

Analytical Summary Report

Analysis Method: 7196A

ANALYST: Indiana

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY: apatel

Run Number: LB99507

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
Calibration Std. hexchrome 0.1 ppm	WP69932
Calibration Std. hexchrome 0.05 ppm	WP69931
Hexavalent Chromium LCS Std	WP69937
Calibratation STD HexaChrome 1 PPM	WP69934
Calibratation STD Hexa Chrome 0.5 PPM	WP69933
calibration std. hexchrome 0.01 ppm	WP69929
calibration std. hexchrome 0 ppm	WP69928
Hexavalent Chromium ICV Std.	WP69935
Hexavalent Chromium CCV Std	WP69936
hexavalent chromium color reagent	WP69799
HNO3 Hex-Chrome, 5M	WP65055
Calibration std Hexachrome, 0.025ppm	WP69930

Intercept: 0.0002

Slope: 0.7715

Regression: 0.999979

Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml/gm)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb. at 540		Absorbance Difference	Anal Date	Anal Time
								Backgrnd	Color			
1	CAL1	0	1	100	100		1.55	0.000	0.000	0.000	11/30/2018	10:05
2	CAL2	0.01	1	100	100		2.13	0.000	0.007	0.007	11/30/2018	10:05
3	CAL3	0.025	1	100	100		2.44	0.000	0.017	0.017	11/30/2018	10:06
4	CAL4	0.05	1	100	100		1.90	0.000	0.040	0.040	11/30/2018	10:06
5	CAL5	0.1	1	100	100		1.76	0.000	0.078	0.078	11/30/2018	10:07
6	CAL6	0.5	1	100	100		2.10	0.000	0.389	0.389	11/30/2018	10:07
7	CAL7	1	1	100	100		2.33	0.000	0.770	0.770	11/30/2018	10:08



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Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml/gm)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb. at 540		Absorbance Difference	Result	Anal Date	Anal Time
								Backgrnd	Color				
1	ICV	0.5	1	100	100		1.84	0.000	0.390	0.390	0.505	11/30/2018	10:08
2	ICB		1	100	100		1.75	0.000	0.000	0.000	0.000	11/30/2018	10:09
3	CCV1	0.5	1	100	100		2.04	0.000	0.390	0.390	0.505	11/30/2018	10:09
4	CCB1		1	100	100		2.12	0.000	0.000	0.000	0.000	11/30/2018	10:10
5	LB99507BL		1	100	100		2.22	0.000	0.000	0.000	0.000	11/30/2018	10:10
6	LB99507BS	0.5	1	100	100		1.83	0.000	0.382	0.382	0.495	11/30/2018	10:11
7	J6157-01		1	100	100		1.91	0.290	0.290	0.000	0.000	11/30/2018	10:11
8	J6157-02		1	100	100		1.75	0.279	0.279	0.000	0.000	11/30/2018	10:12
9	J6157-03		1	100	100		2.16	0.170	0.170	0.000	0.000	11/30/2018	10:12
10	J6157-04		1	100	100		2.47	0.147	0.147	0.000	0.000	11/30/2018	10:13
11	J6157-05		1	100	100		1.71	0.125	0.125	0.000	0.000	11/30/2018	10:13
12	J6157-06		1	100	100		1.55	0.119	0.119	0.000	0.000	11/30/2018	10:14
13	J6157-06DUP		1	100	100		2.23	0.117	0.117	0.000	0.000	11/30/2018	10:14
14	J6157-06MS	1	2	100	100		2.16	0.120	0.382	0.262	0.339	11/30/2018	10:15
15	CCV2	0.5	1	100	100		1.76	0.000	0.390	0.390	0.505	11/30/2018	10:15
16	CCB2		1	100	100		1.73	0.000	0.000	0.000	0.000	11/30/2018	10:16
17	J6157-06MSD	1	2	100	100		1.82	0.120	0.381	0.261	0.338	11/30/2018	10:16
18	J6157-07		1	100	100		2.11	0.491	0.491	0.000	0.000	11/30/2018	10:17
19	J6157-08		1	100	100		2.34	0.462	0.462	0.000	0.000	11/30/2018	10:17
20	J6157-09		1	100	100		2.47	0.405	0.405	0.000	0.000	11/30/2018	10:18
21	J6157-10		1	100	100		1.63	0.393	0.393	0.000	0.000	11/30/2018	10:18
22	J6157-11		1	100	100		1.77	0.445	0.445	0.000	0.000	11/30/2018	10:19
23	J6157-12		1	100	100		2.02	0.427	0.427	0.000	0.000	11/30/2018	10:19
24	CCV3	0.5	1	100	100		2.28	0.000	0.390	0.390	0.505	11/30/2018	10:20
25	CCB3		1	100	100		1.93	0.000	0.000	0.000	0.000	11/30/2018	10:20

2399507

WORKLIST(Hardcopy Internal Chain)

WorkList Name: Hex113018-2

WorkList ID: 119786

Date: 11/30/2018 9:21:28 AM

Due Date	Matrix	Sample	Test	Preservative	Customer	Storage Location	Customer Sample	Collect Date	Method
11/30/2018	Water	J6157-01	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-1-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-02	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-1-DISSOLVED	11/29/2018	7196A
11/30/2018	Water	J6157-03	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-2-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-04	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-2-DISSOLVED	11/29/2018	7196A
11/30/2018	Water	J6157-05	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-3-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-06	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-3-DISSOLVED	11/29/2018	7196A
11/30/2018	Water	J6157-07	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-4-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-08	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-4-DISSOLVED	11/29/2018	7196A
11/30/2018	Water	J6157-09	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-5-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-10	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-5-DISSOLVED	11/29/2018	7196A
11/30/2018	Water	J6157-11	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-6-TOTAL	11/29/2018	7196A
11/30/2018	Water	J6157-12	Hexavalent Chromium	Cool 4 deg C	AQUA04	L32	COMPOSITE-6-DISSOLVED	11/29/2018	7196A

Date/Time 11/30/18 9:40

Received by: IB

Relinquished by: IB

Date/Time 11/30/18 11:00

Received by: IB

Relinquished by: IB

CHEMTECH

SOP ID: M3060A.7196A-Hex.Chromium

Effective Date: May 25, 2018

Revision #22

QA Control Code: A2040051

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Appendix A

JG157-06

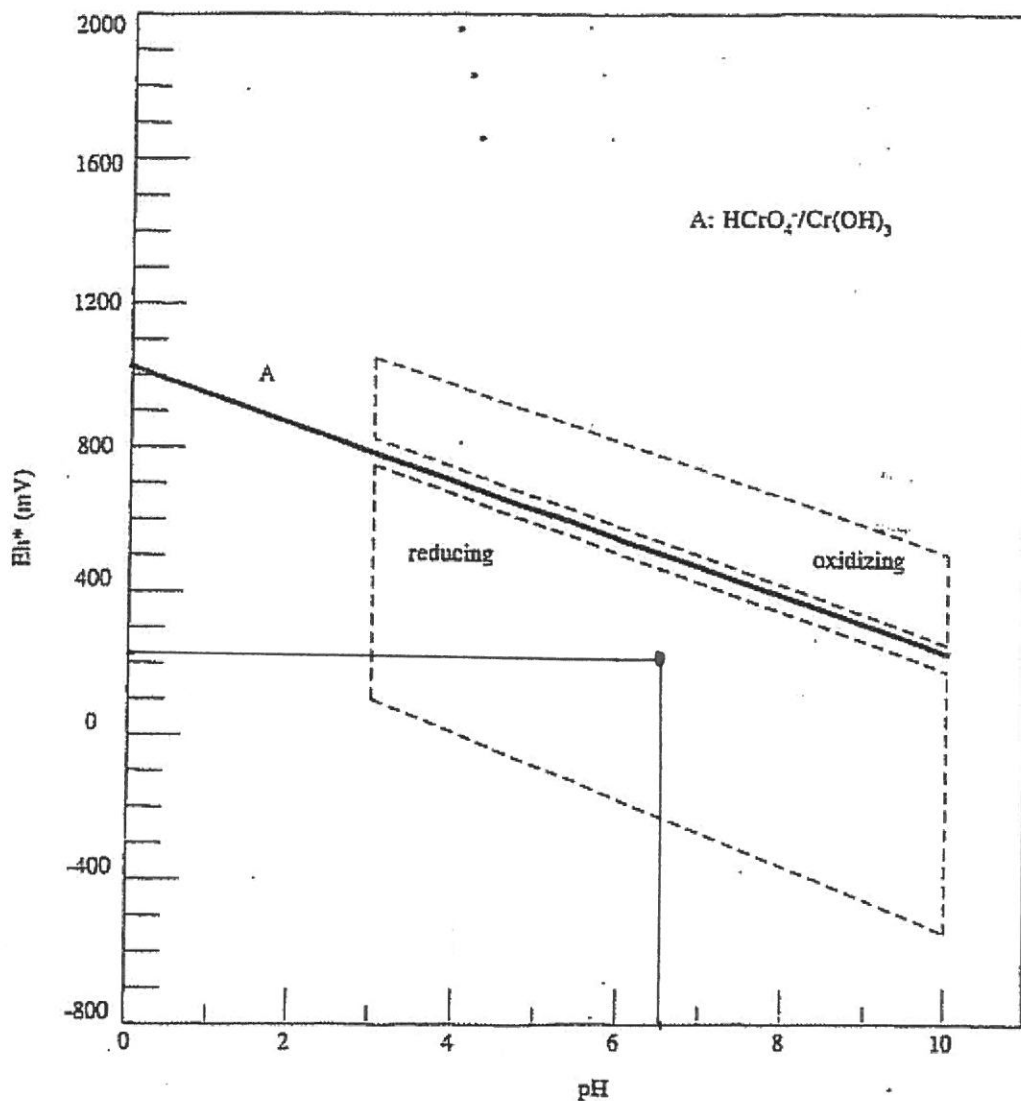
pH: 6.64

Eh: 227.1

FIGURE 2**Eh/pH PHASE DIAGRAM**

IB: 7/30/18

The dashed lines define Eh-pH boundaries commonly encountered in soils and sediments.



* Note the Eh values plotted on this diagram are corrected for the reference electrode voltage: 244 mV units must be added to the measured value when a separate calomel electrode is used, or 199 mV units must be added if a combination platinum electrode is used.