT-13 11:09	AR BP AA AA	14-OCT-13 N	NP	SOL104 XCRA PH EH	
JB50090-3 186-MFHT	Collected: 14-OCT-13 1-3-2.0-2.5	10:15 By: AL	Receiv	ved: 14-OCT-1	3 By:	AS	
JB50090-3 JB50090-3 JB50090-3 JB50090-3	SM2540 G-97 SW846 3060A/7196A SW846 9045C,D ASTM D1498-76M	14-OCT-13 15:21 15-OCT-13 09:42 15-OCT-13 10:58 15-OCT-13 11:09	AR BP AA AA	14-OCT-13 N	NP	SOL104 XCRA PH EH	
JB50090-4 186-MFHT	Collected: 14-OCT-13	09:15 By: AL	Receiv	ved: 14-OCT-1	3 By:	AS	
JB50090-4 JB50090-4 JB50090-4 JB50090-4	SM2540 G-97 SW846 3060A/7196A SW846 9045C,D ASTM D1498-76M	14-OCT-13 15:21 15-OCT-13 09:37 15-OCT-13 10:58 15-OCT-13 11:09	AR BP AA AA	14-OCT-13 N	NP	SOL104 XCRA PH EH	
JB50090-5 186-MFHT	Collected: 14-OCT-13 1-2.0-2.5X	08:31 By: AL	Receiv	ved: 14-OCT-1	3 By:	AS	
JB50090-5 JB50090-5 JB50090-5 JB50090-5	SM2540 G-97 SW846 3060A/7196A SW846 9045C,D ASTM D1498-76M	14-OCT-13 15:21 15-OCT-13 09:42 15-OCT-13 10:58 15-OCT-13 11:09	AR BP AA AA	14-OCT-13 N	NP	SOL104 XCRA PH EH	





Internal Sample Tracking Chronicle

AECOM, 1	INC.
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PPG-Site 186 RAM, Jersey City, NJ Project No: 60238842 186.RAM

U								
Sample Number	Method	Analyzed	By	Prepped	By	Test Codes		
JB50090-6	Collected: 14-OCT-13	08:30 By: AL	Recei	Received: 14-OCT-13 By: AS				
186-MFHT	1-2.0-2.5							
JB50090-6	SM2540 G-97	14-OCT-13 15:21	AR			SOL104		
JB50090-6	SW846 3060A/7196A	15-OCT-13 09:42	BP	14-OCT-13	NP	XCRA		
JB50090-6	SW846 9045C,D	15-OCT-13 10:58	AA			PH		
JB50090-6	ASTM D1498-76M	15-OCT-13 11:09	AA			EH		

JB50090

Job No:

Accutest Internal Chain of Custody

Job Number:	JB20090
Account:	ENSRNJ AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ
Received:	10/14/13

Sample. Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-1.1	Secured Storage	Lucas Schneider	10/14/13 15:24	Retrieve from Storage
JB50090-1.1	Shirley Grzybowski	Secured Storage	10/15/13 07:21	Return to Storage
Analyst unavailab	le for custody transfer.	C		C
JB50090-1.2	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-1.2	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-1.2	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-1.2	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-2.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-2.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-2.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-2.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-2.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-2.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-2.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-2.1
JB50090-2.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-3.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-3.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-3.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-3.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-3.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-3.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-3.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-3.1
JB50090-3.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-4.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage

5.3 5



Accutest Internal Chain of Custody

NJ

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-4.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-4.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-4.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/16/13 06:17	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/16/13 06:17	Return to Storage
JB50090-4.1	Secured Staging Area	Chris Brunson	10/16/13 09:44	Retrieve from Storage
JB50090-4.1	Chris Brunson	Vaidehi Amin	10/16/13 10:20	Custody Transfer
JB50090-4.1	Vaidehi Amin	Secured Storage	10/16/13 18:35	Return to Storage
JB50090-4.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-4.1
JB50090-4.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-4.2	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-4.2	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-4.2	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-4.2	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-4.2	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-4.2	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-4.2	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-4.2	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-4.2	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-4.2	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-4.2	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-4.2	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-5.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-5.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-5.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-5.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-5.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-5.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-5.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-5.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-5.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-5.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-5.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-5.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-5.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-5.1
JB50090-5.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage

5.3 5



Accutest Internal Chain of Custody

Job Number:	JB50090
Account:	ENSRNJ AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ
Received:	10/14/13

Sample. Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-6.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-6.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-6.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-6.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-6.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-6.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-6.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-6.1
JB50090-6.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted

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Section 6

6



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Percent Solids Raw Data Summary





METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090 Account: ENSRNJ - AECOM, INC.

Project:	PPG-Site	186	RAM,	Jersey	City,	NJ	

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent Chromium, Hexavalent Chromium, Hexavalent	GN93212 GP75260/GN93231 GP75260/GN93231	0.010 0.40	0.0 0.0	mg/l mg/kg mg/kg	0.15 40.0 958.911	0.15 35.2 865	100.0 88.0 90.2	90-110% 80-120% 80-120%

Associated Samples:

Batch GN93212: JB50090-1

Batch GP75260: JB50090-2, JB50090-3, JB50090-4, JB50090-5, JB50090-6 (*) Outside of QC limits



DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090 Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent Chromium, Hexavalent Redox Potential Vs H2 Redox Potential Vs H2 pH	GN93212 GP75260/GN93231 GN93230 GN93240 GN93229	JB50113-1 JB50090-4 JB50090-2 JB50090-1 JB50090-2	mg/l mg/kg mv mv su	0.26 1.1 345 349 7.70	0.26 1.1 347 361 7.61	0.0 0.0 0.6 3.4 1.2	0-20% 0-20% 0-20.6% 0-17.2% 0-5.9%
Associated Samples: Batch GN93212: JB50090-1 Batch GN93229: JB50090-2, JB50 Batch GN93230: JB50090-2, JB50 Batch GN93240: JB50090-1 Batch GP75260: JB50090-2, JB50 (*) Outside of QC limits	090-3, JB50090-4, 090-3, JB50090-4, 090-3, JB50090-4,	JB50090-5, JB JB50090-5, JB JB50090-5, JB	50090-6 50090-6 50090-6				

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MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090 Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GN93212	JB50113-1	mg/l	0.26	0.15	0.42	106.7	85-115%
Chromium, Hexavalent	GP75260/GN93231	JB50090-4	mg/kg	1.1	44.4	28.4	61.5N(a)	75-125%
Chromium, Hexavalent	GP75260/GN93231	JB50090-4	mg/kg	1.1	1020	1020	99.4(b)	75-125%

Associated Samples:

Batch GN93212: JB50090-1

Batch GP75260: JB50090-2, JB50090-3, JB50090-4, JB50090-5, JB50090-6

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (85.8%) on this sample.

(b) Good recovery on insoluble XCR matrix spike. See additional comments on soluble matrix spike recovery.

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Percent Solids Raw Data Summary

Job Number:	JB50090
Account:	ENSRNJ AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ

Sample: JB50090-2 ClientID: 186-MFHT1-4-	Analyzed: 2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	34.2 29.03 33.45 85.5	g g g %		
Sample: JB50090-3 ClientID: 186-MFHT1-3-	Analyzed: 2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	33.39 27.49 32.5 84.9	g g g %		
Sample: JB50090-4 ClientID: 186-MFHT1-2-	Analyzed: 2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	30.89 24.26 30.28 90.8	g g g %		
Sample: JB50090-5 ClientID: 186-MFHT1-2.	Analyzed: 0-2.5X	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	32.43 26.71 31.79 88.8	g g g %		
Sample: JB50090-6 ClientID: 186-MFHT1-2.	Analyzed: 0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	26.86 21.59 26.32 89.8	g g %		

6.4



Section 7



General Chemistry

Raw Data



	Reports». (GN93212		a (di Garata	Hexaval	ent Chi	omiu	<u>m</u>					
								1.2.5		lar" :			
Rottle		Sample	BKGRD	Analyzed	Y Values Corr Sample	X Values	Final Vol.	Sam Vol.	- 39				
ID	Sample #	Absorbance	Abs [*]	Times	Absorbance	Conc(mg/l)	± ² ²(mi)	(ml) Mothod:	Dilution	Final Conc.	Units	MDL	RDL
	SN Batch:	GN93212			1			metriou.	300040 /	IĐOA			
,	Analyst:	MRH	1										
F	Prep Date:	N/A 10/14/2013				Note: Use	4 for CLP	' list poin	iter, 1 for	reg. List pointe	r.		
í	nstrument ID:	E									0 00007		
<u> </u>	Cal. Blk.	0.000	NA	21:20	0.000	0.0000				Corr. Coef:	0.999997		
	STD1	0.009	NA	21:24	0.009	0.0100				Slope:	0.8585		
	STD2	0.044	NA	21:24	0.044	0.1000				Y intercept:	0.0022		
	STD4	0.263	NA	21:24	0.263	0.3000							
	STD5	0.436	NA NA	21:24	0.436	0.8000	Final Vol.	Sam, Vol.					
	STD7	0.859	NA	21:24	0.859	1.0000	<u>(ml)</u>	<u>(m)</u>	Dilution	Final Conc.	Units	MDL	RDL
	ccv	0.440	NA	21:53	0.440	0.5100	NA	NA	NA	NA	mg/l	0.001	0.010
	CCB GN93212_MP1	0.000	0.000	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
+	GN93212-B1	0.132	0.000	22:07	0.132	0.1512	50.0	50.0	1	0.151	mg/l	0.0014	0.010
4	GN93212-S1	0.388	0.027	22:07	0.361	0.4179	50.0	50.0	1	0.418	mg/l	0.0014	0.010
4	GN93212-D1	0.256	0.028	22:07	0.228	0.2630	50.0 50.0	50.0 50.0	1	0.263	mg/l	0.0014	0.010
2	JB50113-1	0.095	0.102	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	JB50113-3	0.108	0.021	22:07	0.087	0.0988	50.0	50.0	1	0.099	mg/l	0.0014	0.010
2	JB50113-4	0.026	0.024	22:07	0.002	-0.0002	50.0 50.0	50.0	1	0.000	mg/i ma/i	0.0014	0.010
-	JB50113-5 JB50113-6	0.245	0.000	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
	CCV	0.438	NĂ	22:07	0.438	0.5076	NA	NA	NA	NA	mg/l	0.0013	0.010
	ССВ	0.000	NA	22:07	0.000	-0.0026	NA 50.0	NA 50.0	NA 1	NA 0.091	mg/i	0.0013	0.010
2	JB50113-7 JB50113-8	0.095	0.015	22:25	0.040	0.0900	50.0	50.0	1	0.044	mg/l	0.0014	0.010
1	JB50090-1	0.000	0.000	22:25	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
·i	JB50119-1	0.000	0.000	22:25	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	GN93212-S2	0.149	0.023	22:25	0,126	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	JB50139-3	0.018	0.023	22:25	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	JB50139-6	0.000	0.000	22:25	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
8	jb50145-38	0.001	0.000	22:25	0.001	-0.0014	50.0	50.0		-0.001	mg/i	0.0014	0.010
<u> </u>	CCV	0.438	NA	22:25	0.438	0.5076	NA	NA	NA	NA	mg/l	0.0013	0.010
-	CCB	0.000	NA	22:25	0.000	-0.0026	NA	NA	NA	NA	mg/l	0.0013	0.010
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	001		NIA NIA				NA	NA	NA	NA	ma/l	0.0013	0.010
	CCB		NA NA			· · ·	NA	NA	NA	NA	mg/l	0.0013	0.010
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QC	Reports:	GN93212	1. – . – . – . 1. – . – . – . – . – . – . – . – . – . –		Hoyaval	ant Chi	ombi	n de la	8.975 <i>3</i>	Maardolikkee	a Statesta	ader de	Alge and the
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	문 이 같은 것 같은 것												
	한 김 왕 동생한 문												
		나는 아니라 나는 가지만 가지가 있다. ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	에 있는 것은 가슴을 가슴다. 한편 이는 것은 것은 것은 것이 같아. 같이 같이 같이 같이 같아.		Y Values Corr		성상 영상			전 전 전 문 문.			
Bottle		Sample	BKGRD	Analyzed	Sample	X Values	Final Vol.	Sam Vol.		방송 공공 같다			
⊡ ID∛ ?	Sample #	Absorbance	Abs	Times	Absorbance	Conc(mg/l)	* (ml)	(ml)	Dilution	Final Conc.	Units	MDL	RDL
	Test Title:	XCr			1			Method:	SW846 71	96A			
	GN Batch:	GN93212											
	Analyst:	MRH				N							
	Analysis Date:	N/A				Note: Use	4 for CLP	' list poir	iter, 1 for	reg. List pointe	r.		
	Instrument ID:	10/14/2013 E											
	man ument iD.	–								Corr Coof	0 00007		
	Cal Bik	0.000	NΔ	21.20	0.000	0,0000	1			<u>con.coe</u>	0.55551		
	STD1	0.009	NA		0.009	0.0100				Slope:	0.8585		
	STD2	0.044	NA		0.044	0.0500							
	STD3	0.089	NA	<u> </u>	0.089	0.1000				Y intercept:	0.0022		
	STD4	0.263	NA		0.263	0.3000	1						
	STD5	0.436	NA		0.436	0.5000							
	STD6	0.687	NA		0.687	0.8000	Final Vol.	<u>Sam. Vol.</u>					
	STD7	0.859	NA	21:24	0.859	1.0000	<u>(ml)</u>	<u>(ml)</u>	Dilution	Final Conc.	<u>Units</u>	MDL	RDL
]	CCV	0.440	NA	21:53	0.440	0.5100	NA	NA	NA	NA	mg/l	0.001	0.010
	ССВ	0.000	NA		0.000	-0.0026	NA	NA	NA	NA	mg/l	0.0013	0.010
	GN93212-MB1	0.000	0.000	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
	GN93212-B1	0.132	0.000	22:07	0.132	0.1512	50.0	50.0	1	0.151	mg/i	0.0014	0,010
4	GN93212-S1	0.388	0.027	22:07	0.361	0.4179	50.0	50.0	1	0.418	mg/l	0.0014	0.010
4	GN93212-D1	0.256	0.028	22:07	0.228	0.2630	50.0	50.0	1	0.263	mg/l	0.0014	0.010
4	JB50113-1	0.254	0.027	22:07	0.227	0.2619	50.0	50.0	1	0.262	mg/l	0.0014	0.010
2	JB50113-2	0.095	0.102	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/i	0.0014	0.010
2	JB50113-3	0.108	0.021	22:07	0.087	0.0988	50.0	50.0	1	0.099	mg/l	0.0014	0.010
2	JB50113-4	0.026	0.024	22:07	0.002	-0.0002	50.0	50.0	1	0.000	mg/l	0.0014	0.010
2	JB50113-5	0.245	0.018	22:07	0.227	0.2619	50.0	50.0	1	0.262	mg/l	0.0014	0.010
-3	3850113-6	0.000	0.000	22:07	0.000	-0.0026	50.0	50.0	1	-0.003	mg/i	0.0014	0.010
		0.438	NA	22:07	0.438	0.5076	NA	NA	NA	NA	mg/l	0.0013	0.010
	ID50112 7	0.000	0.015	0	0.000	-0.0026	50.0	50 0		NA 0.001	mg/i	0.0013	0.010
2	JB50113-7	0.095	0.015	0	0.080	0.0908	50.0	50.0	1	0.091	mg/i	0.0014	0.010
- 2	1850090-1	0.092	0.002	0	0.040	0.0440	50.0	50.0	1	0,044	mg/i	0.0014	0.010
	JB50090-1	0.000	0.000	0	0.000	-0.0028	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	GN93212-S2	0.000	0.000	0	0.000	0 1442	50.0	50.0	1	0.144	mg/i	0.0014	0.010
2	GN93212-D2	0.018	0.023	0	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
2	JB50139-3	0.018	0.023	0	0.000	-0.0026	50.0	50.0	1	-0.003	ma/l	0.0014	0.010
2	JB50139-6	0.000	0.000	0	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
8	jb50145-38	0.001	0.000	0	0.001	-0.0014	50.0	50.0	1	-0.001	mg/l	0,0014	0.010
8	jb50145-39	0.000	0.000	0	0.000	-0.0026	50.0	50.0	1	-0.003	mg/l	0.0014	0.010
	ccv	0.438	NA		0.438	0.5076	NA	NA	NA	NA	mg/l	0.0013	0.010
	CCB	0.000	NA	22:25	0.000	-0.0026	NA	NA	NA	NA	mg/l	0.0013	0.010
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	COV		NA.		+	···	NIA		NIA			0.0010	0.010
						<u> </u>					mg/i	0.0013	0.010
					<u> </u>	<u>├───</u> ──	NA		AIR I		1	0.0013	0,010
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		<u> </u> ·			1		h			<u> </u>	1	i———	
	~					<u> </u>	†		·		1	1	
	ccv	1	NA				NA	NA	NA	NA	ma/l	0.0013	0,010
	ССВ	1	NA		1		NA	NA	NA	NA	mo/l	0.0013	0.010
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30 of 53 ACCUTEST. JB50090

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	ST.	1 of	2		-	
Test: Hexavalent Cl Product: XCr Method: SW846 719	nromlum 6A	MDL = RDL =	0.0013 mg/l 0.010 mg/l	GNBatch ID: <u>. (</u> Date: <u>_/0_/) </u>	9N 9321 Z 113	
Digestion Batch QC	Summary	Units =	= mg/l			
Method Blank ID: -MB	1 Date: <u>10/1</u>	<u>ч/із </u> ғ	Result: <u>0,000</u> F	RDL: 0.010	<rdl:<u>Ves</rdl:<u>	
	50112-1) Some Boout	<u>, n. 26</u>	Z. Dup Booult: /	9 263 0/0	$\frac{1}{2} \frac{1}{2} \frac{1}$	
	Samp Besult: 0/2	62 MS F	$\frac{1}{2} = 0.000 \text{ (Constants)}$	Spike () ISO %	Rec: 104.0%	
Diluted Sample ID:	Samp. Nesur	Regult:	Dil Res	ult.	%RPD	
	Samp Bogui		MS Booult:	Spike:	%Roo:	
pH adj. PS 10:	Samp. Resul	Le	_ IND Result	Opike	////80	-
Analysis Batch QC Su	mmary Units	= mg/l		·	·	
ik il a				9		
ccv: 10/14/13	Result: <u>(), 5100</u> TV	0,5000	2 %Rec.: 102.0	40		
CCV :	Result: <u>0,5076</u> TV:		_ %Rec.: <u>_/0/, ६</u>	10		
ccv:	Result: <u>(); </u>		%Rec.:	•		
CCV :	Result: TV:		%Rec.:			
CCV :	Result: ŤV		%Rec.:		•	÷
CCV :	Result: TV		%Rec.:	.	٠	
an inticher		. 0 010				
ССВ: <u>10/14/13</u>	$-$ Result: $0 \cdot 0 \cdot 0 \cdot 0$ RDI	.: <u>0,070</u>	<pre></pre>			
	Result: RDI	··	_ <rdl:< td=""><td></td><td></td><td></td></rdl:<>			
ССВ:У	Result: RDI	-: <u>v</u>	_ <rdl:<u>y</rdl:<u>			
ССВ;	_ Result: RDI		<rdl:< td=""><td></td><td></td><td></td></rdl:<>			
ССВ:	Result: RDI	•••••••••••••••••••••••••••••••••••••••	_ <rdl:< td=""><td></td><td></td><td></td></rdl:<>			
ССВ:	Result: RDI	-:	_ <rdl:< td=""><td></td><td></td><td></td></rdl:<>			
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Reagent Reference	Numbers:		· · · · · · · · · · · · · · · · · · ·			
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	·				·····	
In ital Calibration So	ource:					
Continuing Calibrat	ion Source:					
Arelyst: <u>MRH</u>	Date:_ <u>10 14</u>	13				
Comments:	· •					_
· <u>··</u> ·································						-

Fcam: GN076-01



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7.1

QC Reports: GN93212		
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	2 of 2	
Test: Hexavalent Chromium Product: XCr	MDL = 0.0013 mg/l RDL = 0.010 mg/l	GN Dat

Test: Hexavalent Chromium		М	DL = 0.0013 mg/l	GNBatch	10: <u>GN93212</u>	
Product: XCr Mothod: SW846.7	1964	RI	DL = 0.010 mg/l	Date:	114/15	
Digestion Batch G	C Summary	U	nits = mg/l	<u></u>	· · · · · · · · · · · · · · · · · · ·	
Method Blank ID:	Da	ite:	Result:		<rdl:< th=""><th></th></rdl:<>	
Spike Blank ID:	Da	te:	Result:	Spike:	%Rec.:	•
Duplicate ID: D2 (TR50/39-38am	np. Result: 0	000 Dup. Resul	It: 0.000	%RPD: <u>0,0</u> 7	
MS 10: -52	J Samp. Res	ult $\mathcal{O}, \mathcal{O}\mathcal{O}$	MS Result: 0,144	Spike: <u>0,13</u>	SO%Rec: 96.0 20	
Diluted Sample ID:		Samp. Result	: Dil. R	Result:	%RPD:	
pH adi. PS ID:	San	p. Result:	MS Result:	Spike	=: %Rec:	
, <u>_</u> ,		·	· · · · · · · · · · · · · · · · · · ·			
Analysis Batch QC	Summary	Units = mg]/I			
CCV:	Result:		%Rec.:	· .	· ·	
CCV :	Result:	TV:	%Rec.:		•	
CCV :	Result:	TV:	%Rec.:			
ccv:	Result:	TV:	%Rec.:			
CCV :	Result:	тv:	%Rec.:	-	. · ·	
CCV :	Result:	TV:	%Rec.:	· · ·	▲	•
CCB:	Result:	RDL:	<rdl:< td=""><td></td><td></td><td></td></rdl:<>			
ССВ:	Result:		<rdl:< td=""><td></td><td></td><td></td></rdl:<>			
CCB:	Result:	RDL:	<rdl:< td=""><td></td><td></td><td></td></rdl:<>			
CCB:	Result:	RDL:	<rdl:< td=""><td></td><td></td><td></td></rdl:<>			
CCB:	Result:	RDL:	<rdl:< td=""><td></td><td></td><td></td></rdl:<>			

Reagent Reference Numbers: See attached In ilial Calibration Source:

Centinuing Calibration Source:

Aralyst: MRH ____ Date: 10/14/13_

Comments:___

Fom: GN076-01



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7.1

Hexavalent Chromium pH Adjustment Log

Method: SW846 7196A

pH adj. start time: pH adj. end time: 21 25

pH Adjust. Date: <u>10/14/13</u> GN Batch ID: <u>GN 9321 Z</u>

	Initial					i
	Sample	Final		bkg pH		
	Volume	Volume	pH after	after		
Sample ID	(ml) ⁻	(mi)	H2SO4	H2SO4	Spike Info	Comments
CCV	45	50	1.73	NIA	5.0 ml	500m ultra
CCV						
CCV				*-		
CCV					1 N.	
ССВ	45	50	1.75	NIA	NA	
ССВ					,	
ССВ						
ССВ			6 1			· · · · · · · · · · · · · · · · · · ·
MS (JB50113-1)	45	50	1,72	1.80	LOWL	7. SPEM Abs
			1.69	1.88		<i>49</i>
SB BSP			1.81	1,93	1.OmL	7. Sppm Abs.
PB MB			1.93	1.76		
1.JB50113-1			1.88	1-69		· · · · · · · · · · · · · · · · · · ·
2. -2			1.76	1.72		
33			1.75	1.81		
44			1.68	1.86		
5. – S			1.73	1.88		
6 . —6			1.85	70		
77			1.84%	1.91		
8. V - 8			1.91	1.86		
9. JB 50090-1			1.90	1.93		
10. JB 50/19-1			1.76	1.86		
11. EMSZ/JR50139-3			1.86	1.83	LONL	7.5 ppm Abs
12DZ			1.82	1.90		,,
13. JB 501 39-3			1.80	1.89		
14. 1-6			1.77	1.86		
15. JB 50145 - 38			1.69	1.81		
16. 1 - 39			1.71	1.80	-	
17.						
18.		<u> </u>				
19.	<u> </u>					
20.	L	L			<u> </u>	
PS						
DIL						
DIL						
	<u> </u>	11 1	0			

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Reagent Information: Sec attached

Analyst: MRH

Date: 10/14/13 QC

QC Reviewer:___

Date:_

Form: GN077-01 Rev. Date:1/10/11





OC Reports: GN93	212	÷ .		· ,	
	3 T.				
Hexavalent C	hromiur	n pH Ad	justmen	t Log	
Method: SW8	846 7196	5A		. 1	1
pH adj. start time:		7 (:10		pH Adjust. Date: 10/14/	13
pH adj. end time:		<u> XI I S</u>		GN Batch ID: <u>G N193</u>	<u>z12</u>
Sample ID	Initial Sample Volume (ml)	Final Volume (ml)	pH after H2SO4	Comments	Spike Info.
Calibration Blank	45_	50	1.76		
0.010 mg/l standard			1,+0	5 ppm Absolute	0.10 ml of 5 mg/l to 50 ml FV
0.050 mg/l standard			1.7		0.50 ml of 5 mg/l to 50 mL FV
0.100 mg/l standard			1.81		1.00 ml of 5 mg/l to 50 mL FV
0.300 mg/l standard	<u> </u>		1,80		3.00 ml of 5 mg/l to 50 mL FV
0.500 mg/l standard	<u> </u>		1.75		5.00 ml of 5 mg/l to 50 mL FV
0.800 mg/l standard		<u> </u>	1.76		8.00 ml of 5 mg/l to 50 mL FV
1.00 mg/l standard	V	↓	1.81		10.0 ml of 5 mg/l to 50 mL FV
2.00 mg/l standard		<u> </u>	20	The second se	20.0 ml of 5 mg/l to 50 mL FV
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	(1. 17 3 59) 17 ₁₀	- 57	<u> </u>		
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1.1.3 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5		<u> </u>	14 14 14		
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Reagent Information: Sec attached

Analyst:<u>MR/H____</u>

3 _ Date:_10

Form: GN078-01 Dav. Datas 1/10/11

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M ACCUTEST.

HEXAVALENT CHROMIUM STANDARD PREPARATION LOG Product: XCR 719 6 GN or GP Number: GN 9321 2

		_															_			_	_	
	_		Date	2114101	-			X				Date	10/14/13						X			
			Analyst	MAH				>				Analyst	MKH						>			
		Expiration	Date	3/25/2016				10/31/2019			Expiration	Date	10/15/13						•			
Final Conc.	đ	Intermediate	(I/gm)	10 mg/l	100 mg/l	5 mg/l	7.5 mg/l	10 mg/l		Final Conc.	Of Standard	(I/gm)	0.01 mg/l	0.05 mg/l	0.10 mg/l	0.30 mg/l	0.50 mg/l	0.80 mg/l	1.0 mg/l			
		Final	Volume	100 mls	100 mls	200 mg/l	200 mg/l	100 mg/l			Finał	Volume	50 mls									
			Diluent	ō	ō	ō	ā	D				Diluent	⊡	٦	D	D	ō	ā	đ			
	Stock	volume	used in ml	1.0 ml	10 ml	1.0 ml	1.5 ml	1.0 ml	Intermediate	or Stock	volume	used in ml	0.1 ppm	0.5 ppm	1.0 ppm	3.0 ppm	5.0 ppm	8.0 ppm	10.0 ppm			
		Stock	concentration	1000 ppm	1000 ppm	1000 ppm	1000 ppm	1000 ppm		Intermediate	or Stock	concentration	5.0 ppm									
			Stock used to prepare standard	Absolute Grade Lot #032513				Ultra lot #P00986			Intermediate or Stock used to	prepare standard	5.0 ppm abs									
	Intermediate	Standard	Description	10 ppm	100 ppm	5 pom	7.5 ppm	10 ppm			Standard	Description	.010 pom	.050 ppm	.10 ppm	.30 ppm	.50 ppm	.80 ppm	1.00 ppm			

Form: GN205-02 Rev. Date:10/16/09

35 of 53 ACCUTEST JB50090

GN93212
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Reagent Information Log - XCR - water - 7196A

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium, 1000 mg/L Stock	6/6/2016	Absolute Grade Lot # 060613
Calibration Checks: Hexavalent Chromium, 1000 mg/L Stock	10/31/2019	Ultra lot # P00986
External Check	10/31/2019	Ultra lot # P00986
Spiking Solution Source	6/6/2016	Absolute Grade Lot # 060613
Diphenyl carbazide Solution	11/2/2013	GNE10-37623-XCR
Sulfuric Acid, 10%	3/30/2014	GNE9-37608-XCR
Filter 0.45um	na	130407036
1N NaOH	12/6/2013	GNE-6-36428-XCR
	<u></u>	
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Form: GN087A-23 Rev. Date: 10/3/05



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Test: pH, Corrosivity Method: SW846 9040B or SW846 9045C

Product: PH, CORR Analyst: ALECA GN Batch ID: GN93229
 GN93229

 Analysis Date:
 10/15/2013

 pH Meter ID:
 50

> Sample ID: JB50090-2 % RPD:

1.18%

Thermometer ID: 394 Correction Factor: 0

7.61

QC Summary

Duplicate ID: GN93229-D1 Dup Result:

		Uncorrected/			
	Wt./Vol. used	Corrected Temp in			
Sample ID	for solds	Deg C.	Result	Corrosivity	Read time
Buffer Check: 4		25	3.98		9:57
Buffer Check: 7		25	6.97		
Buffer Check: 10		25	9.98		
GN93229-D1		25	7.61		
JB50090-2		25	7.70		
JB50090-3		25	7.37		
JB50090-4		25	7.70		
JB50090-5		25	7.86		
JB50090-6		25	7.87		
JB50119-2		25	7.95		
JB50145-32 A-		25	7.44		
JB50145-33CONF		25	7.30		
JB50145-34 4		25	7.30		
Buffer Check: 7		25	6.97		
Buffer Check: 10		25	9.97		
JB50145-35CONF		25	7.71		
JB50145-36CONF		25	7.64		
JB50145-37CONF		25	7.79		
Buffer Check: 7		25	6.99		
Buffer Check: 10		25	10.00		10:58
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Puffer Cheak			· · ·		
Buffer Check:		<u>\</u> //			⊢
Buller Check:					
Comments:		NL			
Volidated Du	Nese			Validated Date:	10/1/2012
valuated By:	INANC	y COIE		vanuateu Date:	10/1/2012
Desument Control #					



QC Reports:

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Balance #__





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70 C 1 Analyst Method Prep Date GP# (2) <u>>#</u> GN93230-EH

Sample Prep Log

Sample ID	Sample Size	Final Volume		
JB50090-2	50.9	added some		
* -3	50.5			
-4	50.9			
-5	50,1			
- 6 h	508			
-2pup	50,9			
51350145-32	50.4			
~ 3,3	50. Jan 19 19 19 19			
-34	50,7			
- 35	50,0			
- 36	ST.F			
- 37	50.9	V V		
JB50119-2	30.0	polled 30m		
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Form: GN166-02

Rev: Date: 8/5/05

QC Review_





Reagent Information Log Test Name:_____pH____

GN 93229

Reagent

pH 2 Buffer Solution

pH 4 Buffer Solution

pH 7 Buffer Solution

pH 10 Buffer Solution

pH 13 Buffer Solution

FISHER LOT#126191 EXP 10/2014

BDH LOT#2206544 EXP 6/2014

RICCA LOT#2304783 EXP 03/2015

BDH LOT#2206072 EXP 11/2013

Lab Chem LOT# C025-16 EXP 1/29/20

Form: GN087-01 Rev. Date:9/18/2013









rest. Redox rotendal	Analyst:	ALECA				
Matrix: Aqueous 🔘	Aqueous Method: ASTM D1498-76			10/15/13		
Matrix: Solid O	Method: ASTM D1498-	-76 Mod.	GN Batch ID:	GN93230		
			Temp (Deg C):	25		
Quality Control Summary						
Sample ID: GN93230-D1	Results: 345.4	Dup: 346.9	% RPD:	0.43%		
Ferrous-Ferric True: 675		Found 675.5	% Rec	100.07%		
pH 4 Quinhydrone True: 462		Found 492.8	- % Rec	106.67%		
pH 4 Quinhydrone True: 462		Found 485.1		105.00%		
pH 4 Quinhydrone True: 462		Found 484.4	% Rec	104.85%		
pH 7 Quinhydrone True: 285		Found 290.3	_ % Rec	101.86%		
pH 7 Quinhydrone True: 285		Found 284.8	_ % Rec	99.93%		
pH 7 Quinhydrone True: 285		Found <u>285.4</u>	% Rec	100.14%		
		my vs. Ad/AdCl		Corrected results (my		
Sample #:		Electrode		vs. Hydrogen electrode) ***		
Ferrous-Ferric Solution		463.5		675.5		
pH 4 Quinhydrone	•	280.7	_	492.8		
oH 7 Quinhydrone	•	78.2		290.3		
Dup GN93230-D1] .	134.8		346.9		
1. JB50090-2]	133.3		345.4		
2. JB50090-3		152.8	_	364.9		
3. JB50090-4		143.2	_	355.3		
4. JB50090-5		104.3		316.4		
5. JB50090-6		101.1		313.2		
6. JB50119-2	4.	63.7		275.9		
7. JB50145-32	-	90.5		302.5		
8. JB50145-33CONF	4	101		313.1		
9.[JB50145-34	J.	105.7		317.9		
pH 4 Quinnydrone		2/3	<u> </u>	400.1		
pH / Quinnyarone	۰ r	<u> </u>	_	204.0		
11 JB50145-36CONF		60	_	200.0		
12 JB50145-37CONE	-	60.9	_	272.1		
13	-	00.0	_	210		
14	-					
15.	-					
16.	-					
17.	1 .					
· · · ·	1 .					
18.	1 .		_	· · ·		
18 19.						
18 19 pH 4 Quinhydrone	」.	272.3		484.4		

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Comments:



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Balance #______&

V G Analyst Method <u>/15/2013</u> Prep Date <u>M3229-</u> GP# s# GN93230-EH

Sample Prep Log

	Final Volume			
50.9	added one			
50.5				
50,9				
50,1				
50.8				
ా5 రె.9				
50.4				
50.0				
50,7				
50,0				
SD. F				
50.9				
30.0	asked same			
her - st				
	·			
	· · · · · · · · · · · · · · · · · · ·			
	$ \frac{50.9}{50.5} \frac{50.7}{50.1} \frac{50.8}{50.9} \frac{50.4}{50.0} \frac{50.7}{50.0} \frac{50.7}{50.0} \frac{50.9}{30.0} \frac{50.9}{30.0} $			

Form: GN166-02 Rev: Date: 8/5/05

QC Review_





				Hexava	lent Ch	romiu	m					
				V Valuer Corr	da anna anna anna anna anna anna anna a				380 States - States - State			
tle	Sample	BKGRD	Analysis	Sample	X Values	Final Vol.	Sam Wt.	and the second			ing the sale of	
Sample #	Absorbance	Abs	Times	Absorbance	Conc(mg/l)	(ml)	(9)	Dilution	Final Conc.	Units	MDL	RDL
Test Title:	XCRA						Method:	SW846 30	060A, 7196A			
GN Batch:	GN93231											
Analyst:	BP											
Prep Date:	10/14/2013				Note: All	results b	elow sho	own on a	wet weight basl	S.		
Analysis Date:	10/15/2013											
Instrument ID:	Н											
						_			Corr. Coef;	0.99997		
Cal. Blk.	0.000	NA	8:37	0.000	0.0000							
STD 1	0.009	NA	8:41	0.009	0.0100				Slope:	0.8939		
STD 2	0.044	NA	8:41	0.044	0.0500							
STD 3	0.089	NA	8:41	0.089	0.1000				Y intercept:	-0.0005		
STD 4	0.268	NA	8:41	0.268	0.3000							
STD 5	0.446	NA	8:41	0.446	0.5000							
STD 6	0.709	NA	8:41	0.709	0.8000	Final Vol.	Sam. Wt.					
STD 7	0.898	NA	8:41	0.898	1.0000	<u>(ml)</u>	<u>(g)</u>	Dilution	Final Conc.	<u>Units</u>	MDL	<u>RDL</u>
CCV	0.442	NA	9:29	0.442	0.4950	NA	NA	NA	NA	mg/l	0.002	0.010
ССВ	0.000	NA	9:29	0.000	0.0006	NA	NA	NA	NA	mg/l	0.002	0.010
GP75260-MB1	0.000	0.000	9:37	0.000	0.0006	100.0	2.5000	1	0.024	mg/kg	0.069	0.400
GP75260-B1	0.787	0.000	9:37	0.787	0.8810	100.0	2.5000	1	35.239	mg/kg	0.069	0.400
GP75260-S1	0.577	0.005	9:37	0.572	0.6405	100.0	2.4800	1	25.825	mg/ka	0.070	0.403
GP75260-D1	0.027	0.006	9:37	0.021	0.0241	100.0	2.4700	1	0.975	mg/ka	0.070	0.405
JB50090-4	0.031	0.009	9:37	0.022	0.0252	100.0	2.4700	1	1.021	ma/ka	0.070	0.405
JB50090-4PSCON	F 0.394	0.000	9:37	0.394	0.4413	100.0	2.4700	2	35.736	ma/ka	0.070	0.810
GP75260-B2	>3	OVR	9:37		#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
GP75260-\$2	>3	0VR	9:37		#VALUE!	100.0	2,4900	1	#VALUE!	ma/ka	0.069	0.402
GP75260-B2	0.386	0.000	9:37	0.386	0.4324	100.0	2 5000	50	864 788	ma/ka	0.000	20.000
GP75260-S2	0.413	0.000	9:37	0.413	0.4626	100.0	2 4900	50	004.700	malka	0.009	20.000
CCV	0.442	NA	9:37	0.442	0.4950	NA I	NA	NA	NA	mg/kg	0.003	20.000
ССВ	0,000	NA	9:37	0.000	0.0006	NA	NA	NA	NA NA	- mg/l	0.002	0.010
IB50090-2	0.150	0.030	0:42	0.000	0.0000	100.0	2 5000		1.001	mg/i	0.002	0.010
JB50090-3	0.578	0.033	0:42	0.111	0.1246	100.0	2.0000		4.991	mg/kg	0.069	0.400
IB50090 5	0.140	0.132	9.42	0.440	0.4995	100.0	2.4400	1	20.4/2	mg/kg	0.071	0.410
JB50000-5	0.140	0.031	9:42	0.109	0.1225	100.0	2.4800	<u> </u>	4.941	mg/kg	0.070	0.403
383090-0	0.120	0.033	9:42	0.093	0.1046	100.0	2.4900	1	4.202	mg/kg	0.069	0.402
			9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
··· • • ···	+		9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#D1V/01
			9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
			9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
		v	9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
COV	0.428		9:42		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
CCP	0,438		9:42	0,438	0.4906	NA	NA	NA	NA	mg/l	0.002	0.010
CCB	0.000	NA	9:42	0.000	0.0006	NA	NA	NA	NA	mg/l	0.002	0.010
+	++		0:00		#VALUE	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
+					#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
+	+				#VALUE!	100.0		<u> </u>	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	+				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	- <u>+</u>				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	┼────┤				#VALUE!	100.0		<u> </u>	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	<u>+</u>				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
	∔				#VALUE!	100.0	-	1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
+	╡────┤				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	<u></u>				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
	╂──────┤	NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
CCB	<u>}</u>	NA			#VALUE1	NA	NA	NA	NA	mg/l	0.002	0.010
	┨─────┤				#VALUE!	100.0		1	#VALUE1	mg/kg	#DIV/0!	#DIV/01
	┫─────┤				#VALUE!	100.0	<u>_</u>	1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
+	<u> </u>				#VALUE!	100.0	$ \rightarrow $	1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	4				#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
+	┿╼───┤				#VALUE!	100.0	\mathbb{A}	1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
	<u> </u>				#VALUE!	100.0	\sim	t	#VALUE1	mg/kg	#DIV/0!	#DIV/01
	<u></u>				#VALUE!	100.0	(1)	1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
					#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
					#VALUE!	100.0		1	#VALUE!	mg/ka	#DIV/0!	#DIV/0!
					#VALUE!	100.0		1	#VALUE!	mg/ka	#DIV/0!	#DIV/0!
CCV		NA			#VALUE!	NA	NA	NA	NA	ma/l	0.002	0.010
CCB		NA			#VALUE!	NA	NA	NA	NA	ma/l	0.002	0.010
					#VALUE!	100.0	2.5000	1	#VALUE!	ma/ko	0.069	0.400
					#VALUE!	100.0	2.5000	1	#VALUEL	mo/ko	0.069	0.400
	1				#VALUE!	100.0	2.5000	1	#\/A1LIE1	ma/ka	0.060	0.400
					#VALUE!	100.0	2,5000	1	#VALUE!	malka	0.060	0 400
	†				#\/AIUEI	100.0	2 5000	1	#VALUE:	mailing	0.009	0.400
	<u>ا</u> ـــــ					,00.0	£.0000	· · · · · · · · · · · · · · · · · · ·	I #VALUEI	riy/kg	0.009	0.400



42 of 53 ACCUTEST. JB50090

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\mathbf{OC}	Ro	norte
Q O	170	porta.

GN93231	
CINCOLOI	

Image: Control of the second	1			1			#\/ALLIE1	100.0	2 5000	1	#VALUE	ma/ka	0.069	0 400
1 1 PAULE 1002 2.8000 1 PAULE 1000 2.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.8000 0.80							#\/A1LIE1	100.0	2 5000	1	#\/A111EI	ma/ka	0.000	0.400
Image: Constraint of the second sec	ŀ						#\/A111E1	100.0	2 5000	1	#\/ALUE	ma/ka	0.000	0.400
CCV NA PAULE NO. PAULE NO. NA PAULE NO. NA PAULE NO. PAULE NO. PAULE NO. PAULE NO. PAULE NO. PAULE NO. NA NA <td></td> <td></td> <td></td> <td></td> <td>h</td> <td>h</td> <td>#VALUE!</td> <td>100.0</td> <td>2.0000</td> <td></td> <td>#VALUE:</td> <td>mg/kg</td> <td>0.000</td> <td>0.400</td>					h	h	#VALUE!	100.0	2.0000		#VALUE:	mg/kg	0.000	0.400
Ctv NA PARLIE NA NA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>#VALUE!</td> <td>100.0</td> <td>2.5000</td> <td></td> <td>#VALUEI</td> <td>mg/kg</td> <td>0.009</td> <td>0.400</td>							#VALUE!	100.0	2.5000		#VALUEI	mg/kg	0.009	0.400
CVC MA		001			·····		#VALUE!	100.0	2.5000		#VALUE:	mg/kg	0.009	0.400
CC9 M PAULE MAUE MA		CCV		NA NA			#VALUE!			NA NA	NA	mg/i	0.002	0.010
Image: Constraint of the second sec		CUB		NA			#VALUE!	NA 100.0	NA	NA		mg/i	0.002	0.010
PAULE ODD PAULE ODD PAULE ODD PAULE ODD PAULE MAD MAD <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>#VALUE!</td> <td>100.0</td> <td>2.5000</td> <td>1</td> <td>#VALUE!</td> <td>mg/kg</td> <td>0.069</td> <td>0.400</td>							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
AVALUE NO. 2 AVALUE NO. NO. NO. NO. NO. 2 AVALUE NO. NA NA <	\vdash					 	#VALUE!	100,0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the second sec					· · · ·		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
AVALUE NO. 2 AVALUE NO. 1 AVALUE NO. 2 AVALUE NO. NO. NO. 2 AVALUE NO. NO. NO. NO. 2 AVALUE NO. NO. NO. AVALUE NO. 2 AVALUE NO. AVALUE NO. AVALUE NO. AVAL							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the second sec							#VALUE!	100.0	2.5000	1	#VALUE}	mg/kg	0.069	0.400
Image: Constraint of the second sec	\square						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Control in the second							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the second sec							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
CCV NA #VALUE 1000 25000 1 #VALUE mghg 0.000 0.002 0.001 CCB NA #VALUE NA NA NA NA NA mghg 0.002 0.010 CCB NA #VALUE 1000 2.5000 1 #VALUE mghg 0.009 0.400 WALUE 1000 2.5000 1 #VALUE mghg 0.609 0.400 WALUE 1000 2.5000 1 #VALUE mghg 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600 0.600							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0,069	0.400
CCV NA PALLEI NA NA NA mpl 0.002 0.010 CCB NA PALLEI 1000 2.000 1 #VALUEI mgkg 0.080 0.002 0.001 CCB NA PALLEI 1000 2.000 1 #VALUEI mgkg 0.080 0.080 0.000 CCM PALLEI 1000 2.000 1 #VALUEI mgkg 0.080 0.000 0.000 1 #VALUEI mgkg 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000							#VALUE!	100.0	2.5000	t	#VALUE!	mg/kg	0.069	0.400
CCB NA PALLEI NA NA NA mpl 0.002 0.010 PALLEI 1030 2500 1 #YALUEI mgl 0.090 0.090 0.000 PALLEI 1030 2500 1 #YALUEI mgl 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 0.090 <td></td> <td>CCV</td> <td></td> <td>NA</td> <td></td> <td></td> <td>#VALUE!</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>mg/l</td> <td>0.002</td> <td>0.010</td>		CCV		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image: Control of the second		CCB		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image Image <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>#VALUE!</td><td>100.0</td><td>2.5000</td><td>1</td><td>#VALUE!</td><td>mg/kg</td><td>0.069</td><td>0.400</td></th<>							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Control of the second			1				#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
Image: Source PYALUE					******		#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0.069	0.400
Price Price <th< td=""><td></td><td></td><td></td><td></td><td></td><td>l</td><td>#VALUE!</td><td>100.0</td><td>2,5000</td><td>1</td><td>#VALUE!</td><td>ma/ka</td><td>0,069</td><td>0,400</td></th<>						l	#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0,069	0,400
Image: Second						1	#VALUE!	100.0	2.5000	1	#VALUE!	mo/ko	0,069	0.400
Private Private <t< td=""><td></td><td></td><td><u> </u></td><td></td><td> </td><td>1</td><td>#\/ALLIEI</td><td>100.0</td><td>2,5000</td><td>1</td><td>#\/A!!!E1</td><td>ma/ka</td><td>0.060</td><td>0.400</td></t<>			<u> </u>			1	#\/ALLIEI	100.0	2,5000	1	#\/A!!!E1	ma/ka	0.060	0.400
PARLEL Oldo ZADUE Imply 0 Oldo ZADUE Imply 0 Oldo							#V/ALLIE!	100.0	2.5000		#VALUE1	mg/kg	0.000	0.400
CV PALLE 1000 2.5000 1 PVALUE mg/ng 0.080 0.400 CCV NA PVALUE 1000 2.5000 1 PVALUE mg/ng 0.088 0.400 CCV NA PVALUE NA NA NA NA mg/ng 0.088 0.400 CCV NA PVALUE NA NA NA NA mg/ng 0.088 0.400 CCS NA PVALUE NA NA NA NA mg/ng 0.089 0.400 CCS NA PVALUE 1000 2.5000 1 #VALUE mg/ng 0.689 0.400 PVALUE 1000 2.5000 1 #VALUE mg/ng 0.689 0.400 PVALUE 1000 2.5000 1 #VALUE mg/ng 0.889 0.400 PVALUE 1000 2.5000 1 #VALUE mg/ng 0.889 0.400 PVALUE							#VALUE:	100.0	2.5000		#VALUE!	mg/kg	0.005	0.400
CCV NA #VALUE 100.0 2 800.1 1 #VALUE 100.0 2 800.0 1 #VALUE mg/sg 0.086 0.400 CCV NA #VALUE NA NA<	\vdash						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
CCV NA FVALUE 1000 2.000 1 FVALUE mg/ng 0.008 0.400 CCB NA NA NA NA NA NA NA mg/ng 0.002 0.001 CCB NA NA NA NA NA NA NA NA mg/ng 0.008 0.000 0.001 CCB NA NA NA NA NA NA NA NA mg/ng 0.008 0.400 CCB PALUEI mg/ng 0.008 0.400 FVALUEI mg/ng 0.008 0.400 PVALUEI 100.01 2.5000 1 #VALUEI mg/ng 0.068 0.400 PVALUEI 100.01 2.5000 1 #VALUEI mg/ng 0.068 0.400 PVALUEI mg/ng 0.068 0.400 2.5000 1 #VALUEI mg/ng 0.068 0.400 PVALUEI mg/ng 0.068 0.000							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
CCV NA NA MA NA	$ \rightarrow $				l		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
CCB NA NA NA NA NA NA NA MA mpl 0.002 0.001 Image: Comparison of the structure	<u> </u>	CUV		NA	· · · · ·		#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image Image <th< td=""><td></td><td>CCB</td><td></td><td>NA</td><td></td><td></td><td>#VALUE!</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>mg/l</td><td>0.002</td><td>0.010</td></th<>		CCB		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image: Image:<				L			#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the second sec							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
							#VALUE!	100.0	2.5000	1	#VALUE	mg/kg	0.069	0.400
Image: state in the s							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the synthesis of the synthesynthesis of the synthesis of the synthesis of the syn							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Second							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Second							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the state of							#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0.069	0.400
Product Product <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>#VALUE!</td><td>100.0</td><td>2 5000</td><td>1</td><td>#VALUE!</td><td>ma/ka</td><td>0.069</td><td>0 400</td></t<>							#VALUE!	100.0	2 5000	1	#VALUE!	ma/ka	0.069	0 400
CCV NA #VALUEI NA NA NA mg/n 0.002 0.002 CCB NA #VALUEI NA NA NA NA NA mg/n 0.002 0.001 CCB NA #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.669 0.400 #VALUEI 100.0 2.5000 1 <						1	#VALUE!	100.0	2.5000	1	#\/AL1/EL	ma/ka	0.069	0.400
CCB NA WA WA NA NA NA MA mg/l 0.002 0.001 CCB NA WA WA NA NA NA MA mg/l 0.002 0.010 WALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.068 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI </td <td></td> <td>CCV</td> <td></td> <td>NA</td> <td></td> <td></td> <td>#VALUE!</td> <td>NA</td> <td>NA</td> <td>NΔ</td> <td>NA NA</td> <td>ma/l</td> <td>0.002</td> <td>0.010</td>		CCV		NA			#VALUE!	NA	NA	NΔ	NA NA	ma/l	0.002	0.010
OCC NN		CCB		NA			#\/ALLIEL	NA	NA	NA	NA	ma/l	0.002	0.010
Image: Section of the sectio		000		- 110			#VALUE:	100.0	2 5000	1		malka	0.002	0.010
Image: Constraint of the second sec	┝──┤						#VALUE!	100.0	2.0000		#VALUE:	mg/kg	0.009	0.400
Image: Constraint of the second sec							#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the second sec	<u>├</u>						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the system #VALUE: 100.0 2.5000 1 #VALUE: mg/kg 0.069 0.400 CCV NA #VALUE! NA NA NA Mg/l 0.002 0.010 CCB NA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.669 0.400 #VALUE! 100.0 2.50	┝──┤				[·	#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
#VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCV NA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCV NA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCV NA #VALUE! NA NA NA MA mg/kg 0.002 0.010 CCB NA #VALUE! NA NA NA NA mg/kg 0.022 0.010 MCCB NA #VALUE! NA NA NA NA MA MA MA MA MA MA				h			#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the system #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 Image: Constraint of the system #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 Image: Constraint of the system #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 Image: Constraint of the system #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 Image: Constraint of the system #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.002 0.010 Image: COS NA #VALUEI NA NA NA NA mg/kg 0.002 0.010 Image: COS NA #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 Image: COS Image: Cos #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.669 0.400 Image	┝──┥						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Constraint of the synthesis of the synthesynthesis of the synthesis of the synthesis of the syn	┝──┤			ļ	<u> </u>		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
Image: Normal State	⊢ Ì				L		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
m mg/kg 0.069 0.400 CCV NA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCB NA MA #VALUE! NA NA NA NA mg/l 0.002 0.010 CCB NA NA #VALUE! NA NA NA NA mg/l 0.002 0.010 CCB NA NA MA NA NA NA NA MA mg/l 0.002 0.010 CCB NA NA MA NA NA NA NA MA mg/ls 0.002 0.010 CCB NA MA MA MA MA MA MA MA MA Mg/ls 0.002 0.001 CCB MA MA MA MA MA MA MA MA Ma Main Main Main Main Main Main	\vdash		l		L	I	#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
CCV NA #VALUE! NA NA NA mg/l 0.002 0.010 CCB NA #VALUE! NA NA NA NA MA mg/l 0.002 0.010 CCB NA #VALUE! NA NA NA NA mg/l 0.002 0.010 MA MA #VALUE! NA NA NA MA mg/kg 0.069 0.400 MA MA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.669 0.400 MA				<u> </u>	I		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
CCB NA #VALUE! NA NA NA mg/l 0.002 0.010 Image: Comparison of the system <		ccv	L	NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image: Second		CCB		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
Image: Section of the sectio	ļ						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0,069	0.400
#VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.669 0.400							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
#VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 #VALUE! 100.0 2.5000 1 #VALU! mg/kg 0.069 0.400							#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
#VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCV NA #VALUE! NA NA NA MA mg/kg 0.002							#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
#VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.669 0.400 CCV NA #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 CCB NA #VALUEI NA NA NA MA mg/kg 0.002 0.010 revised 4/25(11 NA NA NA NA NA<				<u> </u>	T		#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0.069	0.400
#VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.069 0.400 CCV NA #VALUE! 100.0 2.5000 1 #VALUE! mg/kg 0.002 0.010 CCB NA #VALUE! NA NA NA MA mg/kg 0.002 0.010 revised 4/25/11 NA NA NA NA MA mg/kg 0.002 0.010				1			#VALUEI	100.0	2,5000	1	#VALUE!	ma/ka	0,069	0,400
#VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.009 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 CCV NA #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 CCB NA #VALUEI NA NA NA NA mg/kg 0.002 0.010 revised 4/25/11 NA NA NA NA MA mg/kg 0.002 0.010							#VALUEL	100.0	2.5000	1	#VALUE!	mo/ko	0.069	0.400
CCV NA #VALUEI 100.0 2.5000 1 #VALUEI 100,0 0.400 CCB NA #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 #VALUEI 100.0 2.5000 1 #VALUEI mg/kg 0.069 0.400 CCV NA #VALUEI NA NA NA mg/kg 0.002 0.010 revised 4/25/11 HZ MA MA NA NA mg/l 0.002 0.010			1			<u> </u>	#\/ALLEL	100.0	2,5000	1	#\/ALUEI	ma/ka	0.060	0,400
CCV NA #VALUEI 100.0 2.5000 1 #VALUEI Img/kg 0.069 0.400 CCB NA #VALUEI NA MA MA NA NA MA 0.002 0.010 ccb NA #VALUEI NA NA NA NA MA 0.002 0.010							#\/AI1IEI	100.0	2.5000	4		ma/ka	0.000	0.400
CCV NA #VALUEI IOU.0 Z.5000 I #VALUEI Img/kg 0.005 0.400 CCB NA #VALUEI NA NA NA NA NA Mg/kg 0.002 0.010 revised 4/25/11	┝──┤						#\/\\\\E	100.0	2.0000	4	#VALUE!	mg/kg	0.009	0.400
CCB NA NA NA NA Mg/l 0.002 0.010 ccb NA #VALUEI NA NA NA Mg/l 0.002 0.010	┝	CCV	· · · · ·	N1A	<u> </u>		#VALUE!	100.0	2.0000	MA	#VALUE!	mg/kg	0.009	0.400
revised (125/11		<u></u>		N/A			#1/011101		N/A N/A	INA NA	INA NA	nig/i	0.002	0.010
		4 4/25/11	L		l	1	#VALUE!	I NA	I NA	INA	INA	i ng/i	0.002	0.010

Comments:





ЖM	
	ACCUTEST.

Test: Hexavalent Chromium Product: XCr Method: SW846 3060A/7196A	MDL = 0.069 mg/kg GNBatch ID: <u>Chrid323</u> RDL = 0.40 mg/kg Date: <u>[C][5][3</u>
Digestion Batch QC Summary	Units = ma/ka
Mathad Blank IDC P 45360 MRIData 10/16	The population of the series of the series Nells
Sol Spike Blank ID: 1 Date: Date:	$\frac{1}{2} = \frac{1}{2} = \frac{1}$
Insol Snike Blank ID:	Result Eff 1: 1880 pile Ger 91
	O_{2} Dup. Result: O_{2} A_{2} RPD_{1} O_{2}
Sol. MS ID: Samp. Result:	$MS \text{ Result:} \xrightarrow{\alpha} 5.525 \text{ Spike:} \underline{40.3} \text{Rec:} \underline{61.5} \underline{277}$
Insol. MS ID:S Amp. Result:	$\underline{\qquad} MS \operatorname{Result:} \underline{425.90} \operatorname{Spike} \underline{4304} \operatorname{\%Rec:} \underline{44.427} ($
Post Spike ID: 175000048 Samp. Result:_	PS Result: <u>35.736</u> \$pike: <u>10.4</u> %Rec: <u>85</u> -75./
Diluted Sample ID: Samp. Re	sult: Dil. Result: %RPD:
pH adj. PS ID: Samp. Result:	MS Result: Spike: %Rec:
Analysis Batch QC Summary Units =	= mg/l
CCV: 10/15/12 Result: 0.1950TV:	0.500 %Rec. 99. /.
$CCV:$ Result: $\frac{1}{1000}$ TV:	0.500 %Rec.: 1
CCV: Result: O.U906 TV:	0.500 %Rec.: 9 5-12-/ (
CCV : Result: TV:	0.500 %Rec.:
CCV : Result: TV:	0.500 %Rec.:
CCV : Result: TV: _	0.500 %Rec.:
CCV : Result: TV: _	0.500 %Rec.:
CCV : Result: TV:	0.500 %Rec.:
CCV : Result: TV: _	0.500 %Rec.:
CCB: 10/5/13 Result: O.OOGRDL:	0.010 <rdl: es<="" th="" ~=""></rdl:>
CCB: Result: RDL:_	0.010 <rdl:< th=""></rdl:<>
CCB: Result: RDL:_	0.010 <rdl:< th=""></rdl:<>
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CCB: Result: RDL:_	_0.010 <rdl:< th=""></rdl:<>
CCB: Result: RDL:_	0.010 <rdl:< th=""></rdl:<>
CCB: Result: RDL:_	0.010 <rdl:< th=""></rdl:<>
Reagent Reference Information - refer to att	tached reagent reference information page(s).
Molecular weig	nt = 323.2 g/mol Cr = 52.0 g/mol
[{1000000 ug/g x Insoluble spike wt(g) x 52/323	3.2}/ms sample wt(g) = Insoluble spike amount
Analyst: <u>BP</u> Date: <u>[0]15</u>	13
Comments:	
Form: GN066-01 Rev. Date: 05/13/13	







Hexavalent Chromium pH Adjustment Log Method Sw846 3060A/7196A

						pH Meter ID:	23	
						Digestion Date	<u>: 10-14</u>	- 13
pH adj. start time:		5:57	-	916		pH adj. Date:	101151	3
pH adj. end time:		9 07	-	9 24.		GN Batch ID:	ON93	231
		pH after		pH after				
6175260	Sample	HNO3	Final	H2SO4	bkg pH			
	Weight in	(7.0 to	Volume	(1.5 to	after	Spike	Spike	Digestate
Sample ID	g	8.0)	(ml)	2.5)	H2SO4	Amounts	Solution	Description/Comments
CCV		7.42	100	196		Siome	LOPPMUUM	
CCV							<u>+</u>	
CCV								
CCV			- 10	0.14				
CCB		1.67	160	et 16				
CCB								
CCB								
UCB	2110		14-0	2 50	101-	1 Omi	1000000	
$\frac{1}{100} \frac{1}{100} \frac{1}$	3.40	+ 62	100	<u>a.</u>	1.46	A ALIU	the (
	215	3.01			1 73	0.0141	100104	
	3º4	4.46		0000	1.52	NUDAN	10000 ARS	
SB (301)	<u> </u>	7.24		$\frac{1}{1}$	1.6%	0.01119	PN JUL	
MB					1.06		1.001-4	
1 TBSOACH- V	2117	1 8 9		2.33	1.18			Jo Iluci
2 1 -2	250			161	1. <u>0.3</u>			Tan
3 - 3	2.44	7.26		175	1.05			Brown
4 ~5	2.68	1 0 %		2 5	1.60			tan
5 1 ~6	2.05			3.65	2.13			, j
6		7 11						
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20	2.00	1.70	1.					
SB (Insol)	<u>la 20</u>	7.30	<u> </u>	Q. 14	1.6F	InLSanp T	50mi WIDI	dilution 57
MS (Insol.)	g.uq	1.01		1.86	303	$\neg \gamma$		
1500 50010-4)	1 <u>2.11</u>	1.23	40.	1-43	1.52	0.275mLCOP	prostos, F	1.50 mL 1.77
pri adjusted PS								
TREADED 11	2115							
Reagent Reference Ir	1 d. 4.2 Iformation	, refer to	attachod	reagent re	ference i	l nformation pa	ne(e)	
{1000000 ug/g v lneolu	ihle snike v	wt(a) x 52"	323 21/me	sample with	$(\alpha) = lneol$	uhle snike amo	unt of PhOrO	Δ
Li secces adià y moor		(g) × 02/	20.2/1113	campie wu	(9) - 11300	and spine allo		1

2nd analyst check:___

Anayst:______

Form: GN-067 Rev. Date: 08/8/12



7.4

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ACCUTE	EST LABS		3060A/	7196 A P(DST-DK	SEST SPI	KF I EVF				снеет	
	2										GP Batch:	Core tan
NOTE: Alw	ays dilute post	-spike first, the	n take a 45 n	nt aliquot of t	the diluted	post-spike ar	nd add the st	oike amount.				
						. ,		Suggested	Actual ml of 100			
	PS Aliquot			Amount in				ml of 100	ppm to	Est. Read-	Calculated	
- 11	Weight in g			ml to add		Suggested	Actual	ppm to spike	spike on	back on	Spike	
	Digested in	Weight in 45	Results in	of 100 ppm	Dilution	Dilution to	Dilution to	on dilution of	dilution of	curve in	Amount in	Use calculated or
Sample ID	100 ml	Ē	mg/kg.	solution	needed	use	be used	sample.	sample.	mg/l	mg/kg	default spike?
JB50090-4	2.47	1.1115	1.021	0.445	yes	-	2	0.223	0.225	0.513	40.486	efault (40 mg/kg) spike
		0		0.000	ou	0		i0//IC#		i0//IC#	i0//IC#	efault (40 mg/kg) spike
		0		0.000	ou	0		#DIV/0		#DIV/0	#DIV/0	efault (40 mg/kg) spike
		0		0.000	9	0		#DIV/0i		#DIV/0	#DIV/0	stault (40 mg/kg) spike
		0		0.000	02	0		i0//I0#		i0//IQ#	#DIV/0	Pfault (40 mg/kg) spike
		0		0.000	ġ	0		10//IC#		#DIV/0i	#DIV/0	sfault (40 mg/kg) spike
		0		0.000	on	0		#DIV/0		#DIV/0	#DIV/0	efault (40 mg/kg) spike
		0		0.000	ou	0		#DIV/0		#DIV/0	i0//IC#	sfault (40 mg/kg) spike
		0		0.000	ou	0		i0//IC#		#DIV/0	#DIV/0	sfault (40 mg/kg) spike
		0		0.000	0U	0		#DIV/0i		#DIV/0	#DIV/0	sfault (40 mg/kg) spike
		0		0.000	on D	0		#DIV/0i		#DIV/0	#DIV/IO	pfault (40 mg/kg) spike

GN93231

3060A/7196A INSOLUBLE SPIKE

			27	<u>, </u>)		
Ž	Amount	Spiked	958.911	930.454	#DIV/0i	#DIV/0i	#DIV/0i
COLATIC	Weight of	Sample	2.5	2.49			
0	Weight of	PbCrO4	0.0149	0.0144			

Validated By: JJY Doc. Control #: <u>AGN-XCRAPSCALC-0</u>1

Date Validated: 2/26/13





HEXAVALENT CHROMIUM TEMPERATURE AND TIME DIGESTON LOG - METHOD 3060A

Record a minimum of starting, middle, and ending temperatures for each batch.

Raw Data GN93231: Chromium, Hexavalent page 6 of 9

Thermometer ID: 3(8, 354, 395, 157)Thermometer Correction factor: 1, 0, 0, 0, 0

Note: Minimum of 1 hour digestion time for each batch. Corrected temperatures must be in the range of 90 to 95 deg. C.

Digestion			Temp. in deg. C Hot Plate # <u>1</u> - Uncorrected/Correc	Temp. in deg. C Hot Plate # Uncorrected/Correc	Temp. in deg. C Hot Plate # 2 - Uncorrected/Correc	Temp. in deg. C Hot Plate #
ep Ep	Description Starting Time	וווופ ופ' לל	53/5 L	41/41	9/6/	91/91
	Time 1	n.14	43(94	9191	$d\sqrt{a/a}$	9/6/
	Ending Time	<u>, , , , , , , , , , , , , , , , , , , </u>	कत्रुवर	6/14/	16/16	9/15/
		2			-	
60 77360	Starting Time	17,50	354	9161	01/61	91/6/
12961 75261	Time 1	18:20	93/94	91/61	01/4/	61191
	Ending Time	الإدرى	75 83	91191	91/9/	9191
						-
5363	Starting Time	19,00	તુવત	6161		
	Time 1	19,30	43/64	q, (q/		
	Ending Time	20:00	GAGY	$q_{\iota} \{ \tau_{l}$		
Analyst	NBU			Date:	10-14-13	/
2nd Analys	t Check: //	Ţ			2	

Form: GN074-02 Rev. Date: 8/08/12





Hexavalent Chromium pH Adjustment Log Method: SW846 3060A/7196A

Sample

pH adj. start time: pH adj. end time: <u>रू ठ</u>त स्ट.ठा

<u>_&:</u>	31
<u>-</u> \$	33

pH adjustment Date: 1011513 GN Batch ID: GN (1323)

Sample ID	Weight in	pH after ⊌NO3	Volume	pH after		
Calibration Blank			(111)	HZ304	Comments	Spike Info.
0 010 mg/l standard		+8	100	1.76	0	
0.050 mg/l standard		7.42	100	a. 04	10ppm Absolute	0.10 ml of 10 mg/l
0.000 mg/l standard		4.26	100	1.70		0.50 ml of 10 mg/l
0.100 mg/l standard		4.6	100	<u>1.00</u>	10ppm Absolute	1.00 ml of 10 mg/l
0.300 mg/l standard	NA NA	1.28	100	1.959	10ppm Absolute	3.00 ml of 10 mg/l
0.500 mg/l standard	NA	4.35	100	<u>8.16</u>	10ppm Absolute	5.00 ml of 10 mg/l
0.800 mg/l standard	NA	1.20	100	<u> 2.30</u>	10ppm Absolute	8.00 ml of 10 mg/i
1.00 mg/l standard	NA	7.74	100	<u>a.oz.</u>	10ppm Absolute	10.0 ml of 10 mg/l
			. <u> </u>			
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		<u> </u>				
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					·····	
				_		
	;					
Reagent Reference In	formation	- refer to	attached	reagent re	ference information page(s)	

{1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4

Form: GN068-01 Rev. Date: 5/22/06





HEXAVALENT CHROMIUM STANDARD PREPARATION LOG

Product: <u>xcCA푀</u>46 , GN or GP Number: <u>CING</u>333

				त			-	-	-				IC [®]	-			r		-	-	1	 _	_	-
		Date		INTIST	h roted			7				Date	In Ich											
		Analvsf		КY				7				Analyst	62			-								
		Expiration Date	0.00010	91.02/9/9				5/31/2017			Expiration	Date	101101											
Final Conc.	of	(ma/l)	(1:15))	10 mg/l	100 mg/l	5 mg/l	7.5 mg/l	10 mg/l		Final Conc.	Of Standard	(I/6m)	0.01 mg/l	0.05 mg/l	0.10 mg/l	0.30 mg/l	0.50 mg/l	0.80 mg/l	1.0 mg/l					
	- - -	Volume	1		100 mls	200 mg/l	200 mg/l	100 mg/l			Final	Volume	100 mls	100 mls	100 mls	100 mls	100 mls	100 mls	100 mls					
		Diluent		5	۵	10	ō	ā			<u> </u>	Diluent	ā	⊡	ā	۵	ā	⊡	⊡					
đ	Stock	volutite used in ml		1.0 [11	10 ml	1.0 ml	1.5 ml	1.0 ml	Intermediate	or Stock	volume	used in ml	0.1 ppm	0.5 ppm	1.0 ppm	3.0 ppm	5.0 ppm	8.0 ppm	10.0 ppm					
	Ctock	concentration	1000 2200		1000 ppm	1000 ppm	1000 ppm	1000 ppm		Intermediate	or Stock	concentration	10.0 ppm	10.0 ppm	10.0 ppm	10.0 ppm	10.0 ppm	10.0 ppm	10.0 ppm					
		Stock used to prepare standard		VINNIALE CIANE LOL #0000 12				Ultra lot #L00439			Intermediate or Stock used to	prepare standard	10.0 ppm abs	10.0 ppm abs	10.0 ppm abs	10.0 ppm abs	10.0 ppm abs	10.0 ppm abs	10.0 ppm abs					
Intermodiata	Standard	Description	10 nnm	11100	100 ppm	5 ppm	7.5 ppm	10 ppm			Standard	Description	.010 ppm	.050 ppm	.10 ppm	.30 ppm	.50 ppm	.80 ppm	1.00 ppm					

Form: GN205-02 Rev. Date:10/16/09







Reagent Information Log - XCRA (soil 3060A/7196)

Reagent	Exp. Date	Reagent # or Manufacturer/Lot
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	6/6/2016	ABSOLUTE GRADE #060616
Calibration Checks: Hexavalent Chromium,		en e
1000 mg/L Stock	10/31/2019	ULTRA #P00986
Spiking Solution Source	6/6/2016	ABSOLUTE GRADE #060616
Lead Chromate (Insoluble Hexavalent Chromium Spike)	7/26/2017	SIGMA ALDRICH # BCBG0578V
Magnesium Chloride, Anhydrous	9/2/2017	ALFA AESAR # H10X010
1N NaOH		
Digestion Solution	11 9/2013	GNE10-37704-XCR
Phosphate Buffer Solution	4/3/2014	GNE10-37639-XCRA
5.0 M Nitric Acid	5/25/124	CENCEL-37541-XCRA
Diphenylcarbazide Solution	-11413	CINEID- 3765-1-10
Sulfuric Acid, 10%	$-3 _{sc}(4)$	- CINE 9-37608-402
Filter	NA	Lot #130508059
Teflon Chips	NA	91920

Form: GN087A-21B Rev. Date: 2/18/10



7.4

50 of 53 ACCUTEST JB50090 ;





Test: Redox Potential Matrix: Aqueous	Test Code: REDOX Method: ASTM D1498- Method: ASTM D1498-	76 76 Mod.	Analyst: Date: GN Batch ID: Temp (Deg C):	ALECA 10/15/13 GN93240 25
Quality Control Summary				
Sample ID: GN93240-D1 Ferrous-Ferric True: 675 pH 4 Quinhydrone True: 462 pH 4 Quinhydrone True: 462 pH 4 Quinhydrone True: 462 pH 7 Quinhydrone True: 285 pH 7 Quinhydrone True: 285		Dup: 361.2 Found 672.9 Found 494.6 Found 484.5 Found 288 Found 285.4 Found	% RPD: % Rec % Rec % Rec % Rec % Rec % Rec % Rec	2.49% 99.69% 107.06% 104.87% 101.05% 100.14%
Sample #:		mv vs. Ag/AgCl Electrode		Corrected results (mv vs. Hydrogen electrode) ***
Ferrous-Ferric Solution		461		672.9
pH 4 Quinhydrone	-	282.4		494.6
pH 7 Quinhydrone		/6	_	200
Dup[GN93240-D1		149.2		301.2
1.JB50090-1		130.4	_	340.5
2. JB50119-1		158.2	<u> </u>	
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pH 4 Quinnyarone	•	73 3		285.4
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19.			4 /	
pH 4 Quinhydrone			1 / 1	·
pH 7 Quinhydrone			_V /	n
*** Note: Results vs Ag/AgCl electrode conversion is done by adding about 200 Reagent Numbers:	are converted to corrected res mV to the Ag/AgCI reading. <u>GNE4-35810-ORP EX</u>	ults automatically at the in P:10/6/13	strukent by changin	g to the relative mv scale. Th



QC Reports:

Balance #

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GN93240

CUTEST.



Sample Prep Log

Sample ID	Sample Size	Final Volume
B50090-1	40ml	
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BS0119-1	40	2
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Form: GN166-02 Rev: Date: 8/5/05

QC Review_____





Reference for graph: SW846 method 3060A

7.6

N

versus the standard hydrogen electrode

Note that the Eh values plotted on this diagram are corrected for the reference electrode voltage and the values shown are



Нd

Phase Change Line

10

рН 6.75

Sample Number

B50090-1

7.86 7.87

7.7

IB50090-2 IB50090-3

B50090-4 B50090-5 B50090-6

7.7

M ACCUTEST



10/17/13

Technical Report for

AECOM, INC.

PPG-Site 186 RAM, Jersey City, NJ

60238842 186.RAM

Accutest Job Number: JB50090R



Sampling Date: 10/14/13

Report to:

AECOM, INC. 30 Knightsbridge Road Suite 520 Piscataway, NJ 08854 NJlabdata@aecom.com; Lisa.Krowitz@aecom.com; Justin.Webster@aecom.com; Alfred.LoPilato@aecom.com ATTN: Lisa Krowitz

Total number of pages in report: 79



Maney F. Cole

Nancy Cole Laboratory Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Matt Cordova 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), PA, RI, SC, TN, VA, WV

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Sample Summary

AECOM, INC.

Job No: JB50090R

PPG-Site 186 RAM, Jersey City, NJ Project No: 60238842 186.RAM

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
JB50090-2R	10/14/13	11:05 AL	10/14/13	SO	Soil	186-MFHT1-4-2.0-2.5
JB50090-3R	10/14/13	10:15 AL	10/14/13	SO	Soil	186-MFHT1-3-2.0-2.5
JB50090-4R	10/14/13	09:15 AL	10/14/13	SO	Soil	186-MFHT1-2-2.0-2.5
JB50090-5R	10/14/13	08:31 AL	10/14/13	SO	Soil	186-MFHT1-2.0-2.5X
JB50090-6R	10/14/13	08:30 AL	10/14/13	SO	Soil	186-MFHT1-2.0-2.5

Soil samples reported on a dry weight basis unless otherwise indicated on result page.





CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	AECOM, INC.	Job No	JB50090R
Site:	PPG-Site 186 RAM, Jersey City, NJ	Report Date	10/17/2013 7:13:22 P

On 10/14/2013, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JB50090R was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Wet Chemistry By Method ASTM D3872-86

|--|

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

- Sample(s) JB47902-1RTDUP, JB47902-1RTMS were used as the QC samples for Iron, Ferrous.
- JB50090-4R for Iron, Ferrous: The ferrous iron test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

Wet Chemistry By Method LLOYD KAHN 1988 MOD

Matrix: SO	Batch ID:	GP75181

All samples were prepared within the recommended method holding time.

- All method blanks for this batch meet method specific criteria.
- Sample(s) JB48878-1DUP, JB48878-1MS were used as the QC samples for Total Organic Carbon.
- Matrix Spike Recovery(s) for Total Organic Carbon are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Wet Chemistry By Method SM4500S2- A-11

Matrix: SO	Batch ID:	GN93317

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

JB50090-4R for Sulfide Screen: The sulfide screen test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.



Wet Chemistry By Method SW846 3060A/7196A

Matrix: SO	Batch ID:	GP75278	
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- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JB50090-4RDUP, JB50090-4RMS were used as the QC samples for Chromium, Hexavalent.
- Matrix Spike Recovery(s) for Chromium, Hexavalent are outside control limits. Insoluble XCR matrix spike recovery indicates possible matrix interference. See additional comments on soluble matrix spike recovery.
- RPD(s) for Duplicate for Chromium, Hexavalent are outside control limits for sample GP75278-D1. High RPD due to possible sample nonhomogeneity.
- GP75278-S1 for Chromium, Hexavalent: Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (93.8%) on this sample.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



Summary of Hits

Job Number:	JB50090R
Account:	AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ
Collected:	10/14/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB50090-2R	186-MFHT1-4-2.0	-2.5				
Chromium, Hexa	valent	4.1	0.47	0.081	mg/kg	SW846 3060A/7196A
JB50090-3R 186-MFHT1-3-2.0		-2.5				
Chromium, Hexa	valent	24.1	0.47	0.081	mg/kg	SW846 3060A/7196A
JB50090-4R	186-MFHT1-2-2.0	-2.5				
Chromium, Hexa Iron, Ferrous ^a Total Organic Ca	valent rbon	1.4 0.50 39700	0.44 0.20 110	0.076 92	mg/kg % mg/kg	SW846 3060A/7196A ASTM D3872-86 LLOYD KAHN 1988 MOD
JB50090-5R	186-MFHT1-2.0-2	.5X				
Chromium, Hexa	valent	2.0	0.45	0.078	mg/kg	SW846 3060A/7196A
JB50090-6R	186-MFHT1-2.0-2	.5				
Chromium, Hexa	valent	2.5	0.45	0.077	mg/kg	SW846 3060A/7196A

(a) The ferrous iron test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.





Section 4

4



Sample Results

Report of Analysis



Client Sample ID: Lab Sample ID: Matrix:	ient Sample ID: 186-MFHT1-4-2.0-2.5 b Sample ID: JB50090-2R atrix: SO - Soil							Date Sampled: 10/14/13 Date Received: 10/14/13			
Project: General Chemistry	PPG-Site	186 RAM,	Jersey City,	NJ		Perce	nt Solids: 85.5	5			
Analyte		Result	RL	MDL	Units	DF	Analyzed	By	Method		
Chromium, Hexava	lent	4.1	0.47	0.081	mg/kg	1	10/16/13 10:03	BP	SW846 3060A/71964		

Report of Analysis



Page 1 of 1

Client Sample ID: Lab Sample ID: Matrix: Project:	186-MFF JB50090- SO - Soil PPG-Site	186-MFHT1-3-2.0-2.5 JB50090-3R Date Sampled: 10/14/13 JB50090-3R Date Received: 10/14/13 SO - Soil Date Received: 10/14/13 PPG-Site 186 RAM, Jersey City, NJ Percent Solids: 84.9								
General Chemistry	7									
Analyte		Result	RL	MDL	Units	DF	Analyzed By Method			
Chromium, Hexava	lent	24.1	0.47	0.081	mg/kg	1	10/16/13 10:03 BP SW846 3060A/7196A			

Report of Analysis





Iron, Ferrous ^a

Sulfide Screen b

Total Organic Carbon

Client Sample ID: Lab Sample ID: Matrix: Project:	186-MFHT1-2 JB50090-4R SO - Soil PPG-Site 186	2-2.0-2.5 RAM, Jersey (City, NJ		Date Sampled: 10/14/13 Date Received: 10/14/13 Percent Solids: 90.8			
General Chemistry								
Analyte	Res	sult R	L MDL	Units	DF	Analyzed By Method		
Chromium, Hexava	lent 1.4	0.	44 0.076	mg/kg	1	10/16/13 09:58 BP SW846 3060A/7196A		

%

mg/kg

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10/16/13

10/16/13

Report of Analysis

(a) The ferrous iron test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

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0.20

110

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NEGATIVE

(b) The sulfide screen test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.



Page 1 of 1

CB ASTM D3872-86

CB SM4500S2- A-11

10/16/13 14:24 VA LLOYD KAHN 1988 MOD

Client Sample ID: Lab Sample ID: Matrix: Project:	186-MFF JB50090- SO - Soil PPG-Site	186-MFHT1-2.0-2.5X Date Sampled: 10/14/13 JB50090-5R Date Received: 10/14/13 SO - Soil Date Received: 10/14/13 PPG-Site 186 RAM, Jersey City, NJ Percent Solids: 88.8									
General Chemistry	7										
Analyte		Result	RL	MDL	Units	DF	Analyzed By	Method			
Chromium, Hexava	lent	2.0	0.45	0.078	mg/kg	1	10/16/13 10:03 BP	SW846 3060A/7196A			

Report of Analysis

Page 1 of 1

			Repo	rt of Ar	nalysis		Page 1 of	1
Client Sample ID:	186-MFF	IT1-2.0-2.5						
Lab Sample ID:	JB20090-	6R				Date S	Sampled: 10/14/13	
Matrix:	SO - Soil					Date 1	Received: 10/14/13	
						Perce	nt Solids: 89.8	
Project:	PPG-Site	186 RAM, .	Jersey City,	NJ				
General Chemistry	7							
Analyte		Result	RL	MDL	Units	DF	Analyzed By Method	
Chromium, Hexava	lent	2.5	0.45	0.077	mg/kg	1	10/16/13 10:03 BP SW846 3060A/7	196A

Section 5

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Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody



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JB50090R: Chain of Custody Page 1 of 3



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Accutest Laboratories Sample Receipt Summary

LABORA	AT O ATE O			
Accutest Job Number:	JB50090	Client:	Project:	
Date / Time Received:	10/14/2013	Delivery Method:	Airbill #'s:	
Cooler Temps (Initial/Ac	ljusted): <u>#1: (3.5/3.</u>	<u>5); 0</u>		
Cooler Security 1. Custody Seals Present: 2. Custody Seals Intact:	<u>Y or N</u> ✓ □ 3 ✓ □ 4. S	. COC Present: V mpl Dates/Time OK V	N Sample Integrity - Documentation Image: Descent on potties: 1. Sample labels present on bottles: Image: Descent on potties: 2. Container labeling complete:	Y or N V V
Cooler Temperature	Y or N		3. Sample container label / COC agree:	
 Temp criteria achieved: Cooler temp verification: Cooler media: No. Coolers: 	✓ □ IR Gun Ice (Bag) 1		Sample Integrity - Condition 1. Sample recvd within HT: 2. All containers accounted for: 3. Condition of sample:	YorN ✓ □ ✓ □ Intact
Quality Control_Preserv 1. Trip Blank present / cool 2. Trip Blank listed on COO	ratio <u>Y or N</u> ler: □ ✔ C: □ ✔	<u>N/A</u>	Sample Integrity - Instructions 1. Analysis requested is clear: 2. Bottles received for unspecified tests	<u>Y or N N/A</u>

3. Sufficient volume recvd for analysis:

4. Compositing instructions clear:

5. Filtering instructions clear:

Comments

3. Samples preserved properly:

4. VOCs headspace free:

✓

✓

Accutest Laboratories V:732.329.0200 2235 US Highway 130 F: 732.329.3499 Dayton, New Jersey www/accutest.com 5. 1

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JB50090R: Chain of Custody Page 2 of 3

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Requested Date: 10/15/2013 Received Date: 10/14/2013 Account Name: A ECOM, INC. Due Date: 10/14/2013 Project Description: Pro-Site 186, Jersey City, NJ Due Date: 10/15/2013 Project Description: Pro-Site 186, Jersey City, NJ Due Date: 10/15/2013 Sample #: JB500002 thu 6 Change: Pace relog for XXCRAR Fult1 Sample #: JB500002 thu 6 Change: Preser relog for XXCRAR Fult1 Sample #: JB5000002 thu 6 Change: Preser relog for XXCRAR, FE27, SULFS, and TOCLK Preser relog for XXCRAR, FE27, SULFS, and TOCLK Sample #: JB5000004 Change: Preser relog for XXCRAR, FE27, SULFS, and TOCLK Sample #: JB500004 Change: Preser relog for XXCRAR, FE27, SULFS, and TOCLK Sample #: JB5000004 Change: Preser relog for XXCRAR, FE27, SULFS, and TOCLK	Requested Date: 10/15/2013 Received Date: 10/14/2013 Acount Name: A EOM, INC. Due Date: 10/15/2013 Project Description: PG-Site 166, Jersey Cly, NJ Dativerable: FULT1 CRR: Jaboooc2 thru 6 Delorestic 0/15/2013 1 Sample #: JB500002 thru 6 Change: 1 1 Sample #: JB500002 thru 6 Change: 1 Dept: Pease religg for XXCRAR, FE2/7, SULFS, and TOCLK 1 Dept: Description: Pease religg for XXCRAR, FE2/7, SULFS, and TOCLK Dept: JB6: Description: 1		TEST	Job Change Order:	JB	20090	
Project Description: Ped-Site 160, Jersey City, NJ Deliverable: Full T CSR: kelyp table table table table Sample #: JB50000-2 thu 6 table table table Dept: JB50000-2 thu 6 Change: table Dept: JB5000-2 thu 6 Change: table Sample #: JB5000-2 thu 6 Change: table Dept: JB5000-2 thu 6 Change: table Sample #: JB5000-2 thu 6 Change: table Sample #: JB5000-2 thu 6 Change: table	Project Description: PIO-Sile 160, Jersey Chy, NJ Deliverable: Full T CR: kelyp TAT (Days): 1 Sample #: JB500002 thu 6 Change: 1 Dept: Pease relog for XXCRAR, FE27, SULFS, and TOCLK 1 JB6-MFHT122.025 Please relog for XXCRAR, FE27, SULFS, and TOCLK 10150000000000000000000000000000000000	Requested Date: Account Name:	10/15/2013 AECOM, INC.		Received Date: Due Date:	10/14/2013 10/15/2013	
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Dept: Please relog for XXCRAR Sample #: JB0000-4 Change: Sample #: JB0000-4 Change: Bept: Please relog for XXCRAR, FE2/7, SULFS, and TOCLK 166-MFHT1-2-2.0-2.5 Please relog for XXCRAR, FE2/7, SULFS, and TOCLK 166-MFHT1-2-2.0-2.5 Last contage	Dept: Please relog for XXCRAR. Sample #: JB50090-4 Sample #: JB50090-4 Sample #: JB50090-4 Dept: Change: IB6-MFHT1-2:2.0-2:5 Change: IB6-MFHT1-2:2.0-2:5 Date:	Sample #: JB50090	0-2 thru 6	Change:			Ш
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Dept: Please relog for XXCRAR, FE2/f, SULFS, and TOCLK 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 Above Changes Per: Lisa Krowitz Date: 10/15/2013	Dept: Please relog for XXCRAR, FE2/f, SULFS, and TOCLK 186.MFHT1-22.0-2.5 186.MFHT1-22.0-2.5 186.MFHT1-22.0-2.5 Extension of the revision of the revisions, perviously discussed with the Accutest Client Service Representative.	Sample #: JB50090	40	Change:			0.0
186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.0-2.5 186-MFHT1-2-2.5 186-MFHT12-2.5 186-MFHT12-2.5 186-MFHT12-2.5 186-MFHT12-2.5 186-MFHT12-2.5 186-MFHT12-2.5 </td <td>186-MFHT1-2:2.0:2.5 186-MFHT1-2:2.0:2.5 186-MFHT1-2:2.5 186-MFH</td> <td>Dept:</td> <td></td> <td>Please relog for XX</td> <td>(CRAR, FE2/7, SULF</td> <td>S, and TOCLK</td> <td></td>	186-MFHT1-2:2.0:2.5 186-MFHT1-2:2.5 186-MFH	Dept:		Please relog for XX	(CRAR, FE2/7, SULF	S, and TOCLK	
Above Changes Per: Lisa Krowitz Date: 10/15/2013	Above Changes Per: Lisa Krowiz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.	186-MFHT1-2-2.0-2.5					
Above Changes Per: Lisa Krowitz Date: 10/15/2013	Above Changes Per: Lisa Krowitz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.						
Above Changes Per: Lisa Krowitz Date: 10/15/2013	Above Changes Per: Lisa Krowitz Date: 10/15/2013 To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.						
	To Client: This Change Order is confirmation of the revisions, previously discussed with the Accutest Client Service Representative.	Above Changes Pe	er: Lisa Kro	owitz	D	ate: 10/15/2013	
Page 1 of 1							

JB50090R: Chain of Custody Page 3 of 3



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Internal Sample Tracking Chronicle

AECOM,	INC.					Joh No.	
PPG-Site Project N	186 RAM, Jersey Ci p: 60238842 186.R	ty, NJ AM				JOD 110;	JD30090K
Sample Number	Method	Analyzed	By	Prepped	By	Test Codes	
JB50090-2F 186-MFHT	Collected: 14-OCT-13	11:05 By: AL	Receiv	ed: 14-OCT-	13 By:	AS	
JB50090-2F	SW846 3060A/7196A	16-OCT-13 10:03	BP	15-OCT-13	NP	XCRA	
JB50090-3F 186-MFHT	Collected: 14-OCT-13	10:15 By: AL	Receiv	ed: 14-OCT-	13 By:	AS	
JB50090-3F	SW846 3060A/7196A	16-OCT-13 10:03	BP	15-OCT-13	NP	XCRA	
JB50090-4F 186-MFHT	Collected: 14-OCT-13 (1-2-2.0-2.5	09:15 By: AL	Receiv	ed: 14-OCT-	13 By:	AS	
JB50090-4F JB50090-4F JB50090-4F JB50090-4F	2 ASTM D3872-86 2 SM4500S2- A-11 2 SW846 3060A/7196A 2 LLOYD KAHN 1988 N	16-OCT-13 16-OCT-13 16-OCT-13 09:58 1000CT-13 14:24	CB CB BP VA	15-OCT-13 16-OCT-13	NP VA	FE2/7 SULFS XCRA TOCLK	
JB50090-5F 186-MFHT	Collected: 14-OCT-13 (1-2.0-2.5X	08:31 By: AL	Receiv	ed: 14-OCT-	13 By:	AS	
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JB50090-6F 186-MFHT	Collected: 14-OCT-13 (1-2.0-2.5	08:30 By: AL	Receiv	ed: 14-OCT-	13 By:	AS	
JB50090-6F	SW846 3060A/7196A	16-OCT-13 10:03	BP	15-OCT-13	NP	XCRA	



Accutest Internal Chain of Custody

JB20090K
ENSRNJ AECOM, INC.
PPG-Site 186 RAM, Jersey City, NJ
10/14/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-2.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-2.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-2.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-2.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-2.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-2.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-2.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-2.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-2.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-2.1
JB50090-2.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-3.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-3.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-3.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-3.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-3.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-3.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage
JB50090-3.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-3.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-3.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-3.1
JB50090-3.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-4.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-4.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-4.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-4.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-4.1	Secured Storage	Bernadette Vassilatos	10/16/13 06:17	Retrieve from Storage
JB50090-4.1	Bernadette Vassilatos	Secured Staging Area	10/16/13 06:17	Return to Storage
JB50090-4.1	Secured Staging Area	Chris Brunson	10/16/13 09:44	Retrieve from Storage
JB50090-4.1	Chris Brunson	Vaidehi Amin	10/16/13 10:20	Custody Transfer


Accutest Internal Chain of Custody

JB50090R
ENSRNJ AECOM, INC.
PPG-Site 186 RAM, Jersey City, NJ
10/14/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-4.1	Vaidehi Amin	Secured Storage	10/16/13 18:35	Return to Storage
JB50090-4.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-4.1
JB50090-4.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-4.2	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-4.2	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-4.2	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-4.2	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-4.2	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-4.2	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-4.2 JB50090-4.2 JB50090-4.2	Secured Staging Area Alec Arbello	Alec Arbello Secured Storage Parmadatta Vassilatos	10/15/13 08:38 10/15/13 12:08 10/15/13 15:14	Retrieve from Storage Return to Storage
JB50090-4.2 JB50090-4.2 JB50090-4.2 JB50090-4.2	Bernadette Vassilatos Secured Staging Area Nilesh Patel	Secured Staging Area Nilesh Patel Secured Storage	10/15/13 15:14 10/15/13 15:15 10/15/13 15:24 10/15/13 20:28	Return to Storage Retrieve from Storage Return to Storage
JB50090-5.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-5.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-5.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-5.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-5.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-5.1 JB50090-5.1 JB50090-5.1	Bernadette Vassilatos Secured Staging Area	Secured Staging Area Alec Arbello Secured Storage	10/15/13 06:25 10/15/13 08:38 10/15/13 12:08	Return to Storage Retrieve from Storage
JB50090-5.1 JB50090-5.1 JB50090-5.1	Secured Storage Bernadette Vassilatos	Bernadette Vassilatos Secured Staging Area	10/15/13 12:00 10/15/13 15:14 10/15/13 15:15 10/15/13 15:24	Retrieve from Storage Return to Storage
JB50090-5.1 JB50090-5.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-5.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-5.1
JB50090-5.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/14/13 14:38	Retrieve from Storage
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/14/13 14:38	Return to Storage
JB50090-6.1	Secured Staging Area	Nilesh Patel	10/14/13 15:09	Retrieve from Storage
JB50090-6.1	Nilesh Patel	Secured Storage	10/14/13 23:27	Return to Storage
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/15/13 06:25	Retrieve from Storage
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 06:25	Return to Storage
JB50090-6.1	Secured Staging Area	Alec Arbello	10/15/13 08:38	Retrieve from Storage
JB50090-6.1	Alec Arbello	Secured Storage	10/15/13 12:08	Return to Storage
JB50090-6.1	Secured Storage	Bernadette Vassilatos	10/15/13 15:14	Retrieve from Storage
JB50090-6.1	Bernadette Vassilatos	Secured Staging Area	10/15/13 15:15	Return to Storage

5.3 5



Accutest Internal Chain of Custody Job Number: JB50090R

Job Number:JB50090RAccount:ENSRNJ AECOM, INC.Project:PPG-Site 186 RAM, Jersey City, NJReceived:10/14/13

Sample. Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JB50090-6.1	Secured Staging Area	Nilesh Patel	10/15/13 15:24	Retrieve from Storage
JB50090-6.1	Nilesh Patel	Secured Storage	10/15/13 20:28	Return to Storage
JB50090-6.1.1	Nilesh Patel	Arayna Ramkelawan	10/14/13 15:10	Aliquot from JB50090-6.1
JB50090-6.1.1	Arayna Ramkelawan		10/14/13 16:57	Depleted

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5.3

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Section 6

6



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries
- Instrument Runlogs/QC
- Percent Solids Raw Data Summary





METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits	
Chromium, Hexavalent Chromium, Hexavalent	GP75278/GN93304 GP75278/GN93304	0.40	0.0	mg/kg mg/kg	40.0 900.990	38.2 884	95.5 98.1	80-120% 80-120%	
Iron, Ferrous Sulfide Screen	GN93315 GN93317	0.20	<0.20 NEGATIVE	8					
Total Organic Carbon	GP75181/GN93334	100	0.00	mg/kg	2000	1950	97.5	80-120%	6.1

Associated Samples: Batch GN93315: JB50090-4R Batch GN93317: JB50090-4R Batch GP75181: JB50090-4R Batch GP75278: JB50090-2R, JB50090-3R, JB50090-4R, JB50090-5R, JB50090-6R (*) Outside of QC limits



DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent Iron, Ferrous Sulfide Screen	GP75278/GN93304 GN93315 GN93317	JB50090-4R JB47902-1RT JB47902-1RT	mg/kg %	1.4 1.0 NEGATIVE	0.77 1.0 NEGATIVE	58.1*(a) 0.0	0-20% 0-26% 0-%
Total Organic Carbon	GP75181/GN93029	JB48878-1	mg/kg	84500	109000	25.3	0-50.8%

Associated Samples: Batch GN93315: JB50090-4R Batch GN93317: JB50090-4R Batch GP75181: JB50090-4R Batch GP75278: JB50090-2R, JB50090-3R, JB50090-4R, JB50090-5R, JB50090-6R

(*) Outside of QC limits

(a) High RPD due to possible sample nonhomogeneity.

6.2 6



MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent Chromium, Hexavalent Iron, Ferrous Total Organia Carbon	GP75278/GN93304 GP75278/GN93304 GN93315 CD75181/CN93029	JB50090-4R JB50090-4R JB47902-1RT	mg/kg mg/kg %	1.4 1.4 1.0	44.6 968 50.71	28.5 1280 58.0	60.8N(a) 132.0N(b) 112.4	75-125% 75-125% 62-130%
Associated Samples:	GF/5101/GN95029	0040070-1	llig / kg	84300	93000	222000	144.00(0)	ອງ.0-124.8% ຜ

Batch GN93315: JB50090-4R

Batch GP75181: JB50090-4R

Batch GP75278: JB50090-2R, JB50090-3R, JB50090-4R, JB50090-5R, JB50090-6R

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Soluble XCR matrix spike recovery indicates possible matrix interference. Good post spike recovery (93.8%) on this sample.

(b) Insoluble XCR matrix spike recovery indicates possible matrix interference. See additional comments on soluble matrix spike recovery.

(c) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.



Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

File Anal Para	ID: E31010S1.T yst: VA meters: Total C	TXT Drganic Carl	I	Date Analyzed: Run ID:	10/10/13 GN93029	Methods:	LLOYD	KAHN	1988	MOD	
Time	Sample Description	Dilution Factor	PS Recov	Comments							
10:01	GN93029-STD1	1		גמדצ							

10:19 GN93029-STD2 1 STDB 11:19 GN93029-STD3 STDC 1 11:31 GN93029-STD4 1 STDD 11:44 GN93029-STD5 1 STDE 12:02 GN93029-STD6 STDF 1 12:17 GN93029-STD7 STDG 1 09:58 GN93029-CRI1 1 10:19 GN93029-HSTD1 1 10:34 GN93029-ICV1 1 11:03 GN93029-ICB1 1 11:27 GN93029-CCV1 1 11:45 GN93029-CCB1 1 12:02 GP75181-MB1 1 12:14 GP75181-B1 1 12:32 ZZZZZZ 1 12:51 JB48878-1 1 (sample used for QC only; not part of login JB50090R) 13:11 ZZZZZZ 1 14:08 ZZZZZZ 1 14:34 ZZZZZZ 1 14:52 ZZZZZZ 1 15:09 GP75181-D1 1 15:40 GP75181-S1 1 15:54 GN93029-CCV2 1 16:04 GN93029-CCB2 1 16:16 ZZZZZZ 1 16:54 ZZZZZZ 1 17:09 ZZZZZZ 1 17:23 GN93029-CCV3 1 17:40 GN93029-CCB3 1 Refer to raw data for calibration curve and standards.





Instrument QC Summary Inorganics Analyses

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

File ID: E31010S1.TXT		Date Analyzed: 10 Run ID: GN	Date Analyzed: 10/10/13 Run ID: GN93029			Methods: LLOYD KAHN 1988 MOD Units: mg/l				
Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits			
GN93029-CRI1	Total Organic Carbo	n 127	100	84	100	127.0	70-130			
GN93029-HSTD1	Total Organic Carbo	n 5080	100	84	5000	101.6	90-110			
GN93029-ICV1	Total Organic Carbo	n 2080	100	84	2000	104.0	90-110			
GN93029-ICB1	Total Organic Carbo	n 37.0	100	84						
GN93029-CCV1	Total Organic Carbo	n 2600	100	84	2500	104.0	90-110			
GN93029-CCB1	Total Organic Carbo	n 31.7	100	84						
GN93029-CCV2	Total Organic Carbo	n 2620	100	84	2500	104.8	90-110			
GN93029-CCB2	Total Organic Carbo	n 31.7	100	84						
GN93029-CCV3	Total Organic Carbo	n 2610	100	84	2500	104.4	90-110			
GN93029-CCB3	Total Organic Carbo	n 31.7	100	84						

(!) Outside of QC limits

6.4



Accutest Laboratories Instrument Runlog Inorganics Analyses

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

File Anal Para	ID: D31016S1.TX yst: VA meters: Total Or	T ganic Carbo	Da	te Analyzed: Run ID:	10/16/13 GN93334	Methods:	LLOYD	KAHN	1988	MOD
Time	Sample Description	Dilution P Factor R	ecov	Comments						
11:00	GN93334-STD1	1		STDB						
11:31	GN93334-STD2	1		STDC						
11:52	GN93334-STD3	1		STDD						
12:08	GN93334-STD4	1		STDE						
12:27	GN93334-STD5	1		STDF						

Overrange.Rerun at 0.1g.

STDG

12:46 GN93334-STD6

09:47 GN93334-CRI1

11:10 GN93334-CCV1

11:47 GP75181-MB2

12:16 GP75181-B2

12:52 JB50090-4R

14:24 JB50090-4R

15:40 GN93334-CCV2

14:52 ZZZZZZ

15:11 ZZZZZZ

15:57 ZZZZZZ

16:32 ZZZZZZ

16:49 ZZZZZZ

17:03 ZZZZZZ

17:15 ZZZZZZ

17:29 ZZZZZZ

17:59 GN93334-CCV3

10:31 GN93334-HSTD1 1 10:44 GN93334-ICV1

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Refer to raw data for calibration curve and standards.

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JB50090R

Instrument QC Summary Inorganics Analyses

Login Number: JB50090R Account: ENSRNJ - AECOM, INC. Project: PPG-Site 186 RAM, Jersey City, NJ

File ID: D31016S1.TXT		ate Analyzed: 10/ Run ID: GN9	Methods: LI Units: mg				
Sample Number	Parameter	Result	RL	IDL/MDL	True Value	% Recov.	QC Limits
GN93334-CRI1	Total Organic Carbon	79.1	100	84	100	79.1	70-130
GN93334-HSTD1	Total Organic Carbon	5120	100	84	5000	102.4	90-110
GN93334-ICV1	Total Organic Carbon	2010	100	84	2000	100.5	90-110
GN93334-CCV1	Total Organic Carbon	2520	100	84	2500	100.8	90-110
GN93334-CCV2	Total Organic Carbon	2520	100	84	2500	100.8	90-110
GN93334-CCV3	Total Organic Carbon	2500	100	84	2500	100.0	90-110

(!) Outside of QC limits



Accutest Laboratories

Client Sample ID: Lab Sample ID: Matrix:	D: 186-MFHT1-2-2.0-2.5 JB50090-4R SO - Soil Date Sampled: 10/14/13 Date Received: 10/14/13 Percent Solids: 90.8					3 3			
Project:	PPG-Site	186 RAM, Jer	sey City,	NJ					
General Chemistry	,								
Analyte		Result	RL	MDL	Units	DF	Analyzed	By	Method
Chromium, Hexava	lent	1.4	0.44	0.076	mg/kg	1	10/16/13 09:58	BP BP	SW846 3060A/7196A
Iron, Ferrous ^a		0.50	0.20		%	1	10/16/13	CB	ASTM D3872-86
Sulfide Screen b		NEGATIVE				1	10/16/13	CB	SM4500S2- A-11
Total Organic Carbo	on	39700	110	92	mg/kg	1	10/16/13 14:24	↓VA	LLOYD KAHN 1988 MO

Report of Analysis

(a) The ferrous iron test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

(b) The sulfide screen test was analyzed after completion of Cr6 testing (outside of normal hold times for this parameter) in order to provide more information about the possible impact of the sample matrix on Cr6 recoveries.

Page 1 of 1



Percent Solids Raw Data Summary

Job Number:	JB50090R
Account:	ENSRNJ AECOM, INC.
Project:	PPG-Site 186 RAM, Jersey City, NJ

Sample: JB50090-2 ClientID: 186-MFHT1-4-	Analyzed: -2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	34.2 29.03 33.45 85.5	g g g %		
Sample: JB50090-3 ClientID: 186-MFHT1-3-	Analyzed: -2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	33.39 27.49 32.5 84.9	g g g %		
Sample: JB50090-4 ClientID: 186-MFHT1-2-	Analyzed: -2.0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	30.89 24.26 30.28 90.8	g g g %		
Sample: JB50090-5 ClientID: 186-MFHT1-2.	Analyzed: .0-2.5X	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	32.43 26.71 31.79 88.8	g g g %		
Sample: JB50090-6 ClientID: 186-MFHT1-2.	Analyzed: .0-2.5	14-OCT-13 by AR	Method:	SM2540 G-97
Wet Weight (Total) Tare Weight Dry Weight (Total) Solids, Percent	26.86 21.59 26.32 89.8	g g g %		

6.7



Section 7



General Chemistry

Raw Data



C:\TOC-E\Datates to tos Ltoc.tix

	Туре	Analysis	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Status	Date / Time
1	Unknown	SSM-TC	CRI	Ø	TOCSSMC	1.000	SSM-TC:0.1	Completed	10/10/2013 1
2	Unknown	SSM-TC	HSTD	I	TOCSSMC	1.000	SSM-TC:5.0	Completed	10/10/2013 1
3	Unknown	SSM-TC	ICV		TOCSSMC	1.000	SSM-TC:2.0	Completed	10/10/2013 1
4	Unknown	SSM-TC	ICB		TOCSSMC	1.000	SSM-TC:0.0	Completed	10/10/2013 1
5	Unknown	SSM-TC	CCV		TOCSSMC	1.000	SSM-TC:2.5	Completed	10/10/2013 1
6	Unknown	SSM-TC	CCB		TOCSSMC	1.000	SSM-TC:0.0	Completed	10/10/2013 1
7	Unknown	SSM-TC	GP75181-M	TOCLK	TOCSSM.m	1.000	SSM-TC:0.0	Completed	10/10/2013 1
8	Unknown	SSM-TC	GP75181-B1		TOCSSM.m	1.000	SSM-TC:0.2	Completed	10/10/2013 1
9	Unknown	SSM-TC	JB48878-3		TOCSSM.m	1.000	SSM-TC:4.4	Completed	10/10/2013 1
10	Unknown	SSM-TC	JB48878-1		TOCSSM.m	1.000	SSM-TC:3.5	Completed	10/10/2013 1
11	Unknown	SSM-TC	JB48878-2		TOCSSM.m	1.000	SSM-TC:3.6	Completed	10/10/2013 1:
12	Unknown	SSM-TC	JB48878-14		TOCSSM.m	1.000	SSM-TC:4.8	Completed	10/10/2013 2:
13	Unknown	SSM-TC	JB48878-19		TOCSSM.m	1.000	SSM-TC:1.3	Completed	10/10/2013 2:
14	Unknown	SSM-TC	JB48878-22		TOCSSM.m	1.000	SSM-TC:1.8	Completed	10/10/2013 3:
15	Unknown	SSM-TC	GP75181-D1	JB48878-3	TOCSSM.m	1.000	SSM-TC:4.5	Completed	10/10/2013 3:
16	Unknown	SSM-TC	GP75181-S1	JB48878-3	TOCSSM.m	1.000	SSM-TC:9.2	Completed	10/10/2013 3:
17	Unknown	SSM-TC	CCV		TOCSSMC	1.000	SSM-TC:2.6	Completed	10/10/2013 4:
18	Unknown	SSM-TC	ССВ		TOCSSMC	1.000	SSM-TC:0.0	Completed	10/10/2013 4:
19	Unknown	SSM-TC	JB48878-24		TOCSSM.m	1.000	SSM-TC:0.4	Completed	10/10/2013 4:
20	Unknown	SSM-TC	JB48878-38		TOCSSM.m	1.000	SSM-TC:4.3	Completed	10/10/2013 5:
21	Unknown	SSM-TC	JB48878-42		TOCSSM.m	1.000	SSM-TC:5.1	Completed	10/10/2013 5:
22	Unknown	SSM-TC	CCV		TOCSSMC	1.000	SSM-TC:2.6	Completed	10/10/2013 5:
23	Unknown	SSM-TC	ССВ	V	TOCSSMC	1.000	SSM-TC:0.0	Completed	10/10/2013 6:

E3101051. TOC

TOUR

6293029 VA 10/11/13



10/11/2013 7:24:57 AM

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E3101051, DOC

est: Total Organic Carbon	Units = mg/kg
roduct: TOC	Balance ID: B-39
lethod: Corp. Eng. 81 M/SW846 9060 M or	EPA Region 2 Lloyd Kahn (circle one)
DL = 1000 mg/kg or 100 mg/kg (circle one)	

GN Batch ID<u>(4,)93029</u> Date<u>(0//0/13</u>

Analyst

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00514	1	
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Form: GN058-01 Rev. Date: 11/11/08

JB50090R LABORATORIES

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est: Total Organic Carbon	Units = mg/kg		GN Batch ID UN 930 2-9
roduct: TOC	Balance ID: 6-39		Date 10/10/13
lethod: Corp. Eng. 81 M/SW846 9060 M of	EPA Region 2 Lloyd Kann (circle one)	-	
DL = 1000 mg/kg or 100 mg/kg (circle one)			Analyst

Sample ID Sample Weight Bottle # Sample Description & comments JB48378-19 0.1238 0.1000 0.1040 0.1254 JB48878-12 0.9520 1 1.0502 0.0501 0:0501 6P75181 -PI 1B4387-3-3 N.0522 3 • 0.0509 · n. 0501 0.0518 6P7518551 3 1649878~3 TV= 39801 <u>1.0503</u> 0.0502 0-0502 0.0501 CONJEUR 1 JB43868-24 0.2502 0.2501 1.2500 0.2500 DB48868-38 0.0520 0.0502 0.0501 Analyst:____VA Date: t0/10/12 QCReviewer: _____ Date: _____ Manager Review: Date: Comments:

(2)

Form: GN058-01 Rev. Date: 11/11/08



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 iest: Total Organic Carbon
 Units = mg/kg

 iroduct: TOC
 Balance ID: 6 - 39

 lethod: Corp. Eng. 81 M/SW846 9060 M or EPA Region 2 Lloyd Kahn (circle one)

 IDL = 1000 mg/kg or 100 mg/kg (circle one)

GN Batch ID (1913029) Date 10/10/13

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Analyst_____A

Sample ID	Sample Weight	Bottle #	Sample Description & comments
	0.0509		
1B49378-42	0.0515	l	
	0:0501		
	A.0504		
	0'0 <i>5</i> 02		
CWICEB			
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<u> </u>			
Analyst:VA	Date: 10/10/13 QCR	eviewer:	_ Date:
Manager Review:	Date:		
Comments:	······································	·····	
and the second			

Form: GN058-01 Rev. Date: 11/11/08

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Balmue : 3 - 34 GENE

GENERAL CHEMISTRY STANDARD PREPARATION LOG

QC Reports:

GN93029

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Product: <u>المريح</u> GN or GP Number: <u>ميكومي</u>

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				10							õ	 	10/9							10/91	-)	ŀ
			Analyst	UT.	ſ	->					Analyst		NA N					7		νA	->	
		Expiration	Date	H/ 6 /13	-	-				Expiration	Date		11/6/13		_					116/13	÷	
Final Conc	of	Intermediate	(I/gm)	200 000	N	6 0,000			Final Conc.	of Standard	(mg/l)		1000	5000	10000	25,000	40000	50.000		20,000	250000	•
		Final	Volume	100 Mr		->				Final	Volume		100 MC			-		->		100 MC	->	
			Diluent	DI HIO	•	->					Diluent		DL His					->		PLHJ		
	Stock	volume used	in ml	47:59		12.59		Intermediate	or Stock	volume used	in ml		ó Ó	2:5	5 0	12-5	20.0	25.0		0-017	50.0	
		Stock	concentration	Sverove		6 ly core			Intermediate	or Stock	concentration		200.001	-				→		20000	?	
	-	Stock used to	prepare standard	thesi mish		Fisher 120315	-		Intermediate or Stock	used to prepare	standard		6NE10-37309-TCC					->		6NE10-37710-70C	•	•
		Intermediate	Standard Description	61610-37709-70C		64610-37710-TOC					Standard Description	Surves stry	(w610-37711-70C	(ME10-37712.70c	Guero - 377 13 -700	GNERO-DAFIG-TOC	BNEID-37715 -TOC	GNEID-3776-TOC	GIV CONE OTDA	Were - 37717 - Toc	61510-3771B-70C	

Form: GN121 Rev. Date:2/26/03

JB50090R

36 of 79 J⊤⊑S⊤₀

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Glass Piper: Class A





Reagent Information Log - TOC - Soil

nt	agent # or Manufacturer/Lo	t
e Stock Solution, 200000 mg/L	E10- 37709- 70c	11/0
e Stock Solution, 50000 ug/L	10 - 37710 - Tec	
e Check Solution, 25000 ug/L	10 - 37718 - TOC	
cid, Reagent Grade	er K50030	2/12/1
a Se Storth Solution, 20100 mg/L Love	510-37717-70c	
		<u> </u>
ards and stocks were made as dealed to the time of		

tocks were made as described in the SOP for this method (circle one): Y or N If no (N), see attached page for standards prep.

Form: GN-087 1-66 Rev. Date: 4/26/01

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TOC-Control L Report

e31009s2.toc.tlx

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Instr.Information

Instrument Options Catalyst

TOC/SSM/Sparge Kit/ Regular Sensitivity

Cal. Curve

Sample Name: Sample ID: Cal. Curve: Status

SSM-TC Standard

0.000

e31009s1.2013_10_09_09_50_34.cal Completed

Untitled

Untitled

AbsC: 0.000ug

Mean CNV

		, i sin p					r starter and s		URGE (K.
1	0.000	0.000	0.000ug	100.0mg	******		10/9/2013	3 10:01:14 /	AM	
2	0.000	0.000	0.000ug	100.0mg	******		10/9/2013	3 10:12:38 /	٩M	
Mea	n Area	0	.000		Signal{mV	1 10	· · · · · ·	<i></i>		

SimplimV	10											-
Orgnaufur Al	10											-
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				:		;	1	:	:	1		
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												-
	-1	L				i		<u>.</u>	i			1
		n '	,	1 /	5 I	2 1	0 1	2 1	A 1	6 1	8 '	20 Time[min]
				- (, (, 1	v 1	- 1		υ I	v .	eo rune(unu)

AbsC: 0.01000ug

					hin an		arda qariga									
1	16.35	16.35 0,01000ug	100.0mg	****	10	0/9/2013	10:19:58 A	M								
2	16.73	16.73 0.01000ug	100.0mg	******	1(0/9/2013	10:59;25 A	м								
Mear Mear	n Area n CNV	16.54 16.54		Signal[m∨	7] 10 6 3											
					-1	0	2	4	6	8	10	12	14	16	18 2	0 Time[min]

AbsC: 0.05000ug

1 2	76.25 76,49	76.25 76.49	0.05000ug 0.05000ug	100.0mg 100.0mg	******		10/9/20 10/9/20	13 11:19:1 13 11:25:0	15 AM 09 AM									
Mear Mear	Area CNV	74 74	6.37 6.37		Signal[n	ıV]	40 30 20 10 -4 0	2	4	6	A	8	10	12	14	16) Time[min]



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TOC-Control L Report

e31009s2.toc.tb

AbsC: 0.1000ug



10/10/2013 5:32:16 PM



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TOC-Control L Report

e31009s2.toc.tlx

Abs C[ug]



0.1

0.15

0.2

0.25

0.3

0.35

0.4

0.45

0.5

0.55

0.05

0

10/10/2013 5:32:16 PM



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TOC-Control L Report

SSM-TC:0.1267mg/L

18 20 Time[min]

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Instr.Information

Instrument Options Catalyst			TOC/SSM/S Regular Sens	parge Kit/ sitivity	1									
Sample Sample Name: Sample ID: Origin: Status Chk. Result			CRI TOCSSMCA Completed	L.met										
Unknown SS	M-TC		1.000	1.000	Dmg/uLl							an shi ya Nyingi Kas		SSI
1. Det Anal.: SSM-TC														
1 14.67 2 13.42	14.67 13.42	0.1309mg/L 0.1224mg/L	100.0mg 100.0mg	100uL 100uL	e31009s1.2 e31009s1.2	013_10_09 013_10_09	_09_50_34 _09_50_34	.cal .cal		10/10/20	013 9:58:0 013 10:05	08 AM 20 AM		
Mean Conc. CV Conc	0.1267m 4.72%	g/L	Signal[mV]	10 6 3 -1 0	2	4	6	8	10	12	14	16	18	2
<u>Sample</u>														

Sample Name:	HSTD
Origin:	TOCSSMCAL.met
Status	Completed
Chk. Result	·

Unknown	SSM-TC	1.000	1.000mg/uL		SSM-TC:5.084mg/L

1. Det

Anal.: SSM-TC

		ogađeni. V		an an that an			
i	738.5	738,5	5.025mg/L	100.0mg	100uL	c31009s1.2013_10_09_09_50_34.c	al 10/10/2013 10:19:49 AM
2	755.9	755.9	5.142mg/L	100.0mg	100uL	e31009s1.2013_10_09_09_50_34.c	al 10/10/2013 10:28:35 AM



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TOC-Control L Report

e31010s1.toc.tlx





Sample

Sample Name:	ICB
Origin: Status	TOCSSMCAL.met Completed
Chk. Result	

Unknown	SSM-TC	1,000	1.000mg/uLj		SSM-TC:0.03695mg/I
19 - 19 A.	an a	a second and a second			
1.5.5				Reactive states and a second state of a state of the states of the state	er an the second second

1. Det

Anal.: SSM-TC

							ska načenska svoji se zavela na slava se na slava s
1	1.554	1.554	0.04220mg/L	100.0mg	100uL	e31009s1.2013_10_09_09_50_34.cal	10/10/2013 11:03:27 AM
2	0.000	0.000	0.03170mg/L	100.0mg	100uL	e31009s1.2013_10_09_09_50_34.cal	10/10/2013 11:16:39 AM

JB50090R

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TOC-Control L Report

e31010s1.toc.tlx



Anal.: SSM-TC

No.		202.98				ang lan ng laga sa Ng Pang King King ng		
1	0.000	0.000	0.03170mg/L	100.0mg	100uL	e31009s1.2013_10	_09_09_50_34.cal	10/10/2013 11:45:54 AM
2	0.000	0.000	0.03170mg/L	100.0mg	100uL	e31009s1.2013_10	09_09_50_34.cal	10/10/2013 11:53:21 AM



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10/11/2013 7:25:01 AM

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TOC-Control L Report

e31010s1.toc.tlx



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JB50090R

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TOC-Control L Report

e31010s1.toc.tlx



1. Det

Anal.: SSM-TC

						整个的。 图1211 图1211 图 图1211 图1211 图12	
1	265.2	265.2	3.529mg/L	51.70mg	51uL	e31009s1.2013_10_09_09_50_34.cal	10/10/2013 12:51:29 PM
2	259.8	267.0	3.555mg/L	50.30mg	50uL	e31009s1.2013_10_09_09_50_34.cal	10/10/2013 12:59:35 PM



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TOC-Control L Report

e31010s1.toc.tlx



Anal.: SSM-TC

1	361.4	361.4	4.815mg/L	51.40mg	51uL	e31009s1.2013_10_09_09_50_34.cal	10/10/2013 2:08:17 PM
2	355.0	361.3	4.816mg/L	50.50mg	50uL	s31009s1.2013_10_09_09_50_34.cal	10/10/2013 2:24:15 PM

10/11/2013 7:25:01 AM

TOC-Control L Report

e31010s1.toc.tix





Sample Name:		JB48878-	22	
Sample ID: Origin:		TOCSSM	met	
Status Chk. Result		Complete	l	
gir kapitar	a sanahana a sana Ang Kang Karangada		- Digel (
alt i thiad	na shaladi la bar			~ 2019년 1월 2
Unknown	SSM-TC	1.000	1.000mg/uL	uL SSM-TC: 1.807mg/L

Unknown 1. Det

Anal.: SSM-TC

				s na start ann an t-t-t- an t-t-t-t-t-t-t-t-t-t-t-t-t-t-t-t-t-t-t-					e her men sekret skap et La selle her her her her her her her her her he	
1	139.9	139.9	1.880mg/L	52.00mg	52uL	e31009s1.2013	_10_09_09_50_34	cal	10/10/2013 2:52:15 PM	
2	124.0	128.4	1.733mg/L	50.20mg	50uL	e31009s1.2013	_10_09_09_50_34	.cal	10/10/2013 3:00:16 PM	

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TOC-Control L Report

e31010s1.toc.tlx

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Anal.: SSM-TC

8/12



JB50090R



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TOC-Control L Report

e31010s1.toc.tl



Anal.: SSM-TC

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10/11/2013 7:25:01 AM

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TOC-Control L Report

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ACCUTEST

10/11/2013 7:25:01 AM

JB50090R

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TOC-Control L Report e31010s1.toc.tk

Anal.: SSM-TC

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1 333.0 2 307.8	333.0 318.8	4.391mg/L 4.209mg/L	52.00mg 50.20mg	52uL 50uL	e31009s1.2013 e31009s1.2013	10_09_09_50_3 10_09_09_50_3	4.cal 4.cal		10/10/2013 4:5 10/10/2013 5:0	4:49 PM 2:33 PM	1455		
Mean Conc. CV Conc	4.3 2.9	00mg/L 9%	Signal{mV] 40 30 20 10 -4 0	2	4 6	8	10 1	2 14	16	18	20	Time[min]
<u>Sample</u>													
Sample Name: Sample ID: Origin: Status Chk. Result			JB48878-42 TOCSSM.me Completed	đ									
Unknown	SSM-TC	an Serie Carange Serie Carange Serie Carange	9. (318) 1.000	1.00	0mg/uL	5.75	i di jare k			a tanı tarihi Altanı tarih		SSI	vf-TC: 5.172mg/L
1. Det													
1 389.1 2 378.8	389.1 389.4	5.170mg/L 5.175mg/L	51.50mg 50.10mg	51uL 50uL	e31009s1.2013 e31009s1.2013	_10_09_09_50_3 _10_09_09_50_3	4.cal 4.cal		10/10/2013 5:0 10/10/2013 5:1	9 49 PM 6 15 PM			
Mean Conc. CV Conc	5.1 0.0	72mg/L 7%	Signal{m∨	7] 100 60 30									
				-10	0 2	4 6	8	10	12 14	16	18	20	Time[min]
Sample Sample Name:			CCV										
Sample ID: Origin: Status Chk. Result			TOCSSMCA Completed	1.met									
Unknown	SSM-TC		1.000	1.00	0mg/uLj							SS	M-TC:2.612mg/L
1. Det			angan nan ta t		-								

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TOC-Control L Report

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16 18 20 Time[min]

e31010s1.toc.tlx

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Anal.: SSM-TC

381.1	381.1	2.608mg/L	100.0mg	100uL	e31009s1.2013_10	_09_09_50_34.ca	al		10/10/2	2013 5:23:	06 PM			
382.1	382.1	2.615mg/L	100.0mg	100uL	e31009s1.2013_10	_09_09_50_34.ca	al		10/10/2	2013 5:32:	42 PM			
Vlean Conc. CV Conc	2.612 0.189	tmg/L %	Signal[1	nV] 400 300 200 100 -40) 2 4	6	8	10	12	14	16	18	20	Time[min
ample														
imple Name:			CCB											
ample ID: rigin: tatus hk. Result			TOCSSM Complete	CAL,met i										
nknown	SSM-TC		1.000	1.000)mg/uL		ж.	1.3933				al de la cala al de la cala al de la cala de la cala	\$\$M-	TC:0.03170mg
Det														
nal.: SSM-TC														
	. Silver		an a											
0.000	0.000	0.03170mg/L	100.0mg	100uL	e31009s1.2013_10	09_09_50_34.c	al		10/10/	2013 5:40:	26 PM			
0.000	0.000	0.0317011974	Toolonig	10000			au		10/10/	2013 0.11.	<u></u>			
0.000 ean Conc. √ Conc	0.03	170mg/L %	Signal[^{mV] 10} F			÷							
0.000 lean Conc. V Conc	0.03 0.00 ⁴	170mg/L %	Signal[mV] 10 [

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QC F	Reports:		GN9330	4									
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					nexaval	entCn	romiu	im 👘		a second second from		gitti ti vitikan Shinakan	1973 Alexandra Alexandra
				- 19 ST			Project No.	1					
	1			375 872	- Sabara		1	1	sangan a si Manjar	- Aller Martin (198			
		《外国》			Y Values Corr					med fight of	n an		
Bottle		Sample	BKGRD	Analysis	Sample	X Values	Final Vol.	Sam Wt.					
~~###00	Sample #	Absorbance	Absiii I	Times	Absorbance	Conc(mg/l)	(ml)	(g)	Dilution	Final Conc.	Units	MDL.	RDL
	GN Batch:	an93304						wethod:	577846 3	060A, 7196A			
	Analyst:	BP											
	Prep Date:	10/15/2013				Note: All	results b	elow sho	own on a	wet weight basi	s.		
	Analysis Date:	10/16/2013								-			
	Instrument ID:	Н											
	A I B I				1		-			Corr. Coef:	0.99985	5	
	Cal. Blk.	0.000	NA	8:36	0.000	0.0000							
	STD 2	0.009	NA NA	8:39	0.009	0.0100	-			Slope;	0.8922		
	STD 3	0.044	NA	8:39	0.044	0.0000	-			V intercent:	-0 0002	,	
	STD 4	0.267	NA	8:39	0.267	0.3000				<u>1 mai anna</u>	0.0002	•	
	STD 5	0.448	NA	8:39	0.448	0.5000							
	STD 6	0.701	NA	8:39	0.701	0.8000	Final Voj.	<u>Sam. Wt.</u>					
	STD 7	0.901	NA	8:39	0.901	1.0000	(ml)	(a)	Dilution	Final Conc.	<u>Units</u>	MDL	RDL
	ccv	0.430	NA	9:50	0.430	0.4822	NA	NA	NA	NA	mg/l	0.002	0.010
	CCB	0.000	NA	9:58	0.000	0.0002	NA NA	NA	NA	NA	mg/l	0.002	0.010
	GP75278-MB1	0.000	0.000	9:58	0.000	0.0002	100.0	2.5000	1	0.008	mg/kg	0.069	0.400
	GP75278-S1	0.652 /	0.000	9:58	0.852	0.8301	100.0	2.5000	1	38.206	mg/kg	0.069	0.400
	GP75278-D1	0.027	0.012	9:58	0.015	0.0397	100.0	2.4700	1	0.697	mg/kg	0.070	0,405
	JB50090-4R	0.038	0.011	9:58	0.027	0.0305	100.0	2.4700	1	1.234	ma/ka	0.070	0.405
	JB50090-4RPSCONF	0.432	0.000	9:58	0.432	0.4844	100.0	2.4700	2	39.223	mg/kg	0.070	0.810
	GP75278-82	>3	OVR	9:58		#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
	GP75278-S2	>3	OVR	9:58		#VALUE!	100.0	2.4700	1	#VALUE!	mg/kg	0.070	0.405
	GP75278-B2	0.394	0.000	9:58	0.394	0.4418	100.0	2.5000	50	883.622	mg/kg	0.069	20.000
	GP75278-S2	0.511	0.000	9:58	0.511	0.5729	100.0	2.4700	50	1159.813	mg/kg	0.070	20.243
	- CCP	0.430	NA	9:58	0.430	0.4822		NA	NA	NA	mg/l	0.002	0.010
	JB50090-2R	0.000	0.077	9.50	0.000	0.0002	100.0	NA 2.4400		0.545	mg/i	0.002	0.010
	JB50090-3R	0.609	0.167	10:03	0.442	0.4956	100.0	2.4400	1	20.480	mg/kg	0.071	0.410
	JB50090-5R	0.084	0.046	10:03	0.038	0.0428	100.0	2.4400	1	1.754	ma/ka	0.071	0.410
	JB50090-6R	0.110	0.062	10:03	0.048	0.0540	100.0	2.4400	1	2.213	mg/kg	0.071	0.410
				10:03		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
				10:03		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
				10:03		#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
				10:03		#VALUE!	100.0	ļ	1	#VALUE!	mg/kg	#DIV/01	#DIV/01
				10:03		#VALUE!	100.0			#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	ccv	0.430	NA	10:03	0.430	0 4822	NA	NA	NA	#VALUE!	mo/l	#010/0	#010/01
	ССВ	0.000	NA	10:03	0.000	0.0002	NA	NA	NA	NA	ma/l	0.002	0.010
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/01
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
						#VALUE!	100.0		1	#VALUE	mg/kg	#DIV/0!	#DIV/0!
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
						#VALUE1	100.0			#VALUE!	mg/kg	#DIV/0!	#DIV/0!
				-		#VALUE!	100.0		<u>├</u> ;	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
					†	#VALUE:	100.0		1	#VALUE! #\/ALUE!	ma/kg	#017/01	#DIV/0!
						#VALUE!	100.0		1	#VALUE!	ma/ko	#DIV/01	#DIV/01
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	CCV		NA			#VALUE!	NA	NA	NA	NA	mg/t	0.002	0.010
	ССВ		NA		ļ	#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
					Į	#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	· · · · ·					#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0	#DIV/0
						#VALUE!	100.0		1	#VALUEI	mg/kg	#DIV/0	#DIV/01
						#VALUE!	100.0		1	#VALUE!	ma/ka	#DIV/01	#DIV/01
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/01	#DIV/0!
						#VALUE!	100.0		1	#VALUE!	mg/kg	#DIV/0!	#DIV/0!
	001					#VALUE!	100.0		1	#VALUE!	rng/kg	#DIV/0!	#DIV/0!
			NA			#VALUE!	NA	NA	NA NA	NA NA	mg/l	0.002	0.010
	008					#VALUE!	NA 100.0	NA	NA		mg/l	0.002	0.010
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2,5000	1	#VALUET	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
]						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0,069	0.400



7

QC	Re	epo	rts:
_			



				1	· · · · · · · · · · · · · · · · · · ·				<u>г</u> .				
<u> </u>						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2 5000	1	#VALUE!	ma/kn	0.069	0 400
			·				100.0	2.0000		#1742021	ing/kg	0.000	0.400
	÷					#VALUE!	100.0	2.5000	1	#VALUE!		0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
	CCV		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
	CCB		NA			#VALUE!	NA	NA	NA	NA	mo/l	0.002	0.010
						#\/ALLIEI	100.0	0.5000		45 (A L L ITT		0.000	0.010
<u>├</u>						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
			· · · ·			#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
						#\/ALLIEL	100.0	2 5000	1	#\/A11151	ma/ka	0.060	0.400
							100.0	2.0000				0.000	0,400
						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
L						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1 I	#VALUE	ma/ka	0.069	0 400
						#\/ALLIET	100.0	2 5000			ma/ka	0.060	0.400
	CCV					#VALUE:	100.0	2.0000	<u> </u>	#VALUE:	ing/kg	0.009	0.400
	000		NA			#VALUE!	NA	NA	NA	NA	mg/i	0.002	0.010
	ССВ		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0,010
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
						#\/ALLIE1	100.0	2 5000	1	#\/A11151	ma/ka	0.069	0.400
						#\/^\	100.0	2.0000			mg/kg	0.000	0.400
						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
ļ						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2,5000	1	#VALUEL	ma/ka	0.069	0.400
			······································			#0/011151	100.0	2.5000				0.000	0.400
						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
<u> </u>						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
	CCV		NA			#\/ALLIEL	ΝΔ	NIA	NA	NA		0.002	0.010
	CCR		147			#VALUE:					nig/i	0.002	0.010
	008		<u>NA</u>			#VALUE!	NA	NA NA	NA	NA	mg/i	0.002	0.010
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
						#VALUEL	100.0	2 5000	1	#\/ALLE!	ma/ka	0.069	0.400
						#VALUEL	100.0	2.0000		#VALUE)	1119/109	0.000	0.400
						#VALUE!	100.0	2.5000		#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0 400
						#\/ALLIE!	100.0	2 5000	1	#\/ALTICI	ma/ka	0.060	0.400
						#VALUE:	100.0	2.0000		#VALUE:	iiig/kg	0.009	0.400
			<u> </u>			#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
	CCV		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
	CCB		NA			#VALUE!	NA	NA	NΔ	NA	ma/l	0.002	0.010
							400.0	0.5000			1119/1	0.002	0.010
	-1					#VALUE!	100.0	2.5000	1	#VALUE!	тд/кд	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	ma/ka	0.069	0.400
			-			#\/ALLIEI	100.0	2 5000		#\/Δ111E1	maika	0.060	0.400
							100.0	2,5000		#VALUE!	ing/kg	0.003	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0.069	0.400
						#\/	100.0	2 5000	1	#\/ALLEL	malka	0.000	0.400
	CCV		NIA				100.0	£.0000		#VALUE!	ing/kg	0,009	0.400
			NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
	ССВ		NA			#VALUE!	NA	NA	NA	NA	mg/l	0.002	0.010
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUEI	100.0	2,5000	1	#VALUEL	ma/ka	0.069	0 400
						#\/^11	100.0	2.0000				0.000	0.400
<u> </u>						#VALUE!	100.0	2.0000	1	#VALUE!	mg/Kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2,5000	1	#VALUE!	ma/ka	0.069	0.400
						#\/ALLIEL	100.0	2 5000		#\/Δ[1⊑	malka	0.060	0.400
		~					400.0	2.0000			mg/kg	0.009	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/kg	0.069	0.400
						#VALUE!	100.0	2.5000	1	#VALUE!	mg/ka	0.069	0.400
	CCV		NA		1	#VALUF!	NA	NA	NA	NA	ma/l	0.002	0.010
	CCB		N۵			#\/ALLIEL	NIA I	NIA	NA	NA NA	me/	0.002	0.010
roviec	d 4/25/14					#VALUE!	NA	INA	AIR	NA	mg/i	0.002	0.010
revise	u ⇔(ZO/11												

Comments:






Test: Hexavalent C Product: XCr	hromium	MDL RDL	= 0.069 mg/kg = 0.40 mg/kg	GNBatch ID: <u>QN93304</u> Date: (0116113
Method: SW846 306	0A/7196A			540. <u>-10119</u>
Digestion Batch QC	Summary	Units	= mg/kg	
Method Blank ID: GP7:	5278-MB1 Date:_	to116113	Result: 0 (70 5-	RDL: 0 4 <rdl: 45<="" 7="" th=""></rdl:>
Sol. Spike Blank ID:	<u>-B1</u> Da	ite:	Result: <u>3-75-2</u>	66 Spike: 40. %Rec.: 95-521
Insol. Spike Blank ID:_	<u>- 132</u> Dat	e:/	Result: <u> </u>	67_Spike:900.99%Rec.: 9508/
Duplicate ID:	<u> </u>	lesult: (-230	⊥Dup. Result:	0.647 %RPD: 55.624
Sol. MS ID:	<u>- 51</u> Samp. Res	ult:	MS Result: ລິຣ-ອ	74 Spike: 40:49 % Rec: 60.55
Insol. MS ID:		esult:	MS Result: 1159	513 Spike 87936 % Rec 121 75%
Post Spike ID:71350	90-42PSSamp. F	esult:	PS Result 3.9	223 Spike: (10.115) Ber 93 83.50
Diluted Sample ID:		mn Result	Dil Reg	
nHadi PS ID	Samp 6			
pri doj. 1 O 10	<u></u>		MS Result:	Spike: %Rec:
Analysis Batch QC Su	mmary	Units = ma/l		
	·			
ccv: tolibliz	Result: 0.4627	2TV: _0.500	%Rec.: <u>ק6. ע</u>	<u>'</u> Lf
ccv:	Result:	TV: _0.500	%Rec.:	
ccv:/	Result:/	TV: _0.500	%Rec.:/	_
CCV :	Result:	TV: _0.500_	%Rec.:	_
CCV :	Result:	_ TV: _0.500_	%Rec.:	_
CCV :	Result:	TV:0.500	%Rec.:	_
CCV :	Result:	_TV: _0.500_	%Rec.:	_
	Result:	_ TV: _0.500_	%Rec.:	_
CCV :	Result:	_ TV: _0.500	%Rec.:	_
CCB: INTIALIS	Result: A.MT		-PDUNIOC	
ССВ:	Result:	RDL0.010_		
CCB: V	Result:	RDL 0.010		
CCB:	Result:	RDI • 0.010		
CCB:	Result:	RDL: 0.010	<rdi th="" ·<=""><th></th></rdi>	
ССВ:	Result:	RDL: 0.010	<rdl:< th=""><th></th></rdl:<>	
ССВ:	Result:	RDL: 0.010	<rdl:< th=""><th></th></rdl:<>	
ССВ:	Result:	 RDL:_0.010		
ССВ:	Result:	RDL:_0.010	<rdl:< td=""><td></td></rdl:<>	
Pergent Peterence		A 44		
Insoluble spike = Pho	CrO4 Molecula	to attached	reagent reference	e information page(s).
{100000 µg/g x lpcc		weight = 32	5.2 g/mor $Cr = 52$	2.0 g/moi
	uble spike wi(g) X :	2/323.2}/ms	sample wt(g) = In:	soluble spike amount
Analyst: <u>BP</u>	Date: 10 16-	112.		
Commente	······································	,		
Comments:				
	· · · · · · · · · · · · · · · · · · ·			······





	÷							
NOTE: AW	ays dilute post	-spike first, the	in take a 45 i	mi aliquot of t	he diluted	post-spike an	nd add the s	oike amount.
								Suggested
	PS Aliquot			Amount in				ml of 100
	Weight in g			ml to add		Suggested	Actual	ppm to spike
	Digested in	Weight in 45	Results in	of 100 ppm	Dilution	Dilution to	Dilution to	on dilution o
Sample ID	100 ml	m	mg/kg.	solution	needed	nse	be used	sample.
JB50090-4R	2.47	1.1115	1.234	0.445	yes	-	2	0.223
		0		0.000	00	0		i0//I0#
		0		0.000	ou	0		#DIV/0
		0		0.000	ou	0		10//IC#
		0		0.000	ou	0		#DIV/IO#

E SPIKE	
INSOLUBI	OTTA HON
3060A/7196A	I C

			67	35			
Z	Amount	Spiked	066.006	879.364	i0//IC#	i0//\lO#	i0//IC#
ALCULATIC	Weight of	Sample	2.5	2.47			
נ	Weight of	PbCrO4	0.014	0.0135			

JB50090R

7.2

Date Validated: 2/26/13

Validated By: JJY Doc. Control #: <u>AGN-XCRAPSCALC-0</u>1

ACCUTEST LABS DAYTON, NJ GN93304

efault (40 mg/kg) spike sfault (40 mg/kg) spike sfault (40 mg/kg) spike sfault (40 mg/kg) spike efault (40 mg/kg) spike

40.486 #DIV/0!

0.515

#DIV/0i i0//IC#

#DIV/0

#DIV/0 #DIV/0

#DIV/0 i0//IC#

#DIV/0 i0//10# i0//IC# i0//I0# #DIV/0 10//IQ# i0//I0#

#DIV/0

i0//IC#

0 0 0

2

0.000 0.000

2

2

0

2

0 0 0 ¢

0

Q

2

0.000

#DIV/0

#DIV/0

i0//IC# #DIV/0

0

2

0.00

Q

i0//I0#

#DIV/01 i0//I0# i0//IC# i0//IQ#

Use calculated or

Amount in

curve in back on

Spike

mg/kg

mg/l

sample. 0.225

Calculated

Est. Read-

of 100 ppm to spike on dilution of

Suggested ml of 100 ppm to spike on dilution of

Actual ml

default spike?

GP Batch: QP75 &78

3060A/7196A POST-DIGEST SPIKE LEVEL CALCULATION SPREADSHEET





Hexavalent Chromium pH Adjustment Log Method Sw846 3060A/7196A

						pH Meter ID:	ි නිථ	1 .
				-1 -		Digestion Date	e: [0~(5-13
pH adj. start time:		9:14	(<u>1.37-</u>		pH adj. Date:	101611	<u>კ</u>
pH adj. end time:		9.26	Ċ	1:45		GN Batch ID:	GING	3304
		pH after		pH after				
678278	Sample	HNO3	Final	H2SO4	bkg pH			
	Weight in	(7.0 to	Volume	(1.5 to	after	Spike	Spike	Digestate
Sample ID	g	8.0)	(ml)	2.5)	H2SO4	Amounts	Solution	Description/Comments
CCV		7.42	100	8-15		Sionl	10pp m UTLA	
CCV						۲		
CCV								
CCV		4						
ССВ		7.54	100	203				
CCB		,						
ССВ								
CCB	- 						1	
MS (SOI) JKS QYU-YK	2.41	7.33	1072	व्युख्य	1.89.	1.0M(10000mags	
MS (Insol.)	di ya	7.02		-216	804	00(3)	PSCIOY	
DUP V-4	J.YT	7.46		1.66	105		4. 00. 00	
SB (Sol)	2.50	7.73		1 77	015	1.OML	19271m 145	
SB (Insol)		7.66		204	1.55	00140	YDUNY	
MB		7 59		195	1.82			
13B50040-4K		1 23		1, 53	<u>a 14</u>			Jellow
2 -2K	2.44	JUD		4.92	1.95			Blown
3 - 3k	2.42	774		1.68	1. 43			Kyk Brown
	$\frac{2}{2}$	<u> 7 4 1</u>		<u> x 65</u>	1-59			Van
5 V - 6L	a.yy	7.75		1.79.	1.82			<u> </u>
6							l	
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17		· · · ·					-	
18								
19								
20 CD (Inc.)	1.7			<u> </u>			hon tain	Hilution 1 (540)
	<u>a su</u>	4.86	1002	124	1 2 3 3	IMP ROWIN	$1 \sim 0 m (\sim 0)$	dilution 1.30
	pr u -	1-52		التظعر	167	<u>↓</u>		
10(JB) 0040-4P	L-2X-47-	1+ 33		Q-02	1.13	0.92506100	ppmtb,	W-Somily (1.2
pri adjusted PS			·					
TREDECA ALL	2.110	<u> </u>					.	
1 Y - 2 Y - 2 Y - 4 Y -	10.4)	<u> </u>		L	<u> </u>	<u> </u>		

Reagent Reference Information - refer to attached reagent reference information page(s). {1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4

2nd analyst check:__

Anayst: <u>BP</u>

Form: GN-067 Rev. Date: 08/8/12





ACCUTEST:

Hexavalent Chromium pH Adjustment Log Method: SW846 3060A/7196A

pH adj.	start time:
pH adj.	end time:

<u>8:20</u>

5.29

pH adjustment Date: <u>IOIIGI3</u> GN Batch ID: <u>GN G1N 9380U</u>

	Sample		Final			
	Weight in	pH after	Volume	pH after		
Sample ID	g	HNO3	(ml)	H2SO4	Comments	Spike Info.
Calibration Blank	NA	7.33	100	2.13	0	
0.010 mg/l standard	NA	7.86	100	<i>ৰ</i> ০%	10ppm Absolute	0.10 ml of 10 mg/l
0.050 mg/l standard	NA	7.79	100	197	10ppm Absolute	0.50 ml of 10 mg/l
0.100 mg/l standard	<u>NA</u>	7.65	100	2.31	10ppm Absolute	1.00 ml of 10 mg/l
0.300 mg/l standard	NA	7-22	100	1.77	10ppm Absolute	3.00 ml of 10 mg/l
0.500 mg/l standard	NA	7.58	100	1.60	10ppm Absolute	5.00 ml of 10 mg/l
0.800 mg/l standard	NA	1.37	100	1.62	10ppm Absolute	8.00 ml of 10 mg/l
1.00 mg/l standard	NA	7.81	100	1.93	10ppm Absolute	10.0 ml of 10 mg/l
		•				
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						-
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						······
					· · · · · · · · · · · · · · · · · · ·	
· ·	<u> </u>	·				
	—— <u> </u>					
		<u> </u>				
Reagent Reference Inf	ormation	rofor to				

<u>Reagent Reference Information - refer to attached reagent reference information page(s).</u> <u>{1000000 ug/g x Insoluble spike wt(g) x 52/323.2}/ms sample wt(g) = Insoluble spike amount of PbCrO4</u>

> Anayst:______ВР Date:______Юц6ЦЭ.____

Form: GN068-01 Rev. Date:5/22/06



MN Accutest

HEXAVALENT CHROMIUM STANDARD PREPARATION LOG

Product: <u>XCP A7</u>196. GN or GP Number: <u>Cand 933</u>04.

GN93304

						Final Conc.			
			Stock			oť			
		Stock	volume		Final	Intermediate	Expiration		
ξ,	ock used to prepare standard	concentration	used in ml	Diluent	Volume	(l/gm)	Date	Analyst	Date
4	Absolute Grade Lot #060613	1000 ppm	1.0 ml	ā	100 mls	10 mg/l	6/6/2016	с ф	10/16/13
		1000 ppm	10 ml	ā	100 mls	100 mg/l			
		1000 ppm	1.0 ml	D	200 mg/l	5 mg/l			
		1000 ppm	1.5 ml	ā	200 mg/l	7.5 mg/l			
∍	tra lot #L00439	1000 ppm	1.0 ml	ā	100 mg/l	10 mg/l	5/31/2017	7	7
			Intermediate						
		Intermediate	or Stock			Final Conc.			
_	ntermediate or Stock used to	or Stock	volume		Final	Of Standard	Expiration		
	prepare standard	concentration	used in ml	Diluent	Volume	(l/gm)	Date	Analyst	Date
	10.0 ppm abs	10.0 ppm	0.1 ppm	ā	100 mls	0.01 mg/l	101413	98	10/16/13
	10.0 ppm abs	10.0 ppm	0.5 ppm	ā	100 mls	0.05 mg/l	-	1	
	10.0 ppm abs	10.0 ppm	1.0 ppm	ō	100 mls	0.10 mg/l			
	10.0 ppm abs	10.0 ppm	3.0 ppm	D	100 mls	0.30 mg/l		1	
	10.0 ppm abs	10.0 ppm	5.0 ppm	D	100 mls	0.50 mg/l	/	_	
	10.0 ppm abs	10.0 ppm	8.0 ppm	Ы	100 mls	0.80 mg/l			
	10.0 ppm abs	10.0 ppm	10.0 ppm	₫	100 mls	1.0 mg/l	Y	\$	>

Form: GN205-02 Rev. Date:10/16/09

JB50090R

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HEXAVALENT CHROMIUM TEMPERATURE AND TIME DIGESTON LOG - METHOD 3060A

Record a minimum of starting, middle, and ending temperatures for each batch.

Thermometer ID: $3lS_{1}SS_{1}S_{1}S_{1}$ Thermometer Correction factor: 1, 0, 0, 0

Note: Minimum of 1 hour digestion time for each batch. Corrected temperatures must be in the range of 90 to 95 deg. C.

GN93304

Digestion Distribution		j j	Temp. in deg. C Hot Plate # <u>1</u> - Uncorrected/Correc	Temp. in deg. C Hot Plate # 2 - Uncorrected/Correc	Temp. in deg. C Hot Plate # 3 Uncorrected/Correc	Temp. In deg. C Hot Plate # <u>丫</u> - Uncorrected/Correc fed
222	Starting Time	16,43	43(94	91/91	18/15	91/61
PLEX	Time 1	[7,13	63/94	91/61	9/[9]	01/61
	Ending Time	17,43	1563	16 61	9//9/	9/1G1
OST JO	Starting Time	17,50	93.94	61/61	91/21	9161
5781	Time 1	18:20	53/3rt	1/1/6	91/61	grlaf
	Ending Time	18:50	63/64	16/6/	9/14/	9161
eress	Starting Time	18:55	63/61	91[91	9161	91/91
5 5983	Time 1	19:25	45/86	91/51	9/19/	G(19)
	Ending Time	الارحح	£3 2A	9/19/	91191	91/91
Analyst	NBU			Date:	10-15-13	
2nd Analys	st Check: 171 K	Ŧ,		-		

Form: GN074-02 Rev. Date: 8/08/12

60 of 79 ACCUTEST JB50090R

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GN/GP Batch ID: GTN9330(1.

Reagent Information Log - XCRA (soil 3060A/7196)

Reagent	Exp. Date	<u>Reagent # or Manufacturer/Lot</u>
Calibration Source: Hexavalent Chromium,		
1000 mg/L Stock	6/6/2016	ABSOLUTE GRADE #060616
Calibration Checks: Hexavalent Chromium,		
1000 mg/L Stock	10/31/2019	ULTRA #P00986
Spiking Solution Source	6/6/2016	ABSOLUTE GRADE #060616
Lead Chromate (Insoluble Hexavalent Chromium Spike)	7/26/2017	SIGMA ALDRICH # BCBG0578V
Magnesium Chloride, Anhydrous	9/2/2017	ALFA AESAR # H10X010
1N NaOH		
Digestion Solution	119/2013	GNE10-37704-XCR
Phosphate Buffer Solution	413/2014	6NE10-37639-XCKA
5.0 M Nitric Acid	325114	CINEQ - 37501-XCRA
Diphenylcarbazide Solution	14413.	CINEID-37689-XCP.
Sulfuric Acid, 10%	3/3014	CIN19-37608-400
Filter	NA	Lot #-130508059
Teflon Chips	NA	91920

Form: GN087A-21B Rev. Date: 2/18/10



							a 1			~
	TEST: Ferrous Iron (FE2/7 METHOD: ASTM D3872-8 RDL: 0.20 %	7) 6	an an Artan An Artan Artan Artan	ANALYST: DATE:	CB		GN BATCH: REAGENT ID's	GN 933 : See attache	lK d page	
÷	F=	Weight of Iron Vol. Of Dicho	n in g mate in mL	F= <u>0.00</u>	<u> </u>	%Fe2/7 =	<u>ml Dichromate</u> sample wt in g	<u>x F x 100</u> x (%sol/100)		
	QC Summary Dup. Sample ID: MS Sample ID: MB ID and prep date: SB ID and prep date: External ID:	Original:	Qriginal: 1.00 1.02 Amt. 5 Result: 40.7 Amt. Spiked:) Spiked:	Duplicate:	1.02 3:58.03 2.2	RPD: REC:24 <rdl?y REC:</rdl?y 	Units	Within limits? (Y/N)	
			<u> </u>				HEC:			
<u>.</u>	Spike prep: 0.25	<u>le</u>		Sample		· · · · · · · · · · · · · · · · · · ·		<u></u>		
e #	Sample Description	in g	Start Time/End Time	Titrant Start in ml	Titrant End in ml	Titrant Total (ml)	Result in mg/l	Final Result in mg/l	RDL	Unit
	GNMB		10:00 AM	0	0.10	0.10	0.134	20.2	0.2	%
_	GNB		······		37.50	37.50	For calura	ton only		%
_	1 JB47902-1M	0.524			0.75	0.75	1.0193	1.02		%
_	<u>GN</u> D	0.525			<u>0.75</u>	0.75	1.0193	1.02		%
	<u>GNS</u>	0.525			42.70	42.70	58.0351	58-03		%
	2. JB50090-4R	0.524			0.35	0.35	0.4966	0.50		%
	3 JB49787-1R	0.500	See.		0.25	0.25	0.3840	D.38		%
	4 JB49673-1R	O.SIG	<u> </u>	×	0.70	0.70	1.0145	1.04.		%
	5	ر 		•						%
-	6		er Maria							%
_	7		1. 3 . 1 . 1							%
	8		<u> </u>						1	%
	9 70 Solals	-	· · · · · · · · · · · · · · · · · · ·							%
	10 JBHTO2-12T	94.8				35 2	L,		1	%
	11 JB50290-4R	90.8		M.S-	•25	1 97 1		50.71	1	%
	12 * 51349787 - 1R	75.2			-57		.945			1 %
	13 JB49677-1R	88.9							1	. %
	14									1%
	15									%
	16								1	%
•	17		··							%
	18		1	L					1	%
	19								1	%
_	20									%
aso	n codes for data correction $\bigcirc 0$	is : 1 - review	er error correction	; 2 - transcrip	tion error, 3-c	computer erro	r; 4- analyst erro	r		<u> </u>

Form: GN-198 Rev. Date: 6/16/06

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Reagent	Fe2/7
	Work Group #
Reagent	Reagent # or Manufacturer/Lot
FIINS Iron Wire Std	Fisher 135597 9127/18
HCL (1:1)	GNEID-37651-SREAL 415/14
60% Sulfuric Acid/Phosphoric Acid	- GNELO-37652-FE217 415114
Potassium Dichromate Solution	<u>GNEIO-37653-Fe 217</u> 415/14
Diphenyl Amino Indicator	GNE 9-37565- FC2/7 3124/14
Aceta Acet Butter	- ONE 7 - 36794 - SUISS 1/11/14
	·
All standards and stocks were made as described	ed in the SOP for this method (circle one):

Form: GN087-01 Rev. Date:12/19/2011





 ACCUTEST.

Analyst(<u>_B</u>
Method	Sulfs
Prep Date 1	5/16/13
GP# GN	93317

B-14 Balance #___

Sample Prep Log

Sample ID	Sample Size		Final Volume
MB		+ lom DI	Negative
JB47902-1RT	10.58%		
-IFTD	P 10.629		
JB50090-4R	10.11		
JB49787-1R	10.01 2		
JB49673-1R	10.52 q		
	L		
	· · · · · · · · · · · · · · · · · · ·		

QC Review 64 of 79 ACCUTEST JB50090R

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Form: GN166-02 Rev. Date: 8/5/05 _



	Туре	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Status	Date / Time	
<u>1</u> `	Unknown	CRI	A)	TOCSSMC	1.000	SSM-TC:0.07911m	Completed	10/16/2013	
2	Unknown	HSTD		TOCSSMC	1.000	SSM-TC:5.120mg/	Completed	10/16/2013	1
3	Unknown	ICV		TOCSSMC	1.000	SSM-TC:2.013mg/	Completed	10/16/2013	
4	Unknown	CCV		TOCSSMC	1.000	SSM-TC:2.515mg/	Completed	10/16/2013	
5	Unknown	GP75181-M	TOCLK	TOCSSM.m	1.000	SSM-TC:0.00255m	Completed	10/16/2013	
6	Unknown	GP75181-B2	Y	TOCSSM.m	1.000	SSM-TC:0.1951mg	Completed	10/16/2013	
7	Unknown	JB50090-4R	D	TOCSSM.m	1.000	SSM-TC:3.404mg/	Completed	10/16/2013	overage
8	Unknown	JB50090-4R	æ	TOÇSSM.m	1.000	SSM-TC:3.606mg/	Completed	10/16/2013	a 0.18
9	Unknown	JB24887-1	T	TOCSSM.m	1.000	SSM-TC:0.01213m	Completed	10/16/2013	
10	Unknown	JB24887-1		TOCSSM.m	1.000	SSM-TC:0.01147m	Completed	10/16/2013	
11	Unknown	CCV	V	TOCSSMC	1.000	SSM-TC:2.521mg/	Completed	10/16/2013	

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10/16/2013 3:49:58 PM

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65 of 79 ACCUTEST JB50090R





ACCL	ЛEST.	•

'est: Total Organic Carbon Units = mg/kg roduct: TOC Balance |D: B-39 Nethod: Corp. Eng. 81 M/SW846 9060 M or EPA Region 2 Lloyd Kahn (circle one) ¿DL = 1000 mg/kg or 100 mg/kg (circle one)

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GN Batch ID_ UN9.3334 Date 10/16/12

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Analyst____/A

Sample vveight		Sample Description & comments
·····		
1.000 0		
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10000		
1.0000		
10.4.065	<u>(1</u>	Overlance . Kenn at 0.19
<u>.</u> <u>0.4034</u>		0
0.414L		
0.411H		
01034	1	
0.1015		
0.1064		
0.1080		
1-000 D		7824890-1 (10C-50) MDL TV=1000
1.0000	,	
1.0002		JB24890-1
1.0000		
1.0000		JB24840-1
1.2000		
1.0000		JB 24390 -1
1.0002		
Date: <u>IOIIBII3</u> QCRevi Date:	ewer:	Date:
goas me cii	1.00 MS	ilica sand TV= 2000 melu
	$\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 4}{1 \cdot 0^{0} \circ 4}$ $\frac{1 \cdot 0^{0} \circ 4}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 5}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$ $\frac{1 \cdot 0^{0} \circ 3}{1 \cdot 0^{0} \circ 3}$	$\frac{1 \cdot 000}{1 \cdot 000}$

Form: GN058-01 Rev. Date: 11/11/08



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ACCUTEST:

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est: Total Organic Carbon	Units = mg/kg	GN Batch ID じ
roduct TOC	Balance ID: B-39	Date 10/16
lethod: Corp. Eng. 81 M/SW846 9060 M o	EPA Region 2 Lloyd Kann (circle one)	
\DL = 1000 mg/kg or 100 mg/kg (circle one)		Analyst 1A

Sample ID	Sample Weight	Bottle #	Sample Description	& comments
JB24897-1	1.0000		JB24 390-1	
	1.0000			
1B24887-1	1.0000		7824390-1	
	1.0000			
ecv				
JB24887-1	1.0000		JB 24 890-1	
	1.0000			
JB24887-2	1:0000		-1624890-2	TV=50 ppm mn-V
	1.0000			· · · · · · · · · · · · · · · · · · ·
	•			
CCV	•			·····
				·····
				· · · · · · · · · · · · · · · · · · ·
·····		· · · · ·		
······			· · · · · · · · · · · · · · · · · · ·	·
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Analyst:\/A	_ Date: 01613_ QCRevi	ewer:	Date:	
Manager Review:	Date:		_	
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Form: GN058-01 Rev. Date: 11/11/08



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		•	•	•	,		9		
MDL Schedul	e Log								
Product:	TOC-LK				· ,	н			
Matrix:	50				•				7
Instrument:	706-12						į		сл Г
			на на селото на селот На селото на селото н На селото на						7
Sample #:	JB 24887-1	MDL		/ER <u>x</u>	7				
Concentration:	(000VA 101161130	mg/L	or mg/kg	g gr _					
Prep:	STD B (GNEIO-	37711-	TOC)	:		- ·			
				· ·					
Sample #:		MDL		ER			•		
Concentration:	50 QUA WI ILING	mg/L	or mg/kg)r		· .			
Prep:	IML OF 50000	nel	(Gu E 10-	<u>- 3746</u>	<u>-</u> 70c)-	3		·	
	1 100 mL DI 17:0				-	• •			
			• •						
Date:	10/16/13			•					
Analyst:	VA			•					

Batch #:

Form: GN278-02

Revised: 10/16/12

UN93334





TOC-Control L Report

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instr.information

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Instrument Options TOC/SSM/Sparge Kit/ Regular Sensitivity Sample Sample Name: CRI Sample ID: CRI Sample ID: TOCSSMCAL.met Status Completed Chk. Result

Unknown SSM-TC 1.000 1.000mg/uU SSM-TC:0.07911mg/L 1. Det

Anal.: SSM-TC

1 16.18 16. 2 0.000 0.0 3 16.38 16.	18 0.1175mg/L 00 0.00081mg/L 38 0.1190mg/L	100.0mg 100.0mg 100.0mg	100uL 100uL 100uL	d31009s1. d31009s1. d31009s1.	2013_10_09 2013_10_09 2013_10_09	10_01_03 10_01_03 10_01_03	.cal .cal	 10/16/2 10/16/2 10/16/2	013 9:47) 013 10:02 013 10:14	48 AM 13 AM 22 AM		
Mean Conc. CV Conc	0.07911mg/L 85.72%	Signal[mV]	10 6 3 -1 0	2	4	6	8	 				Time[min]

<u>Sample</u>

Sample Name: Sample ID: Origin: Status Chk. Result	HSTD TOCSSMCAL.met Completed	

Unknown	SSM-TC	 1.00	0 1.000m	g/uL	 	SSM-TC:5.120mg/L
1. Det						

Anal.: SSM-TC

18 A.					REAL TO			
1	707.9	707.9	5.108mg/L	100.0mg	100uĽ	d31009s1.2013_10	_09_10_01_03.cal	10/16/2013 10:31:26 AM
<u>د</u> ا	711,2	/11.2	5.132mg/L	100.0mg	100uL	d31009s1.2013_10	_09_10_01_03.cal	10/16/2013 10:38:55 AM





TOC-Control L Report

d31016s1.toc.tl

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Sam	ole
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Sample Name: Sample ID: Origin: Status Chk. Result	CCV TOCSSMCAL Completed	.met				
			9.			
Unknown SSM-TC	1.000	1.000mg/uL	 	 		\$\$M-TC:2.515mg/L

1. Det

Anal.: SSM-TC

									18 a	· · · ·
1 2	348.9 348.2	348.9 348.2	2.518mg/L 2.513mg/L	100.0mg 100.0mg	100uL 100uL	-	d31009s1.2013_10_09_10_01_03.cal d31009s1.2013_10_09_10_01_03.cal	 	10/16/2013 11:10:21 10/16/2013 11:37:04	AM

10/16/2013 3:50:01 PM



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TOC-Control L Report

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		a sa ata			 	
Unknown	SSM-TC	 1.000	1.000mg/uL			SSM-TC:0.1951mg/L
1. Det				 	 	

Anal.: SSM-TC

1 270.1 2 270.5	270.1	0.1949mg/L 0.1952mg/L	1000mg	1000uL 1000uL	d31009s1.2013_10_09_10_01_03.cal d31009s1.2013_10_09_10_01_03.cal	10/16/2013 12:16:22 PM 10/16/2013 12:22:11 PM





Raw Data GN93334: Total Organic Carbon page 7 of 15



TOC-Control L Report

d31016s1.toc.tlx



631.0	(0) 0						
521.8	521.8	3.641mg/L	103.4mg	103uL	d31009s1.2013 10 09 10 01 03.cal	10/16/2013 2:24:06 PM	Î
502.3	511.7	3.571 mg/L	101.5mg	101uL	d31009s1.2013_10_09_10_01_03.cal	10/16/2013 2:42:56 PM	-







TOC-Control L Report

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	15.57 15.57	0.01121	1000	1000 1		
<u></u>	16.01	0.01151mg/L	TOOOmg	1000uL	d31009s1.2013_10_09_10_01_03.cal	10/16/2013 3:11:18 PM
Ë.,	10.01 10.01	0.01165mg/L	Tooomg	TOOOuL	d31009s1.2013_10_09_10_01_03.cal	10/16/2013 3:17:55 PM

10/16/2013 3:50:01 PM

JB50090R



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TOC-Control L Report

d31016s1.toc.tlx



Anal.: SSM-TC





10/16/2013 3:50:01 PM







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	Туре	Sample Nam	Sample ID	Origin	Manual Diluti	Result	Status	Date / Time
_ 1	Unknown	JB24887-1	(A)	TOCSSM.m	1.000	SSM-TC:0.01290m	Completed	10/16/2013
2	Unknown	JB24887-1	Ť	TOCSSM.m	1.000	SSM-TC:0.01095m	Completed	10/16/2013
3	Unknown	JB24887-1		TOCSSM.m	1.000	SSM-TC:0.06023m	Completed	10/16/2013
4	Unknown	JB24887-1	[TOCSSM.m	1.000	SSM-TC:0.01039m	Completed	10/16/2013
5	Unknown	JB24887-1		TOCSSM.m	1.000	SSM-TC:0.00927m	Completed	10/16/2013
6	Unknown	JB24887-2	MDL-V	TOCSSM.m	1.000	SSM-TC:0.00575m	Completed	10/16/2013
7	Unknown	CCV	V	TOCSSMC	1.000	SSM-TC:2.499mg/	Completed	10/16/2013

D3101652. TOC

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		VALO 117/13
	N 1	
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1999 A. 1999	$(1,1)^{*}(t) = (1,1)^{*}(t)$

	1. A.

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TOC-Control L Report

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Instrument Options Catalyst

TOC/SSM/Sparge Kit/ Regular Sensitivity

Sample

Sample Name: Sample ID: Origin: Status Chk. Result

JB24887-1 TOCSSM.met

Completed

SSM-TC	1.000	1.000mg/uL	·····	SSM-TC:0.01290mg/U

Anal.: SSM-TC

Unknown

1. Det



Unknown	SSMITC	 1.000	1.000(1		
Olikilovili	p301-1C	 1.000	1.000mg/uLl	 	 SSM-TC:0.01095mg/L
1. Det					

Anal.: SSM-TC

Γ	15.47	15.47	0.01124mg/L	1000mg	1000uL	d31009s1.2013 10 09 10 01 03.cal	10/16/2013 4:32:17 PM
2	14.66	14.66	0.01066mg/L	1000mg	1000uL	d31009s1.2013 10 09 10 01 03.cal	10/16/2013 4:39:21 PM



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TOC-Control L Report

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TOC-Control L Report

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1. Det

Anal.: SSM-TC



Anal.: SSM-TC

1 7.715 7.715 0.00565mg/L 1000mg 1000uL d31009s1.2013_10_09_10_01_03	cal 10/16/2013 5:29:14 PM
2 8.006 8.006 0.00586mg/L 1000mg 1000uL d31009s1.2013_10_09_10_01_03	B.cal 10/16/2013 5:37:21 PM





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d31016s2.toc.tlx



Sample ID: Origin: Status Chk. Result		TOCSSMCAL.met Completed					
Unknown	SSM-TC	1.000	1.000mg/uL		 	 SSM-TC:2.499mg/L	

1. Det

Anal.: SSM-TC



10/16/2013 6:39:12 PM

