FINAL DATA REPORT Rev 0 GEOTECHNICAL EXPLORATION AND TESTING

EXELON TEXAS COL PROJECT VICTORIA COUNTY, TEXAS COOLING BASIN

July 18, 2008

VOLUME 4

Prepared By:

MACTEC Engineering and Consulting, Inc. Raleigh, North Carolina

MACTEC Project No. 6468-07-1777

Prepared For:

Bechtel Power Corporation Subcontract No. 25352-102-HC4-CY00-00001

Contents
Appendix F – RCTS Data
Appendix G – Groundwater Data

FINAL DATA REPORT Rev 1 GEOTECHNICAL EXPLORATION AND TESTING

EXELON TEXAS COL PROJECT VICTORIA COUNTY, TEXAS COOLING BASIN

July 18, 2008

VOLUME 4 Appendix F – RCTS Data

Prepared By:

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FUGRO CONSULTANTS, INC.



6100 Hillcroft (77081) P.O. Box 740010 Houston, Texas 77274 Tel: 713-369-5400 Fax: 713-369-5518

June 26, 2008

Ms. Siesta Williams MACTEC 3301 Atlantic Avenue Raleigh, NC 27604

RE: Two (2) Reports For The EXELON COL Project

Dear Ms. Williams:

Fugro has completed two (2) RCTS tests, which are 2317/2334 and 2319/2334 for the EXELON project. Fugro has incorporated, as needed, Dr. Kenneth Stokoe's comments into the final reports. The final reports and the associated RCTS Test Approvals by Dr. Kenneth Stokoe have been attached.

Bill De Groff

Laboratory Department Manager

Bill DeGroff, P.E.

Please let us know if you have questions. Thanks.

Very truly yours,

Fugro Consultants, Inc.

Jiewu Meng, PhD, P.E. Project Engineer

.

Enclosures

Cc: Kathryn White, in PDF

RCTS TEST APROVAL

PROJECT SITE/NAME | EXELON

Test ID	Sample ID	Depth B.S. (Ft)	Approved By (Initials)	Date	
RCTS#P	Composite B 2317/2334		大桥	17 June 08	
RCTS#Q	Composite A 2319/2334		LITE &	17 June Of	

Two RCTS tests for the site referenced above were tested, and two reports were prepared, by Fugro Consultants, Inc.

I have reviewed the data and associated results listed above and found them to be reasonable.

Approved By: A. Stolard

Dr. Kenneth Stokoe See notes on some figures and consider nunor changes.

Volume 4 Rev. 0 - 7/18/2008

Page 4 of 657

DCN# EXE808



APPENDIX P

Specimen Composite B - EXELON 2317/2334

Borehole --Sample --Depth = --- ft (--- m)

Total Unit Weight = 133.0 lb/ft³
Water Content = 14.8 %
Estimated In-Situ Ko = 0.5
Estimated In-Situ Mean Effective
Stress = 19 psi

FUGRO JOB #: 0401-1686 Testing Station: RC5



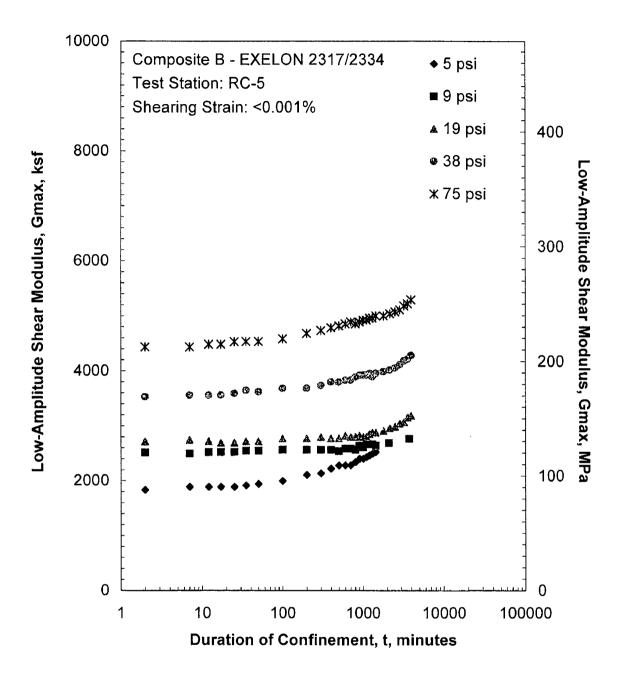


Figure P.1 Variation in Low-Amplitude Shear Modulus with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

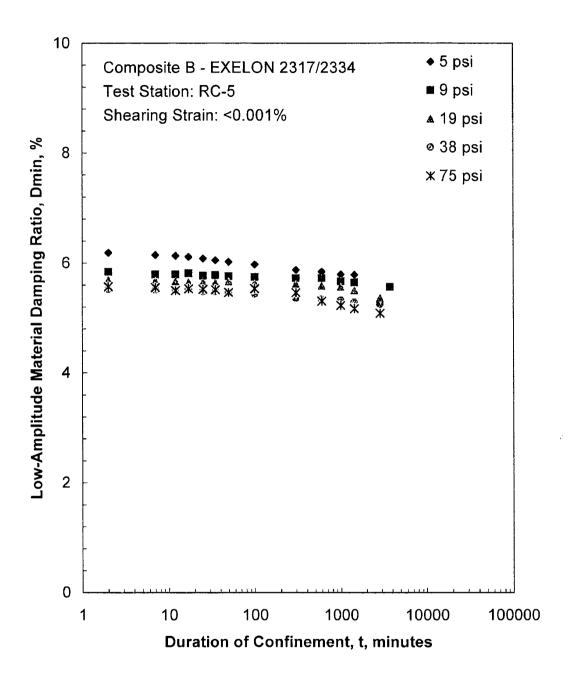


Figure P.2 Variation in Low-Amplitude Material Damping Ratio with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

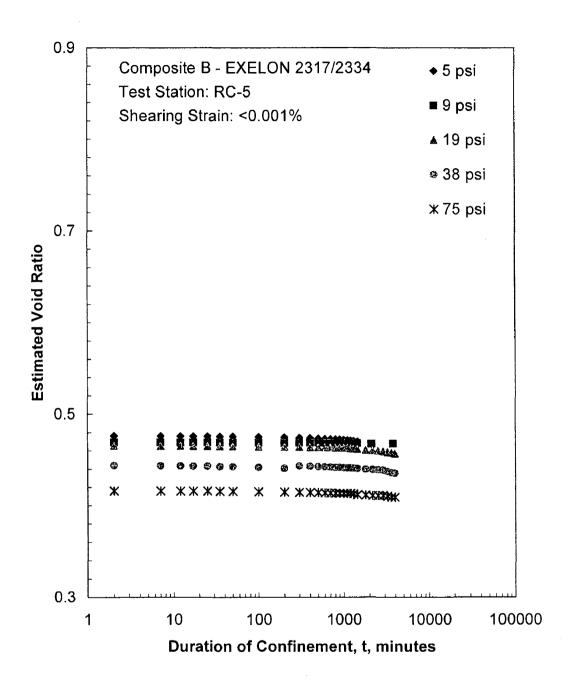


Figure P.3 Variation in Estimated Void Ratio with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

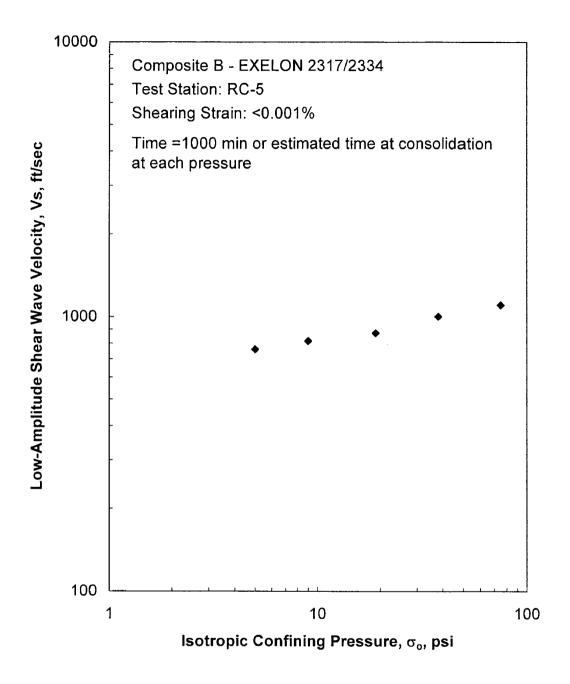


Figure P.4 Variation in Low-Amplitude Shear Wave Velocity with Isotropic Confining Pressure from Resonant Column Tests

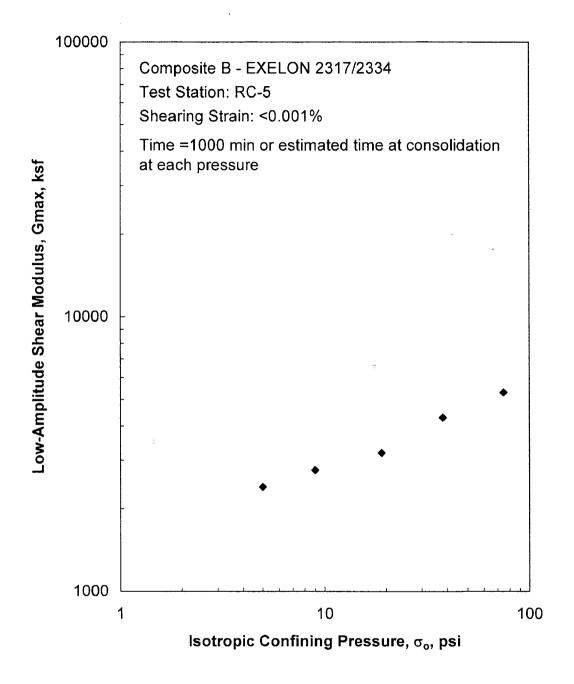


Figure P.5 Variation in Low-Amplitude Shear Modulus with Isotropic Confining Pressure from Resonant Column Tests

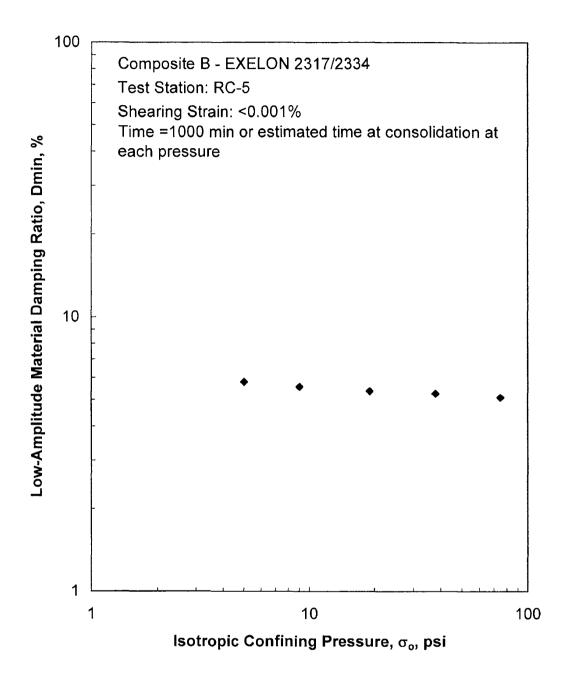


Figure P.6 Variation in Low-Amplitude Material Damping Ratio with Isotropic Confining Pressure from Resonant Column Tests

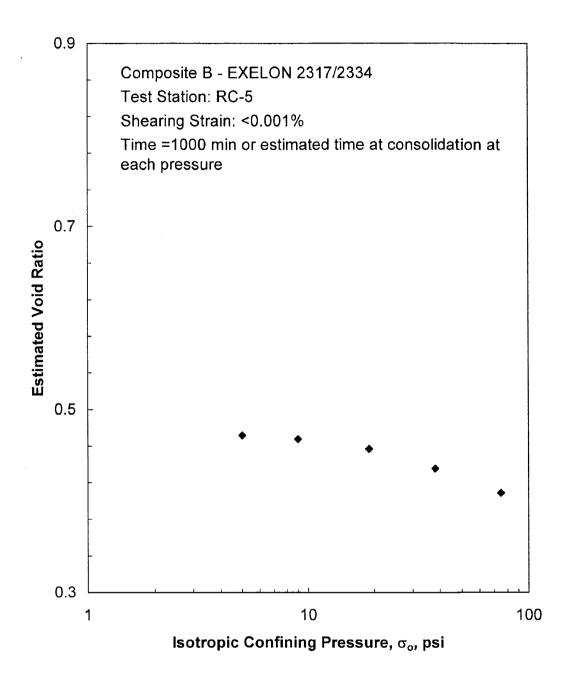


Figure P.7 Variation in Estimated Void Ratio with Isotropic Confining Pressure from Resonant Column Tests

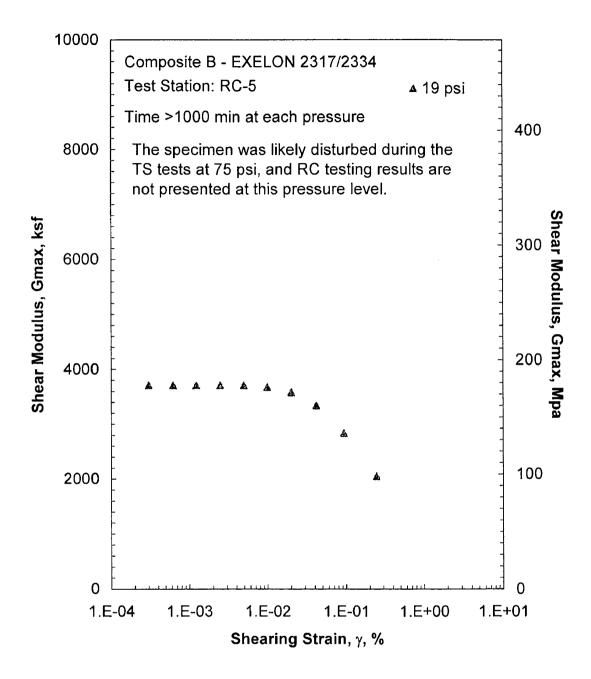


Figure P.8 Comparison of the Variation in Shear Modulus with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

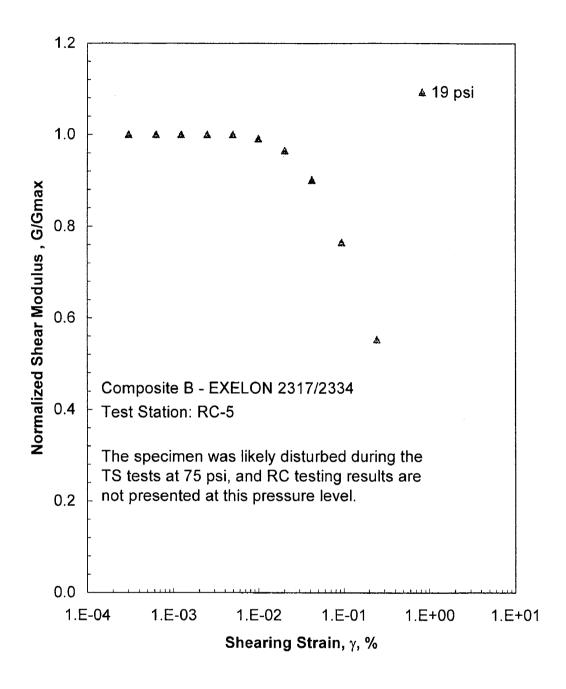


Figure P.9 Comparison of the Variation in Normalized Shear Modulus with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

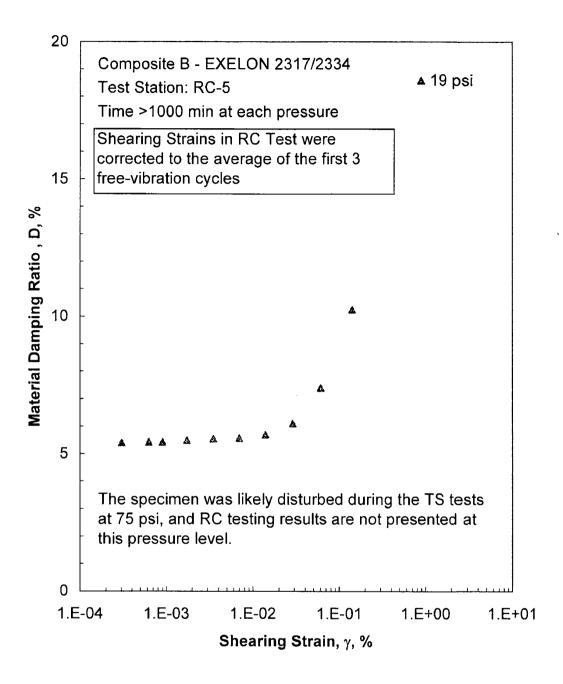


Figure P.10 Comparison of the Variation in Material Damping Ratio with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

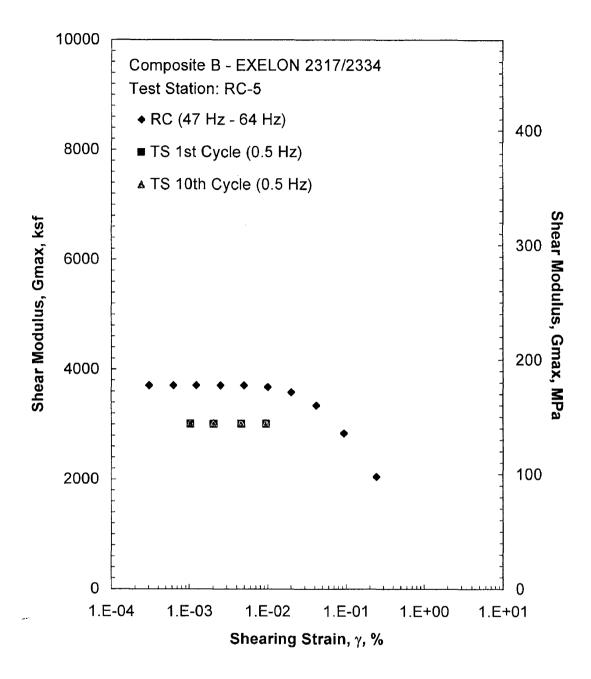


Figure P.11 Comparison of the Variation in Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

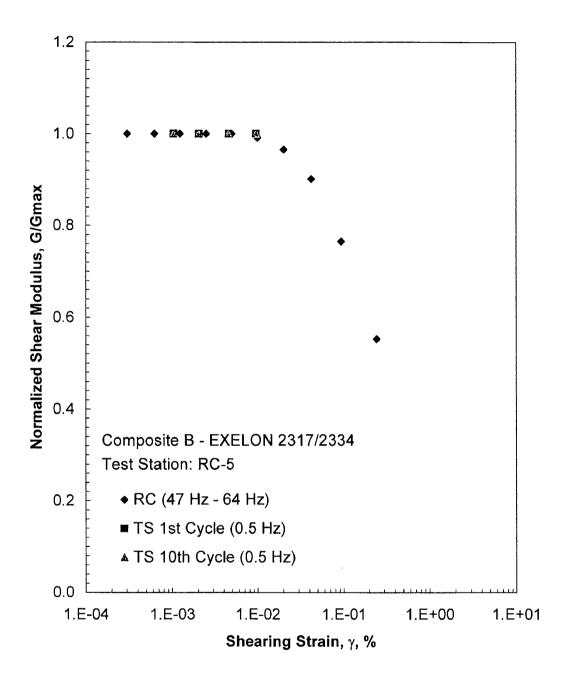


Figure P.12 Comparison of the Variation in Normalized Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

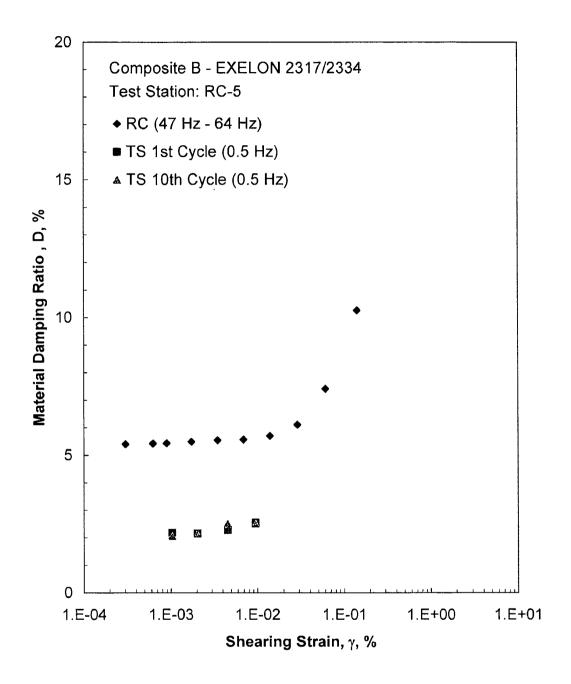


Figure P.13 Comparison of the Variation in Material Damping Ratio with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

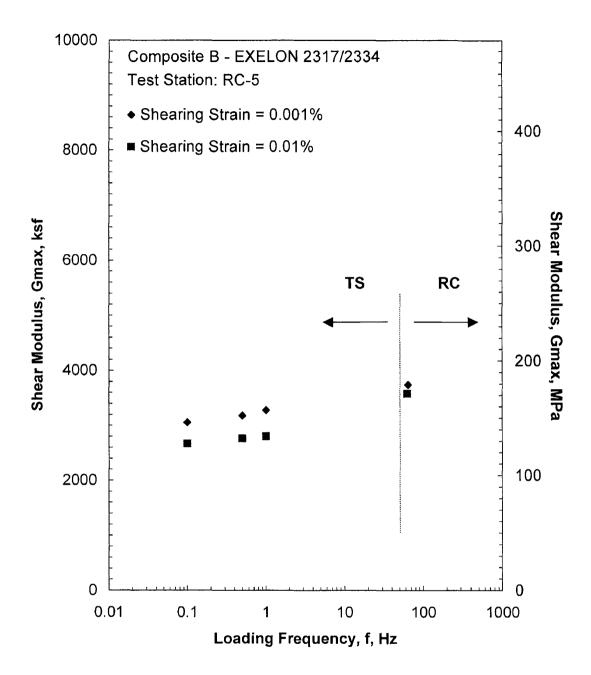


Figure P.14 Comparison of the Variation in Shear Modulus with Loading Frequency at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

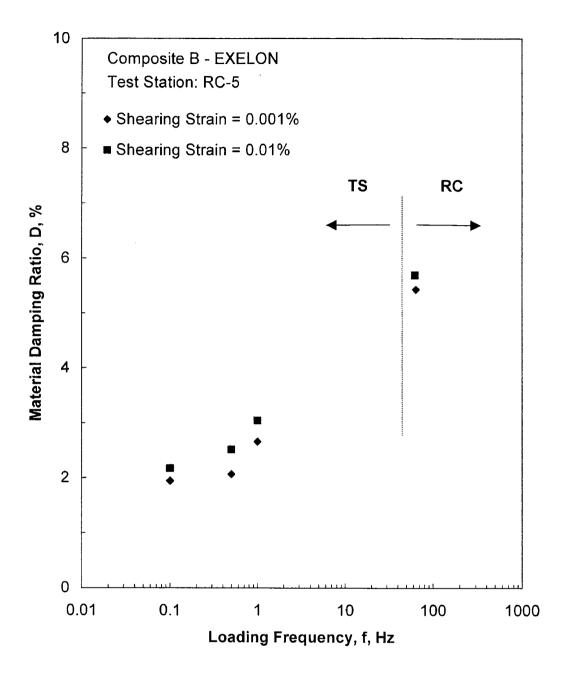


Figure P.15 Comparison of the Variation in Material Damping Ratio with Loading Frequency at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

Table P.1 Variation in Low-Amplitude Shear Wave Velocity, Low-Amplitude Shear Modulus, Low-Amplitude Material Damping Ratio and Estimated Void Ratio with Isotropic Confining Pressure from RC Tests of Specimen Composite B - EXELON 2317/2334

Isotropic Confining Pressure, σ_o		Low-Amplitude Shear Modulus, G _{max}		Low-Amplitude Shear Wave Velocity, Vs	Low-Amplitude Material Damping Ratio, Dmin	Estimated Void Ratio, e	
(psi)	(psf)	(kPa)	(ksf)	(MPa)	(fps)	(%)	1
5	720	34	2399	115	760	5.79	0.47
9	1296	62	2762	133	815	5.56	0.47
19	2736	131	3185	153	872	5.36	0.45
38	5472	262	4278	205	1003	5.25	0.43
75	10800	517	5290	254	1105	5.08	0.41

Table P.2 Variation in Shear Modulus and Material Damping Ratio with Shearing Strain from RC Tests of Specimen Composite B - EXELON 2317/2334; Isoptropic Confining Pressure, σ_o =19 psi (2.7 ksf = 131 kPa)

Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Average [†] Shearing Strain, %	Material Damping Ratio ^x , D, %	
3.02E-04	3708	1.00	3.02E-04	5.40	
6.23E-04	3708	1.00	6.23E-04	5.42	
1.23E-03	3708	1.00	8.96E-04	5.43	
2.48E-03	3707	1.00	1.73E-03	5.49	
4.94E-03	3707	1.00	3.51E-03	5.54	
9.95E-03	3675	0.99	6.96E-03	5.56	
2.02E-02	3579	0.97	1.39E-02	5.69	
4.20E-02	3341	0.90	2.90E-02	6.10	
9.34E-02	2836	0.76	6.07E-02	7.40	
2.44E-01	2048	0.55	1.42E-01	10.25	

^{*} Average Shearing Strain from the First Three Cycles of the Free Vibration Decay Curve

^{*} Average Damping Ratio from the First Three Cycles of the Free Vibration Decay Curve

Table P.3 Variation in Shear Modulus, Normalized Shear Modulus and Material Damping Ratio with Shearing Strain from TS Tests of Specimen Composite B - EXELON 2317/2334; Isotropic Confining Pressure, σ_0 = 19 psi (2.7 ksf =131 kPa)

	Fir	st Cycle		Tenth Cycle				
Peak	Shear	Normalized	Material	Peak	Shear	Normalized	Material	
Shearing	Modulus,	Shear Modulus,	Damping	Shearing	Modulus,	Shear Modulus,	Damping	
Strain, %	G, ksf	G/G _{max}	Ratio, D, %	Strain, %	G, ksf	G/G _{max}	Ratio, D, %	
1.04E-03	3010	1.00	2.18	1.04E-03	3019	1.00	2.06	
2.05E-03	3010	1.00	2.15	2.04E-03	3019	1.00	2.14	
4.58E-03	3010	1.00	2.27	4.55E-03	3019	1.00	2.49	
9.52E-03	3010	1.00	2.54	9.54E-03	3019	1.00	2.51	

Table P.4 Variation in Shear Modulus and Material Damping Ratio with Shearing Strain from RC Tests of Specimen Composite B - EXELON 2317/2334; Isoptropic Confining Pressure, σ_o = 75 psi (10.8 ksf = 517 kPa)

Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Average [†] Shearing Strain, %	Material Damping Ratio ^x , D, %
*	*	*	*	*

^{*} Average Shearing Strain from the First Three Cycles of the Free Vibration Decay Curve

^{*} Average Damping Ratio from the First Three Cycles of the Free Vibration Decay Curve

^{*} The specimen was likely disturbed during the TS tests at 75 psi, and RC testing results are not presented at this pressure level.

Table P.5 Variation in Shear Modulus, Normalized Shear Modulus and Material Damping Ratio with Shearing Strain from TS Tests of Specimen Composite B - EXELON 2317/2334; Isotropic Confining Pressure, σ_o=75 psi (10.8 ksf = 517 kPa)

First Cycle				Tenth Cycle			
Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %	Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %
*	*	*	*	*	*	*	*

^{*} The specimen was likely disturbed during the TS tests at 75 psi, and RC testing results are not presented at this pressure level.



APPENDIX Q

Specimen Composite A - EXELON 2319/2334

Borehole --Sample --Depth = --- ft (--- m)

Total Unit Weight = 135.9 lb/ft³
Water Content = 14.4 %
Estimated In-Situ Ko = 0.5
Estimated In-Situ Mean Effective
Stress = 19 psi

FUGRO JOB #: 0401-1686 Testing Station: RC6

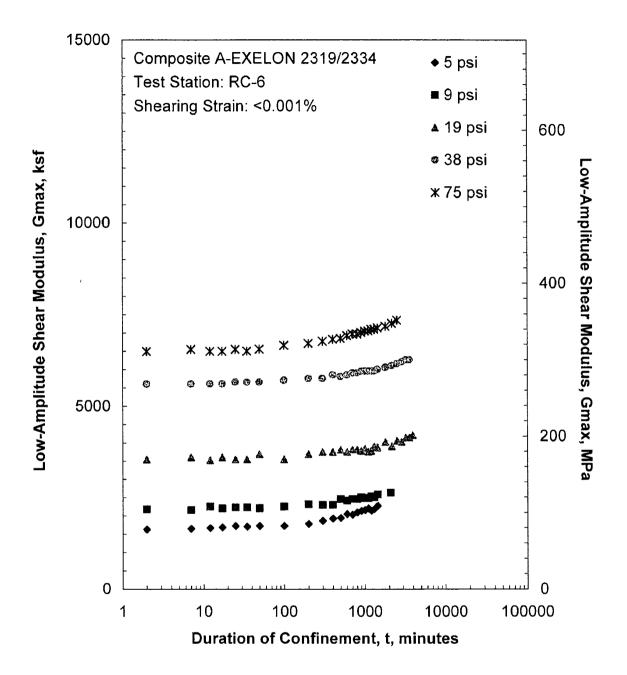


Figure Q.1 Variation in Low-Amplitude Shear Modulus with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

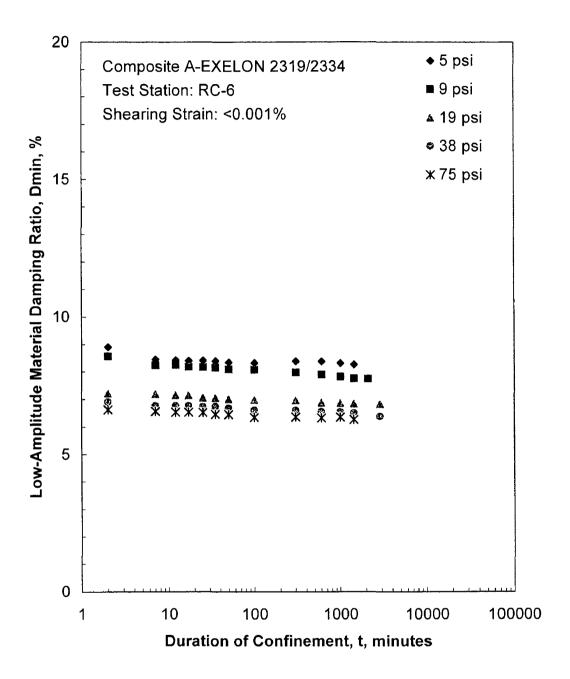


Figure Q.2 Variation in Low-Amplitude Material Damping Ratio with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

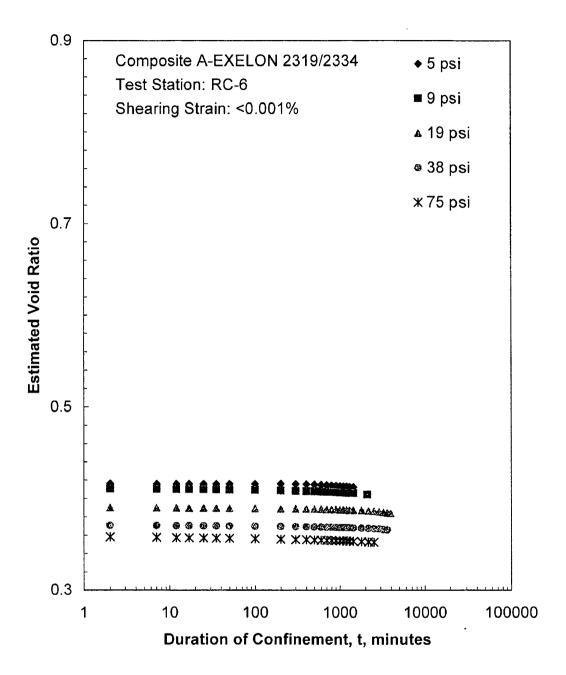


Figure Q.3 Variation in Estimated Void Ratio with Magnitude and Duration of Isotropic Confining Pressure from Resonant Column Tests

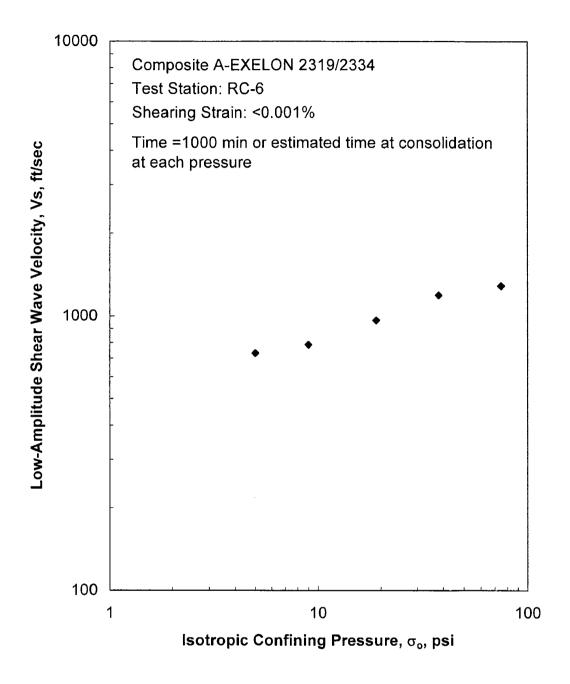


Figure Q.4 Variation in Low-Amplitude Shear Wave Velocity with Isotropic Confining Pressure from Resonant Column Tests

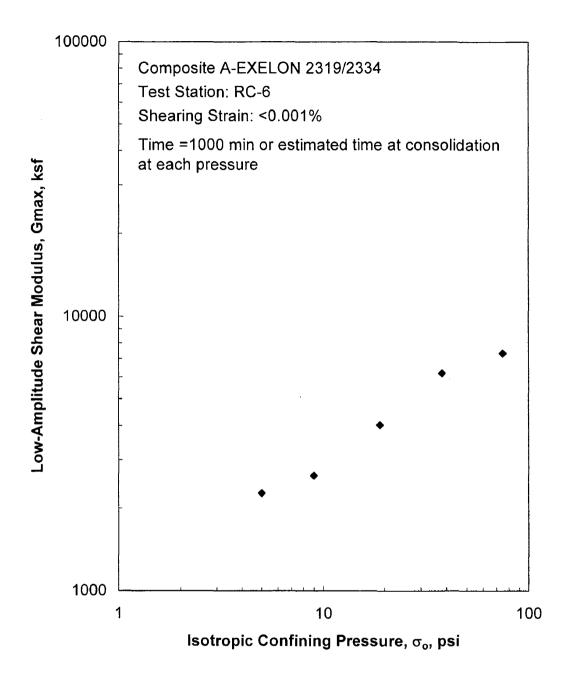


Figure Q.5 Variation in Low-Amplitude Shear Modulus with Isotropic Confining Pressure from Resonant Column Tests

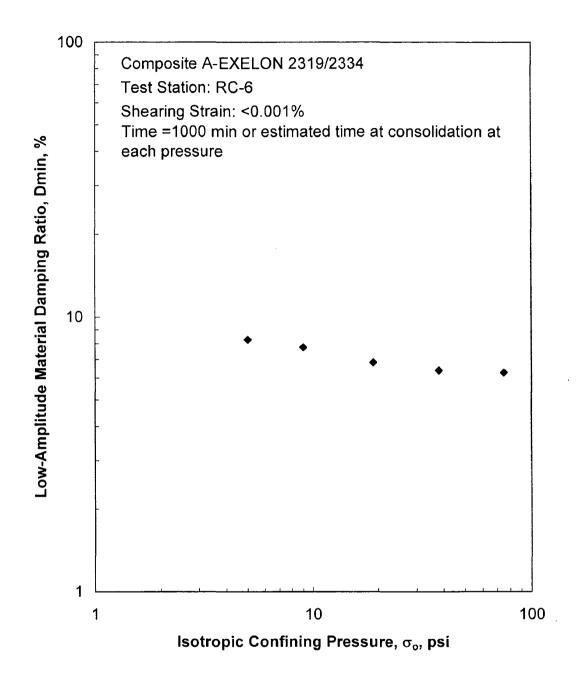


Figure Q.6 Variation in Low-Amplitude Material Damping Ratio with Isotropic Confining Pressure from Resonant Column Tests

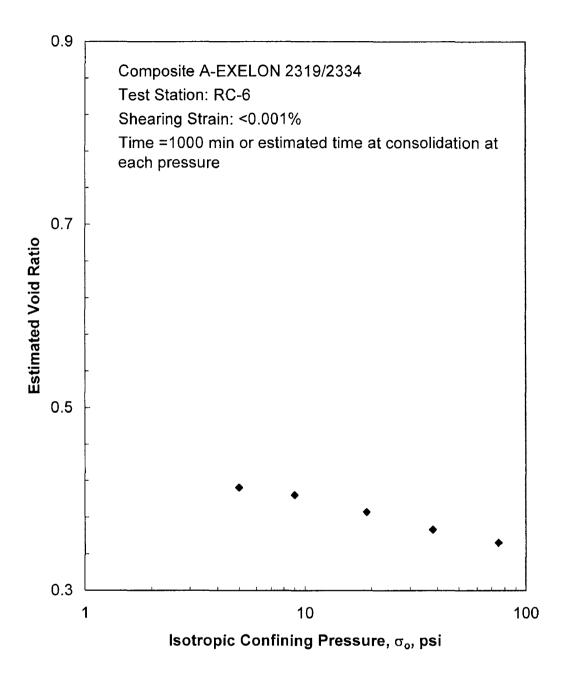


Figure Q.7 Variation in Estimated Void Ratio with Isotropic Confining Pressure from Resonant Column Tests

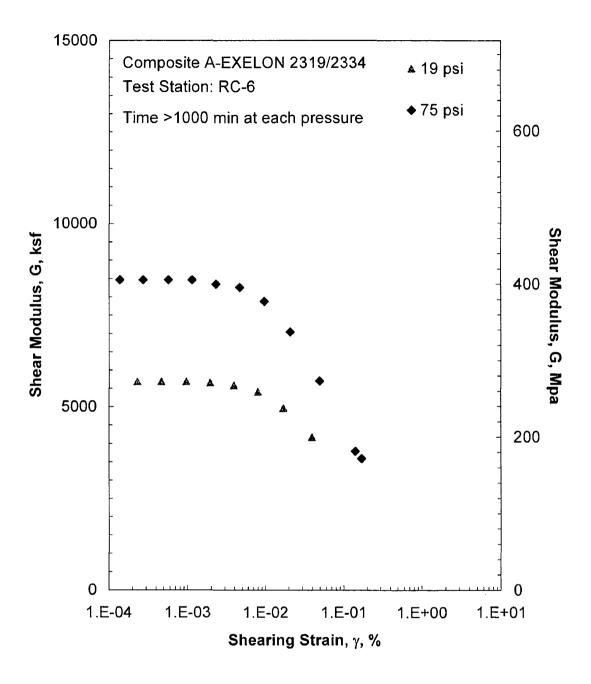


Figure Q.8 Comparison of the Variation in Shear Modulus with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

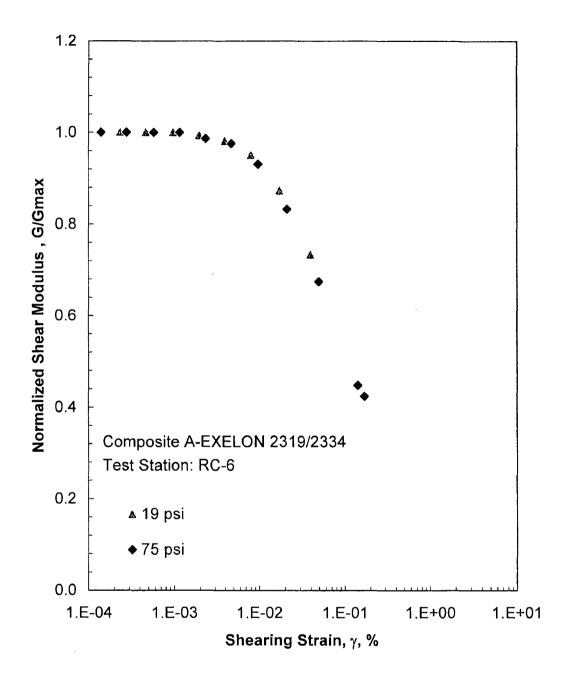


Figure Q.9 Comparison of the Variation in Normalized Shear Modulus with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

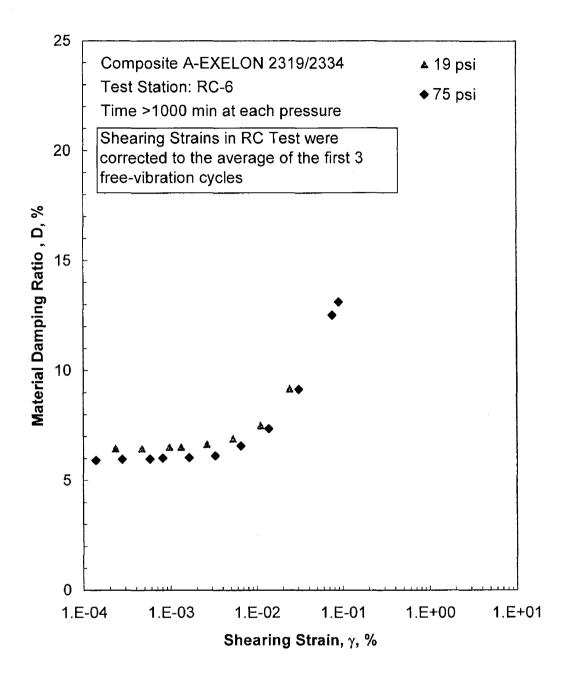


Figure Q.10 Comparison of the Variation in Material Damping Ratio with Shearing Strain and Isotropic Confining Pressure from the Resonant Column Tests

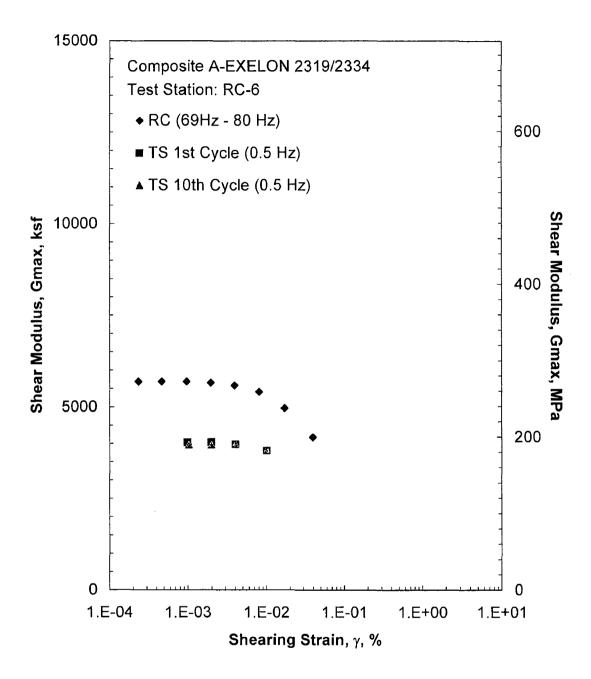


Figure Q.11 Comparison of the Variation in Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

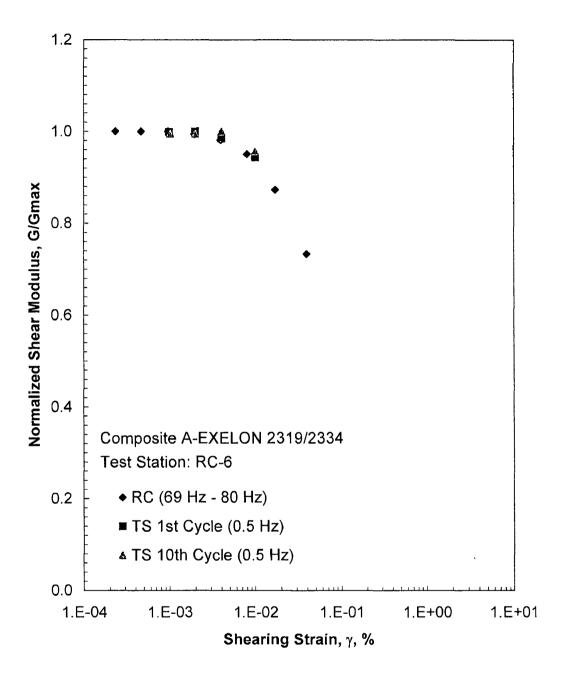


Figure Q.12 Comparison of the Variation in Normalized Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

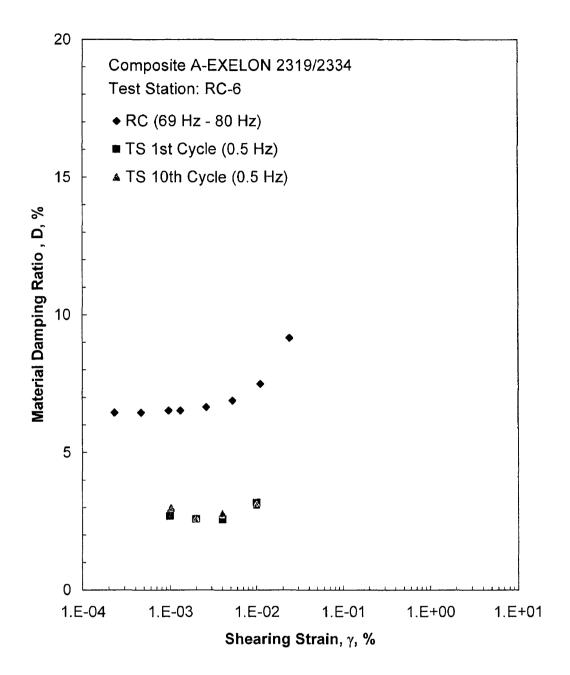


Figure Q.13 Comparison of the Variation in Material Damping Ratio with Shearing Strain at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

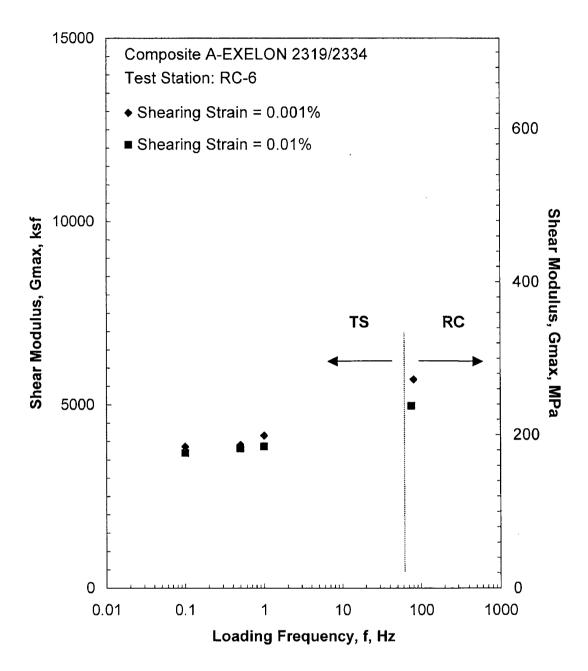


Figure Q.14 Comparison of the Variation in Shear Modulus with Loading Frequency at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

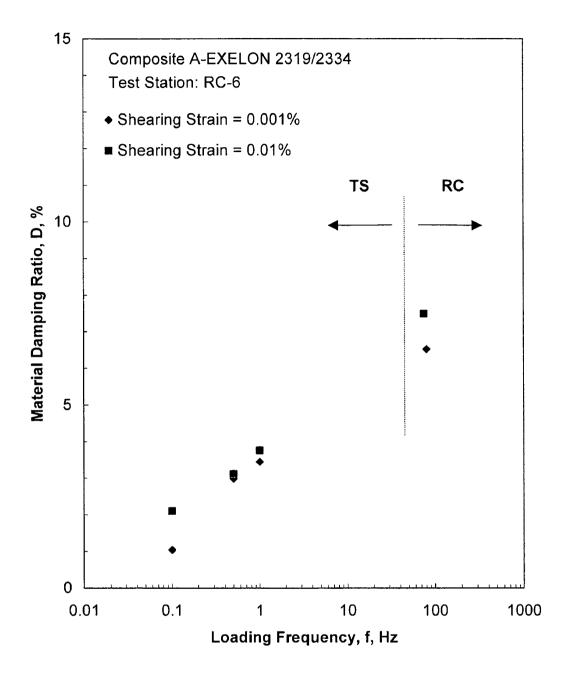


Figure Q.15 Comparison of the Variation in Material Damping Ratio with Loading Frequency at an Isotropic Confining Pressure of 19 psi from the Combined RCTS Tests

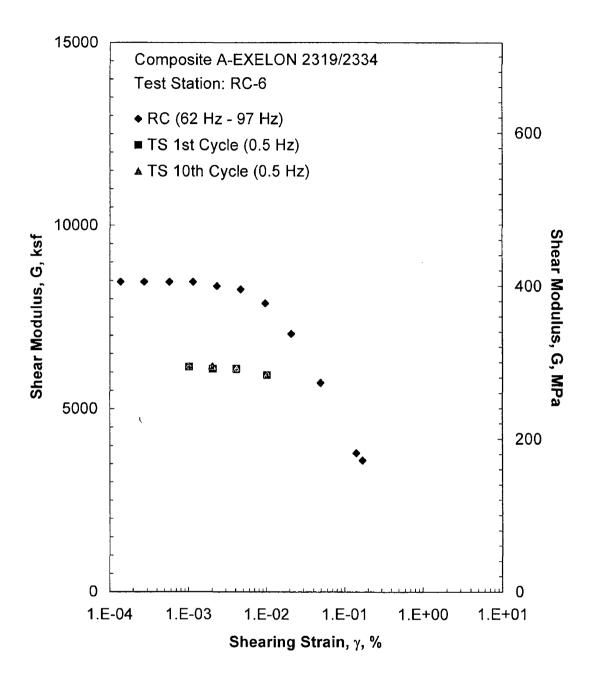


Figure Q.16 Comparison of the Variation in Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 75 psi from the Combined RCTS Tests

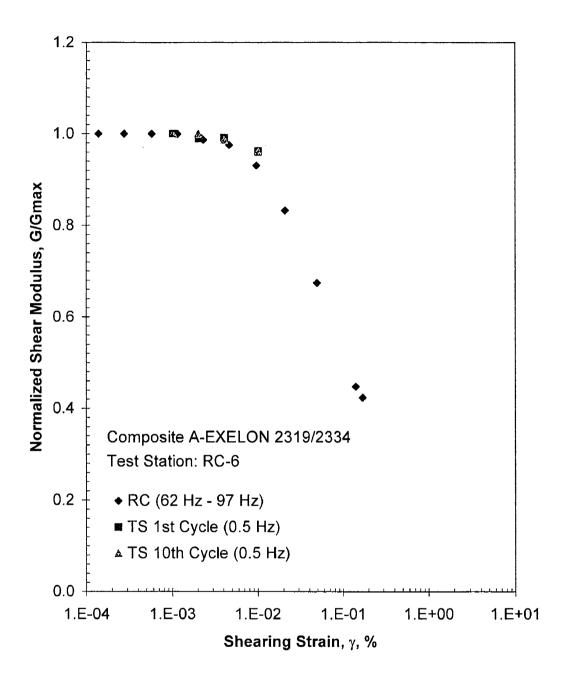


Figure Q.17 Comparison of the Variation in Normalized Shear Modulus with Shearing Strain at an Isotropic Confining Pressure of 75 psi from the Combined RCTS Tests

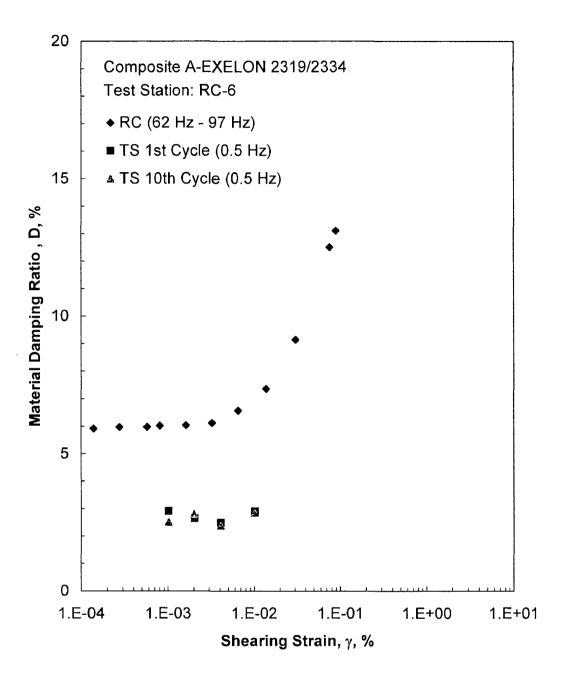


Figure Q.18 Comparison of the Variation in Material Damping Ratio with Shearing Strain at an Isotropic Confining Pressure of 75 psi from the Combined RCTS Tests

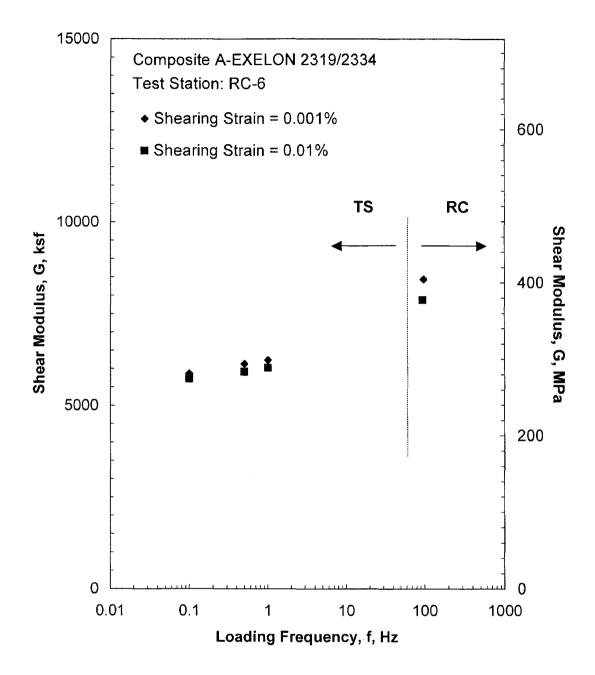


Figure Q.19 Comparison of the Variation in Shear Modulus with Loading Frequency at an Isotropic Confining Pressure of 75 psi from the Combined RCTS Tests

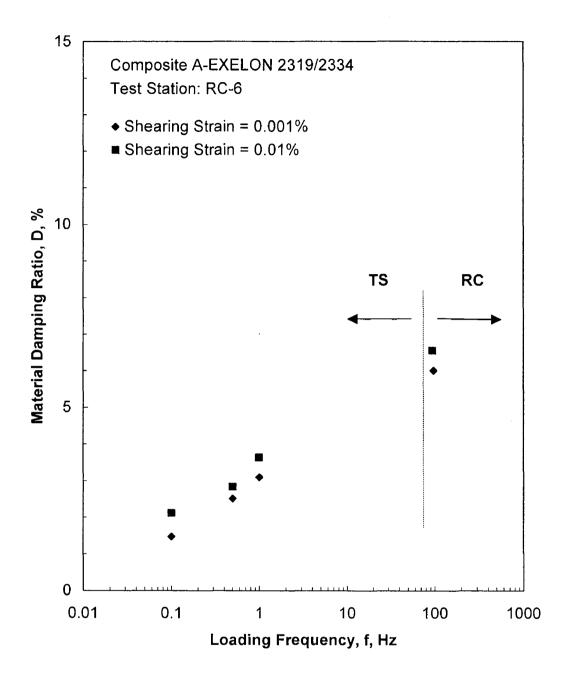


Figure Q.20 Comparison of the Variation in Material Damping Ratio with Loading Frequency at an Isotropic Confining Pressure of 75 psi from the Combined RCTS Tests

DCN# EXE808

Table Q.1 Variation in Low-Amplitude Shear Wave Velocity, Low-Amplitude Shear Modulus, Low-Amplitude Material Damping Ratio and Estimated Void Ratio with Isotropic Confining Pressure from RC Tests of Specimen Composite A - EXELON 2319/2334

Isotropic C	onfining Pre	essure, σ_{o}		itude Shear us, G _{max}	Low-Amplitude Shear Wave Velocity, Vs	Low-Amplitude Material Damping Ratio, Dmin	Estimated Void Ratio, e
(psi)	(psf)	(kPa)	(ksf)	(MPa)	(fps)	(%)	1
5	720	34	2267	109	731	8.26	0.41
9	1296	62	2627	126	785	7.75	0.40
19	2736	131	4017	193	964	6.82	0.39
38	5472	262	6203	298	1189	6.37	0.37
75	10800	517	7339	352	1287	6.26	0.35

Table Q.2 Variation in Shear Modulus and Material Damping Ratio with Shearing Strain from RC Tests of Specimen Composite A - EXELON 2319/2334; Isoptropic Confining Pressure, σ_o =19 psi (2.7 ksf = 131 kPa)

Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Average [†] Shearing Strain, %	Material Damping Ratio ^x , D, %
2.32E-04	5689	1.00	2.32E-04	6.44
4.64E-04	5689	1.00	4.64E-04	6.44
9.63E-04	5689	1.00	9.63E-04	6.52
1.94E-03	5654	0.99	1.32E-03	6.52
3.91E-03	5583	0.98	2.62E-03	6.64
8.01E-03	5407	0.95	5.29E-03	6.88
1.71E-02	4965	0.87	1.11E-02	7.48
3.93E-02	4170	0.73	2.40E-02	9.16

^{*} Average Shearing Strain from the First Three Cycles of the Free Vibration Decay Curve

^{*} Average Damping Ratio from the First Three Cycles of the Free Vibration Decay Curve

Table Q.3 Variation in Shear Modulus, Normalized Shear Modulus and Material Damping Ratio with Shearing Strain from TS Tests of Specimen Composite A - EXELON 2319/2334; Isotropic Confining Pressure, σ_o = 19 psi (2.7 ksf =131 kPa)

First Cycle			Tenth Cycle				
Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %	Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %
9.91E-04	4028	1.00	2.69	1.02E-03	3960	0.99	2.98
1.98E-03	4032	1.00	2.58	1.99E-03	3960	0.99	2.59
4.02E-03	3971	0.98	2.56	4.01E-03	3981	1.00	2.76
1.00E-02	3802	0.94	3.17	1.00E-02	3806	0.96	3.10

Table Q.4 Variation in Shear Modulus and Material Damping Ratio with Shearing Strain from RC Tests of Specimen Composite A - EXELON 2319/2334; Isoptropic Confining Pressure, σ_o = 75 psi (10.8 ksf = 517 kPa)

Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Average ⁺ Shearing Strain, %	Material Damping Ratio ^x , D, %
1.38E-04	8463	1.00	1.38E-04	5.91
2.75E-04	8463	1.00	2.75E-04	5.96
5.73E-04	8463	1.00	5.73E-04	5.97
1.15E-03	8463	1.00	8.02E-04	6.01
2.31E-03	8351	0.99	1.62E-03	6.03
4.66E-03	8257	0.98	3.26E-03	6.11
9.62E-03	7876	0.93	6.54E-03	6.56
2.08E-02	7044	0.83	1.37E-02	7.35
4.90E-02	5707	0.67	3.04E-02	9.13
1.40E-01	3788	0.45	7.58E-02	12.50
1.69E-01	3586	0.42	8.97E-02	13.10

^{1.69}E-01 3586 0.42 8.97E-02 13.10

* Average Shearing Strain from the First Three Cycles of the Free Vibration Decay Curve

^{*} Average Damping Ratio from the First Three Cycles of the Free Vibration Decay Curve

Table Q.5 Variation in Shear Modulus, Normalized Shear Modulus and Material Damping Ratio with Shearing Strain from TS Tests of Specimen Composite A - EXELON 2319/2334; Isotropic Confining Pressure, σ_o=75 psi (10.8 ksf = 517 kPa)

First Cycle				Tenth Cycle			
Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %	Peak Shearing Strain, %	Shear Modulus, G, ksf	Normalized Shear Modulus, G/G _{max}	Material Damping Ratio, D, %
1.01E-03	6147	1.00	2.90	1.01E-03	6164	1.00	2.51
2.05E-03	6084	0.99	2.64	2.01E-03	6164	1.00	2.79
4.09E-03	6092	0.99	2.48	4.09E-03	6081	0.99	2.37
1.01E-02	5916	0.96	2.90	1.01E-02	5919	0.96	2.83

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EXELON TEXAS COL PROJECT VICTORIA COUNTY, TEXAS COOLING BASIN REPORT

July 18, 2008

VOLUME 4
Appendix G – Groundwater Data

Prepared By:

MACTEC Engineering and Consulting, Inc. Raleigh, North Carolina

MACTEC Project No. 6468-07-1777

Prepared For:

Bechtel Power Corporation Subcontract No. 25352-102-HC4-CY00-00001

Contents
Observation Well Records
Well Record Sampling Sheets
Laboratory Test Reports
Slug Test Data Forms
Aquifer Pump Test Data Forms

Borehole Permeameter Data Forms

Observation Well Records

Prepared by: USD Date: 4-3-08

Checked by: USD Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-01L
Date of Observation Well Installation: 10/12/07	Date of Well Development: 10/12/07
Observation Well Northing: 13404252.09 US.ft Easting: 2606686.52	US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Three, stainless-steel centralizers installed at 25 ft, 65 ft, and 99 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

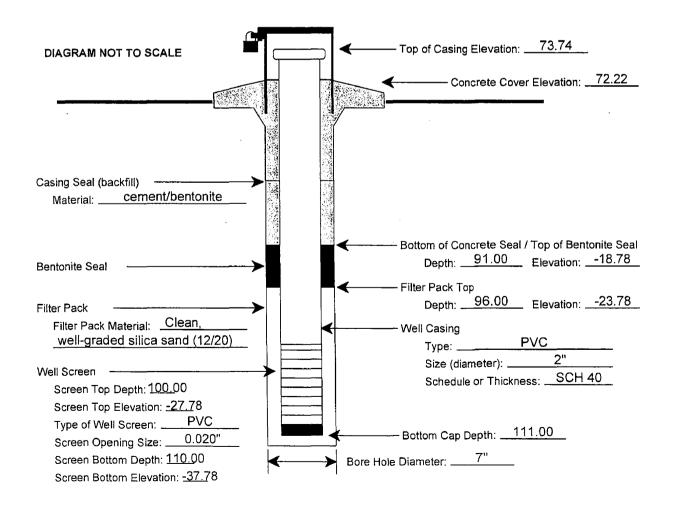
Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: James A. Schiff
Static Water Level Elevation (with respect to NAVD88) after Well Development: 30.83
Name of Geologic Formation(s) in which Well is completed: see boring log B-01

Type of Locking Device: Masterlock - 0536
Type of Casing Protection: Steel
Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: Wy- Date: 4-3-08
Checked by: Wy- Date: 4-3-08

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.:6468-07-1777
County: Victoria	Observation Well I.D.: OW-01U
Date of Observation Well Installation: 10/12/07	Date of Well Development: 10/12/07
Observation Well Northing: 13404253.64 US ft Easting: 2606666.8	85 US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: <u>5036</u>

NOTES:

One, stainless-steel centralizer installed at 49 ft.

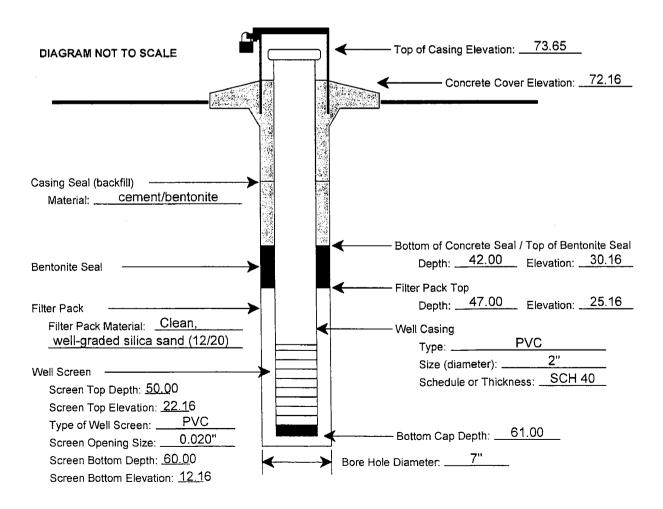
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: WSL Date: 4-3-08.

Checked by: WBL Date: 4-3-08.

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.: <u>6468-07-1777</u>			
County:Victoria	Observation Well I.D.: <u>OW-021</u>			
Date of Observation Well Installation: 10/11/07	Date of Well Development: 10/11/07			
Observation Well Northing: 13411520.51 US ft Easting: 26	07869 30 US ft			
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller			
	Name: <u>BEST Drilling</u>			
	License No.:5036_			

NOTES:

Two, stainless-steel centralizers installed at 45 ft and 97 ft.

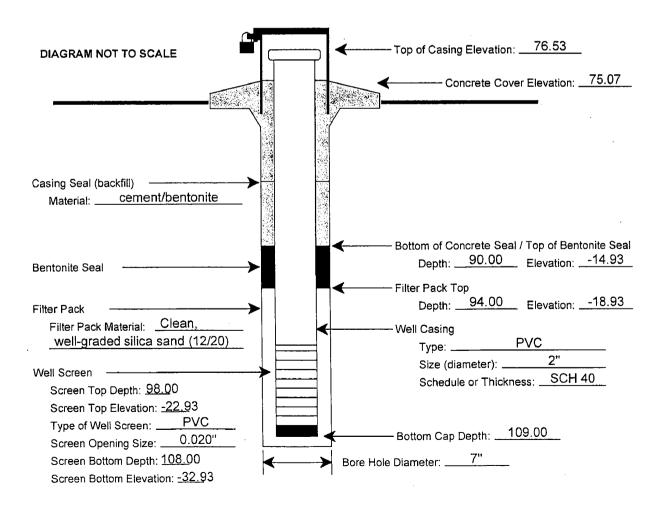
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USF Date: 4-3-8
Checked by: USF Date: 4-3-8

Project Name: <u>Exelon COL Proje</u>	MACTEC Project No.:6468-07-1777				
County: <u>Victoria</u>	Observation Well I.D.: OW-02U				
Date of Observation Well Installation:	Date of Well Development: 10/11/07				
Observation Well Northing: <u>13411502</u>	.39 US ft Easting:260786	2 19 US ft			
Observation Well Location: _Cooling	Pond Area	Observation Well Driller			
		Name: <u>BEST Drilling</u>			
		License No.:5036_			

NOTES:

One, stainless-steel centralizer installed at 52 ft.

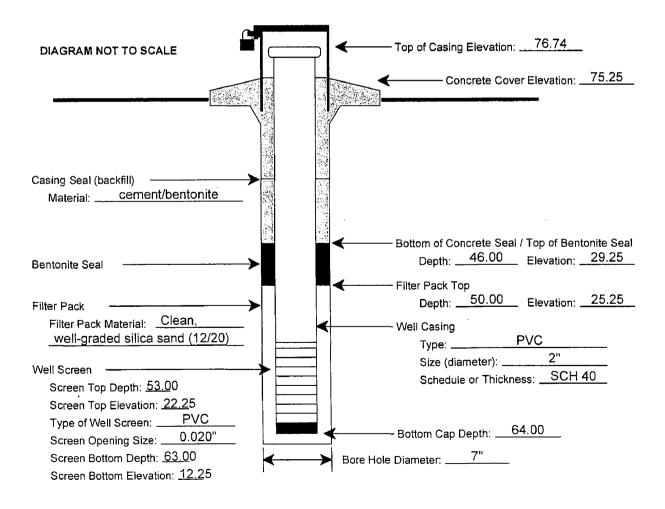
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USO Date: 4-3-08

Checked by: URC Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-03L
Date of Observation Well installation: 10/10/07	Date of Well Development: 10/10/07
Observation Well Northing: <u>13414918.69 US ft</u> Easting: <u>2609286.6</u>	<u>1 US ft</u>
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No. 5036

NOTES:

Two, stainless-steel centralizers installed at 45 ft and 86 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

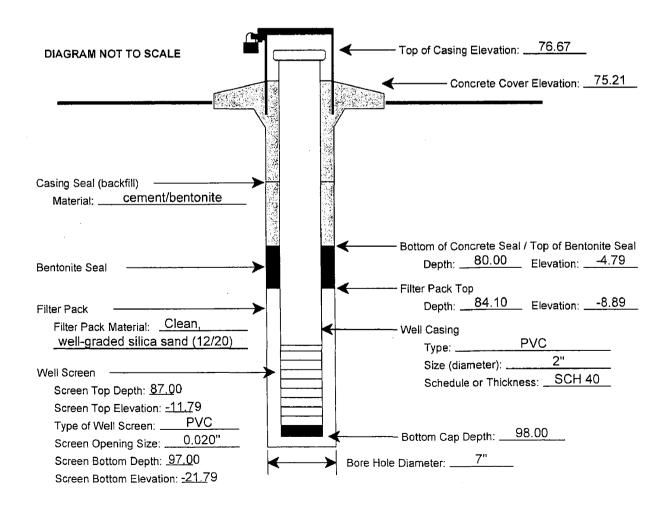
Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: James A. Schiff
Static Water Level Elevation (with respect to NAVD88) after Well Development: 20.47
Name of Geologic Formation(s) in which Well is completed: see boring log B-03

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel
Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USF Date: 4-3-08

Checked by: USF Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-03U
Date of Observation Well Installation: 10/10/07	Date of Well Development:10/10/07_
Observation Well Northing: <u>13414934.48 US ft</u> Easting: <u>2609294.86</u>	6.US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

One, stainless-steel centralizer installed at 42 ft.

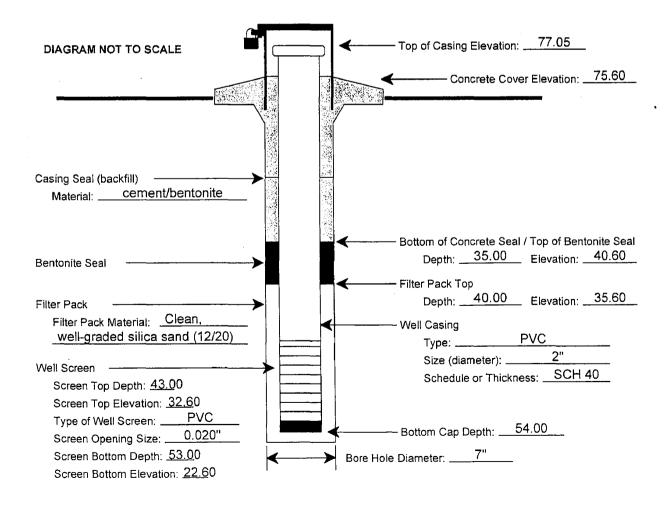
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: $\frac{U5U}{U5U}$ Date: $\frac{U-3-30}{U-3-00}$

Project Name:	Exelon COL	Project	(Victoria	Site)

MACTEC Project No.: <u>6468-07-1777</u> Observation Well I.D.: OW-04L

County: Victoria

Date of Observation Well Installation: 10/9/07

Date of Well Development: ____

10/9/07

Observation Well Northing: 13414268.74 US ft Easting: 2607440.23 US ft

Observation Well Location: Cooling Pond Area

Observation Well Driller

Name: BEST Drilling

License No.: ____5036_

NOTES:

Two, stainless-steel centralizers installed at 55 ft and 109 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

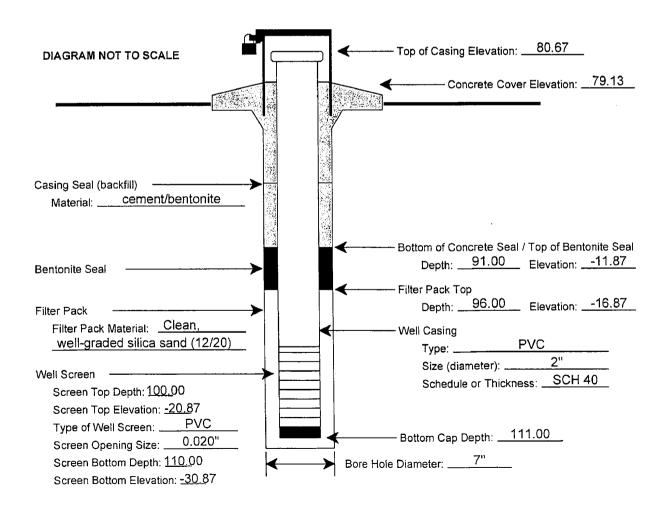
Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: __James A. Schiff Static Water Level Elevation (with respect to NAVD88) after Well Development: 23.79 Name of Geologic Formation(s) in which Well is completed: see boring log B-04

Steel Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USG Date: 4-3-08

Checked by: USG Date: 4-3-08

Project Name:	Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:V	/ictoria	Observation Well I.D.:OW-04U_
Date of Observation	on Well Installation: 10/11/07	Date of Well Development: 10/11/07
Observation Well	Northing: 13414280.51 US ft Easting: 2607428.57	US ft
Observation Well	Location: _Cooling Pond Area	Observation Well Driller
		Name: <u>Lewis Env</u>
		License No.:54672M

NOTES:

One, stainless-steel centralizer installed at 74 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

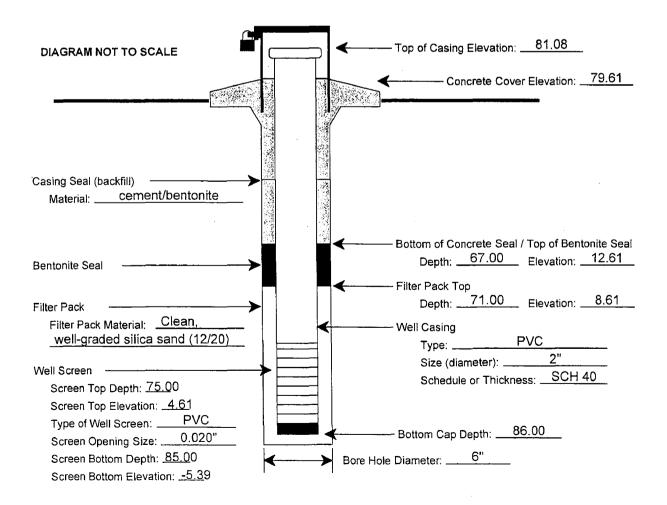
Geologist, Hydrologist, or Engineer Supervising Well Installation: James A. Schiff
Static Water Level Elevation (with respect to NAVD88) after Well Development: 24.75

Name of Geologic Formation(s) in which Well is completed: see boring log B-04

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Project Name: Exelon COL Project (Victoria Site)

Static Water Level Elevation (with respect to NAVD88) after Well Development: 26.65

Name of Geologic Formation(s) in which Well is completed: see boring log B-05

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: _____

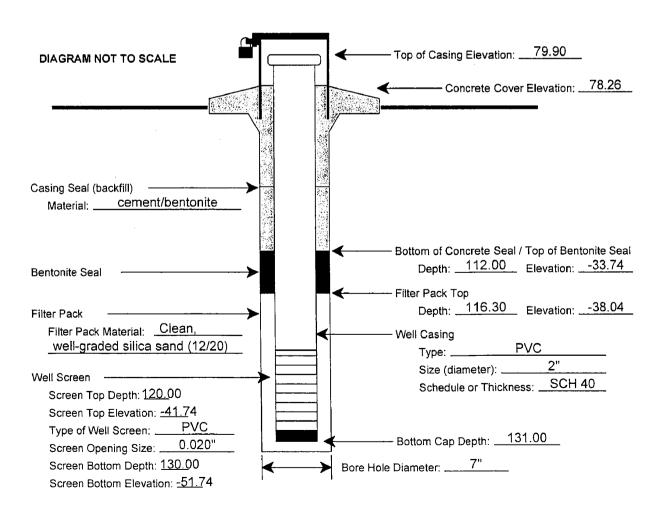
Prepared by: WF Date: 4-3-08

Checked by: WF Date: 4-3-08

Steel

MACTEC Project No.: 6468-07-1777

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County: Victoria	Observation Well I.D.: OW-05L	
Date of Observation Well Installation: 10/4/07	Date of Well Development:10/4/07_	
Observation Well Northing: 13414774.22 US ft Easting: 2605813.2	8 US ft	
Observation Well Location: _Cooling Pond Area	Observation Well Driller	
	Name:BEST Drilling	
	License No.:5036_	
NOTES:		
Three, stainless-steel centralizers installed at 45 ft, 85 ft, and 119 ft. PVC well screen machine-slotted by the manufacturer.		
Observation well developed using air-lifting techniques by the well installation contractor. Static water level measurement collected 1/20/2008.		
Observation well installed in accordance with ASTM D 5092-04e1. Upon completion of well installation, well contractor installed seep here.	oles in the protective steel casing.	
Geologist Hydrologist or Engineer Supervising Well Installation: James A. So	chiff	



Prepared by: Why Date: 4-3-08

Checked by: Why Date: 43-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-05U</u>
Date of Observation Well Installation: 10/10/07	Date of Well Development: 10/10/07
Observation Well Northing: 13414770.21 US ft Easting: 260583	2.08 US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>Lewis Env</u>
	License No.:54672M

NOTES:

One, stainless-steel centralizer installed at 45 ft.

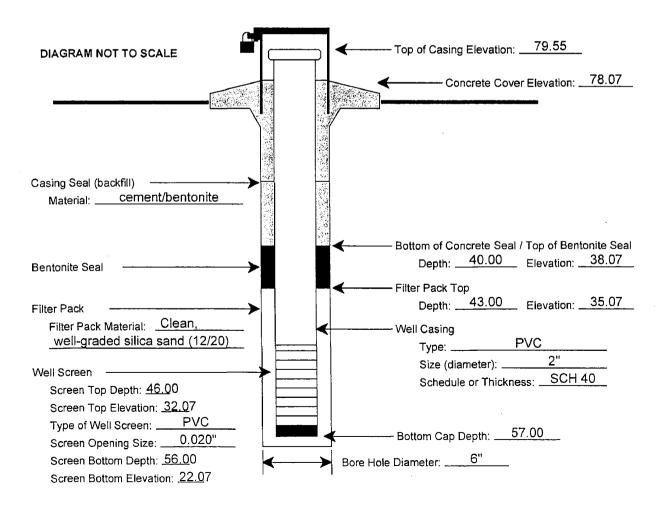
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USC Date: 4-3-08

Checked by: 256 Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.:OW-06L_
Date of Observation Well Installation: 10/2/07	Date of Well Development: 10/2/07
Observation Well Northing: 13415889.64 US ft Easting: 2604964.9	00 US ft
Observation Well Location:	Observation Well Driller
	Name: <u>BEST Drilling</u>
•	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 45 ft and 84 ft.

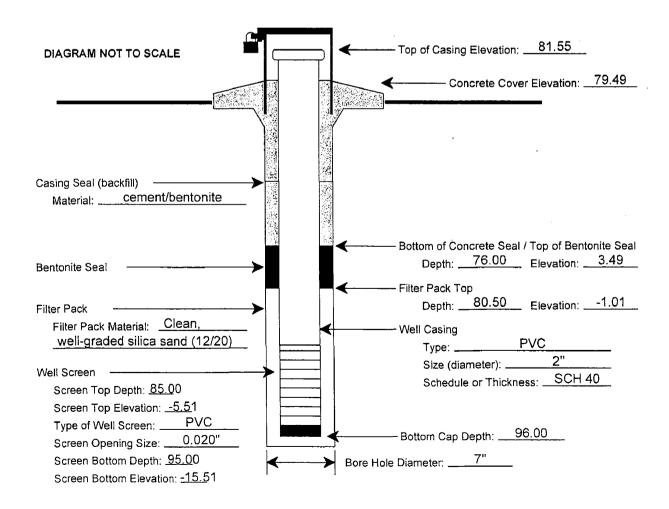
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USC Date: 4-3-38

Checked by: UBC Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: <u>OW-06U</u>
Date of Observation Well Installation:10/13/07	Date of Well Development: 10/13/07
Observation Well Northing: <u>13415875.58 US.ft</u> Easting: <u>2604966.94</u>	LUS ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name:BFST Drilling
	License No.:5036_

NOTES:

One, stainless-steel centralizer installed at 52 ft.

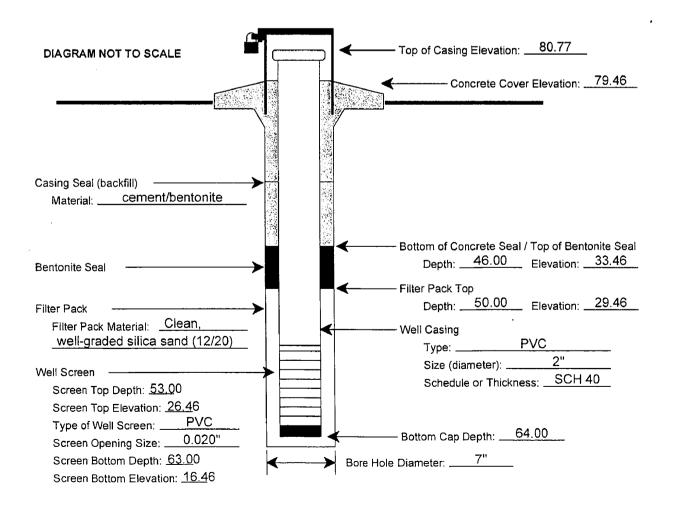
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: UG- Date: 4-3-08

Checked by: UGd Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.:OW-07L_
Date of Observation Well Installation: 10/3/07	Date of Well Development: 10/3/07
Observation Well Northing: <u>13418420.52 US ft Easting</u> : <u>2606531.28</u>	B US ft
Observation Well Location: Northeast Sector	Observation Well Driller
	Name: <u>Lewis Env</u>
	License No.:54672M
NOTES:	

NOTES:

Three, stainless-steel centralizers installed at 45 ft, 90 ft, and 112 ft.

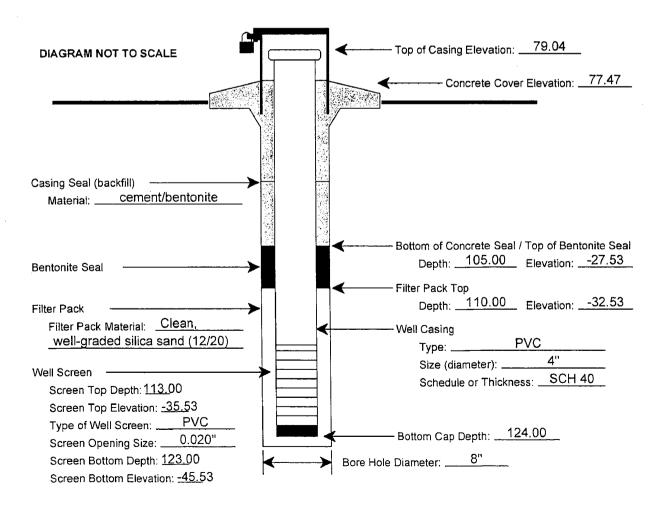
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: WK- Date: 4-3-08

Checked by: WFO Date: 4-3-08

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: OW-07U
Date of Observation Well Installation: 10/9/07	Date of Well Development:10/9/07_
Observation Well Northing: <u>13418421.40 US.ft</u> Easting:	2606542.01 US ft
Observation Well Location:Northeast Sector_	Observation Well Driller
	Name: <u>Lewis Env</u>
	License No.:54672M

NOTES:

One, stainless-steel centralizer installed at 52 ft.

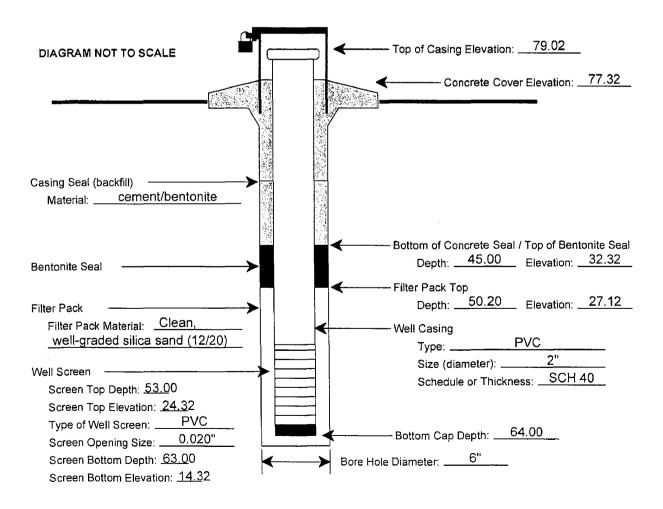
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Project Name: _	Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County:	_Victoria	Observation Well I.D.: OW-08L
Date of Observa	ation Well Installation: 10/14/07	Date of Well Development:10/14/07_
Observation We	ell Northing: <u>13415818.85 US ft</u> Easting: <u>25</u>	598942.49 US ft
Observation We	ell Location: <u>Northern Sector</u>	Observation Well Driller
		Name: Lewis Env
		License No.:54672M

NOTES:

Three, stainless-steel centralizers installed at 45 ft, 95 ft, and 126 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/21/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

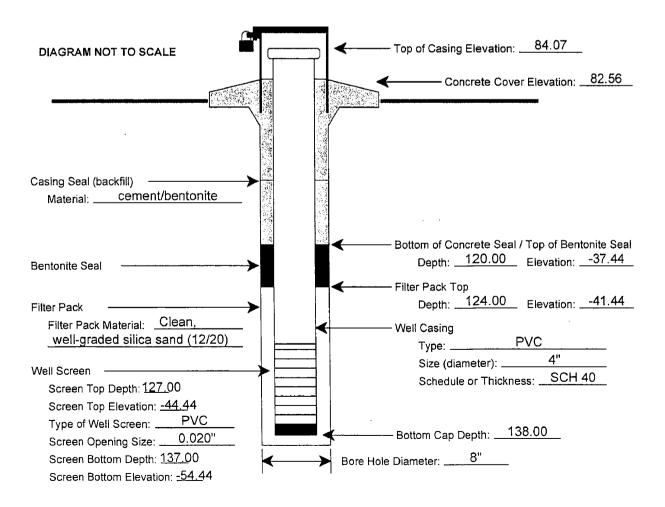
Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: James A. Schiff
Static Water Level Elevation (with respect to NAVD88) after Well Development: 33.96
Name of Geologic Formation(s) in which Well is completed: see boring log B-08

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USC Date: 4308

Checked by: WHO Date: 4-3-1185

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: OW-08U
Date of Observation Well Installation: 10/14/07	Date of Well Development:10/14/07_
Observation Well Northing: 13415801.21 US ft Easting: 2598934.58	BUS ft
Observation Well Location:Northern Sector_	Observation Well Driller
	Name: <u>Lewis Env</u>
·	License No.: <u>54672M</u>

NOTES:

One, stainless-steel centralizer installed at 89 ft.

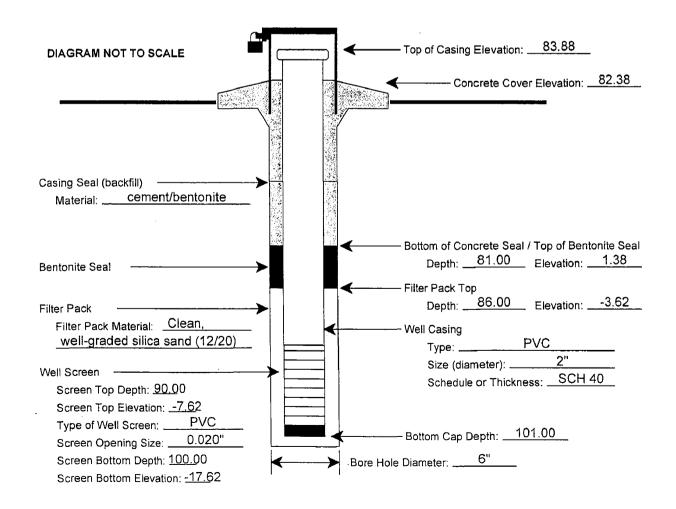
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/21/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Draiget Name:

Evelon COL Project (Victoria Site)

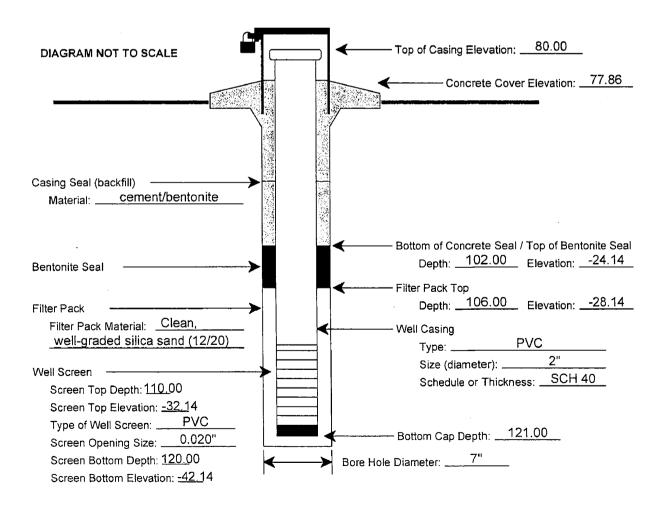
Prepared by: Cusc Date: 4-3-8

Checked by: WBW Date: 4-3-08

6468-07-1777

MACTEC Project No :

Troject Harrie.	111 10 1 20 1 10 10 11 11 11 11 11 11 11 11 11 11	
County:Victoria	Observation Well I.D.: OW-09L	
Date of Observation Well Installation: 10/3/07	Date of Well Development: 10/3/07	
Observation Well Northing: 13414937 42 US ft Easting: 2604893.58	B US ft	
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller	
	Name: <u>BEST Drilling</u>	
	License No.:5036_	
NOTES:		
Three, stainless-steel centralizers installed at 35 ft, 75 ft, and 119 ft. PVC well screen machine-slotted by the manufacturer. Observation well developed using air-lifting techniques by the well installation contractor. Static water level measurement collected 1/20/2008. Observation well installed in accordance with ASTM D 5092-04e1. Upon completion of well installation, well contractor installed seep holes in the protective steel casing.		



Prepared by: W30 Date: 4-3-08

Checked by: W30 Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-09U
Date of Observation Well Installation: 10/13/07	Date of Well Development: 10/13/07
Observation Well Northing: <u>13414956.05 US ft</u> Easting: <u>2604894.5</u>	1 US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

One, stainless-steel centralizer installed at 49 ft.

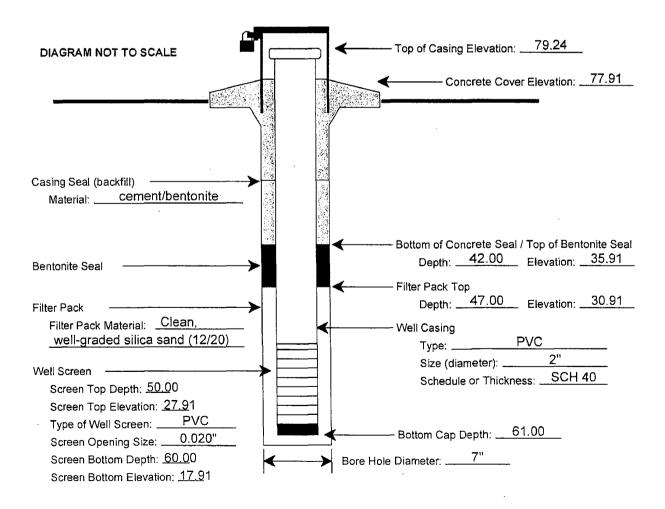
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: <u>\(\mathrightarrow{\mathrice{1}{3}} \) Date: \(\frac{4-3-8}{3-08} \)

Checked by: \(\mathrice{1}{3} \) Date: \(\frac{4-3-08}{3-08} \)</u>

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.:OW-10L_
Date of Observation Well Installation: 10/1/07	Date of Well Development: 10/1/07
Observation Well Northing: 13418486.44 US ft Easting: 2604760.99	9 US ft
Observation Well Location: Northeast Sector	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Three, stainless-steel centralizers installed at 45 ft, 95 ft, and 126 ft.

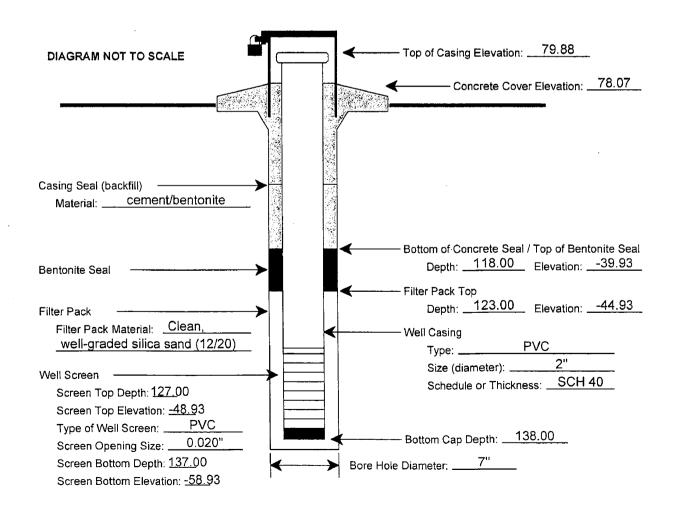
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/21/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USU Date: 4308

Checked by: WBD Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.:0W-10U_
Date of Observation Well Installation: 10/10/07	Date of Well Development: 10/10/07
Observation Well Northing: <u>13418474.37 US.ft</u> Easting: <u>2604768.4</u>	3 US fi
Observation Well Location: <u>Northeast Sector</u>	Observation Well Driller
	Name: Lewis Env.
	License No.:54672M

NOTES:

One, stainless-steel centralizer installed at 47 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/21/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

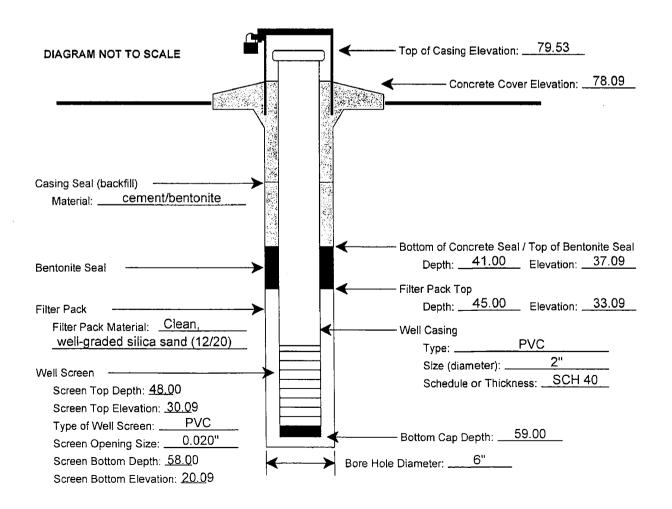
Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: James A. Schiff
Static Water Level Elevation (with respect to NAVD88) after Well Development: 22.57
Name of Geologic Formation(s) in which Well is completed: see boring log B-10

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WBd Date: 4-3-8 Date: 4-3-8

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well i.D.: <u>OW-2301L</u>
Date of Observation Well Installation: 1/31/08	Date of Well Development:1/31/08_
Observation Well Northing: <u>13414429.77 US ft Easting</u> :	2596268.29 US ft
Observation Well Location:Northern Sector_	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_
NOTES.	

NOTES:

Two, stainless-steel centralizers installed at 124 ft and 141 ft.

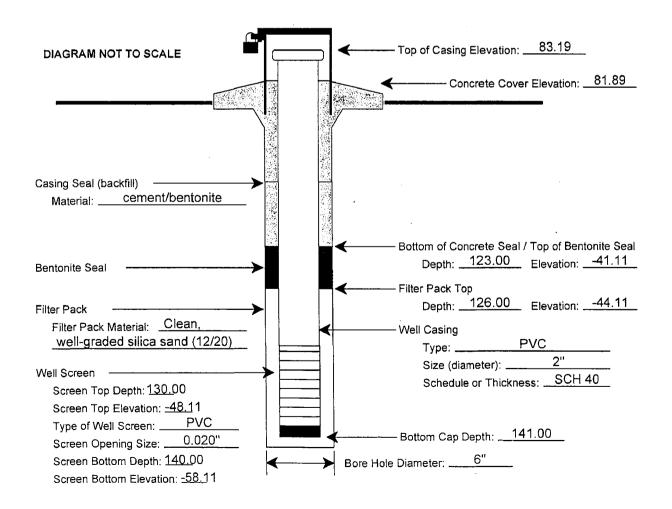
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/6/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USU Date: 4-3-38

Checked by: USU Date: 4-3-38

Project Name: Exelon COL Project (Victoria Site)_	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: <u>OW-2301U</u>
Date of Observation Well Installation: 1/30/08	Date of Well Development: 1/30/08
Observation Well Northing: <u>13414430.08 US ft</u> Easting: <u>2596288.46</u>	SUS ff
Observation Well Location: Northern Sector	Observation Well Driller
	Name: BEST Drilling
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 43 ft and 60 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/6/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation:

Static Water Level Elevation (with respect to NAVD88) after Well Development:

See boring log B-2301

Type of Locking Device:

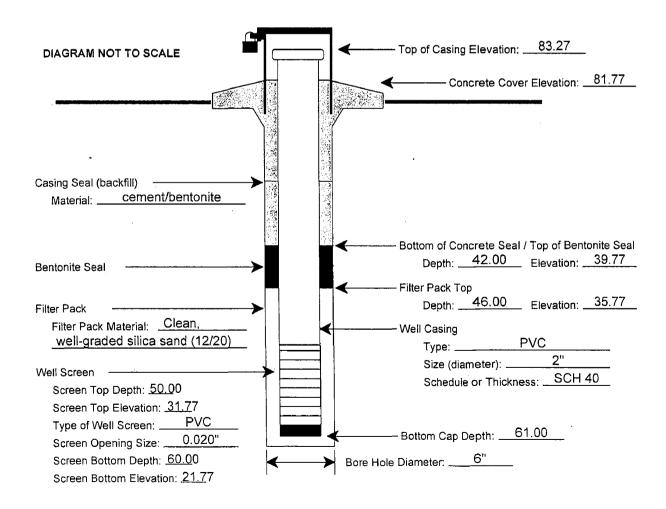
Masterlock - 0536

Type of Casing Protection:

Steel

Concrete Surface Pad (with steel reinforcement) Dimensions:

2'x2'x6"



Prepared by: <u>u.su</u> Date: <u>4-3-08</u>

Checked by: <u>u.su</u> Date: <u>4-3-08</u>

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: OW-2302L
Date of Observation Well Installation: 1/8/08	Date of Well Development:1/8/08
Observation Well Northing: 13407382.11.US ft Easting: 2598388.94	US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: 5036

NOTES:

Two, stainless-steel centralizers installed at 134 ft and 150 ft.

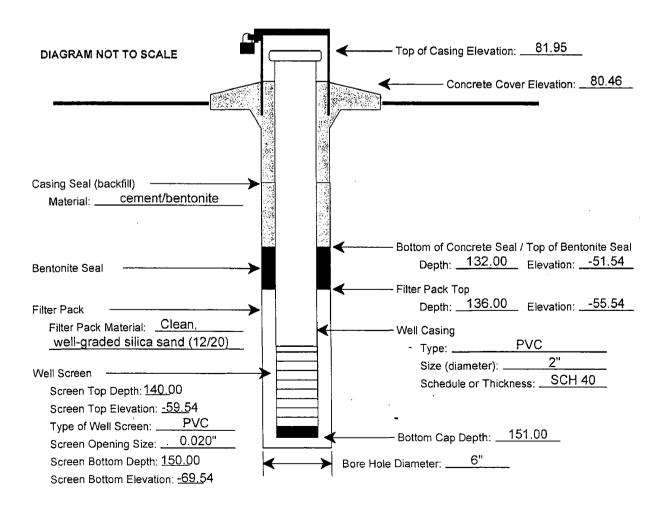
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/19/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USA Date: 4-3-8

Checked by: UBA Date: 4-3-86

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: 6468-07-1777
County:Victoria	Observation Well I.D.: <u>OW-2302U</u>
Date of Observation Well Installation: 1/8/08	Date of Well Development: 1/8/08
Observation Well Northing: <u>13407361 50 US ft Easting</u> : <u>2598388 47</u>	<u>'US.ft</u>
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 79 ft and 95 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/18/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

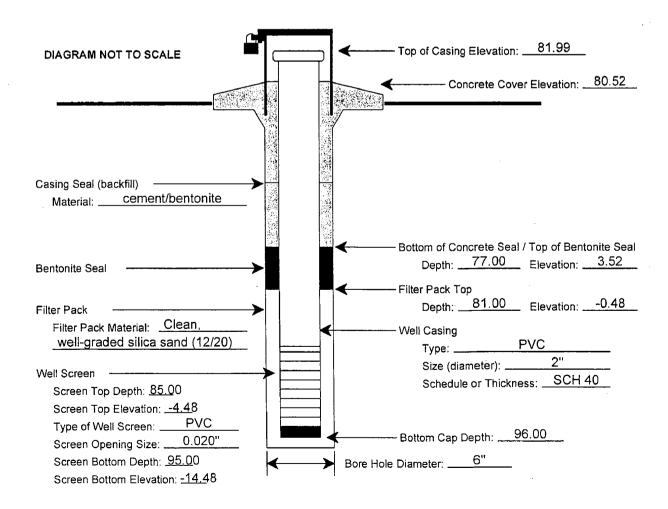
Static Water Level Elevation (with respect to NAVD88) after Well Development: 38.95

Name of Geologic Formation(s) in which Well is completed: see boring log B-2302

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USU Date: 4-3-08

Checked by: USU Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-2304L
Date of Observation Well Installation: 2/5/08	Date of Well Development: 2/5/08
Observation Well Northing: 13396528 12 US ft Easting: 2608678.06	US ft
Observation Well Location: Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No 5036

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/7/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

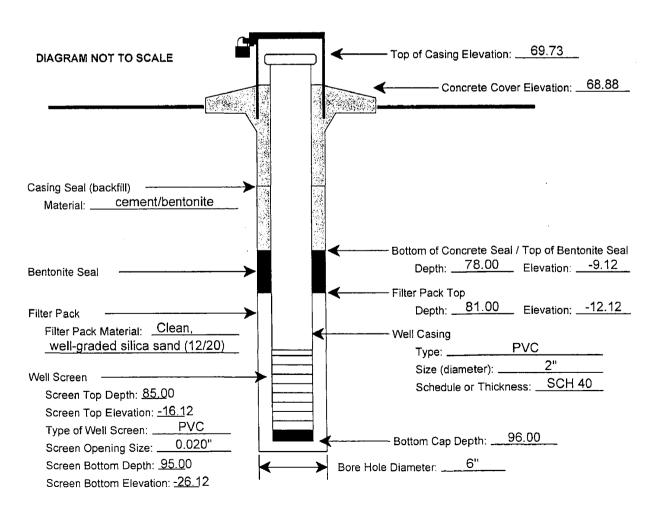
Static Water Level Elevation (with respect to NAVD88) after Well Development: 27.52

Name of Geologic Formation(s) in which Well is completed: see boring log B-2304

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WFW Date: 4-3-88

Checked by: WFW Date: 4-3-08

Steel

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: OW-2304U
Date of Observation Well Installation: 2/5/08	Date of Well Development: 2/5/08
Observation Well Northing: 13396542.39 US.ft Easting: 2608679.35	SUS ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: 5036

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/7/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

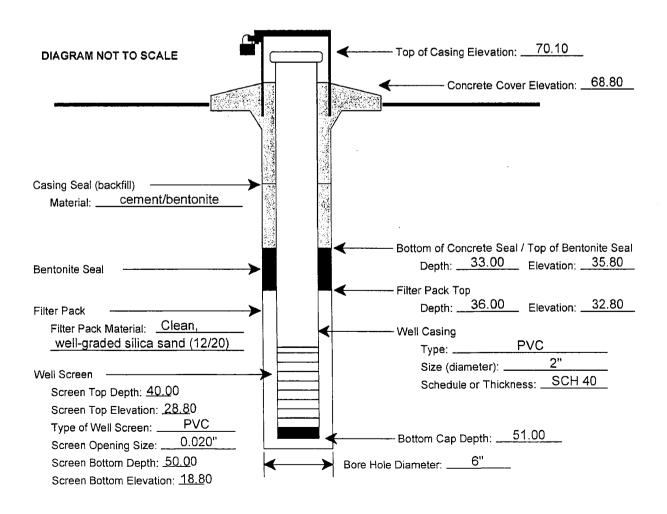
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 36.24

Name of Geologic Formation(s) in which Well is completed: see boring log B-2304

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Type of Locking Device: Masterlock - 0536 Type of Casing Protection:



Prepared by: USC Date: 4-3-8

Checked by: USC Date: 4-3-8

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: <u>OW-23071</u>
Date of Observation Well Installation: 1/20/08	Date of Well Development: 1/20/08
Observation Well Northing: 13420879.09 US ft Easting: _	2603152 12 US ft
Observation Well Location: Northern Sector	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: 5036

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/23/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

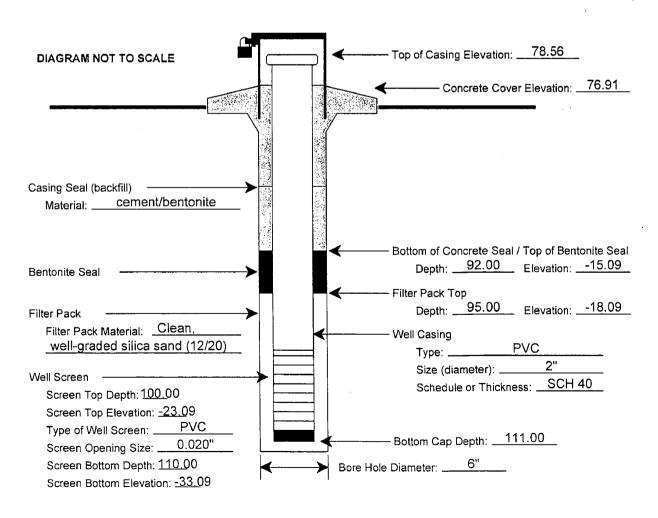
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 27.36

Name of Geologic Formation(s) in which Well is completed: see boring log B-2307

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USW Date: 4-3-08

Checked by: USW Date: 4-3-08

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2307U</u>
Date of Observation Well Installation: 1/19/08	Date of Well Development:1/19/08
Observation Well Northing: <u>13420896 73 US ft Easting</u> : <u>2603164</u> .	23 US ft
Observation Well Location: Northern Sector	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/23/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

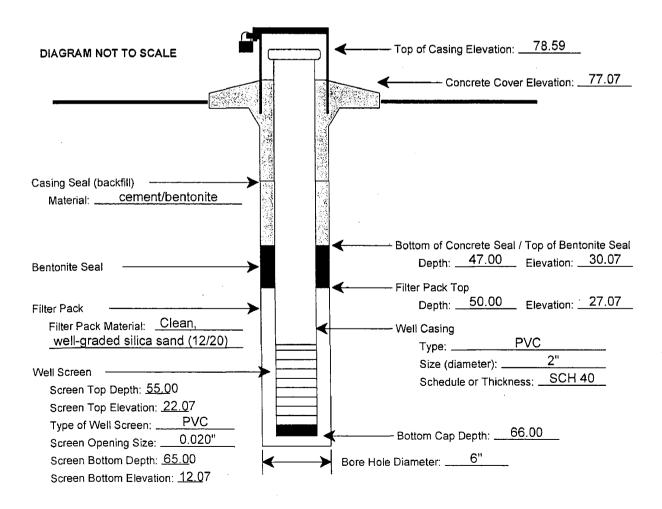
Static Water Level Elevation (with respect to NAVD88) after Well Development: 32.71

Name of Geologic Formation(s) in which Well is completed: see boring log B-2307

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WFC Date: 4-3-08

Checked by: WFC Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2319L</u>
Date of Observation Well Installation: 1/6/08	Date of Well Development: 1/6/08
Observation Well Northing: 13403611.30 US.ft Easting: 2603051.8	3 US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: 5036

NOTES:

Two, stainless-steel centralizers installed at 139 ft and 155 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/18/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

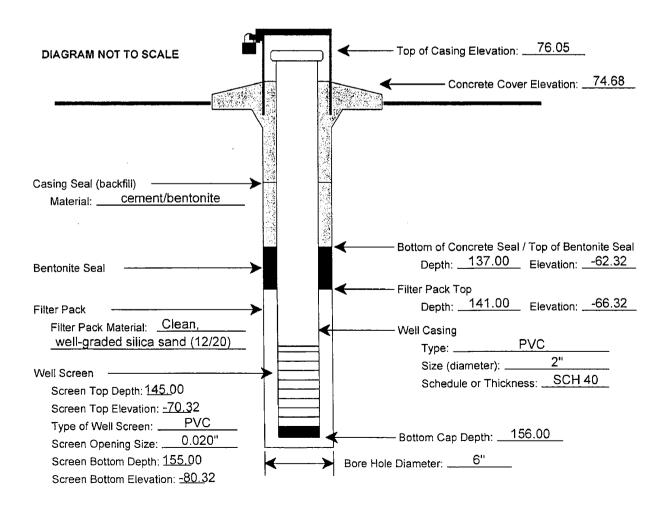
Static Water Level Elevation (with respect to NAVD88) after Well Development: 32.87

Name of Geologic Formation(s) in which Well is completed: see boring log B-2319

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: While Date: 4-3-08

Checked by: While Date: 4-3-08

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2319U</u>
Date of Observation Well Installation: 1/6/08	Date of Well Development:1/6/08
Observation Well Northing: <u>13403590.40 US ft Easting</u> :	2603046.21 US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name:BEST Drilling
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 79 ft and 95 ft.

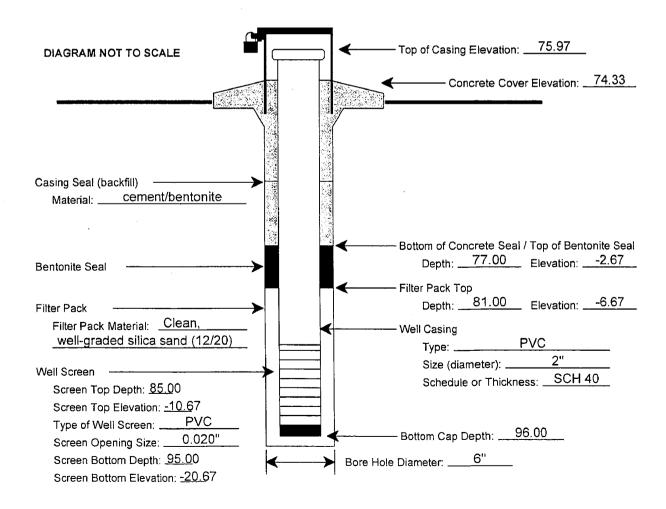
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/18/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USO Date: 4-3-08

Checked by: USO Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2320L</u>
Date of Observation Well Installation: 12/20/07	Date of Well Development: 12/20/07
Observation Well Northing: <u>13407580.88 US.ft</u> Easting: <u>2606834.3</u>	36 US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 134 ft and 150 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/18/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

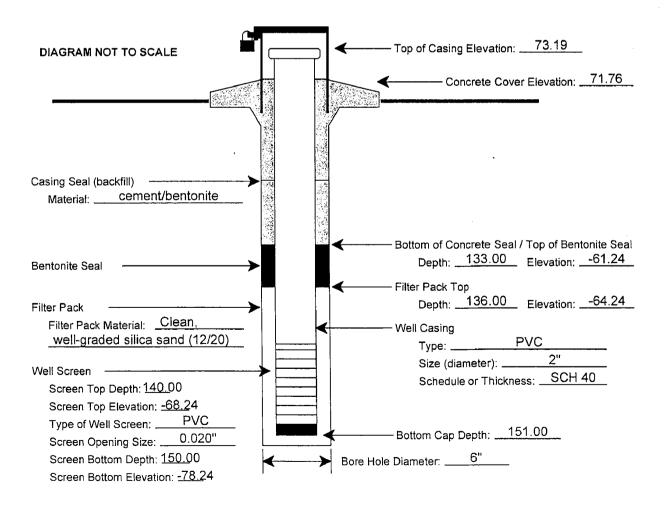
Static Water Level Elevation (with respect to NAVD88) after Well Development: 30.01

Name of Geologic Formation(s) in which Well is completed: see boring log B-2320

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WHD Date: 4-3-08 Date: 4-3-08

Project Name: <u>Exelon COL Project (Victoria Site)</u>		MACTEC Project No.:	<u> 5468-07-1777</u>	
County:Vi	ctoria		Observation Well I.D.:O\	N-2320U
Date of Observatio	n Well Installation:	12/20/07	Date of Well Development:	12/20/07
Observation Well N	Northing: <u>13407569.51 US</u>	S_ft Easting: <u>26068</u>	849.70 US ft	
Observation Well L	ocation: Cooling Pond	Area	Observation Well Driller	
			Name: <u>REST D</u>	rilling
			License No.:5	036_
NOTES.				

NOTES:

Two, stainless-steel centralizers installed at 94 ft and 110 ft.

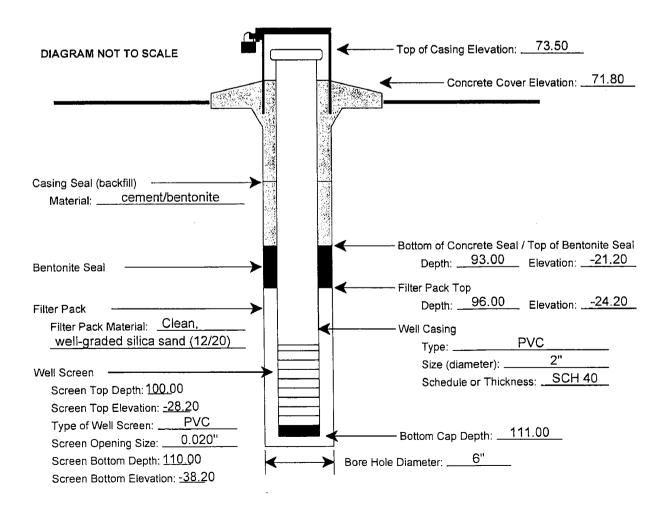
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 1/18/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: WSG Date: 4-3-08
Checked by: WGG Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.:6468-07-1777
County: Victoria	Observation Well I.D.: OW-2320U1
Date of Observation Well Installation: 1/10/08	Date of Well Development: 1/10/08
Observation Well Northing: 13407445.66 US ft Easting: 2607080.05	5.US.ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.: 5036

NOTES:

Two, stainless-steel centralizers installed at 53 ft and 80 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

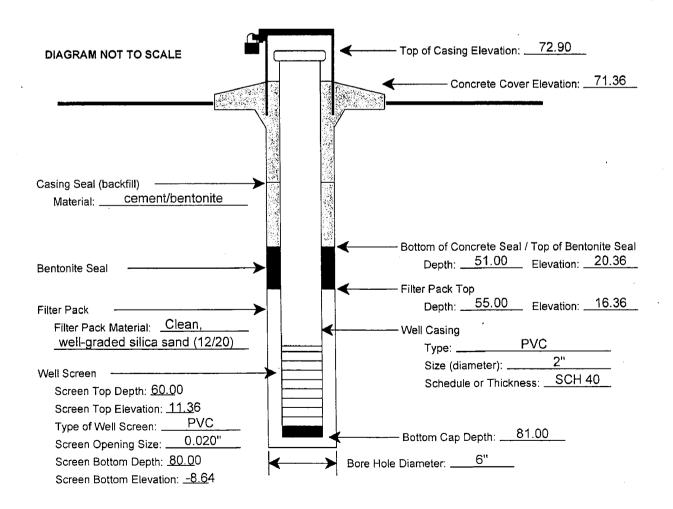
Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

Static Water Level Elevation (with respect to NAVD88) after Well Development: 29.19

Name of Geologic Formation(s) in which Well is completed: See boring log B-2320

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel



Prepared by: USU Date: 4-3-88

Checked by: URQ Date: 4-3-18

Project Name:Exelo	n COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: <u>Victoria</u>		Observation Well I.D.: <u>OW-2320U2</u>
Date of Observation Well	nstallation: 1/10/08	Date of Well Development:1/10/08
Observation Well Northing	: _13407436.76 US ft Easting: _	2607093 25 US ft
Observation Well Location	: Cooling Pond Area	Observation Well Driller
		Name: BEST Drilling
		License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 53 ft and 80 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

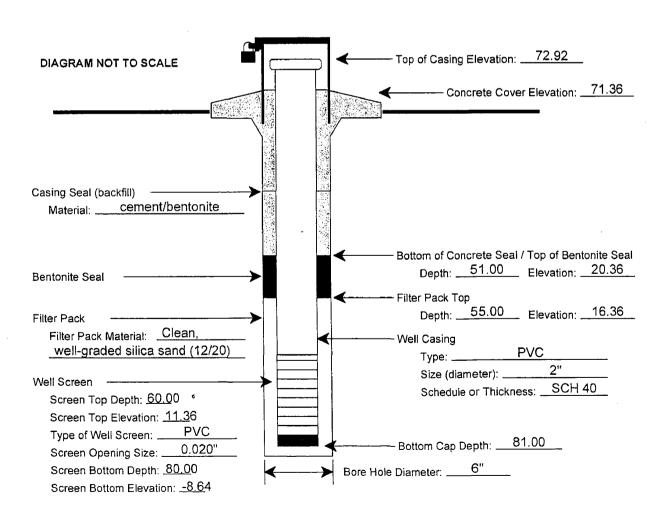
Static Water Level Elevation (with respect to NAVD88) after Well Development: 29.19

Name of Geologic Formation(s) in which Well is completed: see boring log B-2320

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USA Date: 4-3-28

Checked by: WBA Date: 4-3-08

Project Name: Fxelon COL Pr	oject (Victoria Site)	MACTEC Project No.:6468-07-	-1777
County: Victoria		Observation Well I.D.: <u>OW-2320U</u>	3
Date of Observation Well Installation	n:1/10/08	Date of Well Development:	1/10/08
Observation Well Northing: 134074	48.17 US ft Easting:2607121.	37 US ft	
Observation Well Location: Coolin	ng Pond Area	Observation Well Driller	
		Name: BEST Drilling	•
		License No.:5036_	

NOTES:

Two, stainless-steel centralizers installed at 53 ft and 80 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

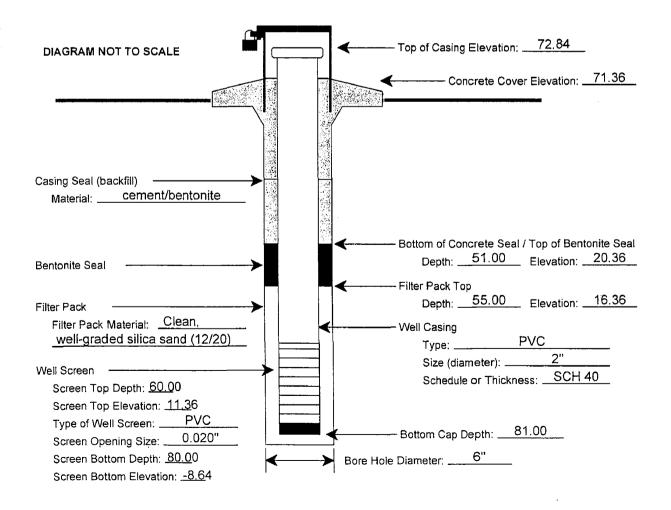
Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

Static Water Level Elevation (with respect to NAVD88) after Well Development: 29.06

Name of Geologic Formation(s) in which Well is completed: see boring log B-2320

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel



Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2320U4</u>
Date of Observation Well Installation:1/10/08	Date of Well Development: 1/10/08
Observation Well Northing: 13407466.49 US ft Easting: 2607138.42	2 US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_
Observation Well Northing: <u>13407466.49 US.ft</u> Easting: <u>2607138.43</u>	Date of Well Development: 1/10/08 2 US ft Observation Well Driller Name: BEST Drilling

NOTES:

Two, stainless-steel centralizers installed at 53 ft and 80 ft.

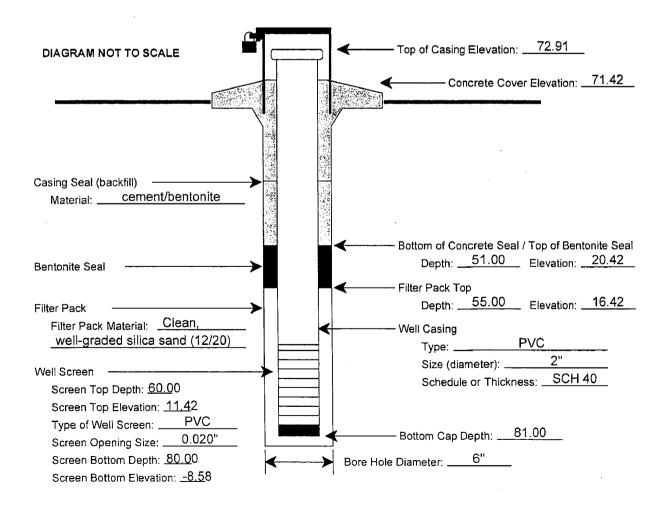
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



 Prepared by:
 Wy Date:
 U-3-08

 Checked by:
 W30
 Date:
 U-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.:6468-07-1777
County:Victoria	Observation Well I.D.: <u>OW-2321L</u>
Date of Observation Well Installation: 1/8/08	Date of Well Development:1/8/08
Observation Well Northing: <u>13410955.46 US.ft</u> Easting: _	2610027.59 US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name:BEST Drilling
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 133 ft and 150 ft.

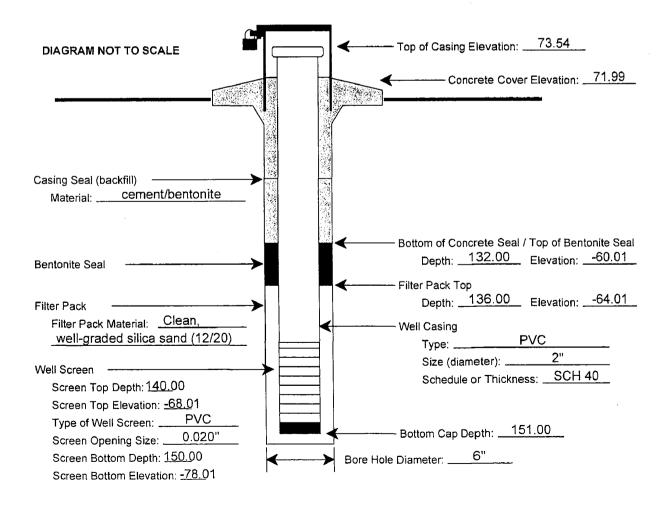
PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/5/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Prepared by: USG Date: 4-3-28

Checked by: USG Date: 4-3-28

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: OW-2321U
Date of Observation Well Installation: 1/8/08	Date of Well Development: 1/8/08
Observation Well Northing: 13410943.58 US ft Easting: 2610040.96	S US ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 94 ft and 110 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/5/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

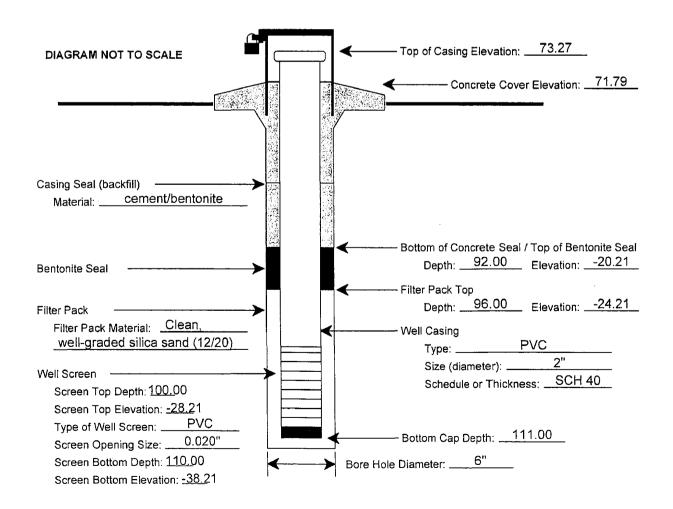
Static Water Level Elevation (with respect to NAVD88) after Well Development: 21.82

Name of Geologic Formation(s) in which Well is completed: see boring log B-2321

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WW Date: 4-3-8

Checked by: WW Date: 4-3-8

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: OW-2324L
Date of Observation Well Installation: 1/21/08	Date of Well Development: 1/21/08
Observation Well Northing: 13416300 52 US ft Easting: 2612217.00) US ft
Observation Well Location: <u>Eastern Sector</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/5/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

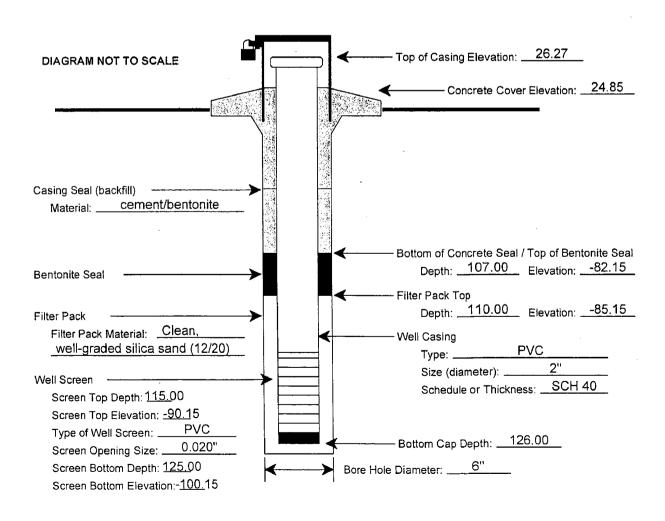
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 14.62

Name of Geologic Formation(s) in which Well is completed: see boring log B-2324

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WG Date: 4-3-08
Checked by: WG Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: OW-2324U
Date of Observation Well Installation: 1/21/08	Date of Well Development: 1/21/08
Observation Well Northing: 13416316.54 US ft Easting: 2612203.23	.US ft
Observation Well Location: <u>Eastern Sector</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/5/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

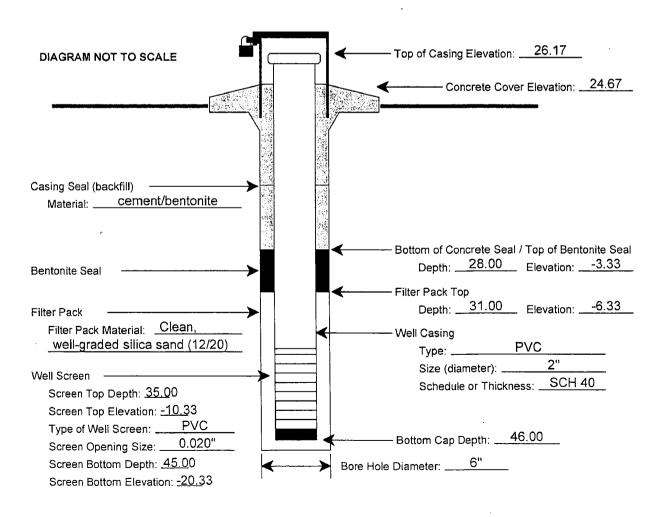
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 15.02

Name of Geologic Formation(s) in which Well is completed: see boring log B-2324

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: <u>OW-2348L</u>
Date of Observation Well Installation: 2/3/08	Date of Well Development: 2/3/08
Observation Well Northing: 13409617.75 US ft Easting: 2621644.36	LUS ff
Observation Well Location: <u>Eastern Sector</u>	Observation Well Driller
	Name:BEST Drilling
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/6/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

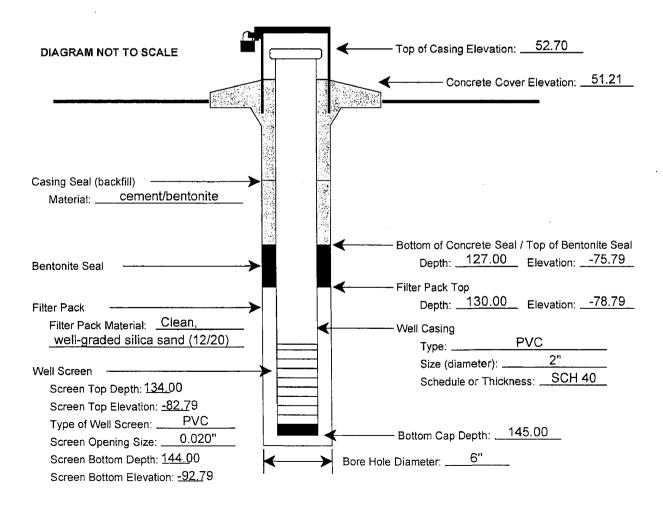
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 13.39

Name of Geologic Formation(s) in which Well is completed: see boring log B-2348

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel



Prepared by: WRO Date: 4-3-08

Checked by: WRO Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: <u>OW-2348U</u>
Date of Observation Well Installation: 2/3/08	Date of Well Development: 2/3/08
Observation Well Northing: 13409636.31 US ft Easting: 2621660.5	8 US ft
Observation Well Location: <u>Eastern Sector</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/6/2008.

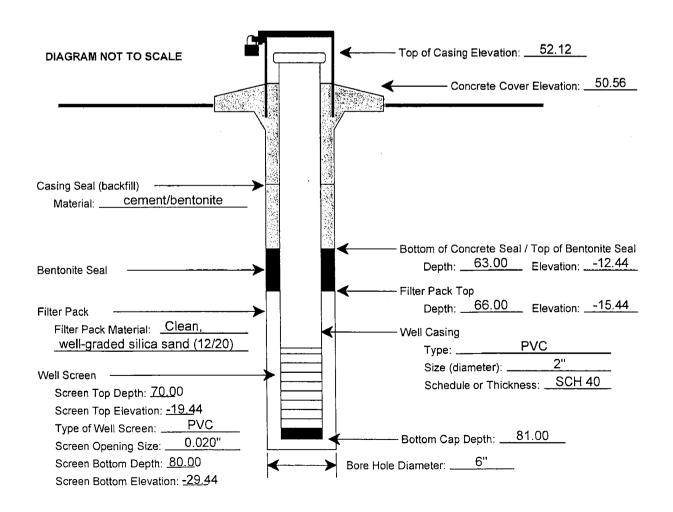
Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd
Static Water Level Elevation (with respect to NAVD88) after Well Development: 13.24
Name of Geologic Formation(s) in which Well is completed: see boring log B-2348

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: USU Date: 4-3-08

Checked by: UBU Date: 4-3-08

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: <u>OW-2352L</u>
Date of Observation Well Installation: 2/5/08	Date of Well Development: 2/5/08
Observation Well Northing: 13402468.45 US ft Easting: 2617518.5	4 US ft
Observation Well Location: _Cooling Pond Area	Observation Well Driller
	Name:BEST Drilling
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 73 ft and 90 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

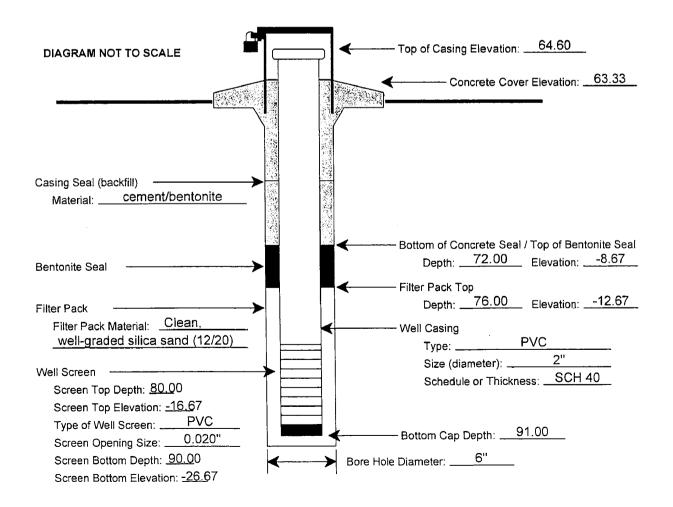
Static water level measurement collected 2/16/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore
Static Water Level Elevation (with respect to NAVD88) after Well Development: 19.54
Name of Geologic Formation(s) in which Well is completed: see boring log B-2352

Type of Locking Device: Masterlock - 0536
Type of Casing Protection: Steel
Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Project Name: Exelon CQL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2352U</u>
Date of Observation Well Installation: 2/5/08	Date of Well Development: 2/5/08
Observation Well Northing: 13402470.61 US ft Easting: 2617538.69	US ft
Observation Well Location: Cooling Pond Area	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 38 ft and 55 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/16/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Jeff Moore

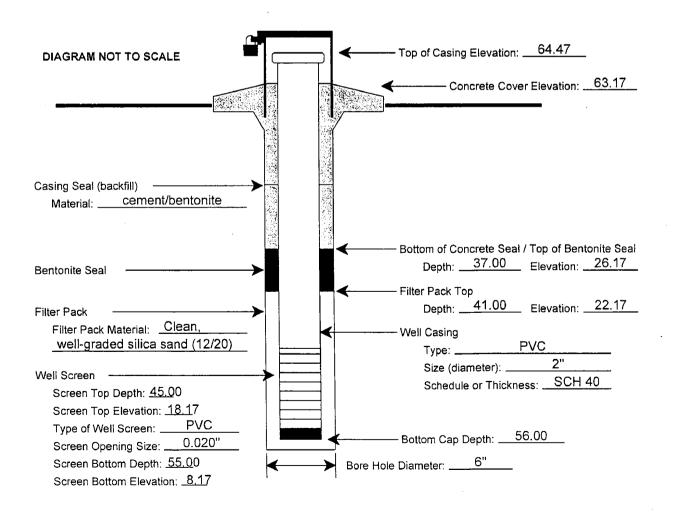
Static Water Level Elevation (with respect to NAVD88) after Well Development: 19.49

Name of Geologic Formation(s) in which Well is completed: See boring log B-2352

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: WSb- Date: 43-8

Checked by: WBD Date: 4-3-8

Steel

Project Name:Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2359L1</u>
Date of Observation Well Installation: 1/16/08	Date of Well Development: 1/16/08
Observation Well Northing: <u>13417263.65 US ft</u> Easting: <u>2605470.56</u>	SUS ft
Observation Well Location: Northeast Sector	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/4/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

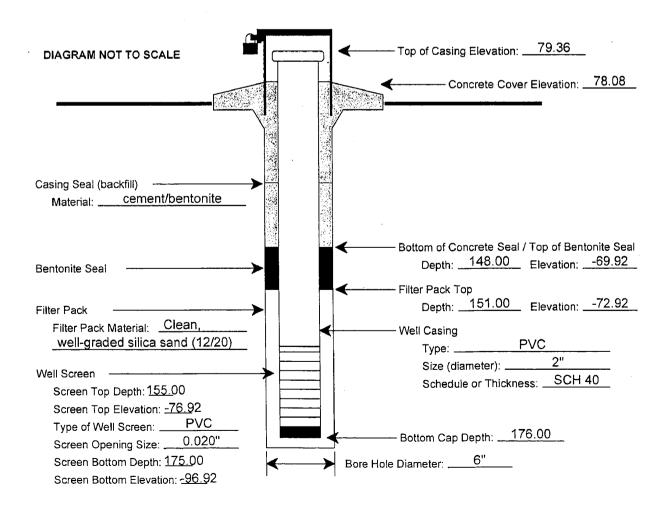
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 24.86

Name of Geologic Formation(s) in which Well is completed: see boring log B-2359

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: ___



Prepared by: WFIO Date: 4-3-08

Checked by: WFIO Date: 4-3-08

Steel

Project Name: <u>Exelon COL Project (Victoria Site)</u>	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria	Observation Well I.D.: <u>OW-2359L2</u>
Date of Observation Well Installation: 1/16/08	Date of Well Development:1/16/08_
Observation Well Northing: 13417259.76 US.ft Easting: 2605433	.37 US.ft
Observation Well Location: Northeast Sector	Observation Well Driller
	Name:BEST_Drilling
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/4/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

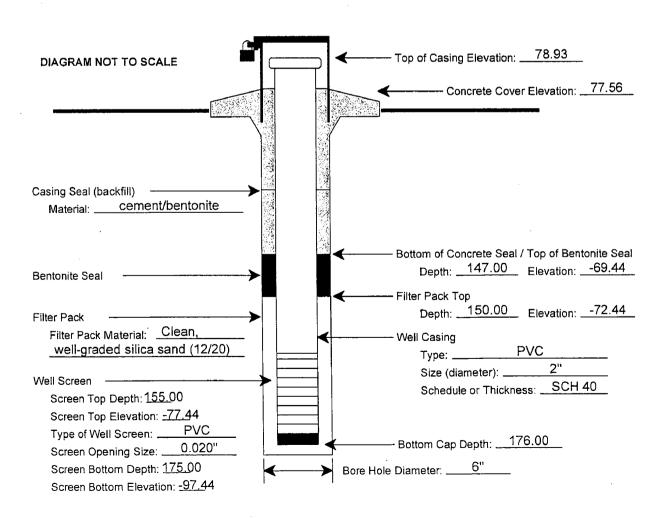
Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 24.85

Name of Geologic Formation(s) in which Well is completed: see boring log B-2359

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: Whole Date: 4-3-08

Checked by: Whole Date: 4-3-08

Steel

Project Name:Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>OW-2359L3</u>
Date of Observation Well Installation: 1/17/08	Date of Well Development: 1/17/08
Observation Well Northing: 13417278 58 US ft Easting: 2605416.18	B.U.S.ft
Observation Well Location: Northeast Sector	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/4/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

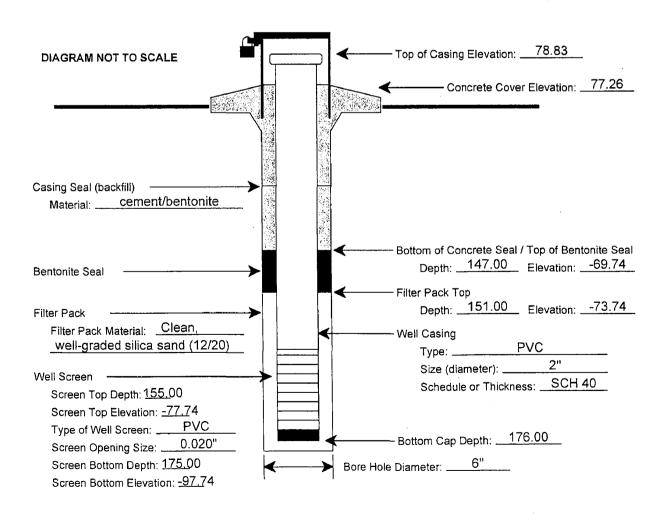
Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 25.01

Name of Geologic Formation(s) in which Well is completed: see boring log B-2359

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"



Prepared by: UBU Date: 4-3-08

Checked by: UBU Date: 4-3-08

Project Name: Exelon COL P	roject (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County: Victoria		Observation Well I.D.: <u>OW-2359U1</u>
Date of Observation Well Installatio	n: <u>1/16/08</u>	Date of Well Development:1/16/08_
Observation Well Northing: 134172	252.64 US ft Easting: <u>2605460.6</u>	64 US ft
Observation Well Location:Nort	theast Sector	Observation Well Driller
		Name: <u>BEST Drilling</u>
		License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Observation well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/4/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

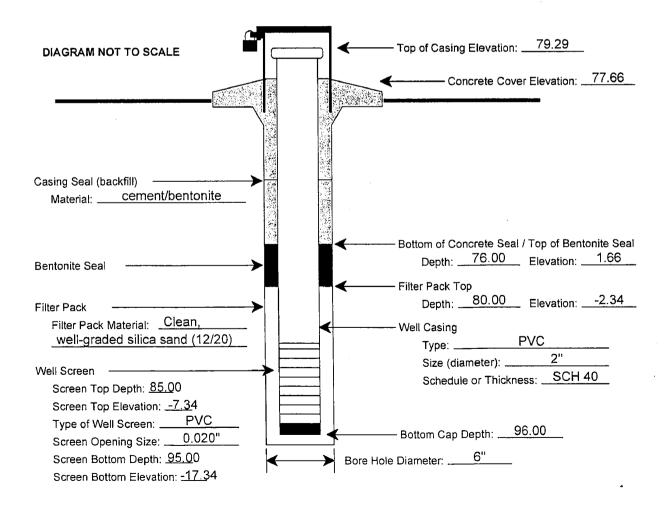
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 24.38

Name of Geologic Formation(s) in which Well is completed: see boring log B-2359

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel



Test Well Data Sheet

Prepared by: UFA Date: 43-08

Checked by: UFA Date: 43-08

Project Name: Exelon COL Project (Victoria Site)_	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>TW-2320U</u>
Date of Observation Well Installation: 1/30/08	Date of Well Development:1/30/08
Observation Well Northing: <u>13407428.59 US ft Easting</u> : <u>2607105.51</u>	_US_ft
Observation Well Location: <u>Cooling Pond Area</u>	Observation Well Driller
	Name: <u>BEST Drilling</u>
	License No.:5036_

NOTES:

Two, stainless-steel centralizers installed at 46.6 ft and 80.5 ft.

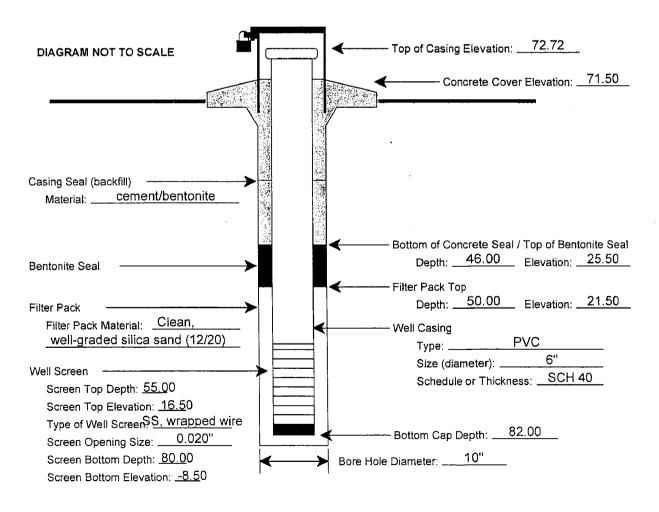
Well screen machine-slotted by the manufacturer. Five feet of solid riser pipe installed from 65 ft to 70 ft.

Well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/20/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.



Test Well Data Sheet

Steel

Project Name: Exelon COL Project (Victoria Site)	MACTEC Project No.: <u>6468-07-1777</u>
County:Victoria	Observation Well I.D.: <u>TW-2359L</u>
Date of Observation Well Installation: 1/18/08	Date of Well Development:1/18/08
Observation Well Northing: 13417241 41 US ft Easting: 2605450 48	SUS fi
Observation Well Location: Northeast Sector	Observation Well Driller
	Name: BEST Drilling
	License No.:5036_

NOTES:

PVC well screen machine-slotted by the manufacturer.

Well developed using air-lifting techniques by the well installation contractor.

Static water level measurement collected 2/4/2008.

Observation well installed in accordance with ASTM D 5092-04e1.

Upon completion of well installation, well contractor installed seep holes in the protective steel casing.

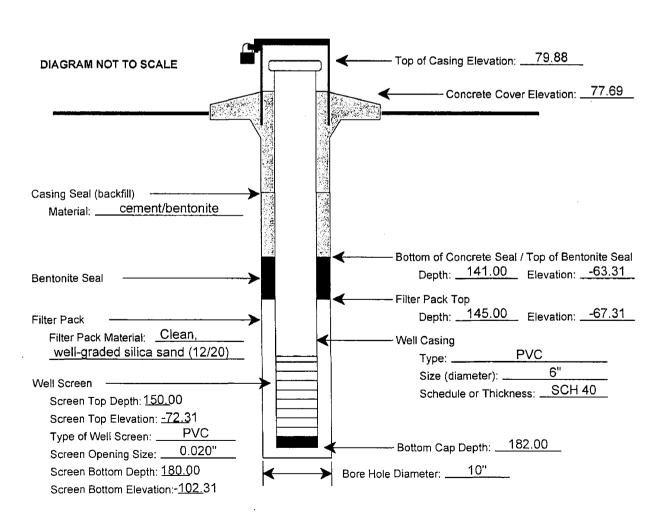
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kyla R. Rudd

Static Water Level Elevation (with respect to NAVD88) after Well Development: 24.82

Name of Geologic Formation(s) in which Well is completed: see boring log B-2359

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x6"

Type of Locking Device: Masterlock - 0536 Type of Casing Protection:



Well Record Sampling Sheets



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue Raleigh, North Carolina 27604

MEASURED WELL DEPTH: 63.00 FT. SCREENED INTERVAL: 50-60 FT. WELL DIAMETER: 2 HEIGHT OF MEASURING POINT ABOVE LAND SURFACE: 1.50 CASING MATERIAL: PVC SAMPLING DEVICE: See below TUBING TYPE: Dedicated, Disposable Tubing Type: MEASURING POINT: Top of Casing DEPTH TO GROUNDWATER: 33.08 SAMPLING PERSONNEL: K. Rudd WATER-COLUMN HEIGHT: 29.92 STEEL GUARD PIPE AROUND CASING: ✓ YES NO LOCKING CAP: ✓ YES NO PROTECTIVE POST/ABUTMENT: ✓ YES NO NONPOTABLE LABEL: ✓ YES NO NOO WELL INTEGRITY SATISFACTORY: ✓ YES NO WELL YIELD: ✓ HIGH MODERATE L Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump set at 50 ft below top of casing Pump set	
MEASURED WELL DEPTH: 63.00 FT. SCREENED INTERVAL: 50-60 FT. WELL DIAMETER: 2 HEIGHT OF MEASURING POINT ABOVE LAND SURFACE: 1.50 CASING MATERIAL: PVC SAMPLING DEVICE: See below TUBING TYPE: Dedicated, Disposable Tubing Type: MEASURING POINT: Top of Casing DEPTH TO GROUNDWATER: 33.08 SAMPLING PERSONNEL: K. Rudd WATER-COLUMN HEIGHT: 29.92 STEEL GUARD PIPE AROUND CASING: ✓ YES NO LOCKING CAP: ✓ YES NO PROTECTIVE POST/ABUTMENT: ✓ YES NO NONPOTABLE LABEL: ✓ YES NO NOO WELL INTEGRITY SATISFACTORY: ✓ YES NO WELL YIELD: ✓ HIGH MODERATE L Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump intake set at 50 ft below top of casing Pump set at 50 ft below top of casing Pump set	77
HEIGHT OF MEASURING POINT ABOVE LAND SURFACE: 1.50	/2008
SAMPLING DEVICE See below TUBING TYPE Dedicated, Disposable Tubing	IN.
MEASURING POINT: Top of C∗sing DEPTH TO GROUNDWATER: 33.08 SAMPLING PERSONNEL: K. Rudd WATER-COLUMN HEIGHT: 29.92 STEEL GUARD PIPE AROUND CASING: ✓ YES NO NO LOCKING CAP: ✓ YES NO NO PROTECTIVE POST/ABUTMENT: ✓ YES NO NO NOPOTABLE LABEL: ✓ YES NO NO ID PLATE: ✓ YES NO NO WELL INTEGRITY SATISFACTORY: ✓ YES NO NO WELL YIELD: ✓ HIGH MODERATE L COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter. Pump intake set at 50 ft below top of casing Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well PURGE VOLUME PURGE RATE TEMP PH D.O. SP. COND. TURBIDITY O.R.P. NOTES (gallons) (gpm) (°C) (S.U.) (mgL) (μS/cm²) (NTU) (± mV) NOTES 1 1 22.39 7.20 7.73 977	
SAMPLING PERSONNEL: K. Rudd WATER-COLUMN HEIGHT: 29.92 STEEL GUARD PIPE AROUND CASING: ✓ YES ☐ NO LOCKING CAP: ✓ YES ☐ NO PROTECTIVE POST/ABUTMENT: ☐ YES ☐ NO NONPOTABLE LABEL: ✓ YES ☐ NO WELL INTEGRITY SATISFACTORY: ✓ YES ☐ NO WELL YIELD: ✓ HIGH ☐ MODERATE ☐ L COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter. Description of casing Pump intake set at 50 ft below top of casing Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well PURGE VOLUME PURGE RATE TEMP PH D.O. SP. COND. TURBIDITY O.R.P. NOTES (gallons) (gpm) (°C) (S.U.) (mg/L) (µS/cm²) (NTU) (± mV) NOTES 1 1 2.39 7.20 7.73 977 683 161.7 169.7 149.7 </td <td>;</td>	;
STEEL GUARD PIPE AROUND CASING:	
LOCKING CAP:	
PROTECTIVE POST/ABUTMENT:	
NONPOTABLE LABEL:	
ID PLATE:	
WELL INTEGRITY SATISFACTORY: ✓ YES □ NO WELL YIELD: ✓ HIGH □ MODERATE □ L COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter. Pump intake set at 50 ft below top of casing Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well PURGE VOLUME PURGE RATE TEMP PH D.O. SP. COND. TURBIDITY O.R.P. NOTES (gallons) (gpm) (°C) (S.U.) (mg/L) (µS/cm²) (NTU) (± mV) NOTES 1 1 22.39 7.20 7.73 977 683 161.7 15 0.4 22.45 7.22 7.91 923 77 149.7	
WELL YIELD: ✓ HIGH	
COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter. Pump intake set at 50 ft below top of casing Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well PURGE VOLUME (gallons) PURGE RATE (gpm) TEMP (°C) PH (S.U.) D.O. (mg/L) SP. COND. (NTU) TURBIDITY (± mV) NOTES 1 1 22.39 7.20 7.73 977 683 161.7 15 0.4 22.45 7.22 7.91 923 77 149.7	
Pump intake set at 50 ft below top of casing	OW O
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well	
PURGE VOLUME (gallons) PURGE RATE (gpm) TEMP (°C) PH (S.U.) D.O. (mg/L) SP. COND. (μS/cm²) TURBIDITY (NTU) O.R.P. (± mV) 1 1 22.39 7.20 7.73 977 683 161.7 15 0.4 22.45 7.22 7.91 923 77 149.7	
(gallons) (gpm) (°C) (S.U.) (mg/L) (μS/cm²) (NTU) (± mV) NOTES 1 1 22.39 7.20 7.73 977 683 161.7 15 0.4 22.45 7.22 7.91 923 77 149.7	
(gallons) (gpm) (°C) (S.U.) (mg/L) (µS/cm²) (NTU) (± mV) 1 1 22.39 7.20 7.73 977 683 161.7 15 0.4 22.45 7.22 7.91 923 77 149.7	
15 0.4 22.45 7.22 7.91 923 77 149.7	
30 0.4 22.42 7.20 6.99 917 6 144.9	
32 0.4 . 22.48 7.18 7.03 914 5 146.2	
34 0.4 22.46 7.19 7.39 915 4 149.8	
35 0.4 22.61 7.20 7.29 921 4 151.5	
Sample collected at 15:30 for the following tests	
Qty. Container Analytical Method	
1 TDS - Method 160.1 / Alkalinity - Method 310.1	
1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1	
1 Cations - Method 200.7	
I Ammonia - Method 350.1	
1 Kd - distribution coefficient	

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: USF Date: 4-9-38

Checked by: CHB Date: 4/9/08



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue Raleigh, North Carolina 27604

OBSERVATION WELL SAMPLING WORKSHEET

					0.0	ODIC 1711101C	TEDE SAMI LE	TO WORKSII.	EE1
OBSERVATION WE	ELL ID:		OW-2301I	1	MA	CTEC JOB NUN	/BER:	6468-0	7-1777
PROJECT:	Exe	lon COL Projec	ct	SITE:		Victoria, Texa	s	DATE:	2/18/2008
MEASURED WELL DEPTH:	143.15	FT.	SCREENED	INTERVAL:	130-140	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF M		1.30	CASING N	MATERIAL:	P	VC			
SAMPLING DEV		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing			
MEASURING POINT: Top of Casing					DEPTH	TO GROUND	WATER:	44	.92
SAMPLING	PERSONNEL:		J. Moore		WATI	ER-COLUMN H	EIGHT:	98	.23
STEEL GUA	RD PIPE AROUND	CASING:		Ø	YES		NO		
	LOCKING CAP:			Ø	YES		NO		
PROTEC	TIVE POST/ABUT	MENT:			YES	$\overline{\mathbf{Q}}$	NO		
NO	NPOTABLE LABEI	J:		$\overline{\mathbf{V}}$	YES		NO		
	ID PLATE:			$\overline{\square}$	YES		NO		
WELL INT	EGRITY SATISFA	CTORY:		Ø	YES		NO		
	WELL YIELD:			$\overline{\mathbf{Z}}$	HIGH		MODERATE		LOW
COMMENTS		Monsoon subn	nersible pump,	YSI 650 S/N 0	1H1018 AB; H	ACH turbidity			
			et at 80 ft below						·
···	:	Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch w	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	770
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	TES
1	1	22.89	7.56	3.24	1092	2	117.6	_	
25	1	23.38	6.86	1.95	1257	61	39.4		
50	1.5	23.40	6.78	2.94	1173	7	76.3		
65	0.4	23.41	6.80	3.09	1162	. 4	74.2		
68	0.4.	23.42	6.78	3.05	1167	4	73.8		
69	0.4	23.40	6.82	3.11	1162	4	74.6		
		•							
	Sample collected	at 15:40 for the	following tests						
·	Qty. Container	Analytical Met	hod		 				
 		mp			<u> </u>				
· · · · · · · · · · · · · · · · · · ·	1		160.1 / Alkalinit						
]		od 300.0 / Nitrate	Nitrite - Meth	od 353.1	-	ļ		
	1	Cations - Metho			 				
	1	Ammonia - Me		·	 				
	<u> </u>	Kd - distributio	n coefficient		 		 		
	1	1	i		,				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by:	ust	Date: 4-9-03
Checked by:	C42	Date: 4 19 108



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue Raleigh, North Carolina 27604

ORSERVATION WELL SAMPLING WORKSHEET

					OB	SERVATION V	VELL SAMPLIN	NG WORKSH	EET
OBSERVATION W	ELL ID:		OW-2302 U	J	MAG	CTEC JOB NUM	IBER:	6468-0	7-1777
PROJECT:	Exc	lon COL Projec	et	SITE:		Victoria, Texas	s	DATE:	2/21/2008
MEASURED WELL DEPTH:	98.1	FT.	SCREENED	INTERVAL:	85-95	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF MEASURING POINT ABOVE LAND SURFACE:					1.47	CASING N	ATERIAL:	P	VC
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing
MEASURING POINT: Top of Casing				DEPTH	TO GROUND	WATER:	43	3.14	
SAMPLING	PERSONNEL:		K. Rudd		WATE	ER-COLUMN H	EIGHT:	55	5.04
STEEL GUA	ARD PIPE AROUND	CASING:		$\overline{\square}$	YES		NO		
<u></u>	LOCKING CAP:			Ø	YES		NO		
PROTEC	TIVE POST/ABUT	MENT:			YES	Ø	NO		
NO	NPOTABLE LABE	J:		7	YES		NO		
	ID PLATE:	-		<u> </u>	YEŞ		NO		
WELL IN	EGRITY SATISFA	CTORY:		Ø	YES		NO		
	WELL YIELD:			$\overline{\mathbf{Q}}$	HIGH		MODERATE		LOW
· COMMENTS	3	Monsoon subr	nersible pump,	YSI 650 S/N 04	J16000 AA; H	IACH turbidity	meter.		
		Pump intake s	et at 65 ft below	top of casing					
		Purge volume	determined by	multiplying wa	ter-column he	ight by 0.16 gal	ft for a 2-inch w	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NC	TES
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	110	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1	1	23.06	7.40	6.27	1039	1	77.7		
15	1	23.29	6.92	6.04	1018	11	78.3		
30	1	23.32	6.89	5.68	1018	4	89.7		
45	0.4	23.37	6.90	5.66	1019	2	77.8		
47	0.4	23.40	6.90	5.65	1019	2	78.0		
48	0.4	24.39	6.89	5.66	1019	2	77.5		
	· · · · · · · · · · · · · · · · · · ·	<u> </u>							
····································									
······································	 							·····	
	Sample collected	at 14:05 for the	following tests						
	Qty. Container	Analytical Met	hod						
		TDS - Method							
·			od 300.0 / Nitrate	/Nitrite - Meth	od 353.1				
		Cations - Meth							
·		Ammonia - Me						·- ·· · · · ·	
		Kd - distribution	n coefficient				ļ <u> </u>		
		-					-		

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: List-

Date: 4-4-8

Checked by: CHB

Date: 4/9/08



MACTEC Engineering and Consulting, Inc.
3301 Atlantic Avenue

Raleigh, North Carolina 27604 OBSERVATION WELL, SAMPLING WORKSHEET

					(Ob	SERVATION V	VELL SAMPLIN	G WORKSH	ECI
OBSERVATION V	VELL ID:		OW-2302 I	L	MA	CTEC JOB NUN	IBER:	6468-0	7-1777
PROJECT:	Ex	elon COL Proje	ct	SITE:		Victoria, Texa	s	DATE:	2/21/2008
MEASURED WELL DEPTH:	153.5	0 FT.	SCREENED	INTERVAL:	140-150	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF MEASURING POINT ABOVE LAND SURFACE:					1.49	CASING N	ATERIAL:	P	vc
SAMPLING DEVICE: See below				TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing	
MEASURING POINT: Top of Casing		Top of Casing		DEPTI	TO GROUND	WATER:	44.92		
SAMPLING	G PERSONNEL:		J. Moore		WATI	ER-COLUMN H	EIGHT:	108	8.58
STEEL GU	ARD PIPE AROUNI	CASING:			YES		NO		_
	LOCKING CAP:			\square	YES		NO		
PROTE	CTIVE POST/ABUT	MENT:			YES	Ø	NO		
N	ONPOTABLE LABE	L:		$\overline{\square}$	YES		NO		
	ID PLATE:			7	YES		NO		
WELL IN	TEGRITY SATISFA	CTORY:			YES		NO		
	WELL YIELD:			$\overline{\square}$	HIGH		MODERATE		LOW
COMMENT	`S	Monsoon sub	mersible pump,	YSI 650 S/N 0	H1018 AB; H	ACH turbidity	meter.		
		Pump intake s	set at 64 ft below	top of casing	due to initially	high turbidity	readings		
 _					·		ft for a 2-inch we	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	210	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	TES
1	1	23.01	6.97	5.93	1893	5	130.6		
25	1	23.38	6.63	5.45	2071	>1000	133.5		
50	1	23.38	6.66	5.55	2069	>1000	130.3		
65	0.4	23.36	6.62	5.43	2067	>1000_	210.5		
75	0.4	23.35	6.65	5.40	2067	870	211.0		
80	0.4	23.37	6.65	5.41	2067	869	211.3		
85	0.4	23.37	6.65	5.45	2066	890	211.7		
			<u> </u>						
		174.25.5	6.11.						
	Sample collected	at 14:35 for the	tollowing tests						
	Qty. Container	Analytical Met	hod						
·	Qui Somming	1,11111,741,041,1712							
		1 TDS - Method	160.1 / Alkalinit	y - Method 310	.1				
			od 300.0 / Nitrate	e/Nitrite - Meth	od 353.1				
		1 Cations - Meth	od 200.7						
		1 Ammonia - Me	ethod 350.1						
· · · · · · · · · · · · · · · · · · ·									
		1	,						

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: is 2	Date: _	4-9 20
Checked by: CHP	Date:	4-9-08



OBSERVATION WELL SAMPLING WORKSHEET

						SERVATION V	ELL SAMI LI	to worksii	ee i
OBSERVATION W	ELL ID:		OW-2304 1	U	MA	CTEC JOB NUM	IBER:	6468-0	7-1777
PROJECT:	Ex	elon COL Proje		SITE:		Victoria, Texas	s	DATE:	2/21/2008
MEASURED WELL DEPTH:	54.3	0 FT.	SCREENED	INTERVAL:	40-50	FT.	WELL DIA	MÉTER:	2 IN.
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		1,30	CASING N	AATERIAL:	P	VC
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing
MEASURING PC	INT:		Top of Casing		DEPTI	TO GROUND	WATER:	34	.00
SAMPLING	PERSONNEL:		K. Rudd		WAT	ER-COLUMN H	EIGHT:	20	.30
STEEL GUARD PIPE AROUND CASING:				V	YES		NO		
LOCKING CAP:				Ø	YES		NO	-	
PROTEC		YES	Ø	NO					
NO	NPOTABLE LABE	L:		Ø	YES		NO		
	ID PLATE:			Ø	YES		NO		
WELL INTEGRITY SATISFACTORY:				Ŋ	YES		NO		
		V	HIGH		MODERATE		LOW		
COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter.									
		Pump intake s	et at 42 ft belov	v top of casing	due to initially	high turbidity i	eadings		
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch w	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NOTES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm ²)	(NTU)	(± mV)	, NO	169
1	1	22.06	6.78	6.08	1706	>1000	136.8		
10	1	22.39	6.54	2.78	1980	71	81.2		
20	0.8	22.40	6.55	3.09	2024	29	72.1		
27	0.4	22.42	6.55	3.27	2034	7	77.4		
28	0.4	22.43	6.54	3.17	2040	6	78.4		
30	0.4	22.43	6.53	3.11	2043	6	81.2		
		-						····	
<u>-</u>							_		
			Í						
	Sample collected	at 12:15 for the	following tests						
		<u> </u>	l						
	Qty. Container	Analytical Met	hod		 				
		l TDS - Method	160 1 / Alkalimis	n. Mathad 21/	<u> </u>				
		l Anions - Method							
	-	Cations - Meth		WINITE - MELL	1,555				
		1 Ammonia - Me			 				
	-	- Ivie	,ou 550.1		 				
	 	1							
	<u> </u>					· · · · · · · · · · · · · · · · · · ·			

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: List	Date: 4-9-03
repared by.	Dutc.

Checked by: CILB Date: 4-9-08



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: Exelon COL Project SITE Victoria, Texas DATE 2/17/17/7			QB.	SERVATION V	WELL SAMPLIN	NG WUKKSH	LE I					
MEASURED WELL DEPTH: 98.44 FT. SCREENED INTERVAL: 85-95 FT. WELL DIAMETER: 2 IN.	OBSERVATION WE	ELL ID:		OW-2304 I		MA	CTEC JOB NUN	MBER:	6468-0	7-1777		
HEIGHT OF MEASURING POINT ABOVE LAND SURFACE: 0.85 CASING MATERIAL: PVC	PROJECT:	Exc	elon COL Projec	ct	SITE:		Victoria, Texa	s	DATE:	2/21/2008		
SAMPLING DEVICE: See below TUBING TYPE: Dedicated, Disposable Tubing	MEASURED WELL DEPTH:	98.4	4 FT.	SCREENED	INTERVAL:	85-95	FT.	WELL DIA	METER:	2 IN.		
MEASURING POINT: Top of Casing DEPTH TO GROUNDWATER: 42.30	HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		0.85	CASING N	MATERIAL:	P	VC		
SAMPLING PERSONNEL:	SAMPLING DEV	ICE:		Sec below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing		
STEEL GUARD PIPE AROUND CASING:	MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	42	.30		
LOCKING CAP:	SAMPLING	PERSONNEL:		J. Moore		WATI	ER-COLUMN H	EIGHT:	56	.14		
PROTECTIVE POST/ABUTMENT:	STEEL GUA	RD PIPE AROUND	CASING:			YES		NO				
NONPOTABLE LABEL:			V	YES		NO						
DPLATE: YES	PROTEC			YES	\square	NO						
WELL NTEGRITY SATISFACTORY:	NO		$\overline{\mathbf{Q}}$	YES		NO						
WELL YIELD:	ID PLATE:				$\overline{\mathbf{Q}}$	YES		NO				
COMMENTS Monsoon submersible pump, YSI 650 S/N 01H1018 AB; HACH turbidity meter.	WELL INTEGRITY SATISFACTORY:				7	YES		NO				
Pump intake set at 60 ft below top of casing due to initially high turbidity readings	***************************************		Ø	HIGH		MODERATE		LOW				
Pump intake set at 60 ft below top of casing due to initially high turbidity readings	COMMENTS	ACH turbidity	meter.									
PURGE VOLUME												
(gallons) (gpm) (°C) (S.U) (mg/L) (µS/cm²) (NTU) (± mV) NOTES 1 1 2.46 7.29 5.87 1873 2 113.0 20 1 23.02 6.74 7.98 2021 14 83.2 45 1 23.04 6.73 7.33 1998 1 116.8 47 0.4 23.05 6.73 7.13 1996 1 118.3 49 0.4 23.05 6.73 7.10 1997 1 119.3 Sample collected at 12:20 for the following tests Qty. Container Analytical Method 4												
Calions Cali	PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NOTES			
20	(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	165		
1 23.04 6.73 7.33 1998 1 116.8	1	1	22.46	7.29	5.87	1873	2	113.0				
47 0.4 23.05 6.73 7.13 1996 1 118.3 49 0.4 23.05 6.73 7.10 1997 1 i19.3 Sample collected at 12:20 for the following tests			+		7.98		14	83.2				
49 0.4 23.05 6.73 7.10 1997 1 119.3 Sample collected at 12:20 for the following tests Qty. Container Analytical Method Analytical Method Analytical Method Analytical Method Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 Cations - Method 200.7 Cations - Method 200.7	······································	+					1	····				
Sample collected at 12:20 for the following tests Qty. Container Analytical Method 1 TDS - Method 160.1 / Alkalinity - Method 310.1 1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7			-				1					
Qty. Container	49	0.4	23.05	6.73	7.10	1997	11	119.3				
Qty. Container												
Qty. Container			 			ļ		+		······································		
Qty. Container	· ,,,,		 			 		 				
Qty. Container								 		 		
1 TDS - Method 160.1 / Alkalinity - Method 310.1 1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7		Sample collected	at 12:20 for the	following tests								
1 TDS - Method 160.1 / Alkalinity - Method 310.1 1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7												
1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7		Qty. Container	Analytical Met	hođ				<u> </u>				
1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7			1700 14 1	160.17.415-15-5	NA-41 - 1210	<u> </u>						
1 Cations - Method 200.7		 						 				
		-			Meth	00 353.1	 	 				
I Ammonia - Metrod 330.1		 				 -	ļ	 	· · · · · · · · · · · · · · · · · · ·			
			Aminonia - Me	11100 330.1		 	ļ	 		· · · · · ·		
		 	 	 		 	 	 				
			 				-	1				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by:	h.sr-	Date: 4-927
Checked by:	CHB	Date: 4-4-08



ORSEDVATION WELL SAMPLING WODESHEET

					OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION W	ELL ID:		OW-2307 U	J	MA	CTEC JOB NUM	IBER:	6468-0	7-1777	
PROJECT:	Exe	elon COL Projec	et	SITE:		Victoria, Texas	s	DATE:	2/20/2008	
MEASURED WELL DEPTH:	68.11	I FT.	SCREENED	INTERVAL:	55-65	FT.	WELL DIA	METER:	2 IN.	
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		1.52	CASING N	ATERIAL:	P	VC	
SAMPLING DEV	ICE:		Sec below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing	
MEASURING PO	INT;		Top of Casing		DEPTH	TO GROUND	WATER:	45	5.95	
SAMPLING	PERSONNEL:	-	J. Moore	<u> </u>	WAT	ER-COLUMN H	EIGHT:	. 22	2.16	
STEEL GUARD PIPE AROUND CASING:				$\overline{\mathbf{A}}$	YES		NO			
LOCKING CAP:					YES		NO			
PROTEC			YES	\square	NO					
NO	NPOTABLE LABEI	J: .		7	YES		NO			
ID PLATE:				<u> </u>	YES		NO			
WELL INTEGRITY SATISFACTORY:				\square	YES		NO			
	<u> </u>	HIGH		MODERATE		LOW				
COMMENTS Monsoon submersible pump, YSI 650 S/N 01H1018 AB; HACH turbidity meter.										
Pump intake set at 55 ft below top of casing due to initially high turbidity readings										
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well										
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NOTES		
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)		TES	
1	1	23.08	7.26	4.18	1127	501	96.3			
20	0.8	23.11	7.12	4.79	1106	22	58.4			
25	0.8	23.11	7.12	4.75	1107	6	56.6			
30	0.4	23.10	7.20	4.78	1106	5	56.8			
								-		
	Sample collected	at 11:00 for the	following tests							
	Qty. Container	Analytical Met	hod							
	i Qty. Container	73 narytical Wich	lou							
	1	TDS - Method	160.1 / Alkalinit	y - Method 310	.1					
		Anions - Metho	od 300.0 / Nitrate	/Nitrite - Meth	od 353.1					
	··· ··································	Cations - Metho								
		Ammonia - Me								
		Kd - distribution	n coefficient					·		

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: US-

Date: 4-4-08

Checked by: CHB

Date: <u>4/9/08</u>



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-2307 L					MACTEC JOB NUMBER: 6468-07-1777						
					WA						
PROJECT:		lon COL Projec		SITE:		Victoria, Texa		DATE:	2/20/2008		
MEASURED WELL DEPTH:	113.27		SCREENED	INTERVAL:	100-110		WELL DIA		2 IN.		
HEIGHT OF MI	EASURING POINT	ABOVE LAND			1.65		MATERIAL:	PV			
SAMPLING DEVI	CE:		See below			G TYPE:		d, Disposable	Tubing		
MEASURING POI	NT:		Top of Casing		DEPTI	TO GROUND	WATER:	51.	75		
SAMPLING PERSONNEL: J. Moore				WATI	ER-COLUMN H	EIGHT:	61.	52			
STEEL GUARD PIPE AROUND CASING:				\square	YES		NO				
LOCKING CAP:				Ø	YES		NO				
PROTECT		YES	Ø	NO							
ЮИ		Ø	YES		NO						
ID PLATE:				\square	YES		NO				
WELL INTEGRITY SATISFACTORY:				Ø	YES		NO				
	<u> </u>	HIGH		MODERATE		LOW					
COMMENTS		Monsoon subn	nersible pump,								
COMMENTS Monsoon submersible pump, YSI 650 S/N 01H1018 AB; HACH turbidity meter.											
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well											
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	······································			
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	TOM	TES		
1	2	23.14	7.07	4.79	1053	18	109.0	•			
25	I	23.14	6.89	2.89	1055	10	138.1				
40	1	23.14	6.89	2.96	1054	5	142.4				
43	0.25	23.14	6.89	2.90	1054	4	143.1				
46	0.25	22.92	6.91	2.83	1054	4	144.9				
50	0.2	23.17	6.91	2.87	1053	3	152.2				
		1	-					·- ···			
											
	Sample collected a	at 11:15 for the	following tests								
	Qty. Container	Analytical Meti	hod								
					Ļ						
, . 	1		160.1 / Alkalinit od 300.0 / Nitrate								
	J	Cations - Metho		ezinttrite - Mieth	00 353.1		-				
	1	Ammonia - Me						 			
	1	Kd - distributio			 						
								··· · · · · · · · · · · · · · · · · ·			

Observation wells purged in accordance with ASTM D-6452-99

repared by:	in H-	Date:	4.403

Checked by: 149 Date: 4/9/08



MACTEC Engineering and Consulting, Inc.
3301 Atlantic Avenue

Raleigh, North Carolina 27604

OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-2319 U			MACTEC JOB NUMBER: 6468-07-1777								
PROJECT:		lon COL Projec		SITE:		Victoria, Texas		DATE:	2/21/2008		
MEASURED WELL DEPTH:	98.15			INTERVAL:	85-95		WELL DIA		2 IN.		
	EASURING POINT			INTERVAE.	1,64	CASING M		PVC			
SAMPLING DEVI		ABO VE EAIVE	See below					ted, Disposable Tubing			
											
MEASURING POI			Top of Casing K. Rudd		DEPTH TO GROUNDWATER:				.42		
SAMPLING I			ER-COLUMN HI		- 57	.73					
STEEL GUAI	Ø	YES		NO							
	LOCKING CAP:			V	YES		NO				
PROTECT	IVE POST/ABUTN	MENT:			YES	Ø	NO				
NONPOTABLE LABEL:			V	YES		NO					
ID PLATE:				V	YES		NO				
WELL INTE	EGRITY SATISFAC	CTORY:		V	YES		NO				
WELL YIELD:				Ø	HJGH		MODERATE		LOW		
COMMENTS Monsoon submersible pump, YSI 650 S/N 04J16000 AA; HACH turbidity meter.											
Pump intake set at 70 ft below top of casing due to initially high turbidity readings											
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well											
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	110	700		
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	TES		
1	1	22.50	7.97	14.08	1150	3	154.8		· · · · · · · · · · · · · · · · · · ·		
15	1	22.87	6.95	13.08	1196	4	77.3		,		
30	1	22.89	6.95	19.46	1199	2	81.4				
46	0.4	22.85	6.96	6.11	1194	2	80.7	 			
47	0.4	22.85	6.96	6.01	1198	2	79.3				
48	0.4	22.84	6.95	6.13	1199	2	81.2				
					····						
	Sample collected	at 10:05 for the	following tests					- · · · · · · · · · · · · · · · · · · ·			
	Qty. Container	Analytical Met	nod								
	1	TDS - Method									
	1		od 300.0 / Nitrat	e/Nitrite - Meth	od 353.1						
	!	Cations - Meth		",	1						
	<u> </u>	Ammonia - Me	1.003 500.1		 						
		 		<u> </u>	 						
		 									

Observation wells purged in accordance with ASTM D-6452-99

Prepared	by:	list

Date: 4423

Checked by:

Date: 4-9-08



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-2319 L				MACTEC JOB NUMBER: 6468-07-1777						
PROJECT:	Exe	lon COL Projec		SITE:		Victoria, Texas	s	DATÉ:	2/21/2008	
MEASURED WELL DEPTH:	156.80	FT.	SCREENED	INTERVAL:	145-155	FT.	WELL DI.	AMETER:	2 IN.	
HEIGHT OF ME	EASURING POINT	ABOVE LAND	SURFACE:		1.37 CASING MATERIAL:			PVC		
SAMPLING DEVI	CE:		See below					ed, Disposable	Tubing	
MEASURING POI	NT:		Top of Casing		DEPTH	TO GROUND	WATER:	41.	.60	
SAMPLING I	PERSONNEL:		J. Moore		WATE	ER-COLUMN H	EIGHT:	115	5.20	
STEEL GUAT	RD PIPE AROUND	CASING:		$\overline{\mathcal{Q}}$	YES		NO			
I	LOCKING CAP:			<u> </u>	YES		NO			
PROTECTIVE POST/ABUTMENT:					YES	Ø	NO			
NONPOTABLE LABEL:				<u> </u>	YES		NO			
ID PLATE:				Ø	YES		NO			
WELL INTE	GRITY SATISFAC	CTORY:		Ø	YES		NO			
WELL YIELD:				$\overline{\mathbf{A}}$	HIGH		MODERATE		LOW	
COMMENTS		Monsoon subn	nersible pump,	YSI 650 S/N 0	1H1018 AB; H	ACH turbidity	meter.			
Pump intake set at 125 ft below top of casing due to initially high turbidity readings										
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well										
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO.	TEC	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	l NO	169	
1	0.8	22	6.88	3.26	1766	25	216.1			
25	0.8	22.96	6.74	4.02	2221	>1000	105.5			
50	0.8	22.96	6.73	4.10	2247	>1000	79.5			
75	0.4	22.97	6.72	4.13	2253	357	102.6			
77	0.4	22.97	6.72	4.17	2253	378	100.6			
79	0.4	22.96	6.71	4.20	2258	365	100.2			
		<u> </u>						When pump int	ake initially	
								set at 125 ft bel		
	Sample collected	at 10:40 for the	following tests					heavy sediment	ruined	
								after two gallor	ıs.	
	Qty. Container	Analytical Meti	nod					Pump replaced		
					L					
	1		160.1 / Alkalinit					ļ		
	1		d 300.0 / Nitrate	/Nitrite - Meth	od 353.1					
	1	Cations - Metho			1					
	1	Ammonia - Me	thod 350.1							
	ļ	 				··				
	 	 				 				

Observation wells purged in accordance with ASTM D-6452-99

Prepared	by:	WY
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Date: 4-9-03

Checked by: CAR

Date: 4-9-03



OBSERVATION WELL SAMPLING WORKSHEET

					OBSERVATION WEEL SAMI ENG WORRSHEET						
OBSERVATION WE	ELL ID:		OW-2321 U		MA	CTEC JOB NUM	IBER:	6468-0	7-1777		
PROJECT:	Exe	lon COL Projec		SITE:		Victoria, Texas	s	DATE:	2/19/2008		
MEASURED WELL DEPTH:	113.17		SCREENED	INTERVAL:	100-110		WELL DIA		2 IN.		
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		1.48	CASING N	ATERIAL:	PV	/C		
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing		
MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUNDY	WATER:	51.	.75		
SAMPLING	PERSONNEL:		K. Rudd		WATE	ER-COLUMN H	EIGHT:	61.	.42		
STEEL GUARD PIPE AROUND CASING:					YES		NO				
LOCKING CAP:				Ø	YES		NO				
PROTEC		YES	Ø	NO							
NO		V	YES		NO						
ID PLATE:				7	YES		NO				
WELL INTEGRITY SATISFACTORY:			7	YES		NO					
WELL YIELD:				Ø	HIGH		MODERATE		LOW		
COMMENTS		Monsoon subr	4J16000 AA; F	IACH turbidity	meter.		,				
Pump intake set at 75 ft below top of casing due to initially high turbidity readings											
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well											
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.				
(gallons)	(gpin)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	IES		
1	1	23.50	6.96	4.60	1729	10	130.9				
20	0.8	23.51	6.85	6.20	1695	14	113.9				
33	0.4	23.51	6.87	6.20	1691	3	104.0				
48	0.4	23.52	6.86	5.98	1688	1	108.6		•		
49	0.4	23.51	6.86	5.90	1687	1	109.4				
50	0.4	23.52	6.85	5.88	1687	11	109.9				
											
								· · · · · · · · · · · · · · · · · · ·			
	Sample collected	at 15:35 for the	following tests								
	1										
	Qty. Container	Analytical Met	nod								
		1	<u> </u>								
		TDS - Method									
			od 300.0 / Nitrate	/Nitrite - Meth	od 353.1	ļ					
		Cations - Meth			ļ						
	1	Ammonia - Me	thod 350.1								
······											

Observation wells purged in accordance with ASTM D-6452-99

repared by:	US6-	Date:	4-4-03

Checked by: <u>C48</u> Date: <u>4-9-08</u>



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue

Raleigh, North Carolina 27604

OBSERVATION WELL SAMPLING WORKSHEET OBSERVATION WELL ID: OW-2321 L MACTEC JOB NUMBER: 6468-07-1777 PROJECT: Exclon COL Project SITE: Victoria, Texas DATE: 2/19/2008 SCREENED INTERVAL: WELL DIAMETER: 153.06 FT. 140-150 FT. MEASURED WELL DEPTH: 2 IN. HEIGHT OF MEASURING POINT ABOVE LAND SURFACE: 1.55 CASING MATERIAL: PVC SAMPLING DEVICE: Sec below TUBING TYPE: Dedicated, Disposable Tubing MEASURING POINT: DEPTH TO GROUNDWATER: Top of Casing 51.77 SAMPLING PERSONNEL: WATER-COLUMN HEIGHT: J. Moore 101.29 STEEL GUARD PIPE AROUND CASING: \square YES LOCKING CAP: ablaYES П NO PROTECTIVE POST/ABUTMENT: **V** \Box YES NO NONPOTABLE LABEL. $\overline{\mathbf{Q}}$ YES NO ID PLATE: $\sqrt{}$ YES NO WELL INTEGRITY SATISFACTORY: \square YES П NO WELL YIELD: $\sqrt{}$ HIGH MODERATE LOW Monsoon submersible pump, YSI 650 S/N 01H1018 AB; HACH turbidity meter. COMMENTS Pump intake set at 75 ft below top of casing due to initially high turbidity readings Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well PURGE VOLUME PURGE RATE TEMP SP. COND. TURBIDITY PH D.O. O.R.P. NOTES (°C) (S.U.) (mg/L) (NTU) (± mV) (galions) (gpm) $(\mu S/cm^2)$ 23.77 6.96 5.10 3553 1 68.6 20 0.9 23.92 6.64 2.61 3777 >1000 135.1 45 0.9 23.93 6.65 3.09 3815 787 77.5 65 0.4 23.90 6.60 4.54 3818 324 82.9 70 0.4 23.96 6.59 4.57 3822 307 96.0 75 0.4 23.91 6.58 4.68 3819 315 97.4 80 0.4 23.91 6.58 4.70 3819 320 97.5 82 0.4 23.90 6.58 4.72 3819 312 97.7 Sample collected at 15:30 for the following tests Qty. Container Analytical Method 1 TDS - Method 160.1 / Alkalinity - Method 310.1 1 Anions - Method 300.0 / Nitrate/Nitrite - Method 353.1 1 Cations - Method 200.7 1 Ammonia - Method 350.1

Observation wells purged in accordance with ASTM D-6452-99

repared by:	wir	Date:	Yel.	C)
repared by:	ww	Date:	4	-41.



OBSERVATION WELL SAMPLING WORKSHEET

					OB	SERVATION V	VELL SAMPLII	NG WORKSII	EE1
OBSERVATION WI	ELL ID:		OW-2324 1	U	MA	CTEC JOB NUM	MBER:	6468-0	7-1777
PROJECT:	Exc	elon COL Proje	ct	SITE:		Victoria, Texa:	s	DATE:	2/20/2008
MEASURED WELL DEPTH:	47.9	8 FT.	SCREENED	INTERVAL:	35-45	FT.	WELL DIA	AMETER:	2 IN.
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		1.50	CASING N	ATERIAL:	P	VC
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing
MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	11	.26
SAMPLING	SAMPLING PERSONNEL: K. Rudd				WATE	ER-COLUMN H	EIGHT:	36	.72
STEEL GUA	RD PIPE AROUND	CASING:		Ø	YES		NO		
	LOCKING CAP:			Ø	YES		NO		
PROTECTIVE POST/ABUTMENT:					YES	\square	NO		
NONPOTABLE LABEL:			Ø	YES		NO	•		
	ID PLATE:			Ø	YES		NO		
WELL INT	EGRITY SATISFA	CTORY:		V	YES		NO		
	WELL YIELD:			V	HIGH		MODERATE		LOW
COMMENTS	YSI 650 S/N 0	4J16000 AA; H	IACH turbidity	meter.	•••				
		Pump intake s	set at 25 ft belov	v top of casing	due to initially	high turbidity r	readings		
-		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal/	ft for a 2-inch w	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TE0
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO.	1E2
1	1	22,27	6.95	7.39	1032	145	109.3		
10	1	22.25	6.83	6.61	1316	18	114.5		
23	1	22.24	6.81	6.61	1292	3	118.7		
36	0.4	22.14	6.84	6.19	1280	0	111.2		
38	0.4	22.14	6.84	6.21	1279	0	111.8		
39	0.4	22.14	6.83	6.22	1281	0	110.9		
	 	 							· · · · · · · · · · · · · · · · · · ·
									
···-··	 								
	Sample collected	at 14:00 for the	following tests						
]						
	Qty. Container	Analytical Met	hod						
		TDC M-45-1	160.1 / All-ali-id	- No-41	<u></u>	·			
	1	TDS - Method	od 300.0 / Nitrate				 		
		Cations - Meth			1 222.1				
		1 Ammonia - Me			 		 		
		- IAIIIIIOIIIa - IVIC	, ((Od 330.)		 				
		 							
		 			 				

Observation wells purged in accordance with ASTM D-6452-99

repared by:	in	Date:	पन्पंच	_

Checked by: CHB Date: 4-9-08



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WE	LL I D:		OW-2324 I	Ĺ	MA	CTEC JOB NUM	IBER:	6468-0	7-1777	
PROJECT:	Exel	on COL Projec	et	SITE:		Victoria, Texas	S	DATE:	2/20/2008	
MEASURED WELL DEPTH:	128.17	FT.	SCREENED	INTERVAL:	115-125	FT.	WELL DIA	AMETER:	2 IN.	
HEIGHT OF ME	EASURING POINT	ABOVE LAND	SURFACE:		1.42	CASING M	ATERIAL:	P	VC	
SAMPLING DEVI	CE:		Sec below		TUBING TYPE: Dedic			ated, Disposable Tubing		
MEASURING POI	NT:		Top of Casing		DEPTH TO GROUNDWATER:			11.82		
SAMPLING I	PERSONNEL:		J. Moore		WATE	ER-COLUMN H	EIGHT:	116.35		
STEEL GUAI	ND PIPE AROUND	CASING:			YES		NO			
I	LOCKING CAP:			V	YES		NO			
PROTECT	IVE POST/ABUTM	TENT:			YES	Ø	NO			
ИОИ	IPOTABLE LABEL			\square	YES		NO			
	ID PLATE:			Ø	YES		NO			
WELL INTE	EGRITY SATISFAC	TORY:		V	YES		NO			
	WELL YIELD:			7	HIGH		MODERATE		LOW	
COMMENTS		Monsoon subr	nersible pump,	YSI 650 S/N 0	1H1018 AB; H	ACH turbidity	meter.			
	Pump intake set at 25 ft below top of casing due to initially high turbidity readings									
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal/	ft for a 2-inch w	ell		
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	210	Tro	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm ²)	(NTU)	(± mV)	NO	165	
1	1.25	22.59	7.34	5.93	2107	2	119.2			
25	1.4	22.81	6.75	5.21	2156	12	90.8			
50	1.4	22.82	6.69	5.98	2157	7	54.2			
75	0.4	22.82	6.69	5.96	2158	1	59.6			
77	0.4	22.82	6.68	5.94	2158	1	59.8	****		
										
	Sample collected a	t 14:20 for the	following tests							
	Qty. Container	Analytical Met	hod							
			160.1 / Alkalinit							
			od 300.0 / Nitrat	e/Nitrite - Meth	od 353.1					
		Cations - Meth								
	1	Ammonia - Me	tnod 350.1		 	ļ				
				-	 		,			
			-		 					

Observation wells purged in accordance with ASTM D-6452-99

renared by:	wife	Date:	4-9-08
repared of.		24.4.	, , <u>, , , , , , , , , , , , , , , , , </u>



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue

Raleigh, North Carolina 27604

					OBSERVATION WELL SAMPLING WORKSHEET				IEET		
OBSERVATION W	/ELL ID:		OW-2348 1	Ŭ	MA	CTEC JOB NUN	IBER:	6468-0	07-1777		
PROJECT:	Exc	elon COL Proje	ect	SITE:		Victoria, Texa	s	DATE:	2/19/200		
MEASURED WELL DEPTH:	83.0	9 FT.	SCREENED	INTERVAL:	70-80	FT.	WELL DIA	METER:	2 IN.		
HEIGHT OF N	MEASURING POINT	ABOVE LAND	SURFACE:		1.56	CASING N	ATERIAL:	P	VC		
SAMPLING DE	VICE:		See below		TUBIN	IG TYPE:	Dedicate	l, Disposable	Tubing		
MEASURING PO	TNIC:		Top of Casing		DEPT	H TO GROUND	WATER:	39	0.18		
SAMPLING	SAMPLING PERSONNEL: J. M.		J. Moore		WAT	ER-COLUMN H	EIGHT:	43	3.91		
STEEL GU.	ARD PIPE AROUND	CASING:		$\overline{\mathbf{A}}$	YES		NO				
	LOCKING CAP:			V	YES		NO				
PROTECTIVE POST/ABUTMENT:				YES	Ø	NO					
NC	ONPOTABLE LABE	L:		Ø	YES		NO				
	ID PLATE:			Ø	YES		NO				
WELL IN	TEGRITY SATISFA	CTORY:		<u> </u>	YES		NO				
	WELL YIELD:			<u> </u>	HIGH		MODERATE		LOW		
COMMENT	S	Monsoon sub	mersible pump.			IACH turbidity					
				·		high turbidity					
· , · , · , ·							ft for a 2-inch we	 {1}			
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.				
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NOTES			
1	1	21.87	7.07	8.30	2342	2	161.5				
20	1	22.67	6.87	5.59	2413	2	148.3				
30	11	22.69	6.83	5.18	2417	1	157.0				
40	0.4	22.60	6.82	4.97	2414	1	162.5				
42	0.4	22.67	6.82	5.08	2412	1	166.8				
43	0.4	22.67	6.82	5.10	2414	1	164.3				
		 	 								
						· · · · · · · · · · · · · · · · · · ·		- · · ·			
	Sample collected	at 11:55 for the	following tests								
		<u> </u>	<u> </u>								
	Qty. Container	Analytical Met	thod								
···		TDS Method	160.1 / Alkalinit	Method 310	1						
			od 300.0 / Nitrate			 	 				
		Cations - Meth									
		l Ammonia - Me									
	ı	1				1					

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: Lill- Date: 4-9-60

Checked by: CHB Date: 4-9-08



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue

Raleigh, North Carolina 27604

				OBSERVATION WELL SAMPLING WORKSHEET						
OBSERVATION W	ELL ID:		OW-2348 I	J	MA	CTEC JOB NUN	ABER:	6468-07-1777		
PROJECT:	Ex	elon COL Proje	ct	SITE:		Victoria, Texa	S	DATE:	2/19/2008	
MEASURED WELL DEPTH:	148.3	2 FT.	SCREENED	INTERVAL:	134-144	144 FT. WELL I		METER:	2 IN.	
HEIGHT OF M	IEASURING POINT	ABOVE LAND	SURFACE:		1.49	CASING N	MATERIAL:	P	VC	
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing	
MEASURING PC	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	39).65	
SAMPLING	PERSONNEL:		K. Rudd		WAT	ER-COLUMN H	EIGHT:	10	8.67	
STEEL GUARD PIPE AROUND CASING:				Ø	YES		NO			
LOCKING CAP:				$ \overline{\mathbf{V}} $	YES		NO			
PROTECTIVE POST/ABUTMENT:					YES	Ø	NO			
NO	NPOTABLE LABE	L:		$ \overline{\mathcal{Q}} $	YES		NO		,	
	ID PLATE:			\square	YES		NO			
WELL IN	EGRITY SATISFA	CTORY:		\square	YES		NO			
	WELL YIELD:	· · · · · · · · · · · · · · · · · · ·		Ø	HIGH		MODERATE		LOW	
COMMENTS		Monsoon sub	mersible pump,	YSI 650 S/N 0	4J16000 AA; I	IACH turbidity	meter.	•		
·····		Pump intake	set at 60 ft below	top of casing						
		Purge volume	determined by 1	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch we	eII		
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm ²)	(NTU)	(± mV)	110	···	
1	1	22.74	7.11	8.07	4062	1	83.0			
25	1	23.16	6.61	2.95	4157	0	38.6			
50	1	23.19	6.59	3.30	4130	. 0	42.9			
72	0.4	23.19	6.59	3.53	4123	0	35.9			
73	0.4	23.18	6.59	3.51	4122	0	40.6			
74	0.4	23.19	6.60	3.54	4122	0	42.1			
			 							
		 					 	····		
······································		-	1							
	Sample collected	at 12:30 for the	following tests							
			<u> </u>							
 	Qty. Container	Analytical Met	thod		<u> </u>					
	+	1 TDC - 14-41 4	160.1 / Aller Bride		<u>. </u>	 	<u> </u>			
-			160.1 / Alkalinity			·				
	 		od 300.0 / Nitrate	/Nitrite - Meth	00 353.1					
	 	1 Cations - Meth			 		-			
		1 Ammonia - Mo	20100 220.1		-	-	 			
	+	+		.,,,	 	 	 			
	+	- 	 			 	 			
	1	1			I .	,				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by:	wi	Date:	4-9-08
Checked by:	CHR	Date:	4-9-08



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-2352 U			т	MACTEC JOB NUMBER: 6468-07-1777					
				SITE:	14174				
PROJECT:		lon COL Projec	 			Victoria, Texas		DATE:	2/19/2008
MEASURED WELL DEPTH:		FT.	SCREENED	INTERVAL:	45-55		WELL DIA		2 IN.
	EASURING POINT	ABOVE LAND			1.30		MATERIAL:		VC
SAMPLING DEV			See below			G TYPE:		d, Disposable	Tubing
MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	45	.18
SAMPLING	G PERSONNEL: K. Rudd				WATE	ER-COLUMN H	EIGHT:	13	.42
STEEL GUARD PIPE AROUND CASING:			\square	YES		NO			
	LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO		
PROTEC	TIVE POST/ABUT	MENT:			YES	V	NO		
NO	NPOTABLE LABE			Ø	YES		NO		
	ID PLATE:			Ø	YES		NO		
WELL INT	EGRITY SATISFA	CTORY:		<u> </u>	YES		NO		
	WELL YIELD:			<u> </u>	HIGH		MODERATE		LOW
COMMENTS		Monsoon subn	nersible pump.		1H1018 AB: H	ACH turbidity	t		
			et at 53 ft below						
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well									
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.		
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NQ	TE\$
1	1	22.25	7.19	3.09	1715	>1000	208.6		
10	1	22.45	7.16	6.22	1588	45	198.3		
20	0.4	22.39	7.14	6.70	1517	7	187.9		
24	0.4	22.69	7.13	6.53	1528	23	183.6		
25	0.4	22.60	7.14	6.48	1530	20	182.8		
26	0.4	22.45	7.13	6.46	1515	20	180.7		
					ļ			·. ··· · · · · · · · · · · · · · · · ·	
								· · · · · · · · · · · · · · · · · · ·	
		-							
	Sample collected	at 10:00 for the	following tests						
	Sample conected	10.00 101 1116	tonowing tests		 	 		·	
	Oty. Container	Analytical Meth	nod						
	1								
	1	TDS - Method	160.1 / Alkalinit	y - Method 310).1				
] 1	Anions - Metho	od 300.0 / Nitrate	/Nitrite - Meth	od 353.1				
	1	Cations - Metho	od 200.7						
	1	Ammonia - Me	thod 350.1						
	1	1	1				1		

Observation wells purged in accordance with ASTM D-6452-99

repared by:	not	Date:	4-9-08	

Checked by: CHB Date: 4-2-08



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WE	ELL ID:	OW-2352 L		MA	CTEC JOB NUN	IBER:	6468-07-1777			
PROJECT:		Ion COL Projec		SITE:		Victoria, Texa		DATE:	2/19/2008	
MEASURED WELL DEPTH:	84.9*	FT.		INTERVAL:	80-90		WELL DIA		2 IN.	
	EASURING POINT				1.27		ATERIAL:	PV	· - - · · · · · · · · · · · · · · · · · ·	
SAMPLING DEVI			See below		TUBING TYPE: Dedica			ited, Disposable Tubing		
MEASURING POI	INT:		Top of Casing		DEPTH TO GROUNDWATER:				.26	
SAMPLING I	PERSONNEL:		J. Moore			ER-COLUMN H		39.		
STEEL GUA	RD PIPE AROUND	CASING:		V	YES		NO			
	LOCKING CAP:	•		Ø	YES		NO			
PROTECT	TIVE POST/ABUT	MENT:			YES	Ø	NO			
ИОИ	NPOTABLE LABEL	<i>i</i> :		Ø	YES		NO			
	ID PLATE:			Ø	YES		NO			
WELL INT	EGRITY SATISFAC	CTORY:		Ø	YES		NO			
	WELL YIELD:			V	HIGH		MODERATE		LOW	
COMMENTS		Monsoon subn	nersible pump,	YSI 650 S/N 0	1H1018 AB; H	ACH turbidity	meter.			
Pump intake set at 80 ft below top of casing										
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well										
		* Well depth g	reater than me	asured depth d	ue to sediment	in well				
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	ree	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	110	113	
1	0.8	22.53	6.40	3.42	3742	16	166.4			
20	1	22.87	6.81	5.92	3519	73	25.4			
35	0.4	22.88	6.79	5.65	3437	33	47.5			
39	0.2	22.30	6.80	5.51	3441	37	61.6			
40	0.2	22.37	6.79	5.53	3438	37	62.7			
42	0.2	22.40	6.79	5.49	3437	38	61.5			
· · · · · · · · · · · · · · · · · · ·	-									
··-···································										
	<u> </u>									
	Sample collected	at 10:05 for the	following tests							
	Qty. Container	Analytical Meth	nod					· · · · · · · · · · · · · · · · · · ·		
	1	TDS Mathod	160.1 / Alkalinit	n. Mathad 210	1	·				
	1		d 300.0 / Nitrate			ļ				
	- 1	Cations - Metho		e/1416/fle - Ivletij	00 333.1					
- 	' 1	Ammonia - Me			 					
	1	110					,			
	 							· · · · ·		

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: UY Date: 4-1-07

Checked by: QHB Date: 4-9-8



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue

Raleigh, North Carolina 27604

				OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION WELL ID: OW-2359 U1				MACTEC JOB NUMBER: 6468-07-1777				7-1777	
PROJECT: Excion COL Project			SITE:		Victoria, Texa	s	DATE:	2/20/2008	
MEASURED WELL DEPTH:	98.05	FT,	SCREENED	INTERVAL:	85-95	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF MI	EASURING POINT	ABOVE LAND	SURFACE:		1.63		MATERIAL:	P	VC
SAMPLING DEVI	CE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing
MEASURING POI	NT:		Top of Casing		DEPTI	I TO GROUND	WATER:	55	5.00
SAMPLING I	PERSONNEL:		J. Moore		WATI	ER-COLUMN H	EIGHT:	43	3.05
STEEL GUAI	RD PIPE AROUND	CASING:			YES		NO		
	LOCKING CAP:			Ø	YES		NO		
PROTECT	TIVE POST/ABUTN	1ENT:			YES	\square	NO		
NON	POTABLE LABEL	:		☑	YES		МО		
	ID PLATE:				YES		NO		
WELL INT	EGRITY SATISFAC	CTORY:		Ø	YES		NO		
	WELL YIELD:			\square	HIGH		MODERATE		LOW
COMMENTS		Monsoon subn	nersible pump,	YS1 650 S/N 0	1H1018 AB; H	ACH turbidity	meter.		
		Pump intake s	et at 80 ft below	top of casing	due to initially	high turbidity i	readings		
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch w	eli	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)		1123
1	1	22.86	7.15	6.23	1192	4	204.0		
15	1	23.39	6.88	5.58	1194	0 :	53.7		
35	0.4	23.28	6.87	5.54	1191	4	27.7		
40	0.4	23.27	6.87	5.57	1192	2	27.3		
42	0.4	23.29	6.87	5.55	1192	0	27.3		
				·					
····									
	Sample collected a	t 09:15 for the	following tests						
	Qty. Container	Analytical Metl	nod						
					<u> </u>				
	1		160.1 / Alkalinit						
	<u> </u>		d 300.0 / Nitrate	/Nitrite - Meth	od 353.1				
	 !	Cations - Metho					 		
	 	Ammonia - Me			<u> </u>				
	 2	Kd - distributio	n coemicient			 			
					 				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: LHZ



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-2359 L2			.2	MACTEC JOB NUMBER: 6468-07-17				7-1777	
PROJECT:	PROJECT: Exelon COL Project			SITE:	Victoria, Texas			DATE:	2/20/2008
MEASURED WELL DEPTH:	178.3	178.30 FT. SCREENED I			155-175	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF ME	EASURING POINT	ABOVE LAND	SURFACE:		1.37	CASING N	ATERIAL:	P	vc
SAMPLING DEVI	CE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing
MEASURING POI	NT:		Top of Casing		DEPTH	TO GROUND	WATER:	54	.20
SAMPLING F	PERSONNEL:		K. Rudd		WATE	ER-COLUMN H	EIGHT:	124	1.10
STEEL GUAI	RD PIPE AROUND	CASING:		Ø	YES		NO		
I	OCKING CAP:				YES		NO		
PROTECT	IVE POST/ABUT	MENT:			YES	Ø	NO		
NON	POTABLE LABE	L:		Ø	YES		NO	-	
	ID PLATE:				YES		NO		
WELL INTE	GRITY SATISFA	CTORY:		Ø	YES		NO		
	WELL YIELD:			\square	HIGH		MODERATE		LOW
COMMENTS		Monsoon subr	nersible pump,	YSI 650 S/N 0	4J16000 AA; F	IACH turbidity	meter.		
		Pump intake s	et at 75 ft below	v top of casing	due to initially	high turbidity r	eadings		
							ft for a 2-inch w	ell	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	. 110	TEC
(gallons)	(gpm)	(°C)	(\$.U.)	(mg/L)	(µS/cm²)	(NTU)	(± mV)	NO	1ES
1	1	22.37	7.24	6.77	1906	12	202.1		
25	Ī	23.45	6.75	6.03	2031	1	87.4		
53	1	23.46	6.74	5.98	2033	0	87.1		
78	0.4	23.44	6.74	5.66	2031	0	84.3		
80	0.4	23.45	6.74	5.62	2031	0	87.3		
82	0.4	23.44	6.74	5.59	2031	0	87.7		
		 							
,		<u> </u>							
	Sample collected	at 09:45 for the	following tests						
		Ţ	<u> </u>						
	Qty. Container	Analytical Met	hod		<u> </u>				
		LTDC Mathed	160 1 / Alkalinia	n. Mathad 210	<u> </u>				
			160.1 / Alkalinit od 300.0 / Nitrate	 					
		Cations - Meth		CARTING - INTERN	T	<u> </u>	 		
		1 Ammonia - Me						 	
						_			

Observation wells purged in accordance with ASTM D-6452-99

Prepared by:	-5L
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Date: 4-9-03

Checked by: CHB

Date: 4-9-08

Laboratory Test Reports



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Exelon COL Project

Project Number: 6468-07-1777

Project Manager: Scott Auger

Project Principal: Kathryn White

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use. Based on the presence of ammonia in the method blank associated with samples OW-2301U and OW-2301L, MACTEC recommends using these data as non-detect values at the Reporting Limit of 50 μ g/L.

REPORT : Analytical Report Lot #: F8B210166
SUBCONTRACTOR: TestAmerica, Earth City, MO
DATE OF ACCEPTANCE : 3/17/2008
TECHNICAL REVIEWER: William S. Grimes hall 3.
PROJECT PRINCIPAL: Kathryn A. White Jathum Thill



ANALYTICAL REPORT

PROJECT NO. 6468071777

Excelon Victoria TEXAS COL

Lot #: F8B210166

Kathryn White

MACTEC Engineering & Consultin 3301 Atlantic Ave Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

March 10, 2008

Case Narrative LOT NUMBER: F8B210166

This report contains the analytical results for the six samples received under chain of custody by TestAmerica St. Louis on February 19, 2008. These samples are associated with your EXcelon Victoria TEXAS COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Due to limitations of the data reporting system method 6020 is reported for metals analysis; however, 6020C was used to perform the analysis.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batches 8052202, 8039204, and 8045132:

The MS (MSD) recoveries for batches 8052202 - silicon, 8039204- iron, and 8045132- barium, chromium and lead are outside the established QC limits. The analyte concentrations in the original sample are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210166 (1): OW-2169U

F8B210166 (2): OW-2169L

F8B210166 (3): OW-2269U

F8B210166 (4): OW-2269L

F8B210166 (5): OW-2301U

F8B210166 (6): OW-2301L

Batches 8052202 and 8045132:

The MS (MSD) recoveries for batches 8052202 (calcium) and 8045132 (silver) are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210166 (1): OW-2169U F8B210166 (2): OW-2169L F8B210166 (3): OW-2269U F8B210166 (4): OW-2269L F8B210166 (5): OW-2301U F8B210166 (6): OW-2301L

Batches 8052202 and 8045132:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8B210166 (1): OW-2169U F8B210166 (2): OW-2169L F8B210166 (3): OW-2269U F8B210166 (4): OW-2269L F8B210166 (5): OW-2301U F8B210166 (6): OW-2301L

Anions (MCAWW 300.0A)

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery for Nitrite in batch 8052287 is attributed to matrix interference.

Affected Samples:

F8B210166 (1): OW-2169U F8B210166 (2): OW-2169L F8B210166 (3): OW-2269U F8B210166 (4): OW-2269L F8B210166 (5): OW-2301U F8B210166 (6): OW-2301L

Alkalinity (MCAWW 310.1)

Batch 8058071 for total alkalinity the matrix spike failed due to a 5x dilution.

Affected Samples:

F8B210166 (4): OW-2269L

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8B210166

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8B210166

WO #_	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KHE9E	001	OW-2169U	02/18/08	10:30
KHE9L	002	OW-2169L	02/18/08	10:20
KHE9N	003	OW-2269U	02/18/08	12:30
KHE9P	004	OW-2269L	02/18/08	14:00
KHE9R	005	OW-2301U	02/18/08	15:30
KHE9T	006	OW-2301L	02/18/08	15:40

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: OW-2169U

TOTAL Metals

Lot-Sample #...: F8B210166-001 Matrix....: WATER

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

					•		
		REPORTIN	G			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
Prep Batch #	.: 8052202						
Calcium	53200 N	2000	ug/L	SW846	6020	02/21-02/25/08	KHE9E1AN
		Dilution Fact	or: 20	Analysis	Time: 16:43		
Iron	ND	500	ug/L	SW846	6020	02/21-02/23/08	KHE9E1AP
		Dilution Fact	or: 10	Analysis	Time: 21:50		
Potassium	2620	1000	ug/L	SW846	6020	02/21-02/23/08	KHE9E1AO
		Dilution Fact	٥.	Analysis	Time: 21:50	,,,	
				_			
Magnesium	14000	500	ug/L	SW846	6020	02/21-02/23/08	KHE9E1AR
		Dilution Fact	or: 10	Analysis	Time: 21:50		
Manganese	ND		ug/L	SW846	6020	02/21-02/23/08	KHE9E1AT
		Dilution Fact	or: 10	Analysis	Time: 21:50		
Sodium	194000	500	ug/L	SW846	6020	02/21-02/23/08	KHE9E1AU
		Dilution Fact	or: 10	Analysis	Time: 21:50		
Silicon	20700 N*	5000	uq/L	SW846	6020	02/21-02/25/08	KHEGE1 ZV
DITICON	20700 R	Dilution Fact			Time: 16:43	02/21 02/23/00	idmonth,
				rmuny 313			
Prep Batch #							
Silica	44300	250	ug/L		602 0	03/07/08	KHE9E1A7
		Dilution Fact	or: 1	Analysis	Time: 00:00		

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2169U

General Chemistry

Lot-Sample #...: F8B210166-001 Work Order #...: KHE9E Matrix....: WATER

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	397	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.26	0.25	mg/L	MCAWW 300.0A Analysis Time: 01:16	02/19/08	8052282
		DITUCION FACE	OI: 1	Analysis lime: 01:16		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	02/22/08	8053135
		Dilution Fact	or: 1	Analysis Time: 00:00		
Chloride	77.0	10.0	mg/L	MCAWW 300.0A	02/19/08	8052283
		Dilution Fact	or: 50	Analysis Time: 03:04		
Fluoride	1.1	0.10	mg/L	MCAWW 300.0A	02/19/08	8052284
		Dilution Fact	or: 1	Analysis Time: 01:16		
Ion Balance Difference	2.3	0.10	ક	SM18 1030F & API	02/27/08	8058113
		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.53	0.020	mg/L	MCAWW 300.0A	02/19/08	8052286
		Dilution Fact	or: 1	Analysis Time: 01:16		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	02/19/08	8052287
		Dilution Fact	or: 1	Analysis Time: 01:16		
Nitrogen, as Ammonia	22.7 B	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
		Dilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	74.6	5.0	mg/L	MCAWW 300.0A	02/19/08	8052285
		Dilution Fact	or: 10	Analysis Time: 02:50		
Total Alkalinity	397	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	642	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

I Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2169L

TOTAL Metals

Lot-Sample #...: F8B210166-002 Matrix....: WATER

Date Sampled...: 02/18/08 10:20 Date Received..: 02/19/08

	REPORTING					PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
Pol-1-1	0055500						
Prep Batch #		2000	/7	OTTO 4 C	5000	00/07 00/07/00	
Calcium	65500 N	2000	ug/L	SW846		02/21-02/25/08	KHE9L1AN
		Dilution	Factor: 20	Analysis	Time: 16:47		
Iron	ND	500	ug/L	SW846	6020	02/21-02/23/08	KHE9L1AP
		Dilution	Factor: 10	Analysis	Time: 21:54		
~	2600	1000	n /T	OTAO A C	6000	00/01 00/00/00	~~~~
Potassium	2680	1000	ug/L	SW846		02/21-02/23/08	KHEALTYÖ
		Dilution	Factor: 10	Analysis	Time: 21:54		
Magnesium	16000	500	ug/L	SW846	6020	02/21-02/23/08	KHE9L1AR
		Dilution	Factor: 10	Analysis	Time: 21:54		
			- 1-	5770.4.5	5000	20/2- 20/20/20	
Manganese	9.8 B		ug/L		6020	02/21-02/23/08	KHE9L1AT
		Dilution	Factor: 10	Analysis	Time: 21:54		
Sodium	218000	500	ug/L	SW846	6020 ⁻	02/21-02/23/08	KHR9L1AU
		Dilution	Factor: 10	Analysis	Time: 21:54		
			_				
Silicon	21100 N*	5000	ug/L	SW846	6020	02/21-02/25/08	KHE9L1AV
		Dilution	Factor: 20	Analysis	Time: 16:47		
		•					
Prep Batch #	- 8067296						
Silica	45200	250	ug/L	SW846	6020	03/07/08	KHR9L1A2
DILLUA	10200	Dilution	.		Time: 00:00	03,07,00	MILLIAN
		חדדתרדטוו	raceur: 1	MIGTARIZ	TIME: 00:00		

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

Client Sample ID: OW-2169L

General Chemistry

Lot-Sample #...: F8B210166-002 Work Order #...: KHE9L Matrix...... WATER

Date Sampled...: 02/18/08 10:20 Date Received..: 02/19/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	398	10.0	mg/L	MCAWW 310.1	02/22/08	8053134
	ם	ilution Fact	or: 2	Analysis Time: 00:00		
Bromide	0.36	0.25	mg/L	MCAWW 300.0A Analysis Time: 01:03	02/19/08	8052282
				•		
Carbonate Alkalinity		10.0 ilution Fact	mg/L or: 2	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	119	10.0	mg/L	MCAWW 300.0A	02/19/08	8052283
	ם	ilution Fact	or: 50	Analysis Time: 02:37		
Fluoride	1.1	0.10	mg/L	MCAWW 300.0A	02/19/08	8052284
	ם	ilution Fact	or: 1	Analysis Time: 01:03		
Ion Balance Difference	0.78	0.10	各	SM18 1030F & API	02/27/08	8058113
	D	ilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.47	0.020	mg/L	MCAWW 300.0A	02/19/08	8052286
	Ď	ilution Fact	or: 1	Analysis Time: 01:03		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	02/19/08	8052287
	ם	ilution Fact	or: 1	Analysis Time: 01:03		
Nitrogen, as Ammonia			ug/L	MCAWW 350.1	02/22/08	8053421
	D	ilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	122	5.0	mg/L	MCAWW 300.0A	02/19/08	8052285
	D	ilution Fact	or: 10	Analysis Time: 02:24		
Total Alkalinity	398	10.0	mg/L	MCAWW 310.1	02/22/08	8053136
	D	ilution Fact	or: 2	Analysis Time: 00:00		
Total Dissolved Solids	780	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
	ם	ilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

 $^{\,}B\,\,$ Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2269U

TOTAL Metals

Lot-Sample #...: F8B210166-003 Matrix....: WATER Date Sampled...: 02/18/08 12:30 Date Received..: 02/19/08 REPORTING PREPARATION-WORK LIMIT RESULT UNITS METHOD ANALYSIS DATE ORDER # Prep Batch #...: 8052202 ug/L SW846 6020 Calcium 116000 N 1000 02/21-02/26/08 KHE9NIAN Dilution Factor: 10 Analysis Time..: 13:30 Iron ND 500 uq/L SW846 6020 02/21-02/23/08 KHE9N1AP Dilution Factor: 10 Analysis Time..: 21:57 1000 Potassium 4050 uq/L SW846 6020 02/21-02/23/08 KHE9N1AQ Dilution Factor: 10 Analysis Time..: 21:57 500 ug/L SW846 6020 Magnesium 17800 02/21-02/23/08 KHE9NLAR Dilution Factor: 10 Analysis Time..: 21:57 Manganese ND 20 ug/L SW846 6020 02/21-02/23/08 KHE9N1AT Dilution Factor: 10 Analysis Time..: 21:57 Sodium 181000 500 ug/L SW846 6020 02/21-02/23/08 KHE9N1AU Dilution Factor: 10 Analysis Time ..: 21:57 Silicon 2500 SW846 6020 02/21-02/23/08 KHE9N1AV 16800 N* ug/L Dilution Factor: 10 Analysis Time..: 21:57 Prep Batch #...: 8067296 SW846 6020 03/07/08 Silica 36000 250 ug/L KHE9N1A2 Dilution Factor: 1 Analysis Time..: 00:00

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2269U

General Chemistry

Lot-Sample #...: F8B210166-003 Work Order #...: KHE9N Matrix.....: WATER

Date Sampled...: 02/18/08 12:30 Date Received..: 02/19/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	339	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
-	Di	lution Facto	or: 1	Analysis Time: 00:00		
Bromide	0.72	0.25	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:43	02/19/08	8052282
Carbonate Alkalinity		5.0	mg/L	MCAWW 310.1	02/22/08	8053135
	נם	lution Facto	or: 1	Analysis Time: 00:00		
Chloride	224 Di	20.0 Lution Facto	mg/L or: 100	MCAWW 300.0A Analysis Time: 04:24	02/19/08	8052283
Fluoride	0.45	0.10	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:43	02/19/08	8052284
Ion Balance Difference	0.080 B	0.10	ક	SM18 1030F & API	02/27/08	8058113
	Di	llution Facto	or: 1	Analysis Time: 00:00	•	
Nitrate	0.59	0.020	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:43	02/19/08	8052286
Nitrite	ND	0.020	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:43	02/19/08	8052287
Nitrogen, as Ammonia		50.0	ug/L or: 1	MCAWW 350.1 Analysis Time: 00:00	02/22/08	8053421
Sulfate	105	5.0	mg/L or: 10	MCAWW 300.0A Analysis Time: 04:11	02/19/08	8052285
Total Alkalinity	339	5.0 ilution Facto	mg/L or: 1	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053136
Total Dissolved	801	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
SOLIUS	D	ilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2269L

TOTAL Metals

Lot-Sample #...: F8B210166-004 Matrix..... WATER Date Sampled...: 02/18/08 14:00 Date Received..: 02/19/08 REPORTING PREPARATION-WORK METHOD PARAMETER RESULT LIMIT UNITS ANALYSIS DATE ORDER # Prep Batch #...: 8052202 Calcium 209000 N 1000 ua/L SW846 6020 02/21-02/26/08 KHE9PIAN Dilution Factor: 10 Analysis Time..: 13:33 SW846 6020 Iron 873 500 ug/L 02/21-02/23/08 KHE9PLAP Dilution Factor: 10 Analysis Time...: 22:01 1000 SW846 6020 Potassium 16100 uq/L 02/21-02/23/08 KHE9PLAQ Dilution Factor: 10 Analysis Time..: 22:01 Magnesium 2740 500 uq/L SW846 6020 02/21-02/23/08 KHE9P1AR Dilution Factor: 10 Analysis Time..: 22:01 Manganese 14.3 B uq/L SW846 6020 02/21-02/23/08 KHE9PLAT Dilution Factor: 10 Analysis Time..: 22:01 Sodium 160000 500 ug/L SW846 6020 02/21-02/23/08 KHE9P1AU Dilution Factor: 10 Analysis Time..: 22:01 Silicon 8320 N* 2500 ug/L SW846 6020 02/21-02/23/08 KHE9PLAV Dilution Factor: 10 Analysis Time..: 22:01 Prep Batch #...: 8067296 Silica 17800 250 uq/L SW846 6020 03/07/08 KHE9P1A6 Dilution Factor: 1 Analysis Time..: 00:00

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

Client Sample ID: OW-2269L

General Chemistry

Lot-Sample #...: F8B210166-004 Work Order #...: KHE9P Matrix.....: WATER

Date Sampled...: 02/18/08 14:00 Date Received..: 02/19/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	ND .	25.0	mg/L	MCAWW 310.1	02/27/08	8058069
· -		Dilution Fact	or: 5	Analysis Time: 00:00		
Bromide	0.57	0.25	mg/L	MCAWW 300.0A	02/19/08	8052282
		Dilution Fact	or: 1	Analysis Time: 01:30		
Carbonate Alkalinity	324	25.0	mg/L	MCAWW 310.1	02/27/08	8058071
		Dilution Fact	or: 5	Analysis Time: 00:00		
Chloride	214	20.0	mg/L	MCAWW 300.0A	02/19/08	8052283
		Dilution Fact	or: 100	Analysis Time: 03:57		
Fluoride	0.38	0.10	mg/L	MCAWW 300.0A	02/19/08	8052284
		Dilution Fact	or: 1	Analysis Time: 01:30		
Ion Balance Difference	0.28	0.10	8	SM18 1030F & API	02/27/08	8058113
		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.097	0.020	mg/L	MCAWW 300.0A	02/19/08	8052286
		Dilution Fact	or: 1	Analysis Time: 01:30		
Nitrite	0.19	0.020	mg/L	MCAWW 300.0A	02/19/08	8052287
		Dilution Fact	or: 1	Analysis Time: 01:30	•	
Nitrogen, as Ammonia	72.8	50.0	ug/L	MCAWW 350.1	02/22/08	8053422
		Dilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	23.9	5.0	mg/L	MCAWW 300.0A	02/19/08	8052285
		Dilution Fact	or: 10	Analysis Time: 03:4	i	
Total Alkalinity	592	25.0	mg/L	MCAWW 310.1	02/27/08	8058072
		Dilution Fact	or: 5	Analysis Time: 00:0)	
Total Dissolved Solids	872	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
•		Dilution Fact	or: 1	Analysis Time: 00:0)	

Matrix WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2301U

TOTAL Metals

Lot-Sample #...: F8B210166-005

Date Sampled...: 02/18/08 15:30 Date Received..: 02/19/08

REPORTING PREPARATION-WORK RESULT LIMIT UNITS PARAMETER METHOD ANALYSIS DATE ORDER # Prep Batch #...: 8052202 SW846 6020 Calcium 77400 N 2000 uq/L 02/21-02/25/08 KHB9R1AN Dilution Factor: 20 Analysis Time..: 16:57 ND 500 uq/L SW846 6020 02/21-02/23/08 KHE9R1AP Iron Dilution Factor: 10 Analysis Time..: 22:04 SW846 6020 Potassium 3860 1000 ug/L 02/21-02/23/08 KHE9R1AQ Dilution Factor: 10 Analysis Time..: 22:04 500 uq/L SW846 6020 Magnesium 8660 02/21-02/23/08 KHE9R1AR Dilution Factor: 10 Analysis Time..: 22:04 ND ug/L SW846 6020 Manganese 02/21-02/23/08 KHE9R1AT Dilution Factor: 10 Analysis Time..: 22:04 130000 SW846 6020 02/21-02/23/08 KHE9R1AU Sodium 500 uq/L Dilution Factor: 10 Analysis Time..: 22:04 Silicon 27300 N* 5000 SW846 6020 02/21-02/25/08 KHE9R1AV ug/L Dilution Factor: 20 Analysis Time..: 16:57 Prep Batch #...: 8067296 Silica 58400 ug/L SW846 6020 03/07/08 KHR9R1CF 250 Analysis Time..: 00:00 Dilution Factor: 1

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2301U

General Chemistry

Lot-Sample #...: F8B210166-005 Work Order #...: KHE9R Matrix.....: WATER

Date Sampled...: 02/18/08 15:30 Date Received..: 02/19/08

PARAMETER	RESULT	RL	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	333	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
	Dil	ution Fact	or: 1	Analysis	Time: 00:00		
Bromide	0.24 B	0.25	mg/L		300.0A Time: 02:10	02/19/08	8052282
Carbonate Alkalinity		5.0	mg/L		310.1	02/22/08	8053135
	Dil	ution Fact	or: 1	Analysis	Time: 00:00		
Chloride	73.5	10.0 ution Fact	mg/L .or: 50		300.0A Time: 06:39	02/19/08	8052283
Fluoride	0.66	0.10 ution Fact	mg/L .or: 1		300.0A Time: 02:10	02/19/08	8052284
Ion Balance Difference	0.60	0.10	%	SM18	1030F & API	02/27/08	8058113
	Dil	ution Fact	or: 1	Analysis	Time: 00:00		
Nitrate	0.68	0.020 ution Fact	mg/L or: 1		300.0A Time: 02:10	02/19/08	8052286
Nitrite	ND Dil	0.020 ution Fact	mg/L or: 1		300.0A Time: 02:10	02/19/08	8052287
Nitrogen, as Ammonia	*	50.0	ug/L		350.1 Time: 00:00	02/22/08	8053421
Sulfate	35.4	5.0 ution Fact	mg/L		300.0A Time: 05:31	02/19/08	8052285
Total Alkalinity	333	5.0	mg/L	MCAWW	310.1 Time: 00:00	02/22/08	8053136
Total Dissolved Solids	520	5.0	mg/L	_	160.1	02/25-02/26/08	8056085
501145	Dil	ution Fact	cor: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2301L

TOTAL Metals

Lot-Sample #...: F8B210166-006 Matrix....: WATER Date Sampled...: 02/18/08 15:40 Date Received..: 02/19/08 REPORTING PREPARATION-WORK LIMIT METHOD RESULT UNITS ANALYSIS DATE ORDER # Prep Batch #...: 8052202 114000 N 1000 ug/L SW846 6020 Calcium 02/21-02/26/08 KHE9T1AN Dilution Factor: 10 Analysis Time..: 13:37 Iron ND 500 ug/L SW846 6020 02/21-02/23/08 KHE9T1AP Dilution Factor: 10 Analysis Time..: 22:08 1000 SW846 6020 Potassium 5130 uq/L 02/21-02/23/08 KHE9T1AQ Dilution Factor: 10 Analysis Time..: 22:08 SW846 6020 500 ug/L Magnesium 14600 02/21-02/23/08 KHE9T1AR Dilution Factor: 10 Analysis Time..: 22:08 Manganese 112 20 SW846 6020 02/21-02/23/08 KHE9T1AT Dilution Factor: 10 Analysis Time..: 22:08 500 SW846 6020 02/21-02/23/08 KHE9T1AU Sodium 122000 ug/L Dilution Factor: 10 Analysis Time ..: 22:08 2500 SW846 6020 02/21-02/23/08 KHE9T1AV Silicon 16800 N* ug/L Dilution Factor: 10 Analysis Time..: 22:08 Prep Batch #...: 8067296 03/07/08 Silica 36000 250 uq/L SW846 6020 KHE9T1A2 Dilution Factor: 1 Analysis Time..: 00:00

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2301L

General Chemistry

Lot-Sample #...: F8B210166-006 Work Order #...: KHE9T
Date Sampled...: 02/18/08 15:40 Date Received..: 02/19/08

Matrix..... WATER

PARAMETER	RESULT	RL .	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	300	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
-		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.42	0.25 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:57	02/19/08	8052282
Carbonate Alkalinity		5.0 Dilution Fact	mg/L	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
				•		
Chloride	155	20.0 Dilution Fact	mg/L or: 100	MCAWW 300.0A Analysis Time: 04:51	02/19/08	8052283
Fluoride	0.26	0.10 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:57	02/19/08	8052284
Ion Balance	2.3	0.10	윰	SM18 1030F & API	02/27/08	8058113
Difference		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.36	0.020 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:57	02/19/08	8052286
Nitrite	ND	0.020 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:57	02/19/08	8052287
Nitrogen, as Ammonia	22.7 B,	J 50.0 Dilution Fact	ug/L or: 1	MCAWW 350.1 Analysis Time: 00:00	02/22/08	8053421
Sulfate	62.5	5.0 Dilution Fact	mg/L	MCAWW 300.0A Analysis Time: 04:38	02/19/08	8052285
Total Alkalinity	300	5.0 Dilution Fact	mg/L	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053136
Total Dissolved Solids	669	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F8B210166

Matrix..... WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sampl	e #: F8B21000	0-202 Prep Batch #	.: 8052202		
Calcium	ND	100 ug/L	SW846 6020	02/21-02/25/08	KHFJT1AF
		Dilution Factor: 1 Analysis Time: 15:26			
		AMELYSIS IIMC IS.20			
Iron	ND	50 ug/L	SW846 6020	02/21-02/23/08	KHFJT1AC
		Dilution Factor: 1			
		Analysis Time: 20:32			
Magnesium	ND	50 ug/L	SW846 6020	02/21-02/23/08	KHFJTLAE
		Dilution Factor: 1			
		Analysis Time: 20:32			
Manganese ND	NTO	2 ug/L	SW846 6020	02/21-02/23/08	אר בייד. דעד
	112	Dilution Factor: 1	5,040 0020	02/21 02/23/00	Idii O I IAI
		Analysis Time: 20:32			
_					
Potassium	ND	100 ug/L	SW846 6020	02/21-02/23/08	KHFJT1AI
		Dilution Factor: 1 Analysis Time: 20:32		•	
	•	Andrysis lime 20.32			•
Silicon	ND	250 ug/L	SW846 6020	02/21-02/23/08	KHFJT1AF
		Dilution Factor: 1	•		
		Analysis Time: 20:32	٠		
Sodium	ND	50 ug/L	SW846 6020	02/21-02/23/08	KHFJT1A0
		Dilution Factor: 1			
		Analysis Time: 20:32			
			•	•	
MB Lot-Sampl	Le #: F8C07000	0-296 Prep Batch #	.: 8067296		
Silica	ND	250 ug/L	SW846 6020	03/07/08	KH71W1A
		Dilution Factor: 1			
		Analysis Time: 00:00			
NOTE (S):					

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #: 1	F8B210166		Matrix: WATER			
PARAMETER Bicarbonate	RESULT	REPORTING LIMIT UNITS Work Order #: KHHMN1AA	METHOD MB Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B220000-134	PREP BATCH #	
Alkalinity	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 310.1	02/22/08	8053134	
Bicarbonate Alkalinity		Work Order #: KHNGK1AA	MB Lot-Sample #:	F8B270000-069		
	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 310.1	02/27/08	8058069	
Bromide	ND	Work Order #: KHH461AA 0.25 mg/L Dilution Factor: 1 Analysis Time: 12:43	MB Lot-Sample #: MCAWW 300.0A	F8B210000-282 02/19/08	8052282	
Carbonate Alkalini	ty ND	Work Order #: KHHM21AA 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 310.1	F8B220000-135 02/22/08	8053135	
Carbonate Alkalini	ty ND	Work Order #: KHNGN1AA 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 310.1	F8B270000-071 02/27/08	8058071	
Chloride	ND	Work Order #: KHH481AA 0.20 mg/L Dilution Factor: 1 Analysis Time: 12:43	MB Lot-Sample #: MCAWW 300.0A	F8B210000-283 02/19/08	8052283	
Fluoride	MD	Work Order #: KHH5DlAA 0.10 mg/L Dilution Factor: 1 Analysis Time: 12:43	MB Lot-Sample #: MCAWW 300.0A	F8B210000-284 02/19/08	8052284	
Nitrate	ND	Work Order #: KHH5Q1AA 0.020 mg/L Dilution Factor: 1 Analysis Time: 12:43	MB Lot-Sample #: MCAWW 300.0A	F8B210000-286 02/19/08	8052286	
Nitrite	ND	Work Order #: KHH5TlAF 0.020 mg/L Dilution Factor: 1 Analysis Time: 12:43	A MB Lot-Sample #: MCAWW 300.0A	F8B210000-287 02/19/08	8052287	

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8B210166

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as Ammo	nia 22.7 B	Work Order #: KHJ1N 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	1AA MB Lot-Sample # MCAWW 350.1	F8B220000-421 02/22/08	8053421
Nitrogen, as Ammo	nia ND	Work Order #: KHJ1P3 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	1AA MB Lot-Sample #: MCAWW 350.1	F8B220000-422 02/22/08	8053422
Sulfate	ND .	Work Order #: KHH5JI 0.50 mg/L Dilution Factor: 1 Analysis Time: 12:43	1AA MB Lot-Sample #: MCAWW 300.0A	F8B210000-285 02/19/08	8052285
Total Alkalinity	ND	Work Order #: KHHM81 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	IAA MB Lot-Sample #: MCAWW 310.1	F8B220000-136 02/22/08	8053136
Total Alkalinity	ND .	Work Order #: KHNGQ1 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	IAA MB Lot-Sample #: MCAWW 310.1	F8B270000-072 02/27/08	8058072
Total Dissolved Solids	ND	Work Order #: KHM9Q1 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	1AA MB Lot-Sample #:	F8B250000-085	8056085

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8B210166			Matrix	: WATER
PARAMETER		RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium		(85 - 115)	SW846 6020	2202 02/21-02/25/08 dysis Time: 15:30	KHFJT1AJ
Iron	101			02/21-02/23/08 Alysis Time: 20:36	KHFJT1AK
Potassium	103			02/21-02/23/08 Alysis Time: 20:36	KHFJT1AL
Magnesium	100			02/21-02/23/08 lysis Time: 20:36	KHFJT1AM
Manganese	107			02/21-02/23/08 lysis Time: 20:36	KHFJTIAN
Sodium	99			02/21-02/23/08 Alysis Time: 20:36	KHFJTlAP
Silicon	103			02/21-02/23/08 dysis Time: 20:36	KHFJT1AQ
LCS Lot-Sample#: Silica		(0.0- 0.0)	SW846 6020	7296 03/07/08 Clysis Time: 00:00	KH71W1AC

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #: F8B210166	Matrix: WATER
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	PERCENT	RECOVERY	מפא		· PREPARATION-	PREP
PARAMETER					ANALYSIS DAT	
Bicarbonate		WO#: KHHMN1 AC	-LCS/KHH	MN1AD-LCSD	LCS Lot-Sample#: F8	3220000-134
Alkalinity		,, o ,, v. 2222 24 12	200, 1442		Tee Tee Dampien: 10	2220000 231
111111111111111111111111111111111111111		(90 - 110)		MCAWW 310.1	02/22/08	8053134
					02/22/08	
				Analysis T		***************************************
Carbonate All					LCS Lot-Sample#: F8	
	100	(90 - 110)		MCAWW 310.1	02/22/08	8053135
	100	(90 - 110) 0.49	(0-15)	MCAWW 310.1	02/22/08	8053135
		Dilution Fac	tor: 1	Analysis T	ime: 00:00	
					LCS Lot-Sample#: F8	
		(90 - 110)		MCAWW 350.1	02/22/08	8053421
	99				02/22/08	8053421
		Dilution Fac	tor: 1	Analysis T	ime: 00:00	
Mitusen on	Naman I a	WO# . PTI T1 D1 NO	ד מפ /צעד	י מאות ד	LCS Lot-Sample#: F8	2220000 472
Nitrogen, as					. 02/22/08	
					02/22/08	
	101					0053422
		Dilution Fac	cor: 1	Analysis T	'ime: 00:00	
Total Alkalin	nity	WO#:KHHM81AC	-LCS/KHH	M81AD-LCSD	LCS Lot-Sample#: F8	8220000~136
	100	(90 - 110)		MCAWW 310.1	02/22/08	8053136
	100	(90 - 110) 0.49	(0-15)	MCAWW 310.1	02/22/08	8053136
				Analysis T		
Total Dissol	ved	WO#:KHM9Q1AC	-LCS/KHM	9Q1AD-LCSD	LCS Lot-Sample#: F8	B250000-085
	98	(86 - 115)		MCAWW 160.1	02/25-02/26/	08 8056085
	99	(86 - 115) 1.6	(0-15)	MCAWW 160.1	02/25-02/26/	08 8056085
		Dilution Fac	tor: 1	Analysis T	ime: 00:00	

NOTE(S):

Matrix..... WATER

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B210166

PARAMETER Bicarbonate Alkalinity	PERCENT RECOVERY	RECOVERY PREPARATION- PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KHNGK1AC LCS Lot-Sample#: F8B270000-069
•	100	(90 - 110) MCAWW 310.1 02/27/08 8058069 Dilution Factor: 1 Analysis Time: 00:00
Bromide	101	Work Order #: KHH461AC LCS Lot-Sample#: F8B210000-282 (90 - 110) MCAWW 300.0A 02/19/08 8052282 Dilution Factor: 1 Analysis Time: 12:29
Carbonate Alkal	inity 100	Work Order #: KHNGN1AC LCS Lot-Sample#: F8B270000-071 (90 - 110) MCAWW 310.1 02/27/08 8058071 Dilution Factor: 1 Analysis Time: 00:00
Chloride	96	Work Order #: KHH481AC LCS Lot-Sample#: F8B210000-283 (90 - 110) MCAWW 300.0A 02/19/08 8052283 Dilution Factor: 1 Analysis Time: 12:29
Fluoride	96	Work Order #: KHH5D1AC LCS Lot-Sample#: F8B210000-284 (90 - 110) MCAWW 300.0A 02/19/08 8052284 Dilution Factor: 1 Analysis Time: 12:29
Nitrate	103	Work Order #: KHH5Q1AC LCS Lot-Sample#: F8B210000-286 (90 - 110) MCAWW 300.0A 02/19/08 8052286 Dilution Factor: 1 Analysis Time: 12:29
Nitrite	101	Work Order #: KHH5T1AC LCS Lot-Sample#: F8B210000-287 (90 - 110) MCAWW 300.0A 02/19/08 8052287 Dilution Factor: 1 Analysis Time: 12:29
Sulfate	98	Work Order #: KHH5J1AC LCS Lot-Sample#: F8B210000-285 (90 - 110) MCAWW 300.0A 02/19/08 8052285 Dilution Factor: 1 Analysis Time: 12:29
Total Alkalinit	У 100	Work Order #: KHNGQ1AC LCS Lot-Sample#: F8B270000-072 (90 - 110) MCAWW 310.1 02/27/08 8058072 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot : Date Sample		10166 9/08 10:00 Date Received.	.: 02/20/08	Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Samp	le #: F8B21		.: 8052202		•
Calcium	69 N	(75 - 125)	SW846 6020	02/21-02/25/08	
·	114	(75 - 125) 11 (0-20) Dilution Factor: 10 Analysis Time: 15:40	SW846 6020	02/21-02/25/08	KHE551CJ
Iron	112	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CK
	121	(75 - 125) 6.6 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CL
Magnesium	99	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CP
	104	(75 - 125) 2.5 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CQ
Manganese	110	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CR
	111	(75 - 125) 0.93 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CT
Potassium	101	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CM
	105	(75 - 125) 2.9 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CN
Silicon	0 11	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CW
	212 N,*	(75 - 125) 0.0 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CX
Sodium	76	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CU
	107	(75 - 125) 4.9 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08	KHE551CV

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

^{*} Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B210166 Matrix.....: WATER

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

PARAMETER Bromide	PERCENT RECOVERY 98	LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KHE9R1A2 MS Lot-Sample #: F8B210166-005 (90 - 110) MCAWW 300.0A 02/19/08 8052282
Chloride	101	Dilution Factor: 1 Analysis Time: 02:10 Work Order #: KHE9R1A4 MS Lot-Sample #: F8B210166-005 (90 - 110) MCAWW 300.0A 02/19/08 8052283
Fluoride	100	Dilution Factor: 50 Analysis Time: 06:39 Work Order #: KHE9R1A6 MS Lot-Sample #: F8B210166-005 (90 - 110) MCAWW 300.0A 02/19/08 8052284
Nitrate		Dilution Factor: 1 Analysis Time: 02:10 Work Order #: KHE9R1CA MS Lot-Sample #: F8B210166-005
Nitrite	108	(90 - 110) MCAWW 300.0A 02/19/08 8052286 Dilution Factor: 1 Analysis Time: 02:10 Work Order #: KHE9R1CD MS Lot-Sample #: F8B210166-005
	146 N	(90 - 110) MCAWW 300.0A 02/19/08 8052287 Dilution Factor: 1 Analysis Time: 02:10
Nitrogen, as Am	monia 97	Work Order #: KHE551C0 MS Lot-Sample #: F8B210151-001 (90 - 110) MCAWW 350.1 02/22/08 8053421 Dilution Factor: 1 Analysis Time: 00:00
Nitrogen, as Am	monia 104	Work Order #: KHH7C1A1 MS Lot-Sample #: F8B220240-003 (90 - 110) MCAWW 350.1 02/22-02/25/08 8053422 Dilution Factor: 1 Analysis Time: 00:00
Sulfate	99	Work Order #: KHE9R1A8 MS Lot-Sample #: F8B210166-005 (90 - 110) MCAWW 300.0A 02/19/08 8052285 Dilution Factor: 10 Analysis Time: 05:31
Total Alkalinit	У 93	Work Order #: KHE9E1A4 MS Lot-Sample #: F8B210166-001 (80 - 120) MCAWW 310.1 02/22/08 8053136 Dilution Factor: 1 Analysis Time: 00:00
Total Alkalinit		Work Order #: KHE9P1A4 MS Lot-Sample #: F8B210166-004 (80 - 120) MCAWW 310.1 02/27/08 8058072 Dilution Factor: 5 Analysis Time: 00:00

NOTE(S)

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8B210166

Work Order #...: KHE9R-SMP

KHE9R-DUP

Matrix....: WATER

Date Sampled...: 02/18/08 15:30 Date Received..: 02/19/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8B210166-005	
0.24 B	0.25	mg/L	5.1	(0-20)	MCAWW 300.0A	02/19/08	8052282
		Dilution Fac	ctor: 1	Ana	alysis Time: 02:10		
Chloride					SD Lot-Sample #:	F8B210166-005	
73.5	70.0	mg/L	4.9	(0-20)	MCAWW 300.0A	02/19/08	8052283
		Dilution Fac		Ana	alysis Time: 06:39	, ,	
Fluoride					SD Lot-Sample #:	F8B210166-005	
0.66	0.66	mg/L	0.49	(0-20)	MCAWW 300.0A	02/19/08	8052284
		Dilution Fac	ctor: 1	Ana	llysis Time: 02:10		
Sulfate					SD Lot-Sample #:	F8B210166-005	
35.4	35.0	mg/L	0.95	(0-20)	MCAWW 300.0A	02/19/08	8052285
		Dilution Fac	ctor: 10	Ana	alysis Time: 05:31		
Nitrate					SD Lot-Sample #:	F8B210166-005	
0.68	0.70	mq/L	3.8	(0-20)	MCAWW 300.0A		8052286
		Dilution Fac			alysis Time: 02:10		
Nitrite					SD Lot-Sample #:	F8B210166-005	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A		8052287
		Dilution Fac			alysis Time: 02:10		
					•		

NOTE(S):

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8B210166

Work Order #...: KHE9E-SMP

Matrix....: WATER

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

KHE9E-DUP

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210166-001	PREP BATCH #
397	396	mg/L	0.25	(0-15)	MCAWW 310.1	02/22/08	8053134
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alkalin	ity				SD Lot-Sample #:	F8B210166-001	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	02/22/08	8053135
		Dilution Fa		Ana	alysis Time: 00:00		•
Total Alkalinity					SD Lot-Sample #:	F8B210166-001	
397	396	mg/L	0.25	(0-20)	MCAWW 310.1	02/22/08	8053136
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Total Dissolved Solids					SD Lot-Sample #:	F8B210166-001	
642 [.]	679	mg/L Dilution Fa	5.6 ctor: 1		MCAWW 160.1	02/25-02/26/08	8056085

General Chemistry

Client Lot #...: F8B210166

Work Order #...: KHE55-SMP

Matrix....: WATER

KHE55-DUP

Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

	DUPLICATE			RPD	•	PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as Ammonia					SD Lot-Sample #:	F8B210151-001	
22.7 B,J	22.7 B	ug/L	0.0	(0-20)	MCAWW 350.1	02/22/08	8053421
	I	ilution Fact	or: 1	Ana	lysis Time: 00:00		

NOTE (S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

General Chemistry

Client Lot #...: F8B210166

Work Order #...: KHH7C-SMP

Matrix....: WATER

KHH7C-DUP

Date Sampled...: 02/21/08 12:15 Date Received..: 02/22/08

•	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD_	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as	Ammonia				SD Lot-Sample #:	F8B220240-003	
ND	7.9 B	ug/L	200	(0-20)	MCAWW 350.1	02/22/08	8053422
		Dilution Fac	tor: 1	Ana	alysis Time: 00:00		

NOTE(S):

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8B210166 Work Order

Work Order #...: KHFEE-SMP

Matrix....: WATER

KHFEE-DUP

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

PARAM RESULT Total Dissolved	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210162-006	PREP BATCH #
Solids							•
1090	1150	mg/L	5.3	(0-0.0)	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8B210166 Work Order #...: KHE9P-SMP

Matrix....: WATER

KHE9P-DUP

Date Sampled...: 02/18/08 14:00 Date Received..: 02/19/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210166-004	PREP BATCH #
Alkalinity ND	ND	mg/L	0	(0-15)	MCAWW 310.1	02/27/08	8058069
		Dilution Fa	ctor: 5	Ana	lysis Time: 00:00	, ,	
Carbonate Alkalin	itv				SD Lot-Sample #:	F8B210166-004	
324	330	mg/L	1.8	(0-20)	MCAWW 310.1	02/27/08	8058071
		Dilution Fa	ctor: 5	Ana	lysis Time: 00:00		
Total Alkalinity					SD Lot-Sample #:	F8B210166-004	
592	605	mg/L	2.2	(0-20)	MCAWW 310.1	02/27/08	8058072
		Dilution Fac	ctor: 5	Ana	lysis Time: 00:00		

F8B210166

Project Manager: IV

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

2008-02-19

Date Received:

2008-02-26

Analytical Due Date: Report Due Date:

2008-02-26

EXcelon Victoria TEXAS COL Report to: Kathry WHite

SDG:

RUSH

PO#: Client:

Project:

373886

6468071777

200803591

MACTEC Engineering and Consulting Inc

Quote #: 78576

#SMPS in LOT: 6

Report Type: W EDD Code: 00

<u>SAMP</u>	LE #	CLIEN	IT SAMPI	<u>EID</u>	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORD	ER	1	
1		OW-2	169U				2008-02-1	18/ 1030	KHE9E	W.	ATER	
SAMP	LE C	MMEN	ITS:									
FE	МН	SW846	6020	Inductively Coupled P Mass Spectrometry(60		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK	06	
кх	MH	SW846	6020	Inductively Coupled P Mass Spectrometry(60	lasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A		06	
MG	мн	SW846	6020	Inductively Coupled P Mass Spectrometry(60	lasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A		06	
MN	мн	SW846	6020	Inductively Coupled P Mass Spectrometry(60	lasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A		06	
NA	МН	SW846	6020	Inductively Coupled P Mass Spectrometry(60	iasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A		06	
SA	MH	SW846	6020	Inductively Coupled P Mass Spectrometry(60	lasma 0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A		06	
SI	мн	SW846	6020	Inductively Coupled P Mass Spectrometry(60	asma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A		06	•
·CA	мн	SW846	6020	Inductively Coupled P Mass Spectrometry(60	asma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A		06	
XX	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A		06	
ХX	AK		160.1	Solids, Filterable "TDS	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	C8	MCAW W	300.0A	(160.1) Fluoride (300.0A, Ion	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
ХХ	C9	MCAW W	A0.00E	Chromatography) Nitrate as N (300.0A, I	on88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK ' LOC	06	
XX	СВ	MCAW W	310.1	Chromatography) Alkalinity, Carbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PŖOT: A	WRK	06	
XX	СХ	MCAW W	300.0A	(310.1) Chloride (300.0A, ion	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX	CY	MCAW	300.0A	Chromatography) Sulfate (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A		06	
XX	GM	MCAW W	300.0A	Chromatography) Bromide (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION DESCRIPTION	01	STANDARD TEST SET	PROT:A		06	
XX	GO	MCAW W	300.0A	Chromatography) Nitrite as N (300,0A, I	88 no	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A		06	
XX	SL	SM18	1030F &	Chromatography) Ion Balance (%	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A		06	
XX	υx	MCAW W	API 310.1	Difference) Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A		06	
XX	VÇ	MCAW W	310.1	(310.1) Alkalinity, Total	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A		06	
XX	VM	MCAW	350.1	(310.1) Nitrogen, Ammonia (3	50.1, 88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A		06	
XX	VC	W MCAW	310.1	Automated) Alkalinity, Total	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A		06	
XX	AK	W MCAW	160.1	(310.1) Solids, Filterable "TD:	88 88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX	СВ	W MCAW	310.1	(160,1) Alkalinity, Carbonate	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT; A		06	
ХX	UX	MCAW	310.1	(310.1) Alkalinity, Bicarbonate	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
xx	vc	W MCAW W	310.1	(310.1) Alkalinity, Total (310.1)	88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06	
SAME	LE#		NT SAMP		Site ID	Client Matrix	DATE/TI	IME SAMPLED	WORKORD		<u></u>	
2	_	OW-2	169L				2008-02-	18/ 1020	KHE9L	W	'ATER	·
SAME	LE C	OMME!	NTS:									
FE	МН	SW846	6020	Inductively Coupled F Mass Spectrometry(6		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK LOC	06	
SI	мн	SW846	6020	Inductively Coupled F Mass Spectrometry(6	lasme GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
SA	МН	SW846	6020	Inductively Coupled F Mass Spectrometry(6	Plasma 0X		9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06	
NA	МН	SW846	6020	Inductively Coupled F Mass Spectrometry(6	Plasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
MN	МН	SW846	6020	Inductively Coupled F Mass Spectrometry(6	lasma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06	
estAme	orica - S	it. Louis	Log	ged in by: VAN	Al 2008	-03-10 13:38:02	pı	rinted on: Monday, March	10, 2008 02:40 Pf	И		Page 1 o

F8B210166

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS 2008-02-19

Project Manager: IV

Quote #: 78576

SDG:

Date Received: Analytical Due Date: 2008-02-26

Project:

6468071777

EXcelon Victoria TEXAS COL

Report Due Date:

2008-02-26

PO#:

200803591

Report to: Kathry WHite

RUSH #SMPS in LOT: 6

Report Type: W EDD Code: 00

373886 MACTEC Engineering and Consulting Inc Client:

кх	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
CA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A	WRK	06	
MG	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	ZV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	C8	MCAW W	300.0A	Fluoride (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	CB	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	CX	MCAW W	A0.00E	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	.01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX	SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	

SAMPL	_E#	CLIEN	NT SAMPL	E ID Site	ID	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	1 .
3		OW-2	269U				2008-02-1	8/ 1230	KHE9N	W	ATER
SAMPI	E CO	OMMEN	NTS:								
	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06
NA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MN	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
KX	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
FE	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
XX	Z۷		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT; A	WRK	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT; A	WRK	06
XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18	1030F & API	Ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06

TestAmerica - St. Louis

Logged in by:

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2008-03-10

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printed on: Monday, March 10, 2008 02:40 PM

Page 2 of 5

F8B210166 Project Manager: IV

6468071777

200803591

373886

Project:

PO#:

Client:

CLIENT ANALYSIS SUMMARY

Quote #: 78576

MACTEC Engineering and Consulting Inc

EXcelon Victoria TEXAS COL

Report to: Kathry WHite

Storage Loc:

1-225,METS

Date Received:

2008-02-19

2008-02-26

Report Due Date:

Analytical Due Date:

2008-02-26

RUSH

#SMPS in LOT: 6

Report Type: W EDD Code: 00

XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1 Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
SAMI	PLE#	CLIE	NT SAMPL	<u>EID</u>	Site ID	Client Matrix	DATE/T	ME SAMPLED	WORKOR	DER	Ī		
4		OW-2	2269L				2008-02-	18 / 1400	KHE9F	· w	ATER		
SAM	PLEIC	OMME	VTS:										
CA		SW846		Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
FE	МН	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
кх	мн	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
MG	мн	SW846	6020	Inductively Coupled Plasm	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	•	
MN	МН	SW846	6020	Mass Spectrometry(6020) inductively Coupled Plasm	a GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06		
SA	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasm	a 0X	CALCULATION	9 Q	ORG FLAGS FOR INORG;	PROT: A	LOC WRK	06		
SI	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasm	a GJ	ONLY METALS, TOTAL - 2%	01	STANDARD STANDARD TEST SET	PROT: A	WRK	06		
ΝA	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasm	≅ GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
XX			RAD	Mass Spectrometry(6020) RAD	RA	HCL IN-HOUSE RAD	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
XX		MCAW	SCREEN 160.1	SCREEN Solids, Filterable "TDS"	88	SCREEN NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
XX		W MCAW	300.0A	(160.1) Fluoride (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
XX		W	300.0A	Chromatography) Nitrate as N (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
XX		W MCAW		Chromatography) Alkalinity, Carbonate	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06		
		W MCAW		(310.1) Alkalinity, Carbonate		PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06		•
XX		W		(310.1)	88	PERFORMED / DIRECT NO SAMPLE PREPARATION				LOC			
XX		W	300.0A	Chloride (300.0A, Ion Chromatography)	88	PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC	06		
XX		W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	GM	W	300.0A	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	SL	SM18	1030F & API	lon Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	UX	MCAW W	310.1	Alkalinity, Bicarbonale (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06		
XX	ŲX	MCAW W	310.1	Alkalinity, Bloarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SÉT	PROT: A	WRK	06		
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1 Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
s xx	vc	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
X XX	СВ	MCAW	310.1	Alkalinily, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
X XX	UX	MCAW	310.1	Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
X XX	vc	MCAW W	310.1	(310.1) Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06		
SAM	PLE#	CLIE	NT SAMP	LE ID	Site ID	Client Matrix	DATE/T	IME SAMPLED	WORKOF	RDER	Ţ		
5		OW-	2301U				2008-02-	18 / 1530	KHE9F	۲ v	/ATER		
	PLF	OMME											
<u> </u>			···········										

F8B210166

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-225.METS

Date Received:

2008-02-19

2008-02-26

Analytical Due Date:

2008-02-26

Project: PO#:

Project Manager: IV 6468071777 Quote #: 78576

MACTEC Engineering and Consulting Inc.

EXcelon Victoria TEXAS COL

RUSH

Report Due Date:

Client:

200803591 373886

Report to: Kathry WHite

Report Type: W EDD Code: 00 #SMPS in LOT: 6

	NA	мн	SW846	6020	Inductively Coupled Plass			METALS, TOTAL • 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	ŞA	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plast	ne ()	χC	CALCULATION	9Q	ORG FLAGS FOR INORG;	PROT: A	WRK	06
	MN	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasn	na G	۱ L	ONLY METALS, TOTAL - 2%	01	STANDARD STANDARD TEST SET	PROT: A	WRK	06
	MG	МН	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasm	na G	J A	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	кх	мн	SW845	6020	Mass Spectrometry(6020) Inductively Coupled Plasm	na G	J N	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	FE	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasn	na G	۱۱	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	CA	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plass	na G	J A	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	SI	мн	SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plass	na G	J۸	ICL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
		zv		RAD	Mass Spectrometry(6020) RAD	R	A I	HCL N-HOUSE RAD	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	XX	AK	MCAW	SCREEN 160.1	SCREEN Solids, Filterable *TDS*	88	. S	SCREEN NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
	XX	C8	W MCAW	300.0A	(160.1) Fluoride (300.0A, Ion	88	F	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06
	XX	C9	W MCAW		Chromatography) Nitrate as N (300.0A, Ion	88	P	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
	XX	CB	W MCAW		Chromatography) Alkalinity, Carbonate	88	F	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06
			W		(310.1) Chloride (300.0A, lon	88	F	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	
	XX	CX	W MCAW		Chromatography) Sulfate (300.0A, Ion		F	PERFORMED / DIRECT NO SAMPLE PREPARATION		STANDARD TEST SET		LOC	06
	XX	CY	W		Chromatography) Bromide (300.0A, Ion	88	F	PERFORMED / DIRECT	01		PROT: A	LOC	06
	XX	GM	MCAW W		Chromatography)	88	F	PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC	06
	XX	-	MCAW .		Nitrite as N (300.0A, Ion Chromatography)	88	P	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	SL		1030F & API	lon Balance (% Difference)	.02	^ (DALCULATION DNLY	. 01	STANDARD TEST SET	PROT: A	WRK	06
	XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88		O SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	VM	MCAW W	350,1	Nitrogen, Ammonia (350,1 Automated)	. 88		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
S	XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	88		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
S	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, lon Chromatography)	81		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
S	XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
S	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT:A	WRK	06
S	XX	GM	MCAW W	A0.00E	Bromide (300.0A, Ion Chromalography)	81	8 1	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
S	XX	GO	MCAW W	30D.0A	Nitrite as N (300.0A, Ion Chromatography)	88	1 8	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	ХX	C8		300.0A	Fluoride (300.0A, Ion Chromalography)	8	8	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06 .
X	XX	C9	• •	A0.00E	Nitrate as N (300.0A, Ion Chromatography)	8	8	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	XX	CX	MCAW	300.0A	Chloride (300.0A, Ion	8	8 1	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	XX	CY		300.0A	Chromatography) Sulfate (300.0A, Ion	8	8 1	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06
X	ХХ	GM		300.0A	Chromatography) Bromide (300.0A, Ion	8	8 1	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06
X	XX	GO		300.0A	Chromatography) Nitrite as N (300.0A, Ion	8	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT:A	WRK	06
-			W		Chromatography)			PERFORMED / DIRECT	·			LOC	
	<u>SAMP</u>	LE#	CLIE	NT SAMPL	E ID	Site ID		Client Matrix	DATE/T	IME SAMPLED	WORKOR	<u>DER</u>	1
	6			2301L					2008-02-	18/ 1540	KHE9T	W	/ATER
	SAMP				Inductivaly Counted Di-			METALS TOTAL 201	• •	STANDADD TOOT OF	DD 07 4	WE:	00
	FE	МН	SW846	0020	Inductively Coupled Plas Mass Spectrometry(6020			METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06

Logged in by:

VANIAL

2008-03-10

TestAmerica - St. Louis

13:38:02

Page 4 of 5

printed on: Monday, March 10, 2008 02:40 PM

F8B210166

Project Manager: IV

Project:

PO#:

Client:

6468071777

200803591

373886

CLIENT ANALYSIS SUMMARY

SDG:

Quote #: 78576

MACTEC Engineering and Consulting Inc.

EXcelon Victoria TEXAS COL

Report to: Kathry WHite

Storage Loc:

Report Type: W

EDD Code: 00

1-225,METS

2008-02-19

Date Received:

2008-02-26

Analytical Due Date:

Report Due Date: 2008-02-26

RUSH

#SMPS in LOT: 6

SA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06
SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry (6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
NΑ	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
ΚХ	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
CA	МН	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MN	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	300.0A	Nitrate as N (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CB	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW W	300.0A	Sulfate (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18	1030F & API	Ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	VΜ	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06

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Temperature on Receipt	

Drinking Water? Yes ☐ No 🗹

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MACTEC		Projec	l IYIBI	ayer	. 1	ffli LE	am s B	ى: مىنىد) (2)	m	ez 1	درور	9) 8	131	رم -	129		'	Date		/19	3[Λ:	a	- 1'	Chair	06 Custody	Number 701	1
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3301 Atlantic Ave			Æ	36C			0-	74	11	5	-									N	A					Pag	el_	of	l
City , State Zip	Code	Site Co	ontaci 2	t	⊃· ⊃		La	b Co		-	,							naly. ore s								T			
Project Name and Location (State)	27604	Carrier	DIT	bill N	e lumba				4	M	+			╁─	Т		Γ'''	<u> </u>	pac	0 15	1166	T	Τ	_	7-	\dashv		•	
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Exalon Victoria COL, TX Contract/Purchase Order/Quote No.							T	•		ntai		· &		\ <u>A</u>		,	2,5										Special Conditio	l Instru ons of l	ctions/ Receipt
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Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soff	Unpres	H2SO4	HAO3	3 3	2 2	250	Ş	707-	Anians	metal	Am						1	727	4	ع	TOOP		
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OW-2169L	2,18-08	10:20		X			2	1	l			\perp		1	ì	1	1									h	old for l	1: trak	Nite
OW-2269U	2-18-08	12:30		X			2	1	١	┸			_	ı	1	١.	1						Γ				<u> </u>		<u>, , , , , , , , , , , , , , , , , , , </u>
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Possible Hazard Identification	<u> </u>	L	S	ample	e Disp	osai		!	Ь.	ل		_!									<u> </u>	<u>. </u>							
💹 Non-Hazard 🔲 Flammable 🔲 Skin Irritant	Polson B	Unknown	, 🗆] Re	tum 1	o Clle	ent	XX i	Disp	osal	By L	ab		Arch	ive F	or _	•		Mon	ths	(A lor				sses: onth)		semples are	eretaine	d
Turn Around Time Required	· —							OC	Re	quire	men	its (Sp	pectfy	1)															
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2. Relinqlished By	•	Date		_	Time	9		2. F	lece	eived	Вy				-							-				Date		Time	
3. Relinquished By		Date			17 <i>m</i> i	9	. ,	3. F	lece	eived	Ву														لن	Date	;	Time	
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Comments	:							:																					
DISTRIBUTION: WHITE - Returned to Client with Report;	CANARY - Stays	with the Sam	ole; F	PINK	- Flel	d Cor	y	·																	—-	··			



- 2087-**(s):	F68210144	
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Client: Ma	chec	COC/RFA No:	Condit	ion Upon Rece	ipt Form Date:	02.19.08
Quote No:	78571.	Initiated By:	Z		Time:	0950
hipper Name:	Fedy	Shir	ping I	nformation	Multiple Packages	Y (N)
hipping # (s):*	-1700 5-111			:	Sample Temperature	' <u>'</u>
. <u>1992</u>	7439 51/4	6		- 	1	_ 6
•						7. 8.
·		9.			4.	9.
·		10.			5.	10.
		nbered Sample Temp lines and "N/A" for not applicable):	vari	ample must be reco ance does NOT aff	ect the following: Metals-Liquid	ntents below. Temperature or Rad tests-Liquid or Solids
) N	Are there cust the cooler?	tody seals present on	8.	У) и	Are there custody seals p	
Y N N	be tampered v		9.	Y NO N/A	Do custody seals on bott with?	
Y N	opening, but l	s of cooler frisked after before unpacking?	10.	Y N N/A	Was sample received wit make note below)	
X M	Custody?	ved with Chain of	11.	YN	If N/A- Was pH taken b lab?	y original TestAmerica
. У и и	sample ID's o	in of Custody match on the container(s)?	12. (X, N	Sample received in prop	
· Y B		eceived broken?	13.	Y N (N/A)	Yes, note sample ID's below)	OX liquid samples? -(If
. (Д) и	analysis?		14.	YN	Was Internal COC/Work	share received?
Notes:	, <u> </u>	s, pH of ALL containers receive				
						
		· · · · · · · · · · · · · · · · · · ·			•	
· · · · · · · · · · · · · · · · · · ·			•			
	•					
						
			T. C			
☐ Client Cont	act Name:		Info	ormed by:		
☐ Sample(s) p	act Name: processed "as is"			-		
☐ Client Cont☐ Sample(s) p☐ Sample(s) c☐ Sample(s) c☐ Project Manage	act Name: processed "as is" pn hold until: ment Review:		≥ If re	eleased, notify:	FANY ITEM IS COMPLETED I	



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Exelon COL Project

Project Number: 6468-07-1777

Project Manager: Scott Auger

Project Principal: Kathryn White

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use. Based on the presence of ammonia in the method blank associated with samples OW-2352U, OW-2352L, OW-2348U, OW-2348L, OW-2321U, and OW-2321L, MACTEC recommends using these data as non-detect values at the Reporting Limit of 50 μ g/L.

REPORT: Analytical Report Lot #: F8B210151	
SUBCONTRACTOR: TestAmerica, Earth City, MO	
DATE OF ACCEPTANCE : 4/10/2008	
TECHNICAL REVIEWER: William S. Grimes	willi dita
PROJECT PRINCIPAL: Kathryn A. White - Authryn	- This





ANALYTICAL REPORT

PROJECT NO. 6468071777

EXcelon Victoria TEXAS COL

Lot #: F8B210151

Kathryn White

MACTEC Engineering & Consultin 3301 Atlantic Ave Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

March 10, 2008

Case Narrative LOT NUMBER: F8B210151

This report contains the analytical results for the six samples received under chain of custody by TestAmerica St. Louis on February 20, 2008. These samples are associated with your EXcelon Victoria TEXAS COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Due to limitations of the data reporting system method 6020 is reported for metals analysis; however, 6020C was used to perform the analysis.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batches 8052202, 8039204, and 8045132:

The MS (MSD) recovery for batches 8052202 - silicon, 8039204- iron, and 8045132- barium, chromium and lead are outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210151 (1): OW-2352U

F8B210151 (2): OW-2352L

F8B210151 (3): OW-2348U

F8B210151 (4): OW-2348L

F8B210151 (5): OW-2321U

F8B210151 (6): OW-2321L

Batches 8052202 and 8045132:

The MS (MSD) recoveries for batches 8052202 (calcium) and 8045132 (silver) are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210151 (1): OW-2352U F8B210151 (2): OW-2352L F8B210151 (3): OW-2348U F8B210151 (4): OW-2348L F8B210151 (5): OW-2321U F8B210151 (6): OW-2321L

Batches 8052202 and 8045132:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8B210151 (1): OW-2352U F8B210151 (2): OW-2352L F8B210151 (3): OW-2348U F8B210151 (4): OW-2348L F8B210151 (5): OW-2321U F8B210151 (6): OW-2321L

Anions (MCAWW 300.0A)

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery for Chloride in batch 8052301 and Nitrite in batch 8052305 is attributed to matrix interference.

Affected Samples:

F8B210151 (1): OW-2352U F8B210151 (2): OW-2352L F8B210151 (3): OW-2348U F8B210151 (4): OW-2348L F8B210151 (5): OW-2321U F8B210151 (6): OW-2321L

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8B210151

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8B210151

<u>wo #</u>	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KHE55	001	OW-2352U	02/19/08	10:00
KHE6M	002	OW-2352L	02/19/08	10:05
KHE6N	003	OW-2348U	02/19/08	11:55
KHE6P	004	OW-2348L	02/19/08	12:30
KHE6Q	005	OW-2321U	02/19/08	15:35
KHE6R	006	OW-2321L	02/19/08	15:30

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: OW-23520

TOTAL Metals

Lot-Sample #...: F8B210151-001
Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08 Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	82200 N	1000 Dilution Factor	ug/L r: 10	SW846 6020 Analysis Time: 15:33	02/21-02/25/08	KHE551AN
Iron	143 B	500 Dilution Factor	ug/L r: 10	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AP
Potassium	2180	1000 Dilution Facto	ug/L r: 10	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AQ
Magnesium	19500	500 Dilution Facto:	ug/L r: 10	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AR
Manganese	ND .	20 Dilution Factor	J.	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AT
Sodium	139000	500 Dilution Factor	ug/L r: 10	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AU
Silicon	17300 N*	2500 Dilution Factor	ug/L r: 10	SW846 6020 Analysis Time: 20:39	02/21-02/23/08	KHE551AV
Prep Batch # Silica	37000	250 Dilution Factor	ug/L r: 1	SW846 6020 Analysis Time: 00:00	03/07/08	KBE551C2

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

Client Sample ID: OW-2352U

General Chemistry

Lot-Sample #...: F8B210151-001 Work Order #...: KHE55 Matrix.....: WATER Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

PARAMETER	RESULT	\mathtt{RL}	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	329	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
•		Dilution Facto	or: 1	Analysis Time: 00:00		
Bromide	0.52	0.25	mg/L	MCAWW 300.0A	02/20/08	8052300
	•	Dilution Facto	or: 1	Analysis Time: 02:31		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	02/22/08	8053135
		Dilution Facto	or: 1	Analysis Time: 00:00		
Chloride	164	20.0	mg/L	MCAWW 300.0A	02/20/08	8052301
		Dilution Facto	or: 100	Analysis Time: 07:18		
Fluoride	0-74	0.10	mg/L	MCAWW 300.0A	02/20/08	8052302
		Dilution Facto	or: 1	Analysis Time: 02:31		
Ion Balance Difference	2.5	0.10	*	SM18 1030F & API	02/27/08	8058113
•		Dilution Facto	or: 1	Analysis Time: 00:00		
Nitrate	0.61	0.020	mg/L	MCAWW 300.0A	02/20/08	8052304
		Dilution Facto	or: 1	Analysis Time: 02:31		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/20/08	8052305
		Dilution Facto	or: 10	Analysis Time: 06:40		
Nitrogen, as Ammonia	22.7 B	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
		Dilution Facto	or: 1	Analysis Time: 00:00) .	
Sulfate	55.7	5.0	mg/L	MCAWW 300.0A	02/20/08	8052303
		Dilution Facto	or: 10	Analysis Time: 06:40		
Total Alkalinity	329	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	602	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	or: 1	Analysis Time: 00:0		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Matrix....: WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2352L

TOTAL Metals

Lot-Sample #...: F8B210151-002

Date Sampled...: 02/19/08 10:05 Date Received..: 02/20/08

REPORTING PREPARATION-WORK RESULT LIMIT UNITS METHOD PARAMETER ANALYSIS DATE ORDER # Prep Batch #...: 8052202 Calcium 95800 N 2000 uq/L SW846 6020 02/21-02/25/08 KHE6MLAN Dilution Factor: 20 Analysis Time..: 15:48 1300 500 uq/L SW846 6020 Iron 02/21-02/23/08 KHE6M1AP Dilution Factor: 10 Analysis Time..: 21:02 4090 1000 ug/L SW846 6020 Potassium 02/21-02/23/08 KHE6M1AQ Dilution Factor: 10 Analysis Time..: 21:02 500 SW846 6020 Magnesium 19700 ug/L 02/21-02/23/08 KHE6MLAR Dilution Factor: 10 Analysis Time..: 21:02 Manganese 34.9 20 uq/L SW846 6020 02/21-02/23/08 KHE6MLAT Dilution Factor: 10 Analysis Time..: 21:02 Sodium 184000 500 SW846 6020 ug/L 02/21-02/23/08 KHE6M1AU Dilution Factor: 10 Analysis Time..: 21:02 Silicon 21200 N* 5000 ug/L SW846 6020 02/21-02/25/08 KHE6MLAV Dilution Factor: 20 Analysis Time..: 15:48

uq/L

SW846 6020

Analysis Time..: 00:00

NOTE(S):

Silica

45400

250

Dilution Factor: 1

Prep Batch #...: 8067296

03/07/08

KHE6M1A2

 $[\]ensuremath{\text{N}}$ Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2352L

General Chemistry

Lot-Sample #...: F8B210151-002 Work Order #...: KHE6M Matrix....: WATER

Date Sampled...: 02/19/08 10:05 Date Received..: 02/20/08

PARAMETER	RESULT	RL	UNITS	METHOI)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	311	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
•	r	Dilution Facto	or: 1	Analysis	Time: 00:00		•
Bromide	0.61	0.25	mg/L		300.0A	02/20/08	8052300
	L	oilution Facto	or: 1	Analysis	Time: 02:18		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1	02/22/08	8053135
	I	ilution Facto	or: 1	Analysis	Time: 00:00		
Chloride	234	20.0	mg/L		300.0A	02/20/08	8052301
	E	Dilution Facto	or: 100	Analysis	Time: 06:28	,	
Fluoride	0.37	0.10	mg/L	MCAWW	300.0A	02/20/08	8052302
		ilution Facto	or: 1	Analysis	Time: 02:18		. ₩
Ion Balance Difference	3.9	0.10	욯	SM18	LO30F & API	02/27/08	8058113
	r	oilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	1.1	0.020	mg/L	MCAWW	300.0A	02/20/08	8052304
	Γ	Dilution Fact	or: 1	Analysis	Time: 02:18		
Nitrite	ND	0.20	mg/L	MCAWW	300.0A	02/20/08	8052305
	I	Dilution Fact	or: 10	Analysis	Time: 06:16		
Nitrogen, as Ammonia	22.7 B,	J 50.0	ug/L	MCAWW	350.1	02/22/08	8053421
- ·	I	Dilution Fact	or: 1	Analysis	Time: 00:00		
Sulfate	118	5.0	mg/L	MCAWW	300.0A	02/20/08	8052303
·	1	Dilution Fact	or: 10	Analysis	Time: 06:16		
Total Alkalinity	311	5.0	mg/L	MCAWW	310.1	02/22/08	8053136
	1	Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	788	5.0	mg/L	MCAWW	160.1	02/25-02/26/08	8056085
	:	Dilution Fact	or: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Matrix....: WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2348U

TOTAL Metals

Lot-Sample #...: F8B210151-003

Date Sampled...: 02/19/08 11:55 Date Received..: 02/20/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOL)	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	: 8052202 159000 N	1000 Dilution Fact	ug/L		6020 Time: 15:59	02/21-02/25/08	KHE6N1AN
Iron	ND	500 Dilution Factor	ug/L or: 10	SW846		02/21-02/23/08	KHE6N1AP
Potassium	4380	1000 Dilution Factor	٥.	SW846 Analysis	6020 Time: 21:06	02/21-02/23/08	KHE6N1AQ
Magnesium	30400	500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:06	02/21-02/23/08	KHE6N1AR
Manganese	ND	20 Dilution Facto	ug/L or: 10		6020 Time: 21:06	02/21-02/23/08	KHE6N1AT
Sodium	166000	500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:06	02/21-02/23/08	KHE6N1AU
Silicon	16600 N*	2500 Dilution Factor	ug/L or: 10		6020 Time: 21:06	02/21-02/23/08	KHE6N1AV
Prep Batch # Silica	: 8067296 35500	250 Dilution Fact	ug/L or: 1	SW846 Analysis	6020 Time: 00:00	03/07/08	KHE6N1A2

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2348U

General Chemistry

Lot-Sample #...: F8B210151-003 Work Order #...: KHE6N
Date Sampled...: 02/19/08 11:55 Date Received..: 02/20/08 Matrix..... WATER

PARAMETER	RESULT	RL RL	UNITS	METHOD)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	252	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
•	D	ilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	1.1	0.25	mg/L		300.0A	02/20/08	8052300
	D	ilution Facto	or: 1	Analysis	Time: 02:06		
Carbonate Alkalinity		5.0	mg/L	MCAWW		02/22/08	8053135
	D	ilution Facto	or: 1	Analysis	Time: 00:00		
Chloride	453	20.0	mg/L		300.0A	02/20/08	8052301
	D	ilution Facto	or: 100	Analysis	Time: 06:03		
Fluoride	0.37	0.10	mg/L	MCAWW	300.0A	02/20/08	8052302
	D	ilution Facto	or: 1	Analysis	Time: 02:06		, .
Ion Balance Difference	6.6.	0.10	육	SM18 1	IGA & 40E0.	02/27/08	8058113
	D	ilution Fact	or: 1	Analysis	Time: 00:00		
Nitrate	0.57	0.020	mg/L	MCAWW	300.0A	02/20/08	8052304
	D	ilution Fact	or: 1	Analysis	Time: 02:06		
Nitrite	ND	0.20	mg/L	MCAWW	300.0A	02/20/08	8052305
	r	ilution Fact	or: 10	Analys i s	Time: 05:51		
Nitrogen, as Ammonia	22.7 B,J	50.0	ug/L	MCAWW	350.1	02/22/08	8053421
	I	Dilution Fact	or: 1	Analysis	Time: 00:00	٠	
Sulfate	106	5.0	mg/L	MCAWW	300.0A	02/20/08	8052303
	ï	Dilution Fact	or: 10	Analysis	Time: 05:51		
Total Alkalinity	252	5.0	mg/L	MCAWW	310.1	02/22/08	8053136
	I	Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	1110	5.0	mg/L	MCAWW	160.1	02/25-02/26/08	8056085
	1	Dilution Fact	or: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2348L

TOTAL Metals

Lot-Sample #...: F8B210151-004 Matrix....: WATER

Date Sampled...: 02/19/08 12:30 Date Received..: 02/20/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD		PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 8052202						
Calcium	175000 N	1000	ug/L	SW846 60	020	02/21-02/25/08	KHE6PLAN
	;	Dilution Facto	r: 10	Analysis Ti	ime: 16:03		
Iron	ND	500	ug/L	SW846 60	020	02/21-02/23/08	KHE6P1AP
	:	Dilution Facto	r: 10	Analysis Ti	ime: 21:09		
Potassium	5420	1000	ug/L	SW846 60	020	02/21-02/23/08	KHE6P1AQ
	1	Dilution Facto	r: 10	Analysis Ti	ime: 21:09		_
Magnesium	33300	500	ug/L	SW846 60	020	02/21-02/23/08	KHE6P1AR
	1	Dilution Facto		Analysis Ti	ime: 21:09	_, _,	
Manganese	33.6	20	ug/L	SW846 60	020	02/21-02/23/08	KHE6PLAT
g	:	Dilution Facto		Analysis Ti	ime: 21:09	,	
Sodium	111000	500	ug/L	SW846 60	020	02/21-02/23/08	KEE6PLAU
		Dilution Facto	-	Analysis Ti	ime: 21:09	,,,,,,,	
Silicon	15900 N*	2500	ug/L	SW846 60	020	02/21-02/23/08	KHE6P1AV
		Dilution Facto	•		ime: 21:09	,	
Prep Batch #	: 8067296						
Silica	34000	250	ug/L	SW846 60		03/07/08	KHE6P1A2
		Dilution Facto	r: 1	Analysis Ti	ime: 00:00	•	
NOTE (S):							

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2348L

General Chemistry

Lot-Sample #...: F8B210151-004 Work Order #...: KHE6P Matrix..... WATER

Date Sampled...: 02/19/08 12:30 Date Received..: 02/20/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	252	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
-		Dilution Factor: 1		Analysis Time: 00:00		
Bromide	1.3	0.25	mg/L	MCAWW 300.0A Analysis Time: 01:53	02/20/08	8052300
		D_12023011 1 11000		indayozo zamorr. var.oo		
Carbonate Alkalinity		5.0 Dilution Facto	mg/L or: 1	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	424	20.0	mg/L	MCAWW 300.0A	02/20/08	8052301
		Dilution Facto	r: 100	Analysis Time: 05:38		
Fluoride	0.27	0.10	mg/L	MCAWW 300.0A	02/20/08	8052302
	Dilution Factor: 1			Analysis Time: 01:53		
Ion Balance Difference	7.6	0.10	8	SM18 1030F & API	02/27/08	8058113
	Dilution Factor: 1		Analysis Time: 00:00			
Nitrate	0.41	0.020	mg/L	MCAWW 300.0A	02/20/08	8052304
		Dilution Facto	or: 1	Analysis Time: 01:53		
Nitrite .	ND	0.20	mg/L	MCAWW 300.0A	02/20/08	8052305
	Dilution Factor: 10		or: 10	Analysis Time: 05:26	LS Time: 05:26	
Nitrogen, as Ammonia	22.7 B,	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
	Dilution Factor: 1		Analysis Time: 00:00		•	
Sulfate	93.3	5.0	mg/L	MCAWW 300.0A	02/20/08	8052303
		Dilution Facto	or: 10	Analysis Time: 05:26		
Total Alkalinity	252	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	1050	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2321U.

TOTAL Metals

Lot-Sample #...: F8B210151-005 Matrix.....: WATER

Date Sampled...: 02/19/08 15:35 Date Received..: 02/20/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD		PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	: 8052202 111000 N	1000 Dilution Facto	ug/L r: 10	SW846 &	6020 Time: 16:07	02/21-02/25/08	KHE6QLAN
Iron	ND	500 Dilution Facto	ug/L r: 10	SW846 6	5020 Fime: 21:13	02/21-02/23/08	KHE6Q1AP
Potassium	4610	1000 Dilution Facto	ug/L r: 10	SW846 6	6020 Fime: 21:13	02/21-02/23/08	KHE6QLAQ
Magnesium	18400	500 Dilution Facto		SW846 6	6020 Time: 21:13	02/21-02/23/08	KHE6QLAR
Manganese	ИD	20 Dilution Facto	ug/L r: 10	SW846 6	6020 rime: 21:13	02/21-02/23/08	KHE6Q1AT
Sodium	133000	500 Dilution Facto	ug/L r: 10	SW846 6	6020 Time: 21:13	02/21-02/23/08	KHE6Q1AU
Silicon	19600 N*	2500 Dilution Facto	ug/L r: 10	SW846 &	6020 Time: 21:13	02/21-02/23/08	KHE6Q1AV
Prep Batch # Silica	: 8067296 41900	250 Dilution Facto	ug/L or: 1	SW846 6	6020 Time: 00:00	03/07/08	KHE6Q1A2

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-23210

General Chemistry

Lot-Sample #...: F8B210151-005 Work Order #...: KHE6Q Matrix....: WATER

Date Sampled...: 02/19/08 15:35 Date Received..: 02/20/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	300	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
_		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.66	0.25 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:41	02/20/08	8052300
Carbonate Alkalinity	ND	5.0 Dilution Fact	mg/L or: 1	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	220	20.0 Dilution Fact	mg/L or: 100	MCAWW 300.0A Analysis Time: 05:14	02/20/08	8052301
Fluoride	0.41	0.10 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:41	02/20/08	8052302
Ion Balance Difference	3.4	0.10	<u> </u>	SM18 1030F & API	02/27/08	8058113
		Dilution Factor: 1		Analysis Time: 00:00		
Nitrate	0.50	0.020 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 01:41	02/20/08	8052304
Nitrite	ND	0.20 Dilution Fact	mg/L .or: 10	MCAWW 300.0A Analysis Time: 05:01	02/20/08	8052305
Nitrogen, as Ammonia	22.7 B,	J 50.0 Dilution Fact	ug/L	MCAWW 350.1 Analysis Time: 00:00	02/22/08	8053421
Sulfate	65.3	5.0 Dilution Fact	mg/L	MCAWW 300.0A Analysis Time: 05:01	02/20/08	8052303
Total Alkalinity	300	5.0 Dilution Fact	mg/L	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053136
Total Dissolved	733	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	cor: 1	Analysis Time: 00:00	1	

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Matrix..... WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2321L

TOTAL Metals

Date Sampled.	: 02/19/08	15:30 Date	Received.	.: 02/20/08	AACCELLATION OF THE LIKE
		REPORTII	1G		PREPARATION- WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE ORDER #
Prep Batch #	: 8052202				
Calcium	166000 N	2000	ug/L	SW846 6020	02/21-02/25/08 KHE6R1AN
		Dilution Fac	tor: 20	Analysis Time: 16	
Iron	3780	500	ug/L	SW846 6020	02/21-02/23/08 KHE6R1AP
		Dilution Fac	tor: 10	Analysis Time: 21	:16
Potassium	6590	1000	ug/L	SW846 6020	02/21-02/23/08 KHE6R1AQ
		Dilution Fac	tor: 10	Analysis Time: 21	:16
Magnesium	27100	500	ug/L	SW846 6020	02/21-02/23/08 KHE6R1AR
J		Dilution Fac	tor: 10	Analysis Time: 21	
Manganese	53.0	20	ug/L	SW846 6020	02/21-02/23/08 KHE6RIAT
.		Dilution Fac		Analysis Time: 21	
Sodium	128000	500	ug/L	SW846 6020	02/21-02/23/08 KHE6R1AU
 		Dilution Fac	-	Analysis Time: 21	
Silicon	31000 N*	5000	ug/L	SW846 6020	02/21-02/25/08 KHE6R1AV

Analysis Time..: 16:10

Analysis Time..: 00:00

SW846 6020

Dilution Factor: 20

Dilution Factor: 1

ug/L

250

NOTE(S):

Silica

66300

Prep Batch #...: 8067296

Lot-Sample #...: F8B210151-006

03/07/08

KHB6R1CF

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2321L

General Chemistry

Lot-Sample #...: F8B210151-006 Work Order #...: KHE6R Matrix.....: WATER

Date Sampled...: 02/19/08 15:30 Date Received..: 02/20/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	279	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
-		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.90	0.25	mg/L	MCAWW 300.0A Analysis Time: 01:29	02/20/08	8052300
		211401011 1400		imary san tamer vi.as		
Carbonate Alkalinity	ND	5.0 Dilution Fact	mg/L or: 1	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	355	20.0	mg/L	MCAWW 300.0A	02/20/08	8052301
		Dilution Fact	or: 100	Analysis Time: 04:49		
Fluoride	0.28	0.10	mg/L	MCAWW 300.0A	02/20/08	8052302
		Dilution Fact	or: 1	Analysis Time: 01:29		
Ion Balance Difference	5.2	0.10	ફ	SM18 1030F & API	02/27/08	8058113
		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.52	0.020	mg/L	MCAWW 300.0A	02/20/08	8052304
		Dilution Fact	or: 1	Analysis Time: 01:29		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/20/08	8052305
		Dilution Fact	or: 10	Analysis Time: 03:21		
Nitrogen, as Ammonia	22.7 B,	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
		Dilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	59.6	5.0	mg/L	MCAWW 300.0A	02/20/08	8052303
		Dilution Fact	or: 10	Analysis Time: 03:21		
Total Alkalinity	279	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	919	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	cor: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F8B210151 Matrix....: WATER

,		REPORTING	3			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
MB Lot-Sample #	: F8B210000	-202 Prep Ba	tch #:	8052202			
Calcium	ND	100	ug/L	SW846	6020	02/21-02/25/08	KHFJT1AA
		Dilution Facto					
		Analysis Time	: 15:26				
Iron	ND	50	ug/L	SW846	6020	02/21-02/23/08	KHFJTlAC
		Dilution Facto	or: 1				
		Analysis Time	: 20:32				
Magnesium	ND	50	ug/L	SW846	6020	02/21-02/23/08	KHFJT1AE
		Dilution Facto	or: 1			. ,	
		Analysis Time	: 20:32				
Manganese	ND	2	ug/L	SW846	6020	02/21-02/23/08	KHFJT1AF
2		Dilution Facto	•			. ,	
		Analysis Time	: 20:32				
Potassium	ND	100	ug/L	SW846	6020	02/21-02/23/08	מא ויידקאא
		Dilution Facto		2		04,22 02,25,00	1411 0 1 111
		Analysis Time	: 20:32				
Silicon	ND	250	ug/L	SW846	6020	02/21-02/23/08	KHFJTI AH
		Dilution Facto			•	, , , , ,	
		Analysis Time	: 20:32				
Sodium	ND	50	ug/L	SW846	6020	02/21-02/23/08	KHFJT1AG
		Dilution Facto				,	
		Analysis Time	: 20:32				
MB Lot-Sample #	: F8C070000	-296 Prep Ba		8067296			
Silica	ND	250	ug/L	SW846	6020	03/07/08	KH71W1AA
		Dilution Fact					
		Analysis Time	: 00:00				

NOTE (S):

METHOD BLANK REPORT

General Chemistry

Client Lot #: I	F8B210151		Mat:	rix WA	: WATER	
PARAMETER Bicarbonate	RESULT		THOD B Lot-Sample #	PREPARATION- ANALYSIS DATE F8B220000-134	PREP BATCH #	
Alkalinity	ND	5.0 mg/L MC2 Dilution Factor: 1 Analysis Time: 00:00	AWW 310.1	02/22/08	8053134	
Bromide	ND	Work Order #: KHJH81AA MI 0.25 mg/L MCZ Dilution Factor: 1 Analysis Time: 10:58	B Lot-Sample # AWW 300.0A	F8B210000-300 02/20/08	8052300	
Carbonate Alkalini	ty ND	Work Order #: KHHM21AA ME 5.0 mg/L MCP Dilution Factor: 1 Analysis Time: 00:00	B Lot-Sample #: AWW 310.1	F8B220000-135 02/22/08	8053135	
Chloride	ND	Work Order #: KHJH91AA ME 0.20 mg/L MCA Dilution Factor: 1 Analysis Time: 10:58	B Lot-Sample #: AWW 300.0A	F8B210000-301 02/20/08	8052301	
Fluoride	ND	Work Order #: KHJJA1AA ME 0.10 mg/L MCA Dilution Factor: 1 Analysis Time: 10:58	B Lot-Sample #: AWW 300.0A	F8B210000-302 02/20/08	8052302	
Nitrate	ND	Work Order #: KHJJGlAA MM 0.020 mg/L MCM Dilution Factor: 1 Analysis Time: 10:58	B Lot-Sample #: AWW 300.0A	F8B210000-304 02/20/08	8052304	
Nitrite	ND	Work Order #: KHJJE1AA MI 0.020 mg/L MC Dilution Factor: 1 Analysis Time: 10:58	B Lot-Sample # AWW 300.0A	F8B210000-305 02/20/08	8052305	
Nitrogen, as Ammor	nia 22.7 B	Work Order #: KHJINIAA M 50.0 ug/L MC Dilution Factor: 1 Analysis Time: 00:00	B Lot-Sample # CAWW 350.1	: F8B220000-421 02/22/08	8053421	
Sulfate	ND	Work Order #: KHJJClAA M 0.50 mg/L MC Dilution Factor: 1 Analysis Time: 10:58	1B Lot-Sample # CAWW 300.0A	: F8B210000-303 02/20/08	8052303	

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8B210151

Matrix..... WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	ND	Work Order #: KHHM81A 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	A MB Lot-Sample #: MCAWW 310.1	F8B220000-136 02/22/08	8053136
Total Dissolved Solids		Work Order #: KHM9Q1A	A MB Lot-Sample #:	F8B250000-085	
5-1	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 160.1	02/25-02/26/08	8056085
NOTE (S) :					

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8B210151		Matrix	,: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium		202 Prep Batch #: 8052202 (85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AJ
Iron	101	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AK
Potassium	103	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	•	KHFJT1AL
Magnesium	100	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AM
Manganese	107	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AN
Sodium	99	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AP
Silicon	103	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis		KHFJT1AQ
LCS Lot-Sample#: Silica		296 Prep Batch #: 8067296 (0.0- 0.0) SW846 6020 Dilution Factor: 1 Analysis	03/07/08	KH71W1AC

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #	: F8B21	0151		Matrix: WATER
	PERCENT	RECOVERY RPD		PREPARATION- PREP
PARAMETER	RECOVERY	LIMITS RPD LIMITS	METHOD_	ANALYSIS DATE BATCH #
Bicarbonate		WO#:KHHMN1AC-LCS/KH	HMN1AD-LCSD LCS	Lot-Sample#: F8B220000-134
Alkalinity				-
•	100	(90 - 110)	MCAWW 310.1	02/22/08 8053134
	100	(90 - 110) 0.49 (0-15)	MCAWW 310.1	02/22/08 8053134
		Dilution Factor: 1		
Carbonate Al	kalinity	WO#:KHHM21AC-LCS/KH	HM21AD-LCSD LCS	Lot-Sample#: F8B220000-135
	100	(90 - 110)	MCAWW 310.1	02/22/08 8053135
	100	(90 - 110) 0.49 (0-15)	MCAWW 310.1	02/22/08 8053135
		Dilution Factor: 1	Analysis Time	: 00:00
Nitrogen, as				Lot-Sample#: F8B220000-421
	100	(90 - 110)		
	99			02/22/08 8053421
		Dilution Factor: 1	Analysis Time	: 00:00
Total Alkali	nitv	WO# : KHHM81 AC-1,CS/KH	HM81AD-LCSD LCS	Lot-Sample#: F8B220000-136
10001 1111011				02/22/08 8053136
	100			
·		Dilution Factor: 1		
			•	•
Total Dissol Solids	ved	WO#:KHM9Q1AC-LCS/KH	M9Q1AD-LCSD LCS	Lot-Sample#: F8B250000-085
	98	(86 - 115)	MCAWW 160.1	02/25-02/26/08 8056085
	.99	(86 - 115) 1.6 (0-15)		

Analysis Time..: 00:00

Dilution Factor: 1

NOTE(S):

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #:	F8B210151	Matrix	- W 2

PARAMETER Bromide	RECOVERY	RECOVERY LIMITS METHOD Work Order #: KHJH81AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	C-Sample#: F8B210000-300 02/20/08 8052300	
Chloride	99	Work Order #: KHJH91AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	02/20/08 8052301	1.
Fluoride	97	Work Order #: KHJJA1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	02/20/08 8052302	2
Nitrate	106	Work Order #: KHJJG1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	02/20/08 8052304	4
Nitrite	106	Work Order #: KHJJE1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	02/20/08 8052305	5
Sulfate	100	Work Order #: KHJJClAC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Ti	02/20/08 8052303	3

NOTE (S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot # Date Sampled		.0151 9/08 10:00 Date Received.	.: 02/20/08	Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl	e #: F8B21	.0151-001 Prep Batch #	.: 8052202		
Calcium	69 N	(75 - 125)	SW846 6020	02/21-02/25/08	KHE551CH
	114	(75 - 125) 11 (0-20) Dilution Factor: 10 Analysis Time.: 15:40	SW846 6020	02/21-02/25/08	KHE551CJ
Iron	112	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CK
	121	(75 - 125) 6.6 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	
Magnesium	99	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CP
	104	(75 - 125) 2.5 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	KHE551CQ
Manganese	110	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CR
	111	(75 - 125) 0.93 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	KHE551CT
Potassium	101	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CM
	105	(75 - 125) 2.9 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	KHE551CN
Silicon	0 N	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CW
	212 N,*	(75 - 125) 0.0 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	KHE551CX
Sodium	76	(75 - 125)	SW846 6020	02/21-02/23/08	KHE551CU
	107	(75 - 125) 4.9 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020	02/21-02/23/08	

NOTE(S):

 $[\]ensuremath{\mathtt{N}}$. Spiked analyte recovery is outside stated control limits.

^{*} Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B210151 Matrix..... WATER

Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

	PERCENT	RECOVERY		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS METHOD		ANALYSIS DATE	BATCH #
Bromide		Work Order #: KHE6	RIA2	MS Lot-Sample	#: F8B210151-006
	104	(90 - 110) MCAWW 300	.0A	02/20/08	8052300
		Dilution Factor: 1	Analysis	Time: 01:29	
Chloride		Work Order #: KHE61	R1A4	MS Lot-Sample	#: F8B210151-006
•	118 N	(90 - 110) MCAWW 300	. 0A	02/20/08	8052301
		Dilution Factor: 100	Analysis	Time: 04:49	
Fluoride		Work Order #: KHE6			
	105	(90 - 110) MCAWW 300	.0A	02/20/08	8052302
		Dilution Factor: 1	Analysis	Time: 01:29	
Nitrate		Work Order #: KHE6			
	107	(90 - 110) MCAWW 300	.0A	02/20/08	8052304
		Dilution Factor: 1	Analysis	Time: 01:29	
Nitrite		Work Order #: KHE6			
	127 N	(90 - 110) MCAWW 300	. 0A	.02/20/08	8052305
		Dilution Factor: 10	Analysis	Time: 03:21	
Nitrogen, as Am		Work Order #: KHE5			
	97	(90 - 110) MCAWW 350			8053421
		Dilution Factor: 1	Analysis	Time: 00:00	
Sulfate		Work Order #: KHE6			
	106	(90 - 110) MCAWW 300			8052303
		Dilution Factor: 10	Analysis	Time: 03:21	
				_	
Total Alkalinit	•	Work Order #: KHE9			
	93	(80 - 120) MCAWW 310		•	8053136
		Dilution Factor: 1	Analysis	: Time: 00:00	

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8B210151

Work Order #...: KHE6R-SMP

Matrix....: WATER

Complete Sampled...: 02/19/08 15:30 Date Received..: 02/20/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8B210151-006	
0.90	1.2	mg/L	26	(0-20)	MCAWW 300.0A	02/20/08	8052300
		Dilution Fac	tor: 1	Ana	alysis Time: 01:29		
Chloride					SD Lot-Sample #:	F8B210151-006	
355	3 7 5	mg/L	5.6	(0-20)	MCAWW 300.0A	02/20/08	8052301
		Dilution Fac	tor: 100	Ana	alysis Time: 04:49		
Fluoride					SD Lot-Sample #:	F8B210151-006	
0.28	0.30	mg/L	5.0	(0-20)	MCAWW 300.0A	02/20/08	8052302
		Dilution Fac	tor: 1 .	Ana	alysis Time: 01:29		
Sulfate					SD Lot-Sample #:	F8B210151-006	,
59.6	60.6	mg/L	1.6	(0-20)	MCAWW 300.0A	02/20/08	8052303
		Dilution Fac	tor: 10	Ana	alysis Time: 03:21		
Nitrate					SD Lot-Sample #:	F8B210151-006	
0.52	0.54	mg/L	4.2	(0-20)	MCAWW 300.0A	02/20/08	8052304
		Dilution Fac	tor: 1	Ana	alysis Time: 01:29		
Nitrite					SD Lot-Sample #:	F8B210151-006	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	02/20/08	8052305
		Dilution Fac	tor: 10	Ana	alysis Time: 03:21		

General Chemistry

Client Lot #...: F8B210151

Work Order #...: KHE9E-SMP

KHE9E-DUP

Matrix..... WATER

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210166-001	PREP BATCH #
397	396	mg/L	0.25	(0-15)	MCAWW 310.1	02/22/08	8053134
		Dilution Fact			lysis Time: 00:00	02, 22, 00	0000101
Carbonate Alkalir	nity ND	mq/L	0	(0-20)	SD Lot-Sample #: MCAWW 310.1	F8B210166-001	8053135
112		Dilution Fact		•	lysis Time: 00:00	02, 22, 00	0000200
Total Alkalinity	396	mg/L	0.25	(0-20)	SD Lot-Sample #: MCAWW 310.1	F8B210166-001 02/22/08	8053136
		Dilution Fact			lysis Time: 00:00	,,	
Total Dissolved					SD Lot-Sample #:	F8B210166-001	
642	679	mg/L Dilution Fact	5.6 or: 1	•	MCAWW 160.1 lysis Time: 00:00	02/25-02/26/08	8056085

General Chemistry

Client Lot #...: F8B210151

Work Order #...: KHE55-SMP

Matrix....: WATER

KHE55-DUP

Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

•	DUPLICATE	;		RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as Amm	onia				SD Lot-Sample #:	F8B210151-001	
22.7 B,J	22.7 B	ug/L	0.0	(0-20)	MCAWW 350.1	02/22/08	8053421
		Dilution Fac	ctor: 1	Ana	alysis Time: 00:00		

NOTE (S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

General Chemistry

Client Lot #...: F8B210151 Work Order #...: KHFEE-SMP

Matrix..... WATER

KHFEE-DUP

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

PARAM RESULT Total Dissolved	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210162-006	PREP BATCH #
Solids 1090	1150	mg/L Dilution Fact	5.3 tor: 1	•	MCAWW 160.1	02/25-02/26/08	8056085

F8B210151 Project Manager: IV

Project:

PO#:

Client:

6468071777

200803591

373886

CLIENT ANALYSIS SUMMARY

SDG:

Quote #: 78576

MACTEC Engineering and Consulting Inc.

EXcelon Victoria TEXAS COL

Report to: Kathryn White

Storage Loc:

1-225,METS

Date Received:

2008-02-20

Analytical Due Date:

2008-02-27

Report Due Date:

printed on: Monday, March 10, 2008 02 MCRM EXE808 Page 1 of 5

2008-02-27

Report Type: W EDD Code: 00

#SMPS in LOT: 6

<u>s</u> ,	AMP	LE#	CLIE	NT SAMPL	<u>EID</u> <u>Si</u>	te ID	Client Matrix	DATE/T	IME SAMPLED	WORKOR	DER	1	
1			OW-2	2352U				2008-02-	19/ 1000	KHE55	W	ATER	
S	AMP	LE CO	MME	NTS:									
	FE	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	кх	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	MN	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	· STANDARD TEST SET	PROT: A	WRK LOC	06	
	NA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	SA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	. 9Q	ORG FLAGS FOR INORG: STANDARD	PROT: A	WRK	06	
	SI	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	CA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A	WRK	06	
	XX	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	C8	MCAW W	A0.00E	Fluoride (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	SL	SM18	1030F & API	lon Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	UX	MCAW W		Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	XX	νc	MCAW W		Alkalinily, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	VM	MCAW W		Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
D	FE	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	KX	мн	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	MG	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	MN	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	NA	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	SI	МН	\$W846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
D	CA	MH	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	FE	MH	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	. GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
S	Si	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT:A	WRK	06	
S	NA		SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT:A	WRK	06	
S		МН		6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
S		MH		5 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT:A	WRK LOC	06	
S	CA	MH	SW84	6 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT:A	WRK LOC	06	

2008-03-10 Page 3 95 6 657

VANIAI

TestAmerica of time is Rev. 0-29998/2008

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

Project Manager: IV

Quote #: 78576

SDG:

Analytical Due Date:

Date Received:

Report Due Date:

2008-02-27

Project:

6468071777 200803591

EXcelon Victoria TEXAS COL

RUSH

2008-02-27

2008-02-20

PO#: Client:

373886

Report to: Kathryn White MACTEC Engineering and Consulting Inc.

#SMPS in LOT: 6

Report Type: W EDD Code: 00

s		мн	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
<i>x</i>	XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
<u> </u>	SAMP	LE #	<u>CLIEI</u>	NT SAMPL	<u>EID</u> S	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORE	DER	1
2	2		OW-2	2352L				2008-02-1	9/ 1005	KHE6M	W	'ATER
5	SAMP	LE CO	<u>IBMMC</u>	VTS:								
	NA	мн	SW846	5020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	SA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06
	CA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	MG	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	FE	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	ΚX	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	MN	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	ZV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	AK	MCAW W		Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromatography)	, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	C9	MCAW W	300.0A ·	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	СВ	MCAW	310.1	Alkalinily, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 -	STANDARD TEST SET	PROT: A	WRK	06
	XX	СХ	MCAW	300.0A	Chloride (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06
	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	GM		300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	GO	• •	300.0A	Nitrite as N (300,0A, ion	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	SL	SM18	1030F &	Chromatography) Ion Balance (%	0X	CALCULATION	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	uх	MCAW W	API 310.1	Difference) Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	VC	MCAW	310.1	(310.1) Alkalinity, Total	88	PERFORMED / DIRECT NO SAMPLE PREPARATION REPEOPMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	хх	٧M	W MCAW W	350.1	(310.1) Nilrogen, Ammonia (350.1, Automated)	88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06
												
-	<u>SAMP</u>	'LE#		NT SAMPL	<u>== 10</u>	Site ID	Client Matrix		ME SAMPLED	WORKORI		1
	3 CAN10		_	2348U				2008-02-1	19/ 1155	KHE6N	W	/ATER
			OMME		Industrialy Corolled Planes		METALS TOTAL 20/		CYANDADD TEST SET	DDOT: A	larme.	25
		MH	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	LOC	06
	CA		SW846		Inductively Coupled Plasma Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	LOC	06
	SA		SW846		Inductively Coupled Plasma Mass Spectrometry(6020)		ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	LOC	06
	Si	MH	SW846		inductively Coupled Plasma Mass Spectrometry(6020)	•	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
	MN	МН	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	MG	MH	SW846	6 6020	Inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	FE	MH	SW846	6 6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL .	01	STANDARD TEST SET	PROT: A	WRK LOC	06

TestAmerica - St. Louis Logged In by: Volume 4 Rev. 0 - 7/18/2008

VANIAI

2008-03-10

13:38:15

Page 196 of 657

Project Manager:

Project:

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

Date Received:

2008-02-20

2008-02-27

Analytical Due Date: Report Due Date:

2008-02-27

Quote #: 78576 SDG: EXcelon Victoria TEXAS COL

RUSH

PO#: 373886 Client:

200803591

6468071777

Report to: Kathryn White

MACTEC Engineering and Consulting Inc

Report Type: W #SMPS in LOT: 6 EDD Code: 00

кх	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	Z۷		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX	ΑK	MCAW W	160,1	Sollds, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW W	A0.00	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, ton Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO	MCAW W	A0.00E	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
XX	UX	MCAW W	310.1	Alkalinily, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06

SAMP	LE#	CLIEN	NT SAMPL	EID Site	ID ·	Client Matrix	DATE/TI	ME SAMPLED	WORKORI	DER	1
4		OW-2	348L				2008-02-1	9/ 1230	KHE6P	W	ATER
SAMP	LE CO	OMMEN	NTS:								
SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
CA	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
FE	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
KX	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MN	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(5020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LDC	06
NA	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06
XX	Z۷		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CB	MCAW W	310.1	Alkalinity, Carbonale (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GM	MCAW W	A0.00E	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO	MCAW W	300.0A	Nitrite as N (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18	1030F & API	lon Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06

CLIENT ANALYSIS SUMMARY

Project Manager: IV

Quote #: 78576

SDG:

Storage Loc:

1-225,METS

Date Received:

2008-02-20

Analytical Due Date:

2008-02-27

Report Due Date:

printed on: Monday, March 10, 2008 02: MODAW EXE808 Page 4 of 5

2008-02-27.

Project: PO#: Client: . 6468071777 200803591

EXcelon Victoria TEXAS COL Report to: Kathryn White

373886

MACTEC Engineering and Consulting Inc

VANIAI

TestAmerical/offurtnewis Rev. 0_07946/2000/8

RUSH

#SMPS in LOT: 6

Report Type: W EDD Code: 00

SA MH SW846 6020 Induc Mass MN MH SW846 6020 Induc Mass Mass MS MM SW846 6020 Induc Mass Mass MM SW846 6020 Induc Mass MM SW846 6020 Induc Mass MM SW846 6020 Induc Mass SI MH SW846 6020 Induc Mass SI MH SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MM SCREEN SCRIC MM SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MM SCREEN SCRIC MM SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MM SCREEN SCRIC MM SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MM SCREEN SCRIC MM SCREEN SCRIC MM SCREEN SCRIC MM SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MASS SCREEN SCRIC MM SW846 6020 Induc Mass XX ZV RAD SCREEN SCRIC MASS SCREEN SCREEN SCRIC MASS SCREEN SCRIC MASS SCREEN SCRIC MASS SCREEN SCRIC MASS SCREEN SCREEN SCRIC MASS SCREEN SCREEN SCRIC MASS SCREEN	uctively Coupled Plasma as Spectrometry(5020) uctively Coupled Plasm	LEE	Client Matrix METALS, TOTAL - 2% HCL CALCULATION ONLY METALS, TOTAL - 2% HCL IN-HOUSE RAD SCREEN NO SAMPLE PREPARATION PERFORMED / DIRECT	DATE/TI 2008-02-1 01 9Q 01 01 01 01 01 01 01 01 01 01 01 01 01	ME SAMPLED 9/ 1535 STANDARD TEST SET ORG FLAGS FOR INORG; STANDARD STANDARD TEST SET STANDARD TEST SET	PROT: A		
SAMPLE COMMENTS: NA MH SW846 6020 Industrian SA MH SW846 6020 Industrian MN MH SW846 6020 Industrian MG MH SW846 6020 Industrian MG MH SW846 6020 Industrian MB SCREEN SCREEN SCRI XX ZV RAD SCREEN	ass Spectrometry(5020) uctively Coupled Plasma ss Spectrometry(6020) uctively Coupled Plasma ss Spectrometry (6020) uctively Coupled Plasma ss Spectrometry (6020) uctively Coupled Plasma ss Spectrometry (60	XC	HCL CALCULATION ONLY METALS, TOTAL - 2% HCL IN-HOUSE RAD SCREEN NO SAMPLE PREPARATION PERFORMED / DIRECT	01 9Q 01 01 01 01 01 01 01 01	STANDARD TEST SET ORG FLAGS FOR INORG: STANDARD STANDARD TEST SET	PROT: A	WRK LOC WRK	06 06 06 06 06 06 06 06 06
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XX C9 MCAW 300.0A Mitrai (310.1 W W Chros (310.1 W) (310.1 XX VC MCAW 350.1 Nitroi (310. XX VM MCAW 350.1 Nitroi (310.1 W) (31	omatography) ate as N (300.0A, Ion omatography) allinity, Carbonate 0.1) oride (300.0A, Ion omatography) ate (300.0A, Ion omatography) ate (300.0A, Ion omatography)	38 ! 38 !	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01 01	STANDARD TEST SET	PROT: A PROT: A	WRK LOC WRK	
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XX CX MCAW 300.0A Chlor Chro W W G310. XX CY MCAW 300.0A Sulfa Chro Chro W W W G400.0A Chro Chro Chro W W G400.0A With Chro Chro XX GO MCAW 300.0A With Chro Chro XX SL SM18 1030F & 100 E API Diffe XX UX MCAW 310.1 Alkal W G400.0A MCAW 310.1 Alkal W G400.0A MCAW 310.1 Alkal W G400.0A MCAW 350.1 Nitro XX VM MCAW 350.1 Nitro XX VM MCAW 350.1 Nitro	0.1) oride (300.0A, lon 8 omatography) ate (300.0A, lon 8 omatography)	38	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	* -	STANDARD TEST SET		-	00
XX CY MCAW 300.0A Sulfa Chro Chro XX GM MCAW 300.0A Brom Chro Chro XX GO MCAW 300.0A Within Chro XX SL SM18 1030F & lon E XX UX MCAW 310.1 Alkal W (310. XX VC MCAW 350.1 Nitro XX VM MCAW 350.1 Nitro XX VM MCAW 350.1 Nitro	omatography) fate (300.0A, ion 8 omatography)		PERFORMED / DIRECT	01			WRK LOC	06
XX GM MCAW 300.0A Bront Chro W W Chro Chro Chro Chro W XX GO MCAW 300.0A Wiltrid Chro Chro Chro W XX SL SM18 1030F & Differ API Differ XX UX MCAW 310.1 Alkal W W 310.1 Alkal W W 310.1 Alkal XX VM MCAW 350.1 Nitro	omalography)	38	10 011101 E BBESTON	٠,	STANDARD TEST SET	PROT: A	WRK LOC	06
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XX GO MCAW 300.0A Wilrit Chro XX SL SM18 1030F & Diffe API Chro XX UX MCAW 310.1 Alkal (310. XX VC MCAW 310.1 Alkal (310. XX VM MCAW 350.1 Nitro	mide (300.0A, Ion 8 omatography)		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		WRK	06
XX SL SM18 1030F & Ion B API Differ XX UX MCAW 310.1 Alkal W 310.1 Alkal	ite as N (300.0A, Ion 8 omatography)		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		WRK	06
XX UX MCAW 310.1 Alkal (310.			CALCULATION ONLY	01	STANDARD TEST SET		WRK	06
XX VC MCAW 310.1 Alkal W (310. XX VM MCAW 350.1 Nitro	alinity, Bicarbonate 8		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX VM MCAW 350.1 Nitro	alinily, Totai 8		NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		WRK	06
W Auto		38	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		WRK LOC	06
SAMPLE# CLIENT SAMPLE ID	Site ID		Client Matrix	DATE/TI	ME SAMPLED	WORKORE	DER	1
6 OW-2321L				2008-02-1	9/ 1530	KHE6R	W	'ATER
SAMPLE COMMENTS:								
	uctively Coupled Plasma G ss Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SI MH SW846 6020 Indu		GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
SA MH SW846 6020 Indu		0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06
NA MH SW846 6020 Indu		GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
MG MH SW846 6020 Indu		GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
FE MH SW845 6020 Indu	luctively Coupled Plasma (GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A	WRK	06
CA MH SW846 6020 Indu	ss Spectrometry(6020) fuctively Coupled Plasma	GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
MN MH SW846 6020 Indu			HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
XX ZV RAD RAD SCREEN SCF	ss Spectrometry(6020)		HCL			PROT: A	LOC WRK	06

2008-03-10 Page 31908 15 657

Project Manager:

Project:

PO#:

Client:

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

Date Received:

2008-02-20

Analytical Due Date:

2008-02-27

Report Due Date:

2008-02-27

RUSH

6468071777 200803591 373886

EXcelon Victoria TEXAS COL Report to: Kathryn White

Quote #: 78576

MACTEC Engineering and Consulting Inc

SDG:

#SMPS in LOT: 6

Report Type: W EDD Code: 00

	XX	ΑK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	ХХ	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	C9	MCAW W	A0,00E	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	CX	MCAW W	300.0A	Chloride (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	CY	MCAW W	A0.00E	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	GO	MCAW W	300.0A	Nitrite as N (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	SL	SM18	1030F & API	lon Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate . (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	C8	MCAW W	300.0A	Fluoride (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	CY	MCAW W	300.0A	Sulfate (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	GM	MCAW W	300.0A	Bromide (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
S	XX	GO	MCAW W	A0.006	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK.	06
X	XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
Χ	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	XX	GM	MCAW W	A0.008	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
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State Zip	Code 27604	Site Co	ntact	-				Con	itact	۱A									Att	ach			·····	1.	age		
Project Name and Location (State) EXELON Victoria COL, T.	Χ	Çarrier. F.E	/Wayl		umbei	790	† 2	76	517	7 -	7 લ	15					Ø				ľ				Specia	l Instruc	ctions/
Contract/Purchase Order/Quote No.					atrix	·.		1 =	Pres	erva	ers & ative	s		TOS/ALK	ANTONS	metals	Dmmonia								Conditi		
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Ąį		Sad.	Soll	Unpres.	H2SO4	HNO3	HG	NaOH	ZoAc, NaOH			Ą	-	-	_	_	-	-	1.					
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							<u> </u>											1									
Possible Hazard Identification		<u> </u>			Disp		<u> </u>	<u>.</u>				·									l fee	may b	le ass	esse	ed if samples a	re retalne	
	Poison B] Re	tum T	o Cllei	nt					b (Spe			ve F	or _		M	onths	i lo	nger	than :	1 mon	nth)			
1. Relinquished By 2. Relinquished By	, <u>24</u> 21 25	Date 2-1		υ 8	Time 5	70	Ò	1	Recei / Necei	į	7				 										Date Date	Time 19	45
#2. Relinquished By X 1. Solution of the state of the sta	;	Date	,		Time				lecel	•					•										Dale	Time	
Comments		:	· <u>-</u> -		<u> </u>	· -		Ļ										·							·		·

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THE LEADER IN ENV	IRONMENTAL TESTING

	F88210151	
- 2000 -		

Client: Mud	COC/RFA No:	Condition Upon Recei	Date: 2/20/06
Quote No: 785	Initiated By:	PO .	• Time: 0943
Shipper Name:	<u> </u>	pping Information	Multiple Packages Y N Sample Temperature (s):** 1. 3 6. 2. 7.
3.	8.		3. 8.
4. ·	9. 10.		
	s correspond to Numbered Sample Temp lines	**Sample must be recei	ved at 4°C ± 2°C- If not, note contents below. Temperature
	for yes, "N" for no and "N/A" for not applicable):	variance does NOT affo	ect the following: Metals-Liquid or Rad tests-Liquid or Solids
1. W N	Are there custody seals present on the cooler?	8. Y 🕅	Are there custody seals present on bottles?
2. Y (N) N/A	Do custody seals on cooler appear to be tampered with?	9. Y N NA	Do custody seals on bottles appear to be tampered with?
3. (Ŷ) N	Were contents of cooler frisked after opening, but before unpacking?	10. Y N N/A	Was sample received with proper pH'? (If not, make note below)
4. Y)N	Sample received with Chain of Custody?	11. Y N	If N/A- Was pH taken by original TestAmerica lab?
5. (Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N	Sample received in proper containers?
6. Y (N)	Was sample received broken?	13;" Y N"(N/A)	Headspace in VOA or TOX liquid samples? (If. Yes, note sample ID's below)
7. Y N	Is sample volume sufficient for analysis?	14. Y N	Was Internal COC/Workshare received?
•	ANL, Sandia) sites, pH of ALL containers received	ed must be verified, EXCEPT	TVOA, TOX and soils.
Notes:		·	
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	·		<u> </u>
Corrective Action: Client Contact		Informed by:	
☐ Sample(s) prod ☐ Sample(s) on h		If released, notify:	
- Project Manageme	nt Review:	Date:	1-17-17-17-17-17-17-17-17-17-17-17-17-17
THIS FORM MUST B THE INDIVIDUAL PRINT	E COMPLETED AT THE TIME THE ITEMS AR 50 THAIP 2008ON IS REQUIRED TO APPLY T	E BEING CHECKED IN. II HERENATIAL AND THE I	ANY ITEM IS COMPLETED BY SOME OVER THAN THE PARTY OF THAT ITEM. DCN# EXESUS 6007VS18xv01VOANOR MSVST-LOUIS/ADMINIAdmin004 xxv11 dog



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Exelon COL Project

Project Number: 6468-07-1777

Project Manager: Scott Auger

Project Principal: Kathryn White

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use. Based on the presence of ammonia in the method blank associated with samples OW-2307U, OW-2307L, OW-2324U, OW-2324L, OW-2359U1, and OW-2359L2, MACTEC recommends using these data as non-detect values at the Reporting Limit of 50 μ g/L.

REPORT: Analytical Report Lot #: F8B210162	
Andrew A. 	
SUBCONTRACTOR: TestAmerica, Earth City, MO	
DATE OF ACCEPTANCE : 4/10/2008	
TECHNICAL REVIEWER: William S. Grimes	_
PROJECT PRINCIPAL: Kathryn A. White	_



ANALYTICAL REPORT

PROJECT NO. 6468071777

Excelon Victoria TEXAS COL

Lot #: F8B210162

Kathryn White

MACTEC Engineering & Consultin 3301 Atlantic Ave Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

March 10, 2008

Case Narrative LOT NUMBER: F8B210162

This report contains the analytical results for the six samples received under chain of custody by TestAmerica St. Louis on February 21, 2008. These samples are associated with your Excelon Victoria TEXAS COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Due to limitations of the data reporting system method 6020 is reported for metals analysis; however, 6020C was used to perform the analysis.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batches 8052202, 8039204, and 8045132:

The MS (MSD) recoveries for batches 8052202 - silicon, 8039204 - iron, and 8045132 - barium, chromium and lead are outside the established QC limits. The analyte concentrations in the original sample are greater than four times the amount spiked making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210162 (1): OW-2359UI

F8B210162 (2): OW-2359L2

F8B210162 (3): OW-2307U

F8B210162 (4): OW-2307L

F8B210162 (5): OW-2324U

F8B210162 (6): OW-2324L

Batches 8052202 and 8045132:

The MS (MSD) recoveries for batches 8052202 (calcium) and 8045132 (silver) are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B210162 (1): OW-2359UI F8B210162 (2): OW-2359L2 F8B210162 (3): OW-2307U F8B210162 (4): OW-2307L F8B210162 (5): OW-2324U F8B210162 (6): OW-2324L

Batches 8052202 and 8045132:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8B210162 (1): OW-2359UI F8B210162 (2): OW-2359L2 F8B210162 (3): OW-2307U F8B210162 (4): OW-2307L F8B210162 (5): OW-2324U F8B210162 (6): OW-2324L

Anions (MCAWW 300.0A)

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery for Nitrite in batch 8052311 is attributed to matrix interference.

Affected Samples:

F8B210162 (1): OW-2359UI F8B210162 (2): OW-2359L2 F8B210162 (3): OW-2307U F8B210162 (4): OW-2307L F8B210162 (5): OW-2324U F8B210162 (6): OW-2324L

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8B210162

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.DA	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrate-Nitrite	MCAWW 353.1	
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8B210162

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KHFAN	001	OW-2359UI	02/20/08	09:15
KHFAV	002	OW-2359L2	02/20/08	09:45
KHFD8	003	OW-2307U	02/20/08	11:00
KHFD9	004	OW-2307L	02/20/08	11:15
KHFEC	005	OW-2324U	02/20/08	
KHFEE	006	OW-2324L	02/20/08	14:00
	- >			

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Matrix....: WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2359UI

TOTAL Metals

Date Sampled: 02/20/08 09:15	Date Received: 02/21/08		
RF	PORTING	PREPARATION-	WORK

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO)	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	: 8052202 93100 N	1000 Dilution Facto	ug/L or: 10		6020 Time: 16:14	02/21-02/25/08	KHFAN1C2
Iron	ND	500 Dilution Facto	ug/L or: 10		6020 Time: 21:20	02/21-02/23/08	KHFAN1C3
Potassium	3850	1000 Dilution Facto	ug/L or: 10		6020 Time: 21:20	02/21-02/23/08	KHFAN1C4
Magnesium	13400	500 Dilution Facto	٥.	SW846 Analysis	6020 Time: 21:20	02/21-02/23/08	KHFAN1C5
Manganese	ND	20 Dilution Facto			6020 Time: 21:20	02/21-02/23/08	KHFAN1C6
Sodium	111000	500 Dilution Facto	 .		6020 Time: 21:20	02/21-02/23/08	KHFAN1C7
Silicon	17700 N*	2500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:20	02/21-02/23/08	KHFAN1C8
Prep Batch #	: 8067296 37900	250 Dilution Facto	ug/L or: 1		6020 Time: 00:00	03/07/08	KHPANIDE

NOTE (S):

Lot-Sample #...: F8B210162-001

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2359UI

General Chemistry

Lot-Sample #...: F8B210162-001 Work Order #...: KHFAN Matrix....: WATER

Date Sampled...: 02/20/08 09:15 Date Received..: 02/21/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	309	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
<u> </u>		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.43	0.25 Dilution Fact	mg/L	MCAWW 300.0A Analysis Time: 01:03	02/21/08	8052306
		Directon Face	OI: I	Analysis lime.,: 01:03		•
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	02/22/08	8053135
		Dilution Fact	or: 1	Analysis Time: 00:00		
Chloride	148	20.0	mg/L	MCAWW 300.0A	02/21/08	8052307
		Dilution Fact	or: 100	Analysis Time: 05:28		
Fluoride	0.44	0.10	mg/L	MCAWW 300.0A	02/21/08	8052308
•		Dilution Fact	or: 1	Analysis Time: 01:03		
Ion Balance	3.5	0.10	8	SM18 1030F & API	02/27/08	8058113
Difference	• •	Dilution Fact	or: 1	Analysis Time: 00:00	•	
Nitrate	0.71	0.020	mg/L	MCAWW 300.0A	02/21/08	8052310
		Dilution Fact	or: 1	Analysis Time: 01:03		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/21/08	8052311
		Dilution Fact	or: 10	Analysis Time: 05:16		
Nitrogen, as Ammonia	. 22.7 B,	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
		Dilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	45.6	5.0	mg/L	MCAWW 300.0A	02/21/08	8052309
	•	Dilution Fact	or: 10	Analysis Time: 05:16		
Total Alkalinity	309	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	554	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	tor: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2359L2

TOTAL Metals

Lot-Sample #:	F8B210162-002	Matrix: W	VATER
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Date Sampled...: 02/20/08 09:45 Date Received..: 02/21/08

PARAMETER	RESULT	REPORTING LIMIT UNI	ITS METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
EMMITTIC				THAT DIE DIE	ORDING TO
Prep Batch #	. : 8052202				
Calcium	169000 N	1000 ug,	L SW846 6020	02/21-02/25/08	KHFAVLAN
		Dilution Factor: 1	O Analysis Time: 16:17		
Iron	ND	500 ug,	'L SW846 6020	02/21-02/23/08	KHFAV1AP
		Dilution Factor: 1	O Analysis Time: 21:24		
Potassium	6100	1000 ug	'L SW846 6020	02/21-02/23/08	KHFAVIAO
1000002		Dilution Factor: 1		,,,,	
Macmesium	26700	500 ug/	'L SW846 6020	02/21-02/23/08	מג דוואידוש
Magnesium	28700	Dilution Factor: 1		02/21-02/23/08	KHEAVLAK
Manganese	ND	20 ug/	'L SW846 6020	02/21-02/23/08	KHFAV1AT
		Dilution Factor: 1	O Analysis Time: 21:24		
Sodium	124000	500 ug	'L SW846 6020	02/21-02/23/08	KHFAV1 ATT
Dod.ium.		Dilution Factor: 1		02,02 02,23,00	
			·		
Silicon	15300 N*	2500 ug,		02/21-02/23/08	KHPAVLAV
		Dilution Factor: 1	O Analysis Time: 21:24		
Prep Batch #			•		
Silica	32700	250 ug,		03/07/08	KHFAV1A2
	•	Dilution Factor: 1	Analysis Time: 00:00		

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2359L2

General Chemistry

Lot-Sample #...: F8B210162-002 Work Order #...: KHFAV Matrix.....: WATER

Date Sampled...: 02/20/08 09:45 Date Received..: 02/21/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	247	5.0	mg/L	MCAWW 310.1	02/22/08	8053134
		Dilution Facto	or: 1	Analysis Time: 00:00		
Bromide	1.3	0.25	mg/L	MCAWW 300.0A Analysis Time: 12:51	02/21/08	8052306
Carbonate Alkalinity	ND	5.0 Dilution Factor	mg/L or: 1	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	415	20.0	mg/L	MCAWW 300.0A	02/21/08	8052307
		Dilution Facto	r: 100	Analysis Time: 05:03		
Fluoride	0.23	0.10	mg/L	MCAWW 300.0A	02/21/08	8052308
		Dilution Facto	or: 1	Analysis Time: 12:51		·,
Ion Balance Difference	6.5	0.10	ቼ	SM18 1030F & API	02/27/08	8058113
		Dilution Facto	or: 1	Analysis Time: 00:00		
Nitrate	0.55	0.020	mg/L	MCAWW 300.0A	02/21/08	8052310
		Dilution Facto	or: 1	Analysis Time: 12:51		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/21/08	8052311
		Dilution Facto	or: 10	Analysis Time: 04:51		
Nitrogen, as Ammonia	22.7 B	J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
		Dilution Facto	or: 1	Analysis Time: 00:00		
Sulfate	76.0	5.0	mg/L	MCAWW 300.0A	02/21/08	8052309
	•	Dilution Fact	or: 10	Analysis Time: 04:51		
Total Alkalinity	247	5.0	mg/L	MCAWW 310.1	02/22/08	8053136
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	973	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2307U

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER					
		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
Prep Batch #	.: 8052202						
Calcium	44900 N	2000	ug/L	SW846	6020	02/21-02/25/08	KHFD81A0
		Dilution Facto	or: 20	Analysis	Time: 16:21		
Iron	56 4	50 0	ug/L	SW846	6020	02/21-02/23/08	KHFD81A1
		Dilution Facto	or: 10	Analysis	Time: 21:27		
Potassium	3340	1000	ug/L	SW846	6020	02/21-02/23/08	KHFD81A2
		Dilution Facto	or: 10	Analysis	Time: 21:27		
Magnesium	7040	500	ug/L	SW846	6020	02/21-02/23/08	KHFD81A3
_		Dilution Facto	or: 10	Analysis	Time: 21:27		
Manganese	10.4 B	20	ug/L	SW846	6020	02/21-02/23/08	KHFD81A4
_		Dilution Facto	or: 10	Analysis	Time: 21:27		•
Sodium	163000	500	ug/L	SW846	6020	02/21-02/23/08	KHFD81A5
		Dilution Facto	or: 10	Analysis	Time: 21:27		
Silicon	22600 N*	5000	ug/L	SW846	6020	02/21-02/25/08	KHFD81A6
		Dilution Facto	or: 20	Analysis	Time: 16:21		
Prep Batch #	.: 8067296						
Silica	48400	250	ug/L	SW846	6020	03/07/08	KHFD81CU
		Dilution Facto	or: 1	Analysis	Time: 00:00	•	
					*		

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

Client Sample ID: OW-2307U

General Chemistry

Work Order #...: KHFD8 Lot-Sample #...: F8B210162-003 Matrix....: WATER

Date Sampled...: 02/20/08 11:00 Date Received..: 02/21/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	490	10.0	mg/L	MCAWW 310.1	02/22/08	8053134
		Dilution Factor: 2		Analysis Time: 00:00		
Bromide	0.24 B	0.25	mg/L or: 1	MCAWW 300.0A Analysis Time: 12:13	02/21/08	8052306
			. 17		/ /	
Carbonate Alkalinity	ND	10.0 Dilution Facto	mg/L or: 2	MCAWW 310.1 Analysis Time: 00:00	02/22/08	8053135
Chloride	59.9	10.0 Dilution Facto	mg/L or: 50	MCAWW 300.0A Analysis Time: 02:59	02/21/08	8052307.
· ·		24402011 14000				
Fluoride	1.0	0.10 Dilution Facto	mg/L	MCAWW 300.0A Analysis Time: 12:13	02/21/08	8052308
		Direction Facto)I.; I	Analysis lime: 12:13		
Ion Balance Difference	7.9	0.10	ક	SM18 1030F & API	02/27/08	8058113
		Dilution Facto	r: 1	Analysis Time: 00:00		
Nitrate	0.36	0.020	mg/L	MCAWW 300.0A	02/21/08	8052310
•		Dilution Facto	or: 1	Analysis Time: 12:13		
Nitrate/Nitrite as N	267	50.0	ug/L	MCAWW 353.1	02/22/08	8053429
		Dilution Facto	or: 1	Analysis Time: 00:00		
Nitrite	ND	0.020	mg/L	MCAWW 300.0A	02/21/08	8052311
		Dilution Facto	or: 1	Analysis Time: 12:13		
Nitrogen, as Ammonia	22.7 B	.J 50.0	ug/L	MCAWW 350.1	02/22/08	8053421
	•	Dilution Facto		Analysis Time: 00:00		
Sulfate	18.9	0.50	mq/L	MCAWW 300.0A	02/21/08	8052309
		Dilution Fact		Analysis Time: 12:13	,,	
Total Alkalinity	490	10.0	mq/L	MCAWW 310.1	02/22/08	8053136
TOTAL ALKALIMITY	450	Dilution Fact	٥.	Analysis Time: 00:00		0000100
Total Dissolved	566	5.0	mg/L	MCAWW 160.1	02/25-02/26/08	8056085
Solids		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result, Result is less than RI Volume 4 Rev. 0 - 7/18/2008 Page 213 of 657 Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2307L

TOTAL Metals

Lot-Sample #...: F8B210162-004 Matrix....: WATER

Date Sampled...: 02/20/08 11:15 Date Received..: 02/21/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOI	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	.: 8052202 83900 N	2000 Dilution Facto	ug/L or: 20	SW846 Analysis	6020 Time: 16:24	02/21-02/25/08	KHFD91AM
Iron	ND	500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:31	02/21-02/23/08	KHFD91AN
Potassium	4970	1000 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:31	02/21-02/23/08	KHFD91AP
Magnesium	12000	500 Dilution Facto	ug/L or: 10		6020 Time: 21:31	02/21-02/23/08	KHFD91AQ
Manganese .	ND	20 Dilution Facto			6020 Time: 21:31	02/21-02/23/08	KHFD91AR
Sodium	100000	500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:31	02/21-02/23/08	KHFD91AT
Silicon	19400 N*	5000 Dilution Facto	ug/L or: 20		6020 Time: 16:24	02/21-02/25/08	KHFD91AU
Prep Batch #	.: 8067296 41500	250 Dilution Facto	ug/L or: 1		6020 Time: 00:00	03/07/08	KHFD91A2

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2307L

General Chemistry

Lot-Sample #...: F8B210162-004 Work Order #...: KHFD9
Date Sampled...: 02/20/08 11:15 Date Received..: 02/21/08 Matrix....: WATER

PARAMETER	RESULT	RL	UNITS	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	298	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
	Dil	Dilution Factor: 1		Analysis Time: 00:00			
Bromide	0.38	0.25 ution Facto	mg/L or: 1		300.0A Time: 12:01	02/21/08	8052306
Carbonate Alkalinity		5.0 ution Facto	mg/L or: 1	MCAWW Analysis	310.1 Time: 00:00	02/22/08	8053135
Chloride	100	10.0 ution Facto	mg/L or: 50		300.0A Time: 02:22	02/21/08	8052307
Fluoride	0.40	0.10 ution Facto	mg/L or: 1	MCAWW Analysis	300.0A Time.: 12:01	02/21/08	8052308
Ion Balance Difference	0.21	0.10	ક	SM18 1	.030F & API	02/27/08	8058113
	Dil	Dilution Factor: 1		Analysis Time: 00:00			
Nitrate	1.4	0.10 ution Facto	mg/L or: 5		300.0A Time: 02:10	02/21/08	8052310
Nitrate/Nitrite as N		50.0	ug/L or: 1	MCAWW Analysis	353.1 Time: 00:00	02/22/08	8053429
Nitrite	ND Dil	0.020	mg/L pr: 1	MCAWW Analysis	300.0A Time: 12:01	02/21/08	8052311
Nitrogen, as Ammonia		50.0 ution Fact	ug/L or: 1	MCAWW Analysis	350.1 Time: 00:00	02/22/08	8053421
Sulfate	25.4 Dil	2.5 ution Fact	mg/L or: 5		300.0A Time: 02:10	02/21/08	8052309
Total Alkalinity	298 Dil	5.0 ution Fact	mg/L or: 1		310.1 Time: 00:00	02/22/08	8053136
Total Dissolved Solids	466	5.0	mg/L	MCAWW	160.1	02/25-02/26/08	8056085
•	Dil	ution Fact	or: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Meth Mobilian Confidence of Randon 7/11/06/2830 Clated method blank contains the target Range 21 5 10 f 6 f 28 level.

Client Sample ID: OW-2324U

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER							
PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #		
Prep Batch #: 8052202									
Calcium	111000 N	1000 Dilution Factor	ug/L or: 10	_	6020 Time: 16:28	02/21-02/25/08	KHFECIAM		
Iron	ND	500 Dilution Fact	ug/L or: 10	SW846 Analysis	6020 Time: 21:43	02/21-02/23/08	KHFEC1AN		
Potassium	3610	1000 Dilution Factor	ug/L or: 10	SW846 Analysis	6020 Time: 21:43	02/21-02/23/08	KHFEC1AP		
Magnesium	15600	500 Dilution Facto	ug/L or: 10	SW846 Analysis	6020 Time: 21:43	02/21-02/23/08	KHFECLAQ		
Manganese	ND	20 Dilution Factor	-	SW846 Analysis	6020 Time: 21:43	02/21-02/23/08	KHFECIAR		
Sodium	99900	500 Dilution Factor	ug/L or: 10	SW846 Analysis	6020 Time: 21:43	02/21-02/23/08	KHFECLAT		
Silicon	17900 N*	2500 Dilution Factor	ug/L or: 10	-	6020 Time: 21:43	02/21-02/23/08	KHFECLAU		
Prep Batch # Silica	: 8067296 38300	250 Dilution Fact	ug/L or: 1		6020 Time: 00:00	03/07/08	KHFEC1A2		

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2324U

General Chemistry

Lot-Sample #...: F8B210162-005 Work Order #...: KHFEC Matrix.....: WATER

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

PARAMETER	RESULT	RL	UNITS	METHOL)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	289	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bromide	0.43	0.25 Dilution Fact	mg/L or: 1		300.0A Time: 12:38	02/21/08	8052306
Carbonate Alkalinity	ND	5.0 Dilution Factor	mg/L or: 1	MCAWW Analysis	310.1 Time: 00:00	02/22/08	8053135
Chloride	160	20.0 Dilution Factor	mg/L or: 100		300.0A Time: 04:39	02/21/08	8052307
Fluoride	0.29	0.10	mg/L or: 1		300.0A Time: 12:38	02/21/08	8052308
Ion Balance Difference	2.1	0.10	8	-	L030F & API	02/27/08	8058113
Distriction of		Dilution Fact	or: 1	Analysis	Time: 00:00	•	
Nitrate	0.67	0.020 Dilution Fact	mg/L or: 1		300.0A Time.: 12:38	02/21/08	8052310
Nitrate/Nitrite as N	497	50.0 Dilution Fact	ug/L or: 1		353.1 Time: 00:00	02/22/08	8053429
Nitrite	ND	0.20 Dilution Fact	mg/L or: 10		300.0A Time: 04:01	02/21/08	8052311
Nitrogen, as Ammonia	. 22.7 B,	J 50.0 Dilution Fact	ug/L .or: 1		350.1 Time: 00:00	02/22/08	8053421
Sulfate	58.3	5.0 Dilution Fact	mg/L or: 10		300.0A Time: 04:01	02/21/08	8052309
Total Alkalinity	289	5.0 Dilution Fact	mg/L or: 1		310.1 Time: 00:00	02/22/08	8053136
Total Dissolved Solids	586	5.0	mg/L	MCAWW	160.1	02/25-02/26/08	8056085
		Dilution Fact	cor: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Mellial Hark to Remindito 7/1912 2008 ciated method blank contains the target and 9:247a 4666 Table level.

Client Sample ID: OW-2324L

TOTAL Metals

Lot-Sample #...: F8B210162-006

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	.: 8052202				•	•	
Calcium	196000 N	1000	ug/L	SW846	6020	02/21-02/25/08	KHFEE1AM
		Dilution Facto	r: 10	Analysis	Time: 16:31		
Iron	ND	500	ug/L	SW846	6020	02/21-02/23/08	KHFEE1AN
		Dilution Facto	or: 10	Analysis	Time: 21:46		
Potassium	6740	1000	uq/L	SW846	6020	02/21-02/23/08	KHEERI AD
FOCASSIAM	0,10	Dilution Facto	ے.		Time: 21:46	02, 22 02, 23, 00	X411 1.1.111 1.
						4 4 4	
Magnesium	33600	500 Dilution Facto		SW846	6020 Time: 21:46	02/21-02/23/08	KHFEBLAQ
		Dilucion Facto	E: IO	Anarysis	Time: 21:46		
Manganese	13.3 B	20	ug/L	SW846	6020	02/21-02/23/08	KHFEBLAR
		Dilution Facto	r: 10	Analysis	Time: 21:46		
Sodium	138000	500	ug/L	SW846	6020	02/21-02/23/08	KHFER1 AT
		Dilution Facto	٥.		Time: 21:46	,,,	
2171	1 = 17 0 0 M+	2500		TITAL 4.C	5000	00/07 00/07/00	*********
Silicon	15700 N*	2500 Dilution Facto	ug/L		6020 Time: 21:46	02/21-02/23/08	KHFEKIAU
		Director Lage	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ratery 525	14		~
Prep Batch #		250	/=	CITIO A C	C020	02/07/00	***********
Silica	33600	250 Dilution Facto	ug/L		6020 Time: 00:00	03/07/08	KHFEE1A3
		Pilation Pace	, <u>.</u>	www. Jara	12.116 00.00		

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

Client Sample ID: OW-2324L

General Chemistry

Lot-Sample #...: F8B210162-006 Work Order #...: KHFEE Matrix..... WATER

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

PARAMETER	RESULT	RL	UNITS	METHOL)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	249	5.0	mg/L	MCAWW	310.1	02/22/08	8053134
	Dil	ution Facto	or: 1	Analysis	Time: 00:00		
Bromide	1.6	0.25	mg/L or: 1		300.0A Time: 12:26	02/21/08	8052306
Carbonate Alkalinity		5.0 ution Facto	mg/L or: 1	MCAWW Analysis	310.1 Time: 00:00	02/22/08	8053135
Chloride	517 Dil	40.0 ution Facto	mg/L or: 200		300.0A Time: 12:16	02/22/08	8052307
Fluoride	0.22	0.10	mg/L or: 1		300.0A Time: 12:26	02/21/08	8052308
Ion Balance Difference	7.1	0.10	<u>9</u>	SM18 1	LO30F & API	02/27/08	8058113
	Dil	ution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	0.54	0.020 ution Facto	mg/L or: 1		300.0A Time: 12:26	02/21/08	8052310
Nitrate/Nitrite as N		50.0 ution Facto	ug/L or: 1		353.1 Time: 00:00	02/22/08	8053429
Nitrite	ND pil	0.20 ution Fact	mg/L or: 10		300.0A Time: 03:37	02/21/08	8052311
Nitrogen, as Ammonia		50.0 ution Fact	ug/L or: 1		350.1 Time: 00:00	02/22/08	8053421
Sulfate	86.0	5.0 ution Fact	mg/L or: 10		300.0A Time: 03:37	02/21/08	8052309
Total Alkalinity	249 Dil	5.0 ution Fact	mg/L .or: 1		310.1 Time: 00:00	02/22/08	8053136
Total Dissolved Solids	1090	5.0	mg/L	MCAWW	160.1	02/25-02/26/08	8056085
	Dil	lution Fact	or,: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F8B210162 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD		WORK ORDER #
MB Lot-Sample Calcium	#: F8B210000 ND	0-202 Prep Batch #: 100 ug/L Dilution Factor: 1 Analysis Time: 15:26	8052202 SW846 6020	02/21-02/25/08	KHFJT1AA
Iron	ND	50 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJT1AC
Magnesium	ND	50 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJT1AE
Manganese	ND	2 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJTlAF
Potassium	ND .`	100 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJTlAD
Silicon	ND	250 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJTlAH
Sodium	ND	50 ug/L Dilution Factor: 1 Analysis Time: 20:32	SW846 6020	02/21-02/23/08	KHFJT1AG
MB Lot-Sample	#: F8C07000	0-296 Prep Batch #:	8067296	·	
Silica	ND	250 ug/L Dilution Factor: 1 Analysis Time: 00:00	SW846 6020	03/07/08	KH71W1AA
				• •	

Calculations are performed before rounding to avoid round-off errors in calculated results.

NOTE (S) :

METHOD BLANK REPORT

General Chemistry

Client Lot #: F	8B210162		Matr	ix WA	TER
PARAMETER Bicarbonate	RESULT	REPORTING LIMIT UNITS Work Order #: KHHMN1AA	METHOD MB Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B220000-134	PREP BATCH #
Alkalinity	ND .	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 310.1	02/22/08	8053134
Bromide	ND	Work Order #: KHKW11AA 0.25 mg/L Dilution Factor: 1 Analysis Time: 11:49	MB Lot-Sample #: MCAWW 300.0A	F8B210000-306 02/21/08	8052306
Carbonate Alkalini	ty ND	Work Order #: KHHM21AA 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 310.1	F8B220000-135 02/22/08	8053135
Chloride	ND	Work Order #: KHKW21AA 0.20 mg/L Dilution Factor: 1 Analysis Time: 11:49	MB Lot-Sample #: MCAWW 300.0A	F8B210000-307 02/21/08	8052307
Fluoride	ND	Work Order #: KHKW51AA 0.10 mg/L Dilution Factor: 1 Analysis Time: 11:49	MB Lot-Sample #: MCAWW 300.0A	F8B210000-308 02/21/08	8052308.
Nitrate	ND	Work Order #: KHKW71AA 0.020 mg/L Dilution Factor: 1 Analysis Time: 11:49	MB Lot-Sample #: MCAWW 300.0A	F8B210000-310 02/21/08	8052310
Nitrate/Nitrite as	ND	Work Order #: KHJ1X1AF 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 353.1	F8B220000-429 02/22/08	8053429
Nitrite	ND	Work Order #: KHKW91AF 0.020 mg/L Dilution Factor: 1 Analysis Time: 11:49	A MB Lot-Sample #: MCAWW 300.0A	F8B210000-311 02/21/08	8052311
Nitrogen, as Ammor	uia 22.7 B	Work Order #: KHJ1N1A 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	A MB Lot-Sample #: MCAWW 350.1	F8B220000-421 02/22/08	8053421

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8B210162

Matrix..... WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Sulfate .	ND	Work Order #: KHKW61. 0.50 mg/L Dilution Factor: 1 Analysis Time: 11:49	AA MB Lot-Sample #: MCAWW 300.0A	F8B210000-309 02/21/08	8052309
Total Alkalinity	ND	Work Order #: KHHM81. 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	AA MB Lot-Sample #: MCAWW 310.1	F8B220000-136 02/22/08	8053136
Total Dissolved Solids		Work Order #: KHM9Q1	AA MB Lot-Sample #:	F8B250000-085	
202240	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 160.1	02/25-02/26/08	8056085

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8B210162				Matrix	: WATER
PARAMETER	PERCENT RECOVERY		METHOD		PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium			SW846 6020)	02/21-02/25/08	KHFJT1AJ
Iron .	101	(85 - 115) Dilution Facto			02/21-02/23/08 Time: 20:36	KHFJT1AK
Potassium	103	(85 - 115) Dilution Facto			02/21-02/23/08 Time: 20:36	KHFJT1AL
Magnesium	100	(85 - 115) Dilution Facto	and the second second		02/21-02/23/08 Time: 20:36	KHFJTlAM
Manganese	107	(85 - 115) Dilution Facto			02/21-02/23/08 Time: 20:36	KHFJTlAN
Sodium	99	(85 - 115) Dilution Facto			02/21-02/23/08 Time: 20:36	KHFJTlAP
Silicon	103				02/21-02/23/08 Time: 20:36	KHFJT1AQ
LCS Lot-Sample#: Silica			SW846 6020)	03/07/08	KH71W1AC

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

			_		
Lot-Sample #	:: F8B21	.0162		Matrix	: WATER
	PERCENT	RECOVERY RPD		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS RPD LIMIT	S METHOD	ANALYSIS DATE	BATCH #
Bicarbonate		WO#:KHHMN1AC-LCS/K	HHMN1AD-LCSD LCS L	ot-Sample#: F8B2	20000-134
Alkalinity		·			
-	100	(90 - 110)	MCAWW 310.1	02/22/08	8053134
	100	(90 - 110) 0.49 (0-15) MCAWW 310.1	02/22/08	8053134
		Dilution Factor: 1	Analysis Time:	00:00	
Carbonate Al	kalinity	WO#:KHHM21AC-LCS/K	HHM21AD-LCSD LCS Lo	ot-Sample#: F8B2	20000-135
	100	(90 - 110)	MCAWW 310.1	02/22/08	8053135
	100	(90 - 110) 0.49 (0-15)) MCAWW 310.1	02/22/08	8053135
			Analysis Time:		
Nitrate/Nitr	ite as N	WO#:KHJ1X1AC-LCS/K	HJ1X1AD-LCSD LCS Lo	ot-Sample#: F8B2	20000-429
		(90 - 110)			
	97	(90 - 110) 0.14 (0-20)	MCAWW 353.1	02/22/08	8053429
	•	Dilution Factor: 1			
Nitrogen, as	Ammonia	WO#:KHJ1N1AC-LCS/K	HJ1N1AD-LCSD LCS Lo	ot-Sample#: F8B2	20000-421
	100	(90 - 110)	MCAWW 350.1	02/22/08	8053421
	99	(90 - 110) 0.22 (0-20)	MCAWW 350.1	02/22/08	8053421
		Dilution Factor: 1	Analysis Time:	00:00	
Total Alkali	nity	WO#:KHHM81AC-LCS/K	HHM81AD-LCSD LCS L	ot-Sample#: F8B2	20000-136
	100	(90 - 110)	MCAWW 310.1	02/22/08	8053136
	100) MCAWW 310.1	02/22/08	8053136
			Analysis Time:		
Total Dissol Solids	ved	WO#:KHM9Q1AC-LCS/K			
	98	(86 - 115)	MCAWW 160.1	02/25-02/26/08	8056085
	99	(86 - 115) 1.6 (0-15) MCAWW 160.1	02/25-02/26/08	8056085
		Dilution Factor: 1	Analysis Time:	00:00	

NOTE(S):

Matrix..... WATER

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B210162

		•	
	PERCENT	RECOVERY	PREPARATION- PREP
PARAMETER	RECOVERY	LIMITS METHOD	ANALYSIS DATE BATCH #
Bromide		Work Order #: KHKW11AC LCS Lo	
	105	(90 - 110) MCAWW 300.0A	02/21/08 8052306
		Dilution Factor: 1 Analysis T	ime: 11:36
		TO A STATE OF THE PARTY OF THE	4. G
Chloride		Work Order #: KHKW21AC LCS Lo	
	102		·
		Dilution Factor: 1 Analysis T.	ime: 11:36
Fluoride		Work Order #: KHKW51AC LCS Lo	t-Sample#: F8B210000-308
1100100	100	(90 - 110) MCAWW 300.0A	-
		Dilution Factor: 1 Analysis T	• •
Nitrate		Work Order #: KHKW71AC LCS Lo	t-Sample#: F8B210000-310
	104	(90 - 110) MCAWW 300.0A	02/21/08 8052310
		Dilution Factor: 1 Analysis T	ime: 11:36
Nitrite		Work Order #: KHKW91AC LCS Lo	+ 6-mml-#- E0D210000 211
NICTICE	107	(90 - 110) MCAWW 300.0A	
	107	Dilution Factor: 1 Analysis T	
		Difficion ractor: 1 Analysis 1.	IME: II:36
Sulfate		Work Order #: KHKW61AC LCS Lo	t-Sample#: F8B210000-309
	104	(90 - 110) MCAWW 300.0A	. 02/21/08 8052309
		Dilution Factor: 1 Analysis T	ime: 11:36

NOTE (S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot :		.: 02/20/08	Matrix	: WATER	
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl Calcium	e #: F8B21 69 N 114	.0151-001 Prep Batch # (75 - 125) (75 - 125) 11 (0-20) Dilution Factor: 10 Analysis Time: 15:40	SW846 6020 SW846 6020	02/21-02/25/08 02/21-02/25/08	
Iron	112 121	(75 - 125) (75 - 125) 6.6 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020 SW846 6020	02/21-02/23/08 02/21-02/23/08	
Magnesium	99 104	(75 - 125) (75 - 125) 2.5 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08 02/21-02/23/08	
Manganese	110 111	(75 - 125) (75 - 125) 0.93 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020 SW846 6020	02/21-02/23/08 .02/21-02/23/08	•
Potassium	101 105	(75 - 125) (75 - 125) 2.9 (0-20) Dilution Factor: 10 Analysis Time.: 20:46	SW846 6020 SW846 6020	02/21-02/23/08 02/21-02/23/08	
Silicon	0 N 212 N,*	(75 - 125) (75 - 125) 0.0 (0-20) Dilution Factor: 10 Analysis Time: 20:46		02/21-02/23/08 02/21-02/23/08	
Sodium	76 107	(75 - 125) (75 - 125) 4.9 (0-20) Dilution Factor: 10 Analysis Time: 20:46	SW846 6020 SW846 6020	02/21-02/23/08 02/21-02/23/08	

NOTE(S):

- N Spiked analyte recovery is outside stated control limits.
 - * Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B210162 Matrix..... WATER

Date Sampled...: 02/20/08 11:00 Date Received..: 02/21/08

PARAMETER Bromide	PERCENT RECOVERY	LIMITS METHOD	MS Lot-Sample #: F8B210162-003 02/21/08 8052306
Chloride	108	Work Order #: KHFD81CH (90 - 110) MCAWW 300.0A Dilution Factor: 50 Analysis	
Fluoride	110	Work Order #: KHFD81CK (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis	
Nitrate	105 .	Work Order #: KHFD81CP (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis	
Nitrate/Nitrite	95 .	Work Order #: KHFD81CD (90 - 110) MCAWW 353.1 Dilution Factor: 1 Analysis	
Nitrite		Work Order #: KHFD81CR (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis	
Nitrogen, as Am		Work Order #: KHE551C0 (90 - 110) MCAWW 350.1 Dilution Factor: 1 Analysis	
Sulfate	109	Work Order #: KHFD81CM (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis	
Total Alkalinit	y 93	Work Order #: KHE9E1A4 (80 - 120) MCAWW 310.1 Dilution Factor: 1 Analysis	MS Lot-Sample #: F8B210166-001 02/22/08 8053136 Time: 00:00

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8B210162

Work Order #...: KHFD8-SMP

Matrix....: WATER

KHFD8-DUP

Date Sampled...: 02/20/08 11:00 Date Received..: 02/21/08

DUPLICAT	E		RPD		PREPARATION-	PREP
PARAM RESULT RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide				SD Lot-Sample #:	F8B210162-003	
0.24 B 0.24 B	mg/L	0.99	(0-20)	MCAWW 300.0A	02/21/08	8052306
	Dilution Fa	ctor: 1	Ana	alysis Time: 12:13		
Chloride				SD Lot-Sample #:		
59.9 59.2	mg/L	1.2	(0-20)	MCAWW 300.0A	02/21/08	8052307
	Dilution Fac	ctor: 50	Ana	alysis Time: 02:59		
Fluoride				SD Lot-Sample #:		•
1.0 1.1	mg/L	5.6		MCAWW 300.0A	02/21/08	8052308
	Dilution Fac	ctor: 1	Ana	alysis Time: 12:13		•
Sulfate				SD Lot-Sample #:	F8B210162-003	•
18.9 18.9	mg/L	0.070	(0-20)	MCAWW 300.0A	02/21/08	8052309
	Dilution Fac	ctor: 1	Ana	alysis Time: 12:13		
Nitrate				SD Lot-Sample #:	F8B210162-003	
0.36 0.36	mg/L	0.51	(0-20)	MCAWW 300.0A	02/21/08	8052310
	Dilution Fac	ctor: 1	Ana	alysis Time: 12:13	•	
Nitrite				SD Lot-Sample #:	F8B210162-003	
ND ND	mg/L	0	(0-20)	MCAWW 300.0A	.02/21/08	8052311
	Dilution Fac	ctor: 1	Ana	alysis Time: 12:13	•	
Nitrate/Nitrite as N				SD Lot-Sample #:	F8B210162-003	
267 287	uq/L	7.2	(0-20)	MCAWW 353.1		8053429
	Dilution Fa			alysis Time: 00:00		

NOTE (S):

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8B210162

Work Order #...: KHE9E-SMP

Matrix....: WATER

KHE9E-DUP

Date Sampled...: 02/18/08 10:30 Date Received..: 02/19/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B210166-001	PREP BATCH #
397	396	mg/L Dilution Fac			MCAWW 310.1 alysis Time: 00:00	02/22/08	8053134
Carbonate Alkalir ND	nity ND	mg/L Dilution Fac	0 tor: 1		SD Lot-Sample #: MCAWW 310.1 alysis Time: 00:00		8053135
Total Alkalinity 397	396	mg/L Dilution Fac			SD Lot-Sample #: MCAWW 310.1 alysis Time: 00:00	F8B210166-001 02/22/08	8053136
Total Dissolved					SD Lot-Sample #:	F8B210166-001	
642	679	mg/L Dilution Fac			MCAWW 160.1 alysis Time: 00:00	02/25-02/26/08	8056085

General Chemistry

Client Lot #...: F8B210162

Work Order #...: KHE55-SMP

Matrix....: WATER

KHE55-DUP

Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as Ammo	nia				SD Lot-Sample #:	F8B210151-001	
22.7 B,J	22.7 B	ug/L	0.0	(0-20)	MCAWW 350.1	02/22/08	8053421
·		Dilution Fact	tor: 1	Ana	llysis Time: 00:00		

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

General Chemistry

Client Lot #...: F8B210162

Work Order #...: KHFEE-SMP

Matrix....: WATER

KHFEE-DUP

Date Sampled...: 02/20/08 14:00 Date Received..: 02/21/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids					SD Lot-Sample	#:	F8B210162-006	
1090	1150	mg/L pilution Fact	5.3 or: 1	•	MCAWW 160.1 lysis Time: 00:00	0	02/25-02/26/08	8056085

CLIENT ANALYSIS SUMMARY

Storage Loc: Date Received:

1-225,METS

Project Manager: IV

Quote #: 78576

SDG:

Analytical Due Date:

2008-02-21 2008-02-28

Project: PO#:

6468071777 200803591

Excelon Victoria TEXAS COL

Report Due Date:

2008-02-28

Client:

373886

Report to: Kathryn White

RUSH

Report Type: W EDD Code: 00

MACTEC Engineering and Consulting Inc

#SMPS in LOT: 6

SAMPLE #	# CLIE	NT SAMPL	EID Site	<u>Ol e</u>	Client Matrix	DATE/T	ME SAMPLED	WORKORE	DER.	1	
1	OW-2	2359UI				2008-02-2	20/915	KHFAN	W	ATER	
SAMPLE (COMME	NTS:									
FE MH			Inductively Coupled Plasma Mass Spectrometry(5020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
KX MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
MG MH	1 SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ.	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
MN MH	4 SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
NA MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
SA MH	\$W845	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06	
SI MH	SW845	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
CA MH	1 SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK	06	
XX ZV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
XX AK	MCAW W		Solids, Filterable "TDS" (160,1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX C8	MCAW W	300.0A	Fiuoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	· 01	STANDARD TEST SET	PROT: A	WRK.	06 .	
XX CB	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
. XX CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	90	
XX CY		300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX GN	MCAW	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX GC		300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX SL	20	1030F & API	ion Balance (% Difference)	0X	CALCULATION	01	STANDARD TEST SET	PROT: A	WRK	06	
XX UX	MCAW W		Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX VC		310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX VIV		350,1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
SAMPLE	# CLIE	NT SAMPL	.E ID Site	: ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORE	DER	1	
2	OW-	2359L2				2008-02-2	20 / 945	KHFAV	W	ATER	
SAMPLE											
NA MI			Inductively Coupled Plasma	GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
SA M	H SW846	5020	Mass Spectrometry(6020) Inductively Coupled Plasma	0X	HCL CALCULATION	9Q	ORG FLAGS FOR INORG;	PROT: A	WRK	06	
MN MI	H SWB46	6020	Mass Spectrometry(6020) inductively Coupled Plasma	GJ	ONLY METALS, TOTAL - 2%	01	STANDARD STANDARD TEST SET	PROT: A	WRK	06	
MG M	H SWB46	6020	Mass Spectrometry(6020) Inductively Coupled Plasma	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
KX MI	H SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasma	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
FE MI	H SW846	6020	Mass Spectrometry(6020) Inductively Coupled Plasma	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
CA MI	H SWB46	6 6020	Mass Spectrometry (6020) Inductively Coupled Plasma	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
SI M	H SW846	6 6020	Mass Spectrometry(6020) Inductively Coupled Plasma	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
XX Z\	v	RAD	Mass Spectrometry(6020) RAD	RA		01	STANDARD TEST SET	PROT: A	WRK	06	
XX A	K MCAW	SCREEN 1 160.1	SCREEN Solids, Filterable "TDS" (160.1)	88	SCREEN NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06	
TestAmerica		4 Rev. 609	•	2008	-03-10 Pagle 232 of 65	57 P	rinted on: Monday, March	10, 2008 02: 49 &		(E808 [‡]	age 1 of 5

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

Project Manager:

: 17

MCAW 350.1

Quote #: 78576

SDG:

Date Received:

2008-02-21 2008-02-28

Project:

XX VM

6468071777

Excelon Victoria TEXAS COL

Analytical Due Date:

Report Due Date:

PROT: A

WRK 06

LOC

2008-02-28

PO#:

200803591

Report to: Kathryn White

RUSH

STANDARD TEST SET

#SMPS in LOT: 6

Report Type: W EDD Code: 00

Client: 373886 MACTEC Engineering and Consulting Inc

Nitrogen, Ammonia (350.1,

Automated)

NO SAMPLE PREPARATION PERFORMED / DIRECT Fluoride (300.0A, Ion STANDARD TEST SET MCAW 300.0A 88 PROT: A WRK 06 XX C8 Chromatography) NO SAMPLE PREPARATION STANDARD TEST SET Nitrate as N (300.0A, ion MCAW 300.0A 88 01 PROT: A WRK 06 XX C9 PERFORMED / DIRECT Chromatography) LOC Alkalinity, Carbonate NO SAMPLE PREPARATION STANDARD TEST SET MCAW 310.1 PROT: A 88 01 WRK 06 CB (310.1) PERFORMED / DIRECT LOC Chloride (300.0A, Ion Chromatography) Sulfale (300.0A, Ion MCAW 300.0A 88 NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRK 06 XX .CX PERFORMED / DIRECT LOC NO SAMPLE PREPARATION STANDARD TEST SET MCAW 300.0A PROT: A WRK 88 01 06 XX CY Chromatography) PERFORMED / DIRECT LOC Bromide (300.0A, Ion NO SAMPLE PREPARATION PERFORMED / DIRECT STANDARD TEST SET PROT: A WRK MCAW 300.0A 88 06 XX GM Chromatography) LDC Nitrite as N (300.0A, ton NO SAMPLE PREPARATION MCAW 300.0A STANDARD TEST SET PROT: A 88 01 WRK 06 GO XX Chromatography) PERFORMED / DIRECT LOC SM18 1030F & Ion Balance (% 0X CALCULATION STANDARD TEST SET PROT: A WRK ns. XX SL Difference) ONLY LOC NO SAMPLE PREPARATION STANDARD TEST SET MCAW 310.1 Alkalinily, Bicarbonate 88 PROT: A WRK 06 XX HX PERFORMED / DIRECT (310.1)LOC NO SAMPLE PREPARATION STANDARD TEST SET MCAW 310.1 Alkalinity, Total PROT: A WRK 88 01 06 VC (310.1)PERFORMED / DIRECT LOC

NO SAMPLE PREPARATION PERFORMED / DIRECT

88

SAME	LE#	CLIEN	NT SAMPL	EID Site	D	Client Matrix	DATE/T	ME SAMPLED	WORKOR	DER	1
3		OW-2	307U				2008-02-2	20/1100	KHFD8	W	ATER
SAME	LE CO	OMMEN	ITS:								
КX	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL • 2% HCL	01	STANDARD TEST SET	PROT: A	WRK.	06
SI	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
ŞA	мн	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06
NA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(5020)	GJ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK LOC	06
FE	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
CA	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MN	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	ΑK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C8	MCAW W	A0.00E	Fluoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	A0.00E	Nitrate as N (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CB	MCAW W	310.1	Alkalinily, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CX	MCAW W	300.0A	Chioride (300,0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	HN	MCAW W	353.1	Nitrale-Nitrite (353.1)	23	REDUCTION	01	STANDARD TEST SET	PROT: Z	WRK	06
XX	SL	SM18	1030F & API	Ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT; A	WRK	06
XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
s xx	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06 .

VANIAL

CLIENT ANALYSIS SUMMARY

Storage Loc: Date Received: 1-225,METS

Project Manager: IV

Quote #: 78576

SDG:

Analytical Due Date:

Report Due Date:

2008-02-21 2008-02-28

Project: PO#:

6468071777 200803591

Excelon Victoria TEXAS COL

RUSH

2008-02-28

Client:

373886

Report to: Kathryn White MACTEC Engineering and Consulting Inc

Report Type: W EDD Code: 00

#SMPS in LOT: 6

s	XX	C9	MCAW 300.0A	Nilrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		VRK 06 .oc	
S	XX	CX	MCAW 300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
S	XX	CY	MCAW 300.0A W	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	VRK 06	
S	XX	GM	MCAW 300.0A W	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
S	XX	GO	MCAW 300.0A W	Nitrite as N (300.0A, ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
S	XX	HN	MCAW 353.1 W	Nitrate-Nitrite (353.1)	23	REDUCTION	01	STANDARD TEST SET	PROT: Z V	VRK 06	
X	XX	C8	MCAW 300.0A W	Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	VRK 06	
X	XX	C9	MCAW 300.0A	Nitrate as N (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	VRK 06	
X	XX	cx	MCAW 300.0A	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	VRK 06	
X	XX	CY	MCAW 300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
X	XX	GM	MCAW 300.0A	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
X	XX	GO	MCAW 300.0A	Nitrite as N (300.0A, ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A V	VRK 06	
X	XX	HN	MCAW 353.1 W	Nitrale-Nitrite (353.1)	23	REDUCTION	01	STANDARD TEST SET	PROT: Z V	VRK 06	
	SAMP	LE#	CLIENT SAM	MPLE ID Site	e ID	Client Matrix	DATE/T	ME SAMPLED	WORKORD	ER l	
	4		OW-2307L			•	2008-02-	20/ 1115	KHFD9	WATER	í
	SAMP	LE C	OMMENTS:			•					
	MN	МН	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		VRK 06	
	SI	MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A V	VRK 06	
	NA	MH	SW846 6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	VRK 06	
						- ::					

97 (1711		<u> </u>	*************************************								<u>-</u>
4		OW-2	307L				2008-02-2	20/ 1115	KHFD9	W	ATER
SAMP	LE C	<u>13MMC</u>	<u> </u>			•		•			
MN	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SI	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
NA	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
ΚХ	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
FE	МН	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
CA	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SA	MH	SW846	6020	inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06
XX	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK Lac	06
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	СВ	MCAW W	310.1	Alkalintly, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW W	A0,00E	Sulfale (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GM	MCAW W	A0,006	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO	MCAW W	A0,008	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT; A	WRK	06
XX	HN	MCAW W	353.1	Nitrale-Nitrite (353.1)	23	REDUCTION	01	STANDARD TEST SET	PROT: Z	WRK	06
XX	SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
XX	UX	MCAW W		Alkalinily, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	٧c	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06

TestAmerica Volume 4 Rev. 0-9918/2008

2008-03-10

VANIAI

Page 234 of 657

printed on: Monday, March 10, 2008 02:00 W EXE808 Page 3 of 5

CLIENT ANALYSIS SUMMARY

Storage Loc: Date Received: 1-225,METS

2008-02-21

Analytical Due Date:

2008-02-28

Report Due Date:

2008-02-28

Project:

Project Manager: IV

Quote #: 78576

SDG: Excelon Victoria TEXAS COL

PO#:

6468071777 200803591

Report to: Kathryn White

RUSH

Report Type: W EDD Code: 00

Client:

373886

MACTEC Engineering and Consulting Inc

#SMPS in LOT: 6

xx	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SAMP	LE#	CLIE	NT SAMPL	E ID	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	1
5		OW-2	2324U				2008-02-2	20 / 1400	KHFEC	W	ATER
SAMP	LE CO	OMME	NTS:								
	мн	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
NA	мн	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SI	МН	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A	WRK	06
MG	MH	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	B GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
КХ	МН	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
FE	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry (6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
CA	MH	SW846		Inductively Coupled Plasma Mass Spectrometry (6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SA	МН	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)		CALCULATION ONLY	9Q	ORG FLAGS FOR IN ORG; STANDARD	PROT: A	WRK	06
XX			RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT; A	WRK LOC	06
XX		MCAW W		Solids, Filterable "TDS" (160:1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX		MCAW W		Fluoride (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC	06:
XX	C9	MCAW W		Nitrate as N (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
XX	CB	MCAW W MCAW		Alkalinity, Carbonate (310.1)	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET STANDARD TEST SET	PROT: A	LOC	06
XX		W MCAW		Chloride (300.0A, Ion Chromatography) Sulfate (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK LOC WRK	06
XX		W MCAW		Chromatography) Bromide (300.0A, ton	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A PROT: A	LOG	06
	GM	W MCAW		Chromatography) Nitrite as N (300.0A, ton	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
	GO	W MCAW		Chromatography) Nitrale-Nitrite	88 · 23	PERFORMED / DIRECT REDUCTION	01	STANDARD TEST SET	PROT: Z	LOC	06
XX		W SM18	1030F &	(353.1) Ion Balance (%	23 0X	CALCULATION	01 01	STANDARD TEST SET	PROT: A	LOC	06
XX		MCAW	API	Difference) Alkalinity, Bicarbonate	88	ONLY NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06 06
-	UX VC	W		(310.1) Alkalinity, Total	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
	VM	W MCAW		(310.1) Nitrogen, Ammonia (350.1)		PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
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NA	МН	SW846		inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT; A	WRK	06
SA	МН	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)	571	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06
MN	MH	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MG	МН	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
КХ	МН	SW846		Inductively Coupled Plasn Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
FE	МН	SW846		Inductively Coupled Plasn Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
CA	MH	SW846		Inductively Coupled Plasm Mass Spectrometry(6020)		HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SI	MH	SWB46	6 6020	Inductively Coupled Plass Mass Spectrometry(6020)		METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06

VANIAI

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-225,METS

Project Manager: IV

Quote #: 78576

SDG:

Date Received:

2008-02-21 2008-02-28

Project:

6468071777

Excelon Victoria TEXAS COL

Analytical Due Date: Report Due Date:

2008-02-28

PO#: Client: 200803591

Report to: Kathryn White MACTEC Engineering and Consulting Inc 373886

#SMPS in LOT: 6

Report Type: W EDD Code: 00

xx	ΖV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	ΑK	MCAW W	160.1	Solids, Fillerable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C8	MCAW W	300.0A	Fluoride (300,0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	CX	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC	06
XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	HN	MCAW W	353.1	Nitrate-Nitrite (353.1)	23	REDUCTION	01	STANDARD TEST SET	PROT:Z	WRK LOC	06
XX	SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	UX	MCAW W		Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	VΜ	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06

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Temperature on Receipt



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Sample I.D. No. and Description (Containers for each sample may be combined on one lin	e) Date	Time .	+		Soll			H2SQ4	Ser l	HCI	NaOH ZnAc/	MaOH	TDS / 44K	4	metals	Am		an.	1/		1	m	e)	500	P.		
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1 A	/		tion Upon Recei	pt Form
lient: <u>Mac</u>	COC/RFA No:		01792	Date: 02.21-08 Time: 0975
note No:	7557 Initiated By:	<i></i>		Time: 0915
•	7 N Sh	.ipp ing :	Information	
hipper Name:	FLEEX			Multiple Packages Y (N)
hipping # (s):*	3 701 - 61110 -			Sample Temperature (s):**
	8 7865 6419 6.			$-\frac{1}{2}$, $-\frac{2}{2}$ 6.
·	7. 8.			
·	9.			4. 9.
	10.			5. 10.
	es correspond to Numbered Sample Temp lines	vai	Sample must be rece iance does NOT affo	ved at 4°C±2°C- If r.ot, note contents below. Temperature to the following: Metals-Liquid or Rad tests-Liquid or Solids
Condition (Circle "Y"	for yes, "N" for no and "N/A" for not applicable	e):		
. У и	Are there custody seals present on the cooler?	8.	A (M)	Are there custody seals present on bottles?
. Y N N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N N/A	Do custody seals on bottles appear to be tampered with?
. (Y) N	Were contents of cooler frisked after opening, but before unpacking?	10.	Y) N N/A	Was sample received with proper pH1? (If not, make note below)
. (Y, N	Sample received with Chain of Custody?	11.	Y N	If N/A- Was pH taken by original TestAmerica lab?
Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	Ϋ́N	Sample received in proper containers?
-	Sample 112 8 Oil 1110 Contamor (8):		<u> </u>	
X Y (N)	Was sample received broken?	13.	Y N(NA	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
Y Y N	Is sample volume sufficient for	13.	Y N N	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below) Was Internal COC/Workshare received?
/. (Y) N	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
For DOE-AL (Pantex, 1	Is sample volume sufficient for	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
For DOE-AL (Pantex, 1	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
For DOE-AL (Pantex, 1	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
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For DOE-AL (Pantex, 1	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
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/. (Y) N	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
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For DOE-AL (Pantex, 1	Is sample volume sufficient for analysis?	14.	YN	Yes, note sample ID's below) Was Internal COC/Workshare received?
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For DOE-AL (Pantex, I Notes:	Is sample volume sufficient for analysis? LANL, Saudia) sites, pH of ALL containers rece	14. ived must	Y N be verified, EXCEP	Yes, note sample ID's below) Was Internal COC/Workshare received?
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Corrective Action: Client Contact Sample(s) pro	Is sample volume sufficient for analysis? LANL, Sandia) sites, pH of ALL containers rece t Name: cessed "as is"	14. ived must	Y N be verified, EXCEP	Yes, note sample ID's below) Was Internal COC/Workshare received?
Corrective Action:	Is sample volume sufficient for analysis? LANL, Saudia) sites, pH of ALL containers recent the sample with the sample volume sufficient for analysis? Is sample volume sufficient for analysis? It Name: cessed "as is" hold until:	14. ived must	Y N be verified, EXCEP ormed by: released, notify:	Yes, note sample ID's below) Was Internal COC/Workshare received?



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Exelon COL Project

Project Number: 6468-07-1777

Project Manager: Scott Auger

Project Principal: Kathryn White

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use. Based on the presence of ammonia in the method blank associated with samples OW-2319U and OW-2319L, MACTEC recommends using these data as non-detect values at the Reporting Limit of 50 µg/L.

REPORT: Analytical Report Lot #: F8B220240
SUBCONTRACTOR: TestAmerica, Earth City, MO
DATE OF ACCEPTANCE : 4/10/2008
TECHNICAL REVIEWER: William S. Grimes Wish & &
PROJECT PRINCIPAL: Kathryn A. White Jan Thu



ANALYTICAL REPORT

PROJECT NO. 6468071777

Excelon Victoria TEXAS COL

Lot #: F8B220240

Kathryn White

MACTEC Engineering & Consultin 3301 Atlantic Ave Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

March 10, 2008

Case Narrative LOT NUMBER: F8B220240

This report contains the analytical results for the six samples received under chain of custody by TestAmerica St. Louis on February 22, 2008. These samples are associated with your Excelon Victoria TEXAS COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Due to limitations of the data reporting system method 6020 is reported for metals analysis; however, 6020C was used to perform the analysis.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batch 8056166:

Analysis of the sample designated for MS/MSD is a sufficiently high concentration of silicon that the MS/MSD are above the instrument's calibration range. MS/MSD results are reported as estimated values.

Affected Samples:

F8B220240 (1): OW-2319U

F8B220240 (2): OW-2319L

F8B220240 (3): OW-2304U

F8B220240 (4): OW-2304L

F8B220240 (5): OW-2302U

F8B220240 (6): OW-2302L

Batch 8056166:

The MS (MSD) recovery for silicon is outside the established QC limits. The said analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8B220240 (1): OW-2319U

F8B220240 (2): OW-2319L

F8B220240 (3): OW-2304U

F8B220240 (4): OW-2304L

F8B220240 (5): OW-2302U

F8B220240 (6): OW-2302L

Batch 8056166:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limit has been adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8B220240 (1): OW-2319U F8B220240 (2): OW-2319L F8B220240 (3): OW-2304U F8B220240 (4): OW-2304L F8B220240 (5): OW-2302U

Anioins (MCAWW 300.0A)

F8B220240 (6): OW-2302L

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery for Chloride in batch 8053330 and Nitrite in batch 8053334 is attributed to matrix interference.

Affected Samples:

F8B220240 (1): OW-2319U F8B220240 (2): OW-2319L F8B220240 (3): OW-2304U F8B220240 (4): OW-2304L F8B220240 (5): OW-2302U F8B220240 (6): OW-2302L

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8B220240

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Alkalinity	MCAWW 310.1	MCAWW 310.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8B220240

SAMPLED SAMP DATE TIME
02/21/08 10:05 02/21/08 10:40 02/21/08 12:15 02/21/08 12:20 02/21/08 14:05 02/21/08 14:35

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: OW-2319U

TOTAL Metals

Lot-Sample #: F8B220240-001 Matrix: WATER Date Sampled: 02/21/08 10:05 Date Received: 02/22/08								
		REPORTI	NG			PREPARATION-	WORK	
PARAMETER	RESULT	LIMIT	UNITS	METHOD)	ANALYSIS DATE	ORDER #	
Prep Batch #	: 8056166							
Calcium	72500	1000	ug/L	SW846	6020	02/25-02/26/08	KHH6Plam	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56			
Iron	ND	500	ug/L	SW846	6020	02/25-02/26/08	KHH6PlAN	
		Dilution Fa	ctor: 10	Analysis	Time: 16:50			
Potassium	4100	1000	ug/L	SW846	6020	02/25-02/26/08	KHH6Plap	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56			
Magnesium	12400 E	500	ug/L	SW846	6020	02/25-02/26/08	KHH6PLAQ	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56			
Manganese	ND	20	ug/L	SW846	6020	02/25-02/26/08	KHH6P1AR	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56		•	
Sodium	147000	500	ug/L	SW846	6020	02/25-02/26/08	KHH6Plat	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56			
Silicon	18800 N	2500	ug/L	SW846	6020	02/25-02/26/08	KHH6P1AU	
		Dilution Fa	ctor: 10	Analysis	Time: 13:56			
Prep Batch #	• 8067310							
Silica	40200	250	uq/L	SW846	6020	03/07/08	KHH6P1CH	
	2200	Dilution Fa			Time: 00:00			

E Matrix interference.

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2319U

General Chemistry

Lot-Sample #...: F8B220240-001 Work Order #...: KHH6P Matrix....: WATER

Date Sampled...: 02/21/08 10:05 Date Received..: 02/22/08

	RESULT	RL	UNITS	METHOD .	PREPARATION- ANALYSIS DATE	PREP
PARAMETER Bicarbonate Alkalinity	378	5.0	mg/L	MCAWW 310.1	02/25/08	BATCH # 8056133
- .	Di	ilution Fact	or: 1	Analysis Time: 00:00		
Bromide	0.58	0.25	mg/L	MCAWW 300.0A	02/22/08	8053329
		llution Fact	or: 1	Analysis Time: 02:41		
Carbonate Alkalinity		5.0	mg/L	MCAWW 310.1	02/25/08	8056134
	Di	llution Facto	or: 1	Analysis Time: 00:00		
Chloride	163	20.0	mg/L	MCAWW 300.0A	02/22/08	8053330
	Di	llution Fact	or: 100	Analysis Time: 08:46		•
Fluoride	0.53	0.10	mg/L	MCAWW 300.0A	02/22/08	8053331
	. Di	lution Fact	or: 1	Analysis Time: 02:41		
Ion Balance Difference	7.5	0.10	ફ	SMI8 1030F & API	02/28/08	8059300
	Di	llution Fact	or: 1	Analysis Time: 00:00		
Nitrate	0.63	0.020	mg/L	MCAWW 300.0A	02/22/08	8053333
	נת	llution Fact	or: 1	Analysis Time: 02:41		
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/22/08	8053334
	Di	ilution Fact	or: 10	Analysis Time: 08:34		
Nitrogen, as Ammonia	22.7 B,J	50.0	ug/L	MCAWW 350.1	02/22/08	8053421
	Di	ilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	41.1	5.0	mg/L	MCAWW 300.0A	02/22/08	8053332
	מ	ilution Fact	or: 10	Analysis Time: 08:34		
Total Alkalinity	378	5.0	mg/L	MCAWW 310.1	02/25/08	8056136
	D:	ilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	665	5.0	mg/L	MCAWW 160.1	02/27/08	8056086
	D.	ilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2319L

TOTAL Metals

PARAMETER RESULT LIMIT UNITS METHOD Prep Batch #: 8056166 Calcium 229000 1000 ug/L SW846 602 Dilution Factor: 10 Analysis Time	ne: 14:19
PARAMETER RESULT LIMIT UNITS METHOD Prep Batch #: 8056166 Calcium 229000 1000 ug/L SW846 602	ANALYSIS DATE ORDER # 20 02/25-02/26/08 KHH681AN ne: 14:19
Calcium 229000 1000 ug/L SW846 602	ne: 14:19
Calcium 229000 1000 ug/L SW846 602	ne: 14:19
Dilution Factor: 10 Analysis Tim	
	20 02/25-02/26/08 KHH681DD
Iron 6650 500 ug/L SW846 602	02/25 02/20/00 MM001AF
Dilution Factor: 10 Analysis Tim	ue: 17:04
Potassium 7580 1000 ug/L SW846 602	20 02/25-02/26/08 KHH681AQ
Dilution Factor: 10 Analysis Tim	ue: 14:19
Magnesium 35700 E 500 ug/L SW846 602	20 02/25-02/26/08 KHH681AR
Dilution Factor: 10 Analysis Tim	ue: 14:19
Manganese 108 20 ug/L SW846 602	20 02/25-02/26/08 KHH68LAT
Dilution Factor: 10 Analysis Tim	e: 14:19
Sodium 189000 500 ug/L SW846 602	20 02/25-02/26/08 KHH681AU
Dilution Factor: 10 Analysis Tim	ue: 14:19
Silicon 43300 N 12500 ug/L SW846 602	20 02/25-02/26/08 KHH681AV
Dilution Factor: 50 Analysis Tim	ie: 15:08
Prep Batch #: 8067310	
Silica 92700 250 ug/L SW846 602	• •
Dilution Factor: 1 Analysis Tim	ie: 00:00
NOTE(S):	

E Matrix interference

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2319L

General Chemistry

Lot-Sample #...: F8B220240-002 Work Order #...: KHH68 Matrix....: WATER Date Sampled...: 02/21/08 10:40 Date Received..: 02/22/08

PARAMETER	RESULT	RL_	UNITS	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	310	5.0	mg/L	MCAWW :	310.1	02/25/08	8056133
-		Dilution Fact	or: 1	Analysis '	Time: 00:00		
Bromide	1.2	0.25	mg/L	MCAWW :		02/22/08	8053329
		Dilution Fact	or: 1	Analysis :	Time: 02:29		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW :	310.1	02/25/08	8056134
		Dilution Fact	or: 1	Analysis !	Time: 00:00		
Chloride	480	20.0	mg/L	MCAWW :	300.0A	02/22/08	8053330
		Dilution Fact	or: 100	Analysis ?	Time: 08:22		
Fluoride	0.26	0.10	mg/L	MCAWW :	300.0A	02/22/08	8053331
		Dilution Fact	or: 1	Analysis !	Time: 02:29		
Ion Balance Difference	6.2	0.10	ቄ	SM18 1	030F & API	02/28/08	8059300
		Dilution Fact	or: 1	Analysis ?	Time: 00:00		
Nitrate	0.43	0.020	mg/L	MCAWW :	300.0A	02/22/08	8053333
		Dilution Fact	or: 1	Analysis ?	Time: 02:29		
Nitrite	ND	0.40	mg/L	MCAWW :	300.0A	02/22/08	8053334
		Dilution Fact	or: 20	Analysis '	Time: 08:09		
Nitrogen, as Ammonia	31.5 B	,Ј 50.0	ug/L	MCAWW	350.1	02/22/08	8053421
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Sulfate	198	10.0	mg/L	MCAWW	300.0A	02/22/08	8053332
		Dilution Fact	or: 20	Analysis	Time: 08:09		
Total Alkalinity	310	5.0	mg/L	MCAWW	310.1	02/25/08	8056136
_		Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	1340	5.0	mg/L	MCAWW	160.1	02/27/08	8056086
		Dilution Fac	tor: 1	Analysis	Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: OW-2304U

TOTAL Metals

Lot-Sample #...: F8B220240-003 Matrix....: WATER Date Sampled...: 02/21/08 12:15 Date Received..: 02/22/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	: 8056166 206000	1000 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 14:23	02/25-02/26/08	KHH7C1AN
Iron	140 B	500 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 17:08	02/25-02/26/08	KHH7C1AP
Potassium	3500	1000 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 14:23	02/25-02/26/08	KHH7C1AQ
Magnesium	27000 E	500 Dilution Factor			6020 Time: 14:23	02/25-02/26/08	KHH7C1AR
Manganese	9.9 B	20 Dilution Factor	ug/L r: 10		6020 Time: 14:23	02/25-02/26/08	KHH7C1AT
Sodium	152000	500 Dilution Factor		SW846 Analysis	6020 Time: 14:23	02/25-02/26/08	KHH7C1AU
Silicon	19400 N	2500 Dilution Factor	ug/L r: 10		6020 Time: 14:23	02/25-02/26/08	KHH7C1AV
Prep Batch # Silica	: 8067310 41500	250	ug/L	SW846	6020	03/07/08	KHH7C1A3
		Dilution Facto	r: 1	Analysis	Time: 00:00		

B Estimated result. Result is less than RL.

E Matrix interference.

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2304U

General Chemistry

Lot-Sample #...: F8B220240-003 Work Order #...: KHH7C Matrix.....: WATER

Date Sampled...: 02/21/08 12:15 Date Received..: 02/22/08

PARAMETER	RESULT	RL	UNITS	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	399	5.0	mg/L	MCAWW 31	0.1	02/25/08	8056133
•		Dilution Facto	or: 1	Analysis Tim	e: 00:00		
Bromide	1.9	0.25 Dilution Factor	mg/L or: 1	MCAWW 30		02/22/08	8053329
Carbonate Alkalinity	ND	5.0 Dilution Factor	mg/L or: 1	MCAWW 31(Analysis Tim		02/25/08	8056134
Chloride	441	20.0 Dilution Facto	mg/L pr: 100	MCAWW 300 Analysis Tim		02/22/08	8053330
Fluoride	0.30	0.10 Dilution Factor	mg/L or: 1	MCAWW 300 Analysis Tim		02/22/08	8053331
Ion Balance Difference	3.8	0.10	\$	SM18 103	OF & API	02/28/08	8059300
·		Dilution Facto	or: 1	Analysis Tim	ne: 00:00		
Nitrate	2.1	0.20 Dilution Factor	mg/L or: 10	MCAWW 300 Analysis Tim		02/22/08	8053333
Nitrite	ND	0.20	mg/L or: 10	MCAWW 30		02/22/08	8053334
Nitrogen, as Ammonia	ND	50.0	ug/L or: 1	MCAWW 35		02/22/08	8053422
Sulfate	17.1	0.50 Dilution Factor	mg/L or: 1	MCAWW 30		02/22/08	8053332
Total Alkalinity	399	5.0 Dilution Fact	mg/L or: 1	MCAWW 31	· —	02/25/08	8056136
Total Dissolved Solids	1200	5.0	mg/L	MCAWW 16	0.1	02/27/08	8056086
		Dilution Fact	or: 1	Analysis Tir	me: 00:00		

Client Sample ID: OW-2304L

TOTAL Metals

Lot-Sample #...: F8B220240-004 Matrix....: WATER Date Sampled...: 02/21/08 12:20 Date Received..: 02/22/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO:	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 8056166						
Calcium	192000	1000	ug/L	SW846	6020	02/25-02/26/08	KHH7ELAN
		Dilution Facto	r: 10	Analysis	Time: 14:26		
Iron	ND	500	ug/L	SW846	6020	. 02/25-02/26/08	KHH7E1AP
		Dilution Facto	r: 10	Analysis	Time: 17:11		
Potassium	5200	1000	ug/L	SW846	6020	02/25-02/26/08	KHH7E1AQ
		Dilution Facto	r: 10	Analysis	Time: 14:26		_
Magnesium	38200 E	500	ug/L	SW846	6020	02/25-02/26/08	KHH7R1AR
		Dilution Facto	_	Analysis	Time: 14:26		
Manganese	ND	20	ng/T.	CWR46	6020	02/25-02/26/08	עטטיים איי
manganese	ND	Dilution Facto	_		Time: 14:26	02/23-02/20/00	KIII/EIAI
			_	_			
Sodium	151000	500	٠.		6020	02/25-02/26/08	KHH7E1AU
		Dilution Facto	r: 10	Analysis	Time: 14:26		•
Silicon	19000 N	2500	ug/L	SW846	6020	02/25-02/26/08	KHH7E1AV
		Dilution Facto	r: 10	Analysis	Time: 14:26		
•							
Prep Batch #	: 8067310						
Silica	40700	250	ug/L	SW846	6020	03/07/08	KHH7E1A1
		Dilution Facto	r: 1	Analysis	Time: 00:00		
				•			

E Matrix interference.

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-2304L

General Chemistry

Lot-Sample #...: F8B220240-004 Work Order #...: KHH7E Matrix..... WATER

Date Sampled...: 02/21/08 12:20 Date Received..: 02/22/08

PARAMETER	RESULT	<u>RL</u>	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	300	5.0	mg/L	MCAWW 310.1	02/25/08	8056133
_		Dilution Facto	or: 1	Analysis Time: 00:00		
Bromide	1.4	0.25 Dilution Factor	mg/L or: 1	MCAWW 300.0A Analysis Time: 02:04	02/22/08	8053329
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	02/25/08	8056134
_		Dilution Facto	or: 1	Analysis Time: 00:00	•	
Chloride	436	20.0	mg/L	MCAWW 300.0A	02/22/08	8053330
		Dilution Facto		Analysis Time: 07:07	,	
Fluoride	0.38	0.10 Dilution Factor	mg/L or: 1	MCAWW 300.0A Analysis Time: 02:04	02/22/08	8053331
Ion Balance Difference	5.6	0.10	8	SM18 1030F & API	02/28/08	8059300
		Dilution Factor: 1		Analysis Time: 00:00		
Nitrate	0.32	0.020 Dilution Fact	mg/L or: 1	MCAWW 300.0A Analysis Time: 02:04	02/22/08	8053333
Nitrite	ND	0.20	mg/L	MCAWW 300.0A	02/22/08	8053334
		Dilution Facto	or: 10	Analysis Time: 06:55		
Nitrogen, as Ammonia	19.7 B	50.0 Dilution Fact	ug/L or: 1	MCAWW 350.1 Analysis Time: 00:00	02/22/08	8053422
Sulfate	153	5.0 Dilution Fact	mg/L	MCAWW 300.0A Analysis Time: 06:55	02/22/08	8053332
				•	00/05/00	2055255
Total Alkalinity	300	5.0 mg/L Dilution Factor: 1		MCAWW 310.1 Analysis Time: 00:00	02/25/08	8056136
Total Dissolved Solids	1160	5.0	mg/L	MCAWW 160.1	02/27/08	8056086
COLLAGE		Dilution Fact	or: 1	Analysis Time: 00:00		

RL Reporting Limit

B Estimated result. Result is less than RL.

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2302U

TOTAL Metals

Lot-Sample #...: F8B220240-005

Date Sampled...: 02/21/08 14:05 Date Received..: 02/22/08

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	.: 8056166 91300	1000 Dilution Facto	ug/L r: 10		6020 Time: 14:30	02/25-02/26/08	KHH7F1AN
Iron	ND	500 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 17:15	02/25-02/26/08	KHH7F1AP
Potassium	4550	1000 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 14:30	02/25-02/26/08	KHH7F1AQ
Magnesium	12400 E	500 Dilution Factor	٥.	SW846 Analysis	6020 Time: 14:30	02/25-02/26/08	KHH7F1AR
Manganese	ND	20 Dilution Factor	ug/L r: 10		6020 Time: 14:30	02/25-02/26/08	KHH7F1AT
Sodium	119000	500 Dilution Factor	ug/L r: 10	SW846 Analysis	6020 Time: 14:30	02/25-02/26/08	KHH7F1AU
Silicon	18500 N	5000 Dilution Factor	ug/L r: 20	SW846 Analysis	6020 Time: 15:12	02/25-02/26/08	KHH7F1AV
Prep Batch # Silica	.: 8067310 39600	_ 250 Dilution Facto	ug/L r: 1	SW846 Analysis	6020 Time: 00:00	03/07/08	KHH7F1CE

NOTE(S):

E Matrix interference.

N Spiked analyte recovery is outside stated control limits.

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2302U

General Chemistry

Lot-Sample #...: F8B220240-005 Work Order #...: KHH7F Matrix.....: WATER

Date Sampled...: 02/21/08 14:05 Date Received..: 02/22/08

PARAMETER	RESULT	RL	UNITS	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	339	5.0	mg/L	MCAWW	310.1	02/25/08	8056133
-		Dilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	0.35	0.25 Dilution Factor	mg/L or: 1		300.0A Time: 01:52	02/22/08	8053329
Carbonate Alkalinity	ND	5.0 Dilution Facto	mg/L or: 1	MCAWW .	310.1 Time: 00:00	02/25/08	8056134
Chloride	110	10.0	mg/L or: 50	MCAWW		02/22/08	8053330
Fluoride	0.44	0.10	mg/L	MCAWW		02/22/08	8053331
Ion Balance Difference	1.6	0.10	8	_	03 0F & AP I	02/28/08	8059300
Dall Carolina		Dilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	0.73	0.020	mg/L or: 1		300.0A Time: 01:52	02/22/08	8053333
Nitrite	ND	0.020	mg/L or: 1		300.0A Time: 01:52	02/22/08	8053334
Nitrogen, as Ammonia	ND	50.0	ug/L	MCAWW		02/22/08	8053422
Sulfate	26.1	5.0 Dilution Fact	mg/L	MCAWW	300. 0A Time: 04:50	02/22/08	8053332
Total Alkalinity	339	5.0	mg/L	MCAWW	310.1	02/25/08	8056136
Total Dissolved	574	Dilution Fact	or: 1 mg/L	Analysis MCAWW	Time: 00:00	02/27/08	8056086
Solids		Dilution Fact	or: 1	Analysis	Time: 00:00		

Matrix....: WATER

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2302L

TOTAL Metals

Lot-Sample #...: F8B220240-006

Date Sampled...: 02/21/08 14:35 Date Received..: 02/22/08

REPORTING PREPARATION-WORK PARAMETER RESULT LIMIT UNITS METHOD ANALYSIS DATE ORDER # Prep Batch #...: 8056166 Calcium 265000 1000 ug/L SW846 6020 02/25-02/26/08 KHH7HlAN Dilution Factor: 10 Analysis Time..: 14:34 18300 500 uq/L SW846 6020 Iron 02/25-02/26/08 KHH7HLAP Dilution Factor: 10 Analysis Time..: 17:27 Potassium 9690 1000 uq/L SW846 6020 02/25-02/26/08 KHH7H1AQ Dilution Factor: 10 Analysis Time..: 14:34 Magnesium 30800 B 500 SW846 6020 ug/L 02/25-02/26/08 KHH7HLAR Dilution Factor: 10 Analysis Time..: 14:34 Manganese 254 20 uq/L SW846 6020 02/25-02/26/08 KHH7H1AT Dilution Factor: 10 Analysis Time..: 14:34 Sodium 500 SW846 6020 167000 ug/L 02/25-02/26/08 KHH7H1AU Dilution Factor: 10 Analysis Time..: 14:34 Silicon 72300 N 12500 ug/L SW846 6020 02/25-02/26/08 KHH7H1AV Dilution Factor: 50 Analysis Time..: 15:15 Prep Batch #...: 8067310 Silica 155000 250 uq/L SW846 6020 03/07/08 KHH7H1A5 Dilution Factor: 1 Analysis Time..: 00:00

NOTE(S):

E Matrix interference.

N Spiked analyte recovery is outside stated control limits.

MACTEC Engineering and Consulting Inc

Client Sample ID: OW-2302L

General Chemistry

Lot-Sample #...: F8B220240-006 Work Order #...: KHH7H Matrix.....: WATER

Date Sampled...: 02/21/08 14:35 Date Received..: 02/22/08

PARAMETER	RESULT	RL	UNITS	METHOI)	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	308	5.0	mg/L	MCAWW	310.1	02/25/08	8056133
Alkalimici		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bromide	1.1	0.25	mg/L or: 1		300.0A Time: 01:39	02/22/08	8053329
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1 Time: 00:00	02/25/08	8056134
Chloride	440	20.0	mg/L	MCAWW	300.0A	02/22/08	8053330
		Dilution Fact	or: 100	Analysis	Time: 04:38		
Fluoride	0.23	0.10 Dilution Fact	mg/L or: 1		300.0A Time: 01:39	02/22/08	8053331
Ion Balance Difference	4.0	0.10	¥	SM18 1	L030F & API	02/28/08	8059300
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Nitrate	0.56	0.020 Dilution Fact	mg/L or: 1		300.0A Time: 01:39	02/22/08	8053333
Nitrite	ND	0.20 Dilution Fact	mg/L or: 10		300.0A Time: 04:26	02/22/08	8053334
Nitrogen, as Ammonia	17.8 B	50.0	ug/L		350.1 Time: 00:00	02/22/08	8053422
Sulfate	125	5.0	mg/L	MCAWW	300.0A	02/22/08	8053332
		Dilution Fact	or: 10	Analysis	Time: 04:26		
Total Alkalinity	308	5.0 Dilution Fact	mg/L or: 1	-	310.1 Time: 00:00	02/25/08	8056136
Total Dissolved Solids	1180	5.0	mg/L	MCAWW	160.1	02/27/08	8056086
		Dilution Fact	cor: 1	Analysis	Time: 00:00		
Morroy (a)							

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F8B220240

Matrix..... WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample	#: F8B25000	0-166 Prep Batch #:	8056166		
Calcium	ND	100 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08	KHKWO1AA
Iron	7.6 B	50 ug/L Dilution Factor: 1 Analysis Time: 16:43	SW846 6020	02/25-02/26/08	KHKWOLAC
Magnesium	ND	50 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08 ·	KHKWOlAE
Manganese	ND	2 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08	KHKW01AF
Potassium	ND	100 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08	KHKWOlAD
Silicon	ND	250 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08	KHKW01AH
Sodium	6.4 B	50 ug/L Dilution Factor: 1 Analysis Time: 13:49	SW846 6020	02/25-02/26/08	KHKW01AG
MB Lot-Sample	#: F8C07000	0-310 Prep Batch #:	8067310		
Silica	ND	250 ug/L Dilution Factor: 1 Analysis Time: 00:00	SW846 6020	03/07/08	KH74H1AA

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results,

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8B220240 Matrix..... WATER REPORTING PREPARATION-PREP RESULT METHOD UNITS PARAMETER LIMIT ANALYSIS DATE BATCH # Work Order #: KHKXE1AA MB Lot-Sample #: F8B250000-133 Bicarbonate Alkalinity ND mg/L MCAWW 310.1 02/25/08 8056133 Dilution Factor: 1 Analysis Time..: 00:00 Work Order #: KHK6R1AA MB Lot-Sample #: F8B220000-329 Bromide MCAWW 300.0A ND mg/L 02/22/08 8053329 Dilution Factor: 1 Analysis Time..: 01:27 Work Order #: KHKXG1AA MB Lot-Sample #: F8B250000-134 Carbonate Alkalinity ND 5.0 ma/L MCAWW 310.1 02/25/08 8056134 Dilution Factor: 1 Analysis Time..: 00:00 Work Order #: KHK6T1AA MB Lot-Sample #: F8B220000-330 Chloride ND 0.20 mg/L MCAWW 300.0A 02/22/08 8053330 Dilution Factor: 1 Analysis Time..: 01:27 Fluoride Work Order #: KHK6W1AA MB Lot-Sample #: F8B220000-331 0.10 MCAWW 300.0A 02/22/08 ND mg/L 8053331 Dilution Factor: 1 Analysis Time..: 01:27 Work Order #: KHK611AA MB Lot-Sample #: F8B220000-333 Nitrate ND mq/L MCAWW 300.0A 02/22/08 8053333 Dilution Factor: 1 Analysis Time..: 01:27 Nitrite Work Order #: KHK621AA MB Lot-Sample #: F8B220000-334 mq/L MCAWW 300.0A 02/22/08 8053334 MD Dilution Factor: 1 Analysis Time..: 01:27 Work Order #: KHJ1N1AA MB Lot-Sample #: F8B220000-421 Nitrogen, as Ammonia 22.7 B 50.0 ug/L MCAWW 350.1 02/22/08 8053421 Dilution Factor: 1 Analysis Time..: 00:00 Work Order #: KHJ1P1AA MB Lot-Sample #: F8B220000-422 Nitrogen, as Ammonia ND 50.0 ug/LMCAWW 350.1 02/22/08 8053422 Dilution Factor: 1

(Continued on next page)

Analysis Time..: 00:00

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8B220240

Matrix..... WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Sulfate	ND	Work Order #: KHK601A 0.50 mg/L Dilution Factor: 1 Analysis Time: 01:27	A MB Lot-Sample #: MCAWW 300.0A	F8B220000-332 02/22/08	8053332
Total Alkalinity	ND	Work Order #: KHKXJlAM 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	A MB Lot-Sample #: MCAWW 310.1	F8B250000-136 02/25/08	8056136
Total Dissolved Solids		Work Order #: KHR9Q1A	A MB Lot-Sample #:	F8B250000-086	
	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 160.1	02/27/08	8056086

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8B220240		Matrix: WATER
PARAMETER		RECOVERY LIMITS METHOD	PREPARATION- ANALYSIS DATE WORK ORDER #
LCS Lot-Sample#: Calcium		166 Prep Batch #: 8056166 (85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Iron	92	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	•
Potassium	92	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Magnesium	88	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Manganese	97	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Sodium	86	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Silicon	96	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
LCS Lot-Sample#: Silica		310 Prep Batch #: 8067310 (0.0-0.0) SW846 6020 Dilution Factor: 1 Analysis	03/07/08 KH74H1AC

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #: F8B220240	Matrix: WATER
-------------------------	---------------

PARAMETER Bicarbonate			LIMITS		AN.	EPARATION- ALYSIS DATE ample#: F8B2	BATCH #
Alkalinity		(90 - 110) (90 - 110) 1.0 Dilution Fac	(0-15)		1	02/25/08	
Carbonate Al		WO#:KHKXGlAC					
	100 99	(90 - 110) (90 - 110) 1.0	(0-15)	MCAWW 310.	.l. 1	02/25/08	8056134
	22			Analysis :			0020134
Nitrogen, as	Ammonia	WO#:KHJ1N1AC					
	100	(90 - 110)		MCAWW 350.:	1	02/22/08	8053421
	99	(90 - 110) 0.22					8053421
		Dilution Fact	cor: 1	Analysis :	Time: 00:00		
Nitrogen, as	Ammonia	WO#:KHJ1P1AC	-LCS/KHJ	1P1AD-LCSD	LCS Lot-Sa	ample#: F8B2	20000-422
J .	103	(90 - 110)					
	101	(90 - 110) 1.5	(0-20)	MCAWW 350.	1.	02/22/08	8053422
		Dilution Fact	tor: 1	Analysis ?	Time: 00:00		
Total Alkali	nitv	WO#:KHKXJ1AC	-LCS/KHK	X.T1 AD-LCSD	LCS Lot-S	ample#: F8B2	50000-136
10001 11211011	-	(90 - 110)				_	
	99	(90 - 110) 1.0					
		Dilution Fac					
Total Dissol	ved	WO#:KHR9Q1AC	-LCS/KHR	9Q1AD-LCSD	LCS Lot-S	ample#: F8B2	50000-086
	100	(86 - 115)					
	100	(86 - 115) 0.39	(0-15)	MCAWW 160.	1	02/27/08	8056086
		Dilution Fac	tor: 1	Analysis '	Time: 00:00)	

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #: F8B220240	•	Matrix WATER
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PARAMETER Bromide	RECOVERY	RECOVERY LIMITS METHOD Work Order #: KHK6R1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Time	-Sample#: F8B220000-329 02/22/08 8053329
Chloride	100	Work Order #: KHK6T1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Time	02/22/08 8053330
Fluoride	99 .	Work Order #: KHK6W1AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Time	02/22/08 8053331
Nitrate	104	Work Order #: KHK611AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Tit	02/22/08 8053333
Nitrite	106	Work Order #: KHK621AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Time	02/22/08 8053334
Sulfate	102	Work Order #: KHK601AC LCS Lot (90 - 110) MCAWW 300.0A Dilution Factor: 1 Analysis Time	02/22/08 8053332

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot : Date Sample		20240 _/08	.: 02/22/08	Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl Calcium	.e #: F8B22 120 113	0240-001 Prep Batch # (75 - 125) (75 - 125) 1.6 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	
Iron	95 B 104	(75 - 125) (75 - 125) 8.7 (0-20) Dilution Factor: 10 Analysis Time: 16:57		02/25-02/26/08 02/25-02/26/08	
Magnesium	99 98	(75 - 125) (75 - 125) 0.67 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	
Manganese	106	(75 - 125) (75 - 125) 0.21 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	
Potassium	99 .97	(75 - 125) (75 - 125) 1.9 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	
Silicon	192 N 205 N	(75 - 125) (75 - 125) 0.62 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	
Sodium	110 97	(75 - 125) (75 - 125) 1.8 (0-20) Dilution Factor: 10 Analysis Time: 14:12	SW846 6020 SW846 6020	02/25-02/26/08 02/25-02/26/08	

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8B220240 Matrix....: WATER

Date Sampled...: 02/21/08 12:15 Date Received..: 02/22/08

PARAMETER Bromide	PERCENT RECOVERY	RECOVERY PREPARATION - PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KHH7F1A1 MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053329 Dilution Factor: 1 Analysis Time: 01:52
Chloride	113 N	Work Order #: KHH7F1A3 MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053330 Dilution Factor: 50 Analysis Time: 05:03
Fluoride	104	Work Order #: KHH7F1A5 MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053331 Dilution Factor: 1 Analysis Time: 01:52
Nitrate	107	Work Order #: KHH7F1A9 MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053333 Dilution Factor: 1 Analysis Time: 01:52
Nitrite	124 N	Work Order #: KHH7F1CC MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053334 Dilution Factor: 1 Analysis Time: 01:52
Nitrogen, as Am	monia 97	Work Order #: KHE551C0 MS Lot-Sample #: F8B210151-001 (90 - 110) MCAWW 350.1 02/22/08 8053421 Dilution Factor: 1 Analysis Time: 00:00
Nitrogen, as An		Work Order #: KHH7ClAl MS Lot-Sample #: F8B220240-003 (90 - 110) MCAWW 350.1 02/22-02/25/08 8053422 Dilution Factor: 1 Analysis Time: 00:00
Sulfate	99	Work Order #: KHH7F1A7 MS Lot-Sample #: F8B220240-005 (90 - 110) MCAWW 300.0A 02/22/08 8053332 Dilution Factor: 10 Analysis Time: 04:50
Total Alkalinit	EY 85	Work Order #: KHH7H1A3 MS Lot-Sample #: F8B220240-006 (80 - 120) MCAWW 310.1 02/25/08 8056136 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8B220240 Work Order

Work Order #...: KHH7F-SMP

Matrix....: WATER

KHH7F-DUP

Date Sampled...: 02/21/08 14:05 Date Received..: 02/22/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8B220240-005	
0.35	0.38	mg/L	9.3	(0-20)	MCAWW 300.0A	02/22/08	8053329
		Dilution Fac	ctor: 1	Ana	alysis Time: 01:52		
Chloride					SD Lot-Sample #:	F8B220240-005	
110	117	mg/L	6.1	(0-20)	MCAWW 300.0A	02/22/08	8053330
		Dilution Fac	ctor: 50	Ana	alysis Time: 05:03		
Fluoride					SD Lot-Sample #:	F8B220240-005	
0.44	0.45	mg/L	2.1	(0-20)	MCAWW 300.0A	02/22/08	8053331
		Dilution Fac	ctor: 1	Ana	alysis Time: 01:52		
Sulfate					SD Lot-Sample #:	F8B220240-005	
26.1	26.3	mg/L	0.73	(0-20)	MCAWW 300.0A	02/22/08	8053332
		Dilution Fac	ctor: 10	Ana	alysis Time: 04:50		
Nitrate					SD Lot-Sample #:	F8B220240-005	
0.73	0.73	mg/L	0.032	(0-20)	MCAWW 300.0A	02/22/08	8053333
		Dilution Fac	ctor: 1	Ana	alysis Time: 01:52		
Nitrite					SD Lot-Sample #:	F8B220240-005	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	02/22/08	8053334
		Dilution Fac	ctor: 1	Ana	alysis Time: 01:52		

General Chemistry

Client Lot #...: F8B220240

Work Order #...: KHE55-SMP

Matrix..... WATER

KHE55-DUP

Date Sampled...: 02/19/08 10:00 Date Received..: 02/20/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as Ammo	onia				SD Lot-Sample #:	F8B210151-001	
22.7 B,J	22.7 B	ug/L	0.0	(0-20)	MCAWW 350.1	02/22/08	8053421
		Dilution Fac	tor: 1	Ana	alysis Time: 00:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

- B Estimated result. Result is less than RL.
- J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

General Chemistry

Client Lot #...: F8B220240

Work Order #...: KHH7C-SMP

Matrix....: WATER

KHH7C-DUP

Date Sampled...: 02/21/08 12:15 Date Received..: 02/22/08

PARAM RESULT	DUPLICAT RESULT	E <u>UNITS</u>	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as Ami	nonia				SD Lot-Sample #	: F8B220240-003	
ND	7.9 B	ug/L	200	(0-20)	MCAWW 350.1	02/22/08	8053422
		Dilution Fa	ctor: 1	Ana	alvsis Time: 00.00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8B220240

Work Order #...: KHH6P-SMP

Matrix..... WATER

KHH6P-DUP

Date Sampled...: 02/21/08 10:05 Date Received..: 02/22/08

PARAM RESULT Total Dissolved	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B220240-001	PREP BATCH #
Solids 665	673	mg/L Dilution Fact	1.2 :or: 1	•	MCAWW 160.1	02/27/08	8056086

General Chemistry

Client Lot #...: F8B220240

Work Order #...: KHH7H-SMP

Matrix....: WATER

KHH7H-DUI

Date Sampled...: 02/21/08 14:35 Date Received..: 02/22/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8B220240-006	PREP BATCH #
308	310	mg/L Dilution Fac	0.65 tor: 1	(0-15) Ana	MCAWW 310.1 Llysis Time: 00:00	02/25/08	8056133
Carbonate Alkalin	ity ND	mg/L Dilution Fac	0 tor: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 (lysis Time; 00:00	F8B220240-006 02/25/08	8056134
Total Alkalinity 308	310	mg/L Dilution Fac	0.65 tor: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 dysis Time: 00:00	F8B220240-006 02/25/08	8056136

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-229,METS

Date Received:

2008-02-22

Analytical Due Date:

2008-02-29

Report Due Date:

Project Manager: IV Project:

6468071777

Quote #: 78576 Excelon Victoria TEXAS COL

RUSH

2008-02-29

PO#: Client: 200803591

373886

MACTEC Engineering and Consulting Inc

Report to: Kathryn White

SDG:

Report Type: W #SMPS in LOT: 6 EDD Code: 00

<u>s</u>	AMP	LE#	CLIE	NT SAMPL	E ID Site	<u>ID</u>	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	1	
1			OW-2	2319U				2008-02-2	21 / 1005	KHH6P	W	ATER	
S	AMP	LE CO	OMME	VTS:									
_		мн	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	ΚХ	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ .	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	MN	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	NA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
	SA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06	
	SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2%] HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	CA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	XX	ZV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	AK	MCAW W	160,1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	XX	C8	MCAW W	A0.00E	Fluoride (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
•	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	CX	MCAW W	A0.008	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	GM	MCAW W	A0.00E	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	GO	MCAW W	A0.00E	Nitrite as N (300.0A, ton Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROTA	WRK LQC	06	
	XX	SL	SM18	1030F & API	ton Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
	XX	UX	MCAW W	310.1	Alkalinity, Blcarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	VC	MCAW W	310.1	Alkatinity, Tolai (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
	XX	VM	MCAW W		Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
D	FE	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	ΚX	MH	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
D	MG	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	MN	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	NΑ	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	SI	мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
D	CA	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	FE	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
S	SI	МН	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	NA	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	MN	МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	КХ		SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
S	CA	МН	SW846	5 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	

TestAmerica - St. Louis

Logged in by: Volume 4 Rev. 0 - 7/18/2008 VANIAI

2008-03-10

13:37:35 Page 270 of 657

printed on: Monday, March 10, 2008 02:40 PM

Page 1 of 5

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-229,METS

Project Manager: IV

Quote #: 78576

SDG:

Date Received:

Report Due Date:

2008-02-22 2008-02-29

Project:

6468071777

Excelon Victoria TEXAS COL

Analytical Due Date:

2008-02-29

PO#: Client: 200803591

Report to: Kathryn White

RUSH

Report Type: W EDD Code: 00

373886

MACTEC Engineering and Consulting Inc

#SMPS in LOT: 6

MG	мн	SW846 6020) Inductively Coupled Plas	ma GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
	AK	MCAW 160.	Mass Spectrometry(6020 1 Solids, Filterable "TDS"		HCL NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06
		W	(160.1)		PERFORMED / DIRECT				LOC	
SAMP	LE#	CLIENT S	SAMPLE ID	Site ID	Client Matrix	DATE/T	IME SAMPLED	WORKOR	DER	1
2		OW-2319	L			2008-02-	21 / 104 0	KHH68	W	/ATER
SAMP	LE C	DMMENTS:								
KX	МН	SW846 6020	Inductively Coupled Plas Mass Spectrometry(6020		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
S!	МН	SW846 6020	 Inductively Coupled Plas Mass Spectrometry(6020 		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SA	мн	SW846 6020		ma 0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06 .
NA	МН	SW846 6020		ma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	мн	SW846 6020		ma GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
FE	мн	SW846 6020	Inductively Coupled Plas	ma GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC :	06
ÇA	мн	SW846 6020		ma GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
MN	МН	SW846 6020		ma GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06
XX	ZV	RAD		RA	HCL IN-HOUSE RAD	01	STANDARD TEST SET	PROT: A	LOC WRK	06
XX	AK	SCR MCAW 160.		88	SCREEN NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
XX	C8	W MCAW 300.	(160.1) DA Fluoride (300.0A, Ion	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06
		W MCAW 300.	Chromatography)		PERFORMED / DIRECT NO SAMPLE PREPARATION	•	STANDARD TEST SET	PROT: A	LOC	
· XX	C9	W .	Chromatography)		PERFORMED / DIRECT	01			LOC	06
XX	CB	MCAW 310.1	(310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CX	MCAW 300.	DA Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW 300.	0A Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GM	MCAW 300.	,	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO	MCAW 300.	= : ••	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18 1030	F & ton Balance (%	0X	CALCULATION	01	STANDARD TEST SET	PROT: A	WRK	06
ХX	UX	MCAW 310.		88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06
XX	VC	W MCAW 310.		88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06
XX		W MCAW 350.		.1, 88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
			Automaled)		FERFORMED / DIRECT				LOC	
SAME	LE#	CLIENT S	SAMPLE ID	Site ID	Cllent Matrix	DATE/T	IME SAMPLED	WORKOR	DER	· <u>1</u>
3		OW-2304	U			2008-02-	21/ 1215	KHH70	· v	VATER
SAME	PEC	OMMENTS	•							

SAMPL	E#	CLIENT SAMPL	E ID Site	<u>ID</u>	Cllent Matrix	DATE/TI	ME SAMPLED	WORKOR	DER -	i
3		OW-2304U				2008-02-2	21 / 1215	KHH70	: W	ATER
SAMPL	E CC	OMMENTS:								
FE	МН	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SA	МН	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06
SI	МН	SW846 6020	Inductively Coupled Plasma Mass Spectromatry(5020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
NA	МН	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
KX	MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
CA	MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	МН	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MN	MH	SW846 6020	inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL • 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06

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13:37:35

printed on: Monday, March 10, 2008 02:40 PM

Page 2 of 5

Volume 4 Rev. 0 - 7/18/2008

Page 271 of 657

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-229,METS

Project Manager: IV

Quote #: 78576

MACTEC Engineering and Consulting Inc

SDG:

Date Received:

2008-02-22 2008-02-29

Project:

6468071777

Excelon Victoria TEXAS COL

Analytical Due Date: Report Due Date:

2008-02-29

PO#: Client:

X

200803591 373886

Report to: Kathryn White

RUSH

#SMPS in LOT: 6

Report Type: W EDD Code: 00

	XX	zv		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	CB	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	СХ	MCAW W	300.0A	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06
	XX	UX	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	VC	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
	XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
?	XX	VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
•	XX	VΜ	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06 -

SAMPLE#	CLIENT SAMPL	.E ID Site II	2	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	1
4	OW-2304L				2008-02-2	21 / 1220	KHH7E	W	ATER
SAMPLE C	OMMENTS:	•				•			
FE MH	SW846 6020	inductively Coupled Plasma Mass Spectrometry(5020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
KX MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MG MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
MN MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
NA MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SA MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06
SI MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
CA MH	SW846 6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX ZV	RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK	06
XX AK	MCAW 160.1 W	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX C8	MCAW 300.0A W	Fluoride (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX C9	MCAW 300.0A W	Nitrate as N (300,0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX CB	MCAW 310.1 W	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX CX	MCAW 300.0A W	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX CY	MCAW 300.0A W	Sulfate (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX GN	MCAW 300.0A W	Bromide (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX GC	MCAW 300.0A W	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX SL	SM18 1030F & API	Ion Balance (% Difference)	0X	CALCULATION ONLY	91	STANDARD TEST SET	PROT: A	WRK	06
XX UX	MCAW 310,1 W	Alkalinity, Bicarbonate (310,1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06

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Page 3 of 5

Volume 4 Rev. 0 - 7/18/2008

Page 272 of 657

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-229,METS

Project Manager: IV

Quote #: 78576

SDG:

Date Received: Analytical Due Date:

Report Due Date:

2008-02-22 2008-02-29

Project:

6468071777 200803591

Excelon Victoria TEXAS COL

RUSH

2008-02-29

PO#: Client:

373886

Report to: Kathryn White MACTEC Engineering and Consulting inc

#SMPS in LOT: 6

Report Type: W EDD Code: 00

ХX	νc	MCAW W	310.1

NO SAMPLE PREPARATION PERFORMED / DIRECT

STANDARD TEST SET

PROT: A WRK 06

XX VM MCAW 350.1

Alkalinity, Total (310.1) Nitrogen, Ammonia (350.1, Automated)

NO SAMPLE PREPARATION PERFORMED / DIRECT 88

STANDARD TEST SET

LOC PROT: A WRK 06 LOC

CANAD	n = #	CI 187	NT SAMDI	EID	Site ID	Client Matrix	ר אַדֶּבֶּית	ME SAMPIED	MODICOR	חבת	
SAMP	LE#		NT SAMPL	<u>-C 1U</u>	טונב וט	Chem Maurx		ME SAMPLED	WORKOR		ī
5			2302U				2008-02-	21 / 1405	KHH7F	W	/ATEF
SAME SI	MH	OMMEI SWB46	-	Inductively Coupled Plasm	e GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06
		SW846		Mass Spectrometry(6020) Inductively Coupled Plasm	-	HCL METALS, TOTAL - 2%		STANDARD TEST SET		LOC	
CA	МН			Mass Spectrometry(6020)		HCL	01		PROT: A	WRK	06
FE	МН	SWB46	6020	Inductively Coupled Plasm Mass Spectrometry(6020)		METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
KX	МН	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	⁸ GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MG	МН	SWB46	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
MN	мн	SW846	6020	Inductively Coupled Plasm Mass Spectrometry(6020)	a GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
NΑ	МН	SW846	6020	inductively Coupled Plasma	a GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC	06
SA	мн	SW846	6020	Mass Spectrometry(6020) inductively Coupled Plasma	a 0X	HCL CALCULATION	9Q	ORG FLAGS FOR INORG;	PROT: A	LOC WRK	06
XX	zv		RAD .	Mass Spectrometry(6020) RAD	RA	ONLY IN-HOUSE RAD	01	STANDARD STANDARD TEST SET	PROT: A	LOC WRK	06
XX	AK	MCAW	SCREEN 160.1	SCREEN Solids, Filterable "TDS"	88	SCREEN NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06
		W		(160.1)		PERFORMED / DIRECT				LOC	_
XX	C8	MCAW W		Fluoride (300.0A, ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	СВ	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	90
XX	СХ	MCAW W	300.0A	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY	MCAW	300.0A	Sulfate (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GM	MCAW W	300.0A	Bromide (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
XX	GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	SL	SM18	1030F & API	Ion Baiance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06
XX	UX	MCAW W		Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	UCC WRK LOC	06
XX	٧C	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	٧M	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C8	MCAW W	300.0A	Fluoride (300.0A, Ion Chromalography)	. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	C9		300.0A	Nitrate as N (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	СХ		300.0A	Chloride (300.0A, Ion	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06
XX	CY		A0,00E	Chromalography) Sulfate (300.0A, Ion Chromalography)	88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06
XX	GM		A0,00E	Bromide (300.0A, lon Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
XX	GO		A0.00E	Nitrite as N (300.0A, Ion	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	Ó6
xx	C8		300.0A	Chromalography) Fluoride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
xx	C9		A0.00E	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
xx x	CX		A0,008	Chloride (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
xx x	CY		A0.008	Sulfate (300.0A, lon Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
(XX	GM	••	300,0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06

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2008-03-10

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Page 4 of 5

Volume 4 Rev. 0 - 7/18/2008

Page 273 of 657

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-229.METS

Date Received:

2008-02-22

2008-02-29

Analytical Due Date:

Project Manager: IV

6468071777

Quote #: 78576

MACTEC Engineering and Consulting Inc

Excelon Victoria TEXAS COL

SDG:

RUSH

Report Due Date:

2008-02-29

PO#: Client:

Project:

200803591 373886

Report to: Kathryn White

#SMPS in LOT: 6

Report Type: W EDD Code: 00

X	x go	MCAW W	300.0A	Nitrite as N (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SAN	IPLE#	CLIE	NT SAMP	LE ID Si	te ID	Client Matrix	DATE/T	IME SAMPLED	WORKOR	DER	1
6		OW-	2302L				2008-02-2	21 / 1435	KHH7H	W	/ATER
SAN	IPLE C	OMME	NTS:								
- M	и мн	SW846	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
SI	MH	SWB46	6020	Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
N/	A MH	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06.
К	K MH	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
FE	Е МН	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
CA	HM A	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06
SA	HM A	SW846		Inductively Coupled Plasma Mass Spectrometry(6020)	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG: STANDARD	PROT: A	WRK	06
M	G MH	SWB46		Inductively Coupled Plasma Mass Spectrometry(6020)	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	(ZV		RAD SCREEN	RAD SCREEN	RA	IN-HOUSE RAD SCREEN	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	C AK	MCAW W	160.1	Solids, Filterable "TDS" (160.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	C8	W	300.0A	Fluoride (300.0A, ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	C9	MCAW W	300.0A	Nitrate as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	· 01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	K CB	MCAW W		Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	CX	W	A0.00E	Chloride (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	(CY	MCAW W	300.0A	Sulfate (300.0A, Ion Chromalography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	K GM	MCAW W	300.0A	Bromide (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	X GO	MCAW W	300.0A	Nitrite as N (300.0A, Ion Chromatography)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	X SL	SM18	1030F & API	ion Balance (% Difference)	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	x ux	MCAW W	310.1	Alkalinity, Bicarbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	. PROT:A	WRK LOC	06
X	x vc	MCAW W	310.1	Alkalinity, Total (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06
X	X VM	MCAW W	350.1	Nitrogen, Ammonia (350.1, Automated)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
X	x vc	MCAW W	310.1	Alkalinlly, Total (310,1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	` 01	STANDARD TEST SET	PROT: A	WRK	06
(X	х св	MCAW W	310.1	Alkalinity, Carbonate (310.1)	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06
(X	X UX	MCAW	310.1	Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06

XX VC

(310.1)

(310.1)

Alkalinity, Total

PERFORMED / DIRECT

NO SAMPLE PREPARATION PERFORMED / DIRECT

STANDARD TEST SET

LOC

WRK 06

DCN# EXE808

PROT: A

MCAW 310.1

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	Chain of	Temperature on Receipt
/olume	Custody Record	Drinking Water? Yes □ No 🗖
9 4 Rev	TAL-4124 (1007) Client MACTEC	Project Manager William Connels (414) Chr. 3 Brue (864) 430-74
. 0 - 7/	3301 Atlantic Ave	Telephone Number (Area Code)/Fax Number (864) 430 - 7415
18/2008	City Ralpiah State Zip Code NC 27604	Sile Contact C, Brul NA
8	Project Name and Cocation (State)	Carrier/Waybill Number

Test,	Am	eric	ca

THE LEADER IN ENVIRONMENTAL TESTING

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Cilv State Zip	Code	Sile Co	ontact				Lab							•				alysi									-E		
Raleigh NC 2	7604	1	, B	rel	_				1	LA.	-			-т-			moi	re sp	ace	is n	ieec	led)							
Project Name and Location (State)		Carrie	/Wayb	ill Nur	nber		,				_11								- 1										
EXELON COL VICTORIA, T	Χ	1=6	OF	Y	799	9	<u> 36</u>	24	<u> ၃</u>	79	7		_\		İ		2		- [8	pecia	i insti	ructions/
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Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date ·	Time	र्जुं ह	Aquabus	Soff					нсі	NaOH	ZaAc NaOH		Ď,	Ę	motels	Am						kg						
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DESCRIPTION CONTRACTOR FOR THE	出版の表現を表現して、
THE LEADER IN ENVIRO	NMENTAL: TESTING

THE	EADER IN ENVIRONM	STATE OF THE PROPERTY.	- 20)9 ⁵ 0 ¹ 2 **(s):	F38220240
Clier Quot	ut: <u>MacA</u>	COC/RFA No: 18571, Initiated By:	Condit UU	ion Upon Recei	pt Form Date: 2/11/56 Time: (330
Ship	per Name: ping # (s):* 1996 - 062	9 5754 6.	p ing I —	nformation	Multiple Packages Y N Sample Temperature (s):*** 1. Z 6.
 3. 4. 	1410 001	7. 8. 9.			2. 7. 3. 8. 4. 9.
		correspond to Numbered Sample Temp lines for yes, "N" for no and "N/A" for not applicable):	var	ample must be recei iance does NOT affe	ived at 4°C ± 2°C. If not, note contents below. Temperature cet the following: Metals-Liquid or Rad tests-Liquid or Solids
1.	A) M	Are there custody seals present on the cooler?	8.	Y (A)	Are there custody seals present on bottles?
2.	Y N N/A	Do custody seals on cooler appear to be tampered with?	9.	Y N (N/A)	Do custody seals on bottles appear to be tampered with?
3.	(X) M	Were contents of cooler frisked after opening, but before unpacking?	10.	Y N N/A	Was sample received with proper pH ¹ ? (If not, make note below)
4.	M	Sample received with Chain of Custody?	11.	Y N	If N/A- Was pH taken by original TestAmerica lab?
5.	Y)N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12.	И	Sample received in proper containers?
·6. ·	y (N)	Was sample received broken?	13.	Y N (N/A)	Headspace in VOA or TOX liquid samples? (If. Yes, note sample ID's below)
7.	K N	Is sample volume sufficient for analysis?	14.	Y N	Was Internal COC/Workshare received?
'For I		ANL, Sandia) sites, pH of ALL containers receive	ed must I	pe verified, EXCEPT	TYOA, TOX and soils.
		·		•	
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	· · · · · · · · · · · · · · · · · · ·				
			- -		
					
					
Con	rective Action: Client Contact	Name:	Info	ormed by:	
0	Sample(s) prod Sample(s) on h	essed "as is"		eleased, notify:	
Pro TH	ject Manageme S FORM MUST B	nt Review:	Da E BEIN	te: G CHECKED IN: D	ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN
		IN THAT PERSON IS REQUIRED TO APPLY T	HEIR ID	VITIAL AND THE I	

LOT# F8B220240

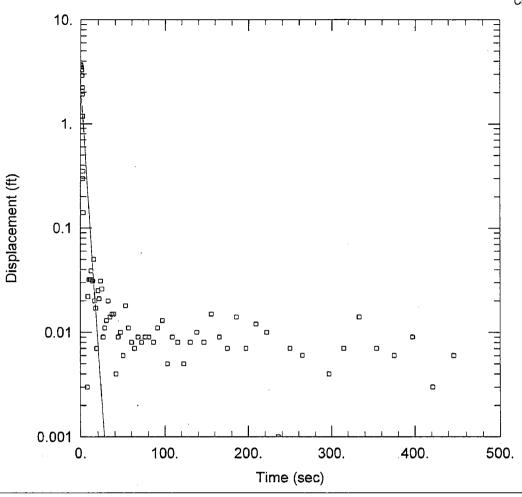
Volume 4 Rev. 0 - 7/18/2008

Slug Test Data Forms



SLUG TEST REPORT

Project Name: Exelon COL	Project Number: 6469-07	-1777 Page 1 of	1 OW-01L
Client: Bechtel	Contractor: MACTEC		
ocation: Victoria	MACTEC Rep: Jeff Mous	Date: 1/19	108
STINL			
_ength	Feet		
Time	Minutes		
Well Data			
Static Water Level	42.91 feet		
Total Well Depth	112,95 feet		
Static Water Column Height (H)	70:04 feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA	~ 3.7 Feet	~ 3.7 Fee+
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)	100 feet		
Length of Well Screen (L)	O feet		
Radius of Well Casing (rc)	0.083 feet	· .	
Radius of Screen (rw)	0.083 feet	· · · · · · · · · · · · · · · · · · ·	
Radius of Probe (req)			
Radius of Boring (rsk) Skin Effect	0.083 feet	•	
			
Probe Serial Number	119305	· · · · · · · · · · · · · · · · · · ·	
Slug Data	5104#2		
Length	5,5 Feet		
weight			
Diameter	1.623 incles		
Slug Test File	Background	Falling	Rising
File Name	cur-o1 L Backgrund	OW-OIL Falling Hed	Owell Rising Head
Start Time	12;41:52	12:58:22	1:07:23 pm
End Time	12:56:52	1:05:52	1:13:51
Notes Park Tillin Hand			
Notes Reclb Talling Head & Rising Head with Double	OURDIL Falling Head B	OW-OIL Rising Had B	
Si.	150 1354344 Displayment 3.6	2'64'37 And. 8'	
51cz			
		——————————————————————————————————————	
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 278	of 657	DCN# EXE808



OW-01 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-01 I

Test Well: OW-01 L Test Date: 1/19/07

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

Saturated Thickness: 10. ft

WELL DATA (OW-01 L)

Initial Displacement: 3.723 ft

Static Water Column Height: 70.04 ft

Total Well Penetration Depth: 110. ft

Screen Length: 10. ft Well Radius: 0.083 ft

Casing Radius: 0.083 ft

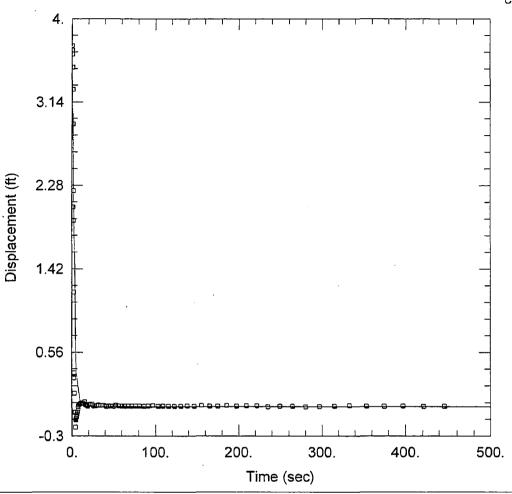
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \(\text{\Lambda} \) \(\t

Page 279 of 65 ₹ 2.367 ft



OW-01 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-01 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 L)

Initial Displacement: 3.723 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

Screen Length: 10. ft Well Radius: 0.083 ft

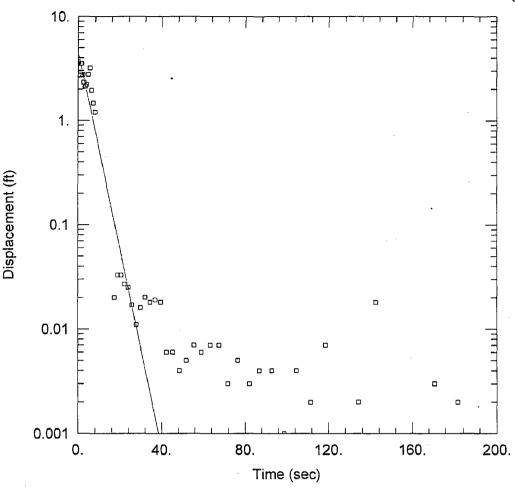
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K v=10763 ft/eday-7/18/2008

Page 280 of 657 0.1 ft



OW-01 L FALLING HEAD TEST (B)

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-01 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 0.001

WELL DATA (OW-01 L)

Initial Displacement: 3.638 ft

Static Water Column Height: 70.04 ft

Total Well Penetration Depth: 110. ft

Screen Length: 10. ft Well Radius: 0.083 ft

Casing Radius: 0.083 ft

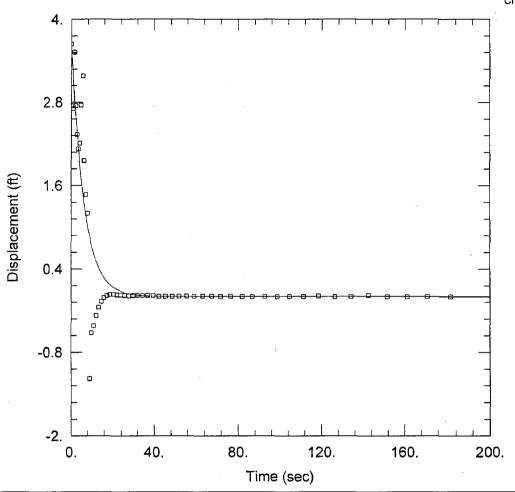
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \≠01860e545Rft\/day7/18/2008

Page 281 of 657 4.573 ft



OW-01 L FALLING HEAD TEST (B)

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-01 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 0.001

WELL DATA (OW-01 L)

Initial Displacement: 3.638 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

Screen Length: 10. ft Well Radius: 0.083 ft

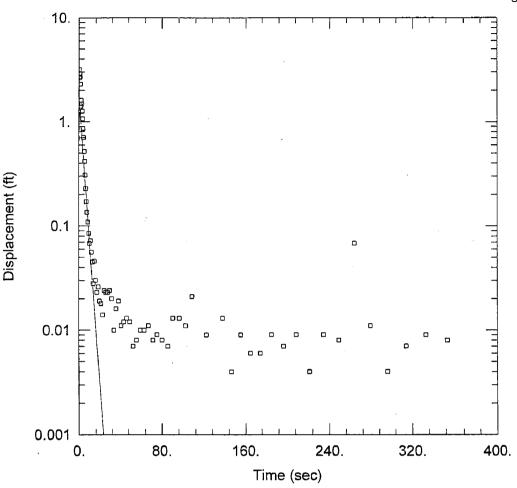
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K \&|\216e,72R\ft/\day7/18/2008

Page 282 d£**6**5**₹** 10. ft



OW-01 L RISING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>
Test Well: OW-01 L

Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 L)

Initial Displacement: 3.165 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

Screen Length: 10. ft Well Radius: 0.083 ft

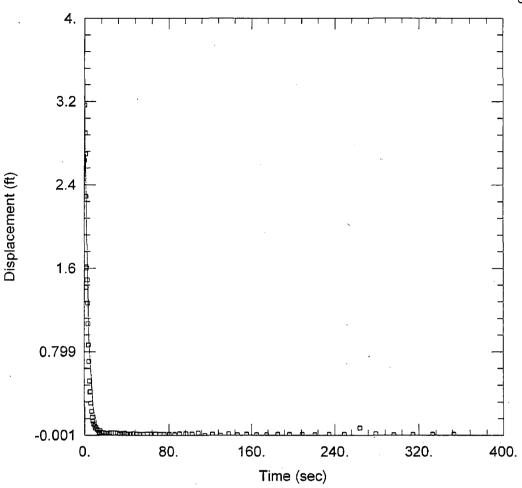
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K Valuation 94 Reft/day/18/2008

Page 283 o**y** 65≠ 1.678 ft



OW-01 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-01 L

Test Well: OVV-01 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 L)

Initial Displacement: 3.165 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

Screen Length: 10. ft Well Radius: 0.083 ft

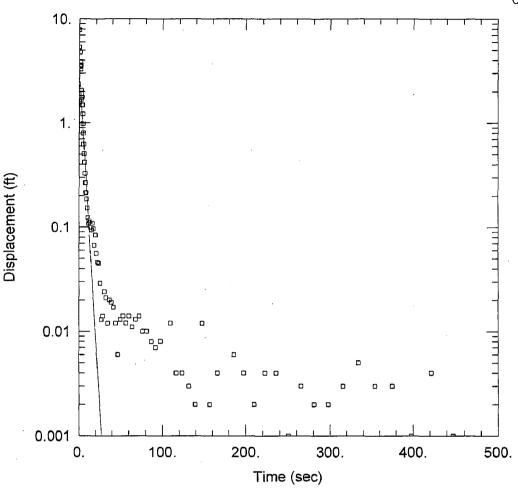
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K \49e312Rft/day7/18/2008

Page 284 of 657 0.1 ft



OW-01 L RISING HEAD TEST (B)

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-01 L

Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 L)

Initial Displacement: 5.354 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

Screen Length: 10. ft Well Radius: 0.083 ft

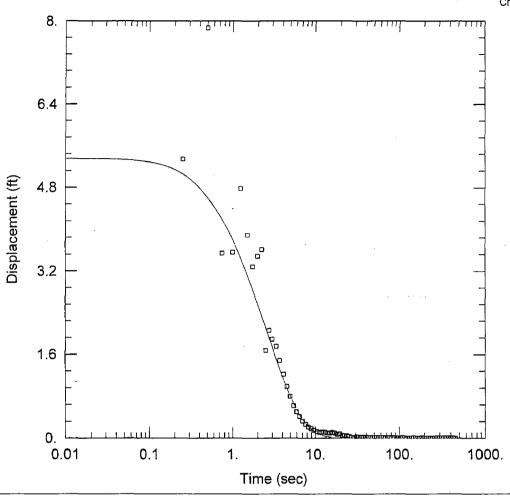
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K ♥01455e918RftVdzy7/18/2008

Page 285 of @57 3.424 ft



OW-01 L RISING HEAD TEST (B)

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-01 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 L)

Initial Displacement: 5.354 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 70.04 ft

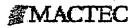
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

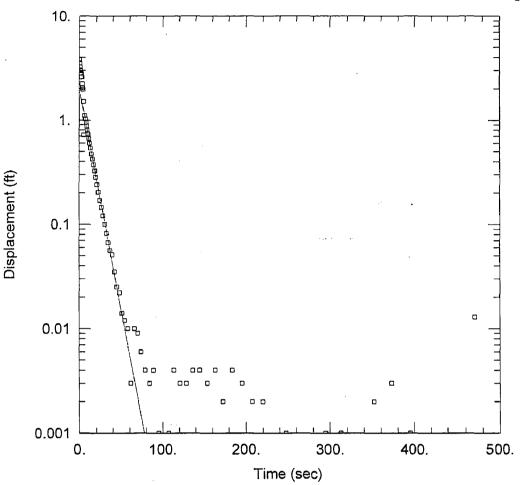
Solution Method: Butler

Page 286 of 65 9.351 ft



SLUG TEST REPORT

			
Project Name: Exelon COL	Project Number: 6469-0	07-1777 Page 1 of	1_ OW-01U
Client: Bechtel	Contractor: MACTEC		
Location: Victoria	MACTEC Rep: Jeff Mour	Date: 1/19	10B
UNITS			
Length	Feet		
Titne	Minutes		
Well Data			
Static Water Level	42.15 feet		
Total Well Depth	63 feet		
Static Water Column Height (H)	20.95 feet		
	Background	Falling Head	Abo Care & Dining Hond
Observed Initial Displacement (H ₀)	NA	~3.7 FeT	JAM 14-6 & Rising Head
		3,	1 2. 12. 3
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		· · · · · · · · · · · · · · · · · · ·
Depth to Top of Well Screen (d)	50 feet		
Length of Well Screen (L)	Ø feet		
Radius of Well Casing (rc)	0.083 feet	·	· ·
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)		······································	
Radius of Boring (rsk) Skin Effect	0.083 feet		·
Probe Serial Number	103078		
Slug Data	Shu#1		
Length	5,5 feit		
weight	U, I, I		
	1,625 inclas		
Slug Test File	Background	Falling	Diaina
File Name	OW-CIV Background	Ow-Olu Falling Houd	OW-01 U Rising Head
Start Time	12:35:34 Pm	12:52:01	1:07:23 1:01:22 PAN
End Time	12:50:34	1:05:52 12:59:58	1:10:49
Notes 2 Feet of Sediment		JA-114-68	
in Bottom, set			
Transdren at 60 (218 water)			
liansame as an (-18 mater)			
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 287	of 657	DCN# EXE808



OW-01 U FALLING HEAD

PROJECT INFORMATION

Company: <u>Exelon</u> Client: Bechtel

Project: 6468-07-1777
Location: Victoria, Tx
Test Well: OW-01 U
Test Date: 2/28/08

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 U)

Initial Displacement: 3.877 ft

Total Well Penetration Depth: 60. ft

Casing Radius: 0.083 ft

Static Water Column Height: 20.85 ft

Screen Length: 10. ft Well Radius: 0.083 ft

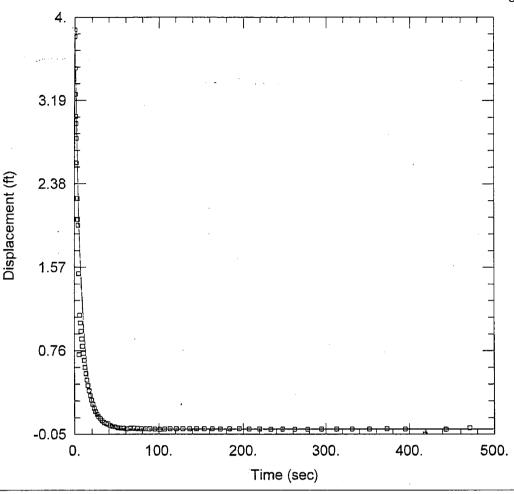
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K Valunge 978 ft/day7/18/2008

Page 288 of 05 ₹ 1.982 ft



OW-01 U FALLING HEAD

PROJECT INFORMATION

Company: Exelon Client: Bechtel

Project: 6468-07-1777 Location: Victoria, Tx Test Well: OW-01 U Test Date: 2/28/08

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 U)

Initial Displacement: 3.877 ft

Total Well Penetration Depth: 60. ft

Casing Radius: 0.083 ft

Static Water Column Height: 20.85 ft

Screen Length: 10. ft Well Radius: 0.083 ft

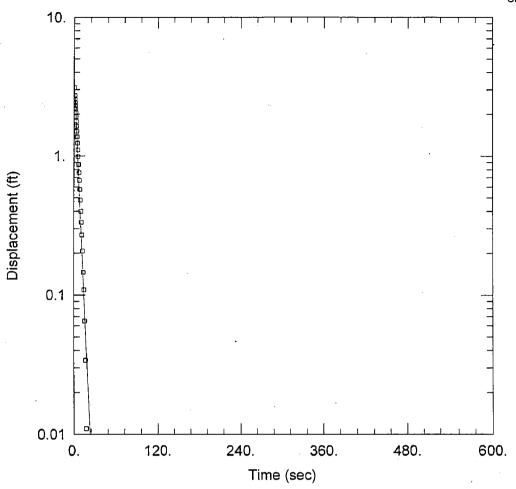
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K 4000.07418000 - 7/18/2008

Page 289 Pte 57 59.11 ft



OW-01 U RISING HEAD

PROJECT INFORMATION

Company: <u>Exelon</u> Client: Bechtel

Project: 6468-07-1777
Location: Victoria, Tx
Test Well: OW-01 U
Test Date: 2/28/08

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 U)

Initial Displacement: 3.105 ft

Total Well Penetration Depth: 60. ft

Casing Radius: 0.083 ft

Static Water Column Height: 20.85 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

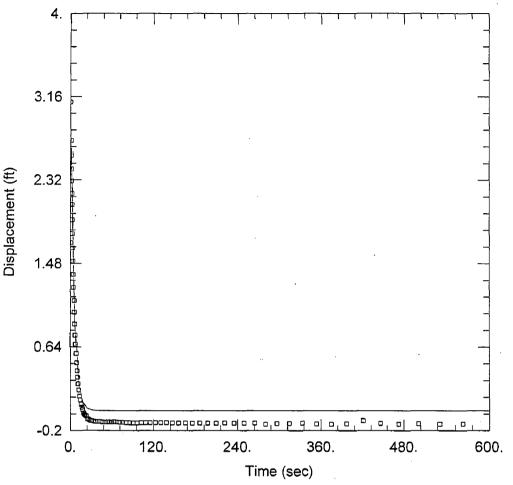
Aquifer Model: Confined

K 1979 17 Pt/Qa7/18/2008

Solution Method: Bouwer-Rice

Page 290 of 65 ₹ 3.696 ft

Checked by: Blud Date: 4/4/08



OW-01 U RISING HEAD

PROJECT INFORMATION

Company: Exelon Client: Bechtel

Project: 6468-07-1777
Location: Victoria, Tx
Test Well: OW-01 U
Test Date: 2/28/08

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-01 U)

Initial Displacement: 3.105 ft

Total Well Penetration Depth: 60. ft

Casing Radius: 0.083 ft

Static Water Column Height: 20.85 ft

Screen Length: 10. ft Well Radius: 0.083 ft

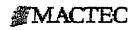
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

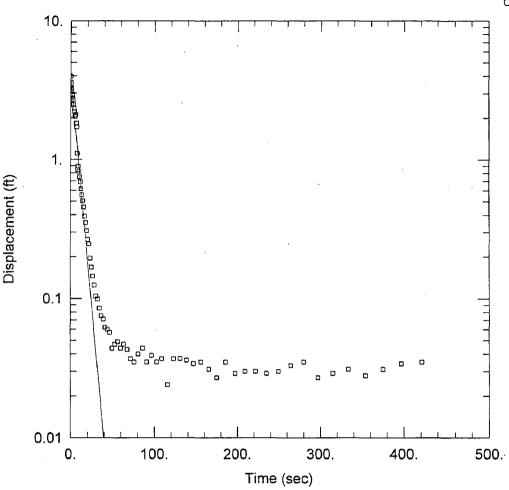
K **∞**l**g**11e**G**9R**f**1/d**a**y7/18/2008

Page 291 of 657 10. ft



SLUG TEST REPORT

Project Name: Exelon COL	Project Number: 6469-07-1	777 Page 1 of	1 OW-02L
Client: Bechtel	Contractor: MACTEC		
ocation: Victoria	MACTEC Rep.	Date: 1/19	<u>। </u>
INITS	 		
ength	Feet		
Time	Minutes		
Well Data			
Static Water Level	51,35 feet		
Total Well Depth	109.13 feet		
Static Water Column Height (H)	57,78 feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA NA	~ 4 Feet	-9 Feet
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)	98 feet		·
Length of Well Screen (L.)	D feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (req)			
Radius of Boring (rsk) Skin Effect	0.083 feet -		
Probe Serial Number	119305		
Slug Data	51y+2		
Length	5.5'		
	3.3		
weight	1175		· · · · · · · · · · · · · · · · · · ·
Diameter Sing Took Sing	1.625 inches	F-W-	Plate
Slug Test File File Name	Background OW-U2 L Background	OW-024 Follow Had	OW-02L Rising HRGD
Start Time	2:50:25	3:06:34	3:14:50
End Time	3105:25	3:13:39	3;21:08
Notes			
		of 657	DCN# EXE808



OW-02 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-02 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-02 L)

Initial Displacement: 3.982 ft

Total Well Penetration Depth: 108. ft

Casing Radius: 0.083 ft

Static Water Column Height: 57.78 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

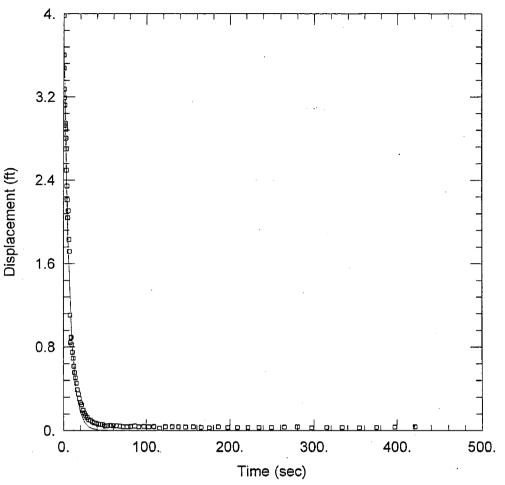
Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \(\psi_\mathbb{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_1\hat{D}_2\hat{D}_2\hat{D}_1\hat{D}_2

Page 293 g 06 5 3.937 ft

Checked by: BWd Date: 4/4/48



OW-02 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL

Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: <u>OW-02 L</u> Test Date: <u>1/19/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-02 L)

Initial Displacement: 3.982 ft

Total Well Penetration Depth: 108. ft

Casing Radius: 0.083 ft

Static Water Column Height: 57.78 ft

Screen Length: 10. ft Well Radius: 0.083 ft

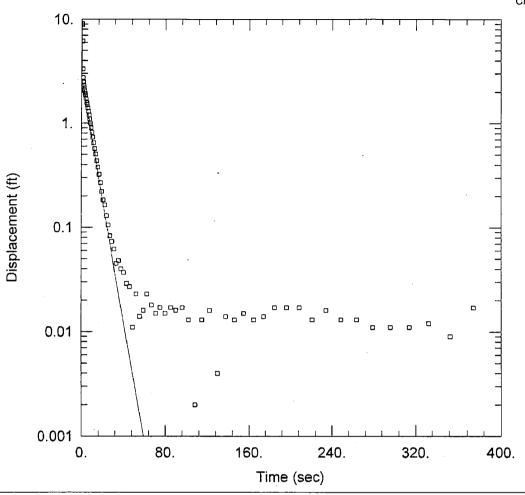
SOLUTION .

Aguifer Model: Confined

Solution Method: Butler

K v5124e84RfWday7/18/2008

Page 294 of \$57 0.1 ft



OW-02 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-02 L

Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-02 L)

Initial Displacement: 9.074 ft

Total Well Penetration Depth: 108. ft

Casing Radius: 0.083 ft

Static Water Column Height: 57.78 ft

Screen Length: 10. ft Well Radius: 0.083 ft

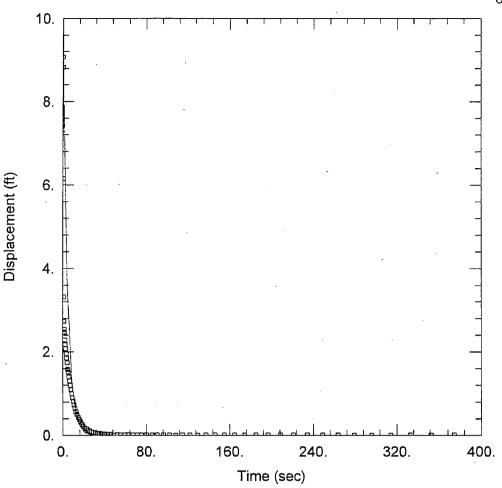
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \6|20e46R\$\day7/18/2008

Page 295 of 05₹ 2.684 ft



OW-02 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-02 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-02 L)

Initial Displacement: 9.074 ft

Total Well Penetration Depth: 108. ft

Casing Radius: 0.083 ft

Static Water Column Height: 57.78 ft

Screen Length: 10. ft Well Radius: 0.083 ft

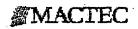
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

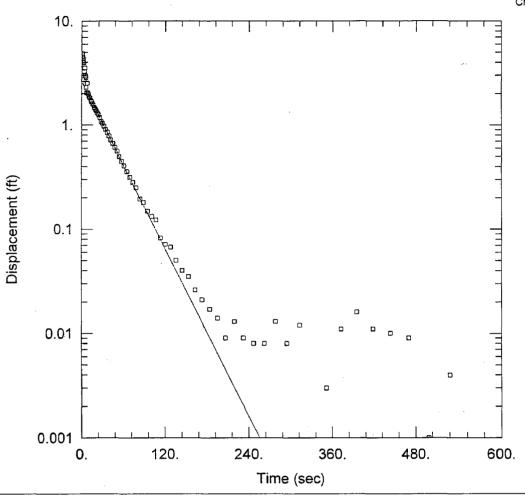
K V±lu366.2941/da√/18/2008

Page 296 of 65 ≥ 0.1 ft



SLUG TEST REPORT

roject Name: Exelon COL	Project Number: 6469-0	7-1777 Page 1 of	1 0W-02U	
lient: Bechtel	Contractor: MACTEC			
ocation: Victoria	MACTEC Rep: Date: 1/19/08			
INITS				
ength .	Feet			
ime	Minutes			
Vell Data				
Static Water Level	51.4 feet			
Fotal Well Depth	66' feet	· .		
Static Water Column Height (H)	14,6 feet			
	Background	Falling Head	Rising Head	
Observed Initial Displacement (H ₀)	NA .	~ 5'	~7'	
Saturated Thickness (b)	feet			
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			
Depth to Top of Well Screen (d)	53 Feet			
Length of Well Screen (L)	C feet	;		
Radius of Well Casing (rc)	0.083 feet			
Radius of Screen (rw)	0.083 feet			
Radius of Probe (req)	5.040 (66)			
Radius of Boring (rsk) Skin Effect	0.083 feet	-		
Probe Serial Number	103078			
			 	
Siug Data	5104#1			
Length	5,5' Feet	······································		
weight	3, 1, 4, 1			
Diameter	1.625 incles			
Slug Test File	Background	Falling	Rising	
File Name	OW-02 U Background	OW-02 U Falling Head	OW-02 U Rising Head	
Start Time	2:44:24	3:00:29	3:10:57	
End Time	2:59:24	3:09123	3:18:27	
Notes				
Transducer Set approx. 2 From				
Bitzm.				
Nev 0 Volume 4 Rev. 0 - 7/18/2008	Page 297	of 657	DCN# EXE808	



OW-02 U FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-02 U

Test Well: <u>OW-02 U</u> Test Date: <u>1/19/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-2U)

Initial Displacement: 4.892 ft
Total Well Penetration Depth: 63. ft

Casing Radius: 0.0833 ft

Static Water Column Height: 14.6 ft

Screen Length: 10. ft Well Radius: 0.0833 ft

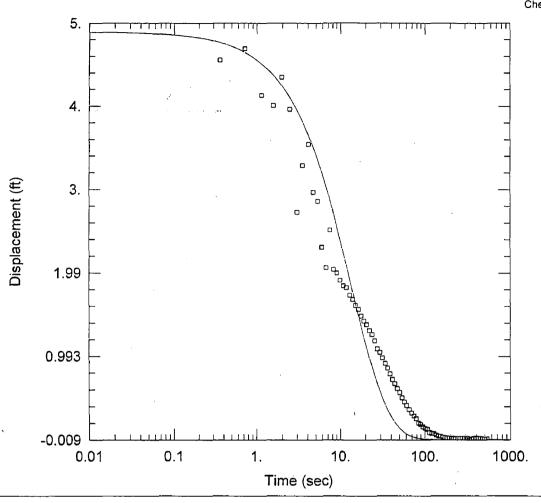
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K V**⇔lu4**n**.456eft/da**ÿ/18/2008

Page 298 o**y 6**5**₹** 2.607 ft



OW-02 U FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-02 U Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-2U)

Initial Displacement: 4.892 ft

Total Well Penetration Depth: 63. ft

Casing Radius: 0.0833 ft

Static Water Column Height: 14.6 ft

Screen Length: 10. ft Well Radius: 0.0833 ft

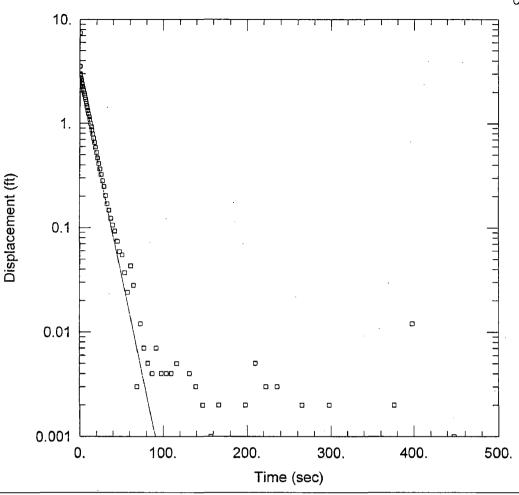
SOLUTION

Aquifer Model: Confined

K voilinhe45REV/chay7/18/2008

Solution Method: Butler

Page 299 df 657 0.1 ft



OW-02 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-02 U

Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 7.419 ft

Total Well Penetration Depth: 63. ft

Casing Radius: 0.0833 ft

Static Water Column Height: 14.6 ft

Screen Length: 10. ft Well Radius: 0.0833 ft

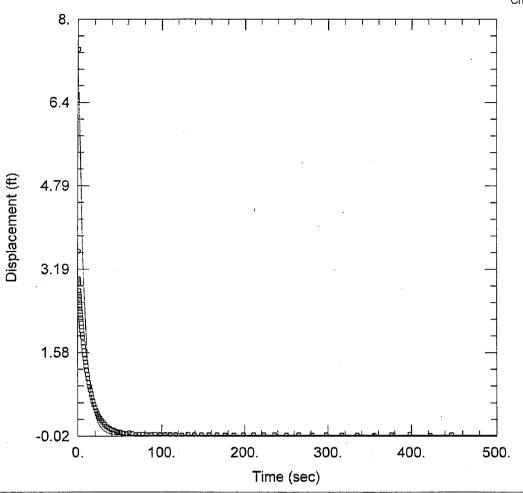
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \(\frac{1}{2}\) \(\frac{1}{2

Page 300 of 65₹ 2.797 ft



OW-02 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-02 U Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (New Well)

Initial Displacement: 7.419 ft

Static Water Column Height: 14.6 ft

Total Well Penetration Depth: 63. ft

Screen Length: 10. ft Well Radius: 0.0833 ft

Casing Radius: 0.0833 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

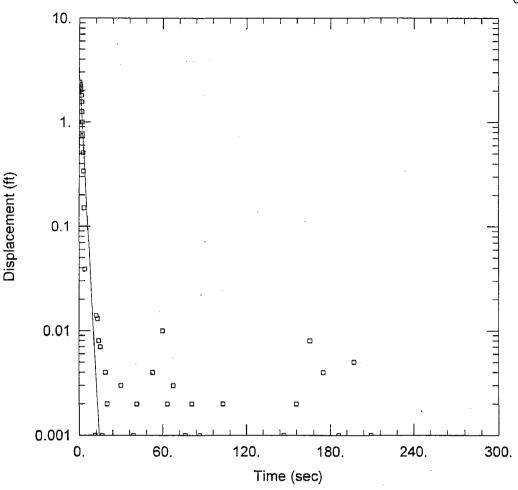
K \&|Q16e37R#Vday7/18/2008

Page 301 of €57 10. ft

MACTEC

SLUG TEST REPORT

Project Name: Exelon COL	Project Number: 6469-0	7-1777	Page 1 of	1	OW-032
lient: Bechtel	Contractor: MACTEC				
ocation: Victoria	MACTEC Rep: Jeff mound	ACTEC Rep: Jeff mouse Date: 1/19/08			
JNITS			1		
ength	Feet				
ime	Minutes				
Well Data			.•	14.	
Static Water Level	56°2 feet		e de la composición del composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la compos		
Fotal Well Depth		ot of Sedmanta	neellem		
Static Water Column Height (H)	feet				
en en en en en en en en en en en en en e	Background	Fallic	g Head	Risi	ng Head
Observed Initial Displacement (H ₀)	NA	~ 2.4"	de de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	~4,5'	
Saturated Thickness (b)	feet				
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			20 pt 20 pt	
Depth to Top of Well Screen (d)	87 Cent				
	778. C 80 74 PM 14.74	78.4			
Length of Well Screen (L)		To test			
Radius of Well Casing (rc)	•	0.083 feet			
Radius of Screen (rw)	0,083 test	0.083 feet.			
Radius of Probe (req)					معربی م <u>رحم ماندند. به مسئلوندی</u> ک به ماده
Radius of Boring (rsk) Skin Effect	0.083 feet			ent.	
	116700				
Probe Serial Number	119305		Property (A. C.		
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Commence against the second se				<u></u>
Slug Data	Slug#2				
Length	5,5 Feel	· · · · · · · · · · · · · · · · · · ·			·
weight					<u> </u>
Diameter	1,625 inches				
Slug Test File	Background		Falling	10. 4 7 1	Rising
File Name	3:56:35	OW-032 F			Rising Ikas
Start Time	4:11:35	4:12:3 4:16:3		4:24:3	
End Time		1,16,0			
Notes	OW 63- Falling Head	11 3	OW-03- 1	Cissing House 13	
Need to add a data point					
At Start of 26.06. I must have started pulling the Slup before	Perplanent ~ 2,3	Diploment ~ 2,3			
logger was running, will Rede	>				
This test.					
ReWolume 4 Rev. 0 - 7/18/2008	Page 302 o	f 657		DCN	# EXE808



OW-03 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-03 L

Test Well: OW-03 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.412 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

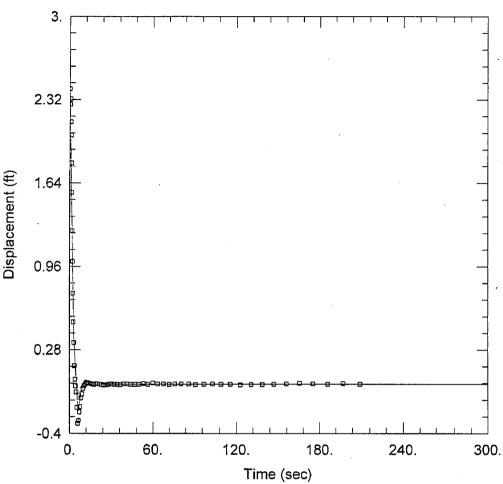
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \(\forall \text{BB:66} \text{Fft/day} 7/18/2008

Page 303 of 065 2.951 ft



OW-03 L FALLING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>

Test Well: <u>OW-03 L</u> Test Date: <u>1/19/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.412 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

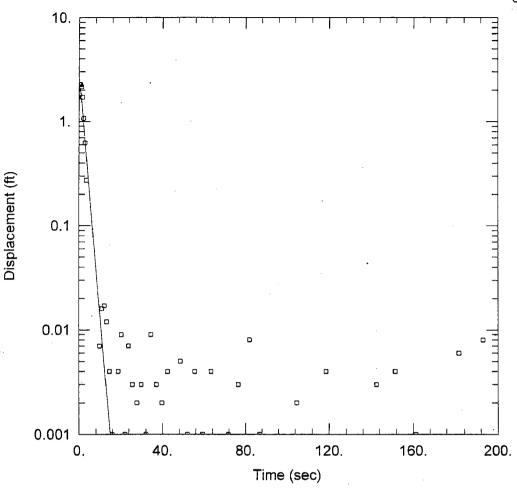
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K ⇒ d9.4m ₹ 7 Fb day 7/18/2008

Page 304 655765.3 ft



OW-03 L FALLING HEAD TEST (B)

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777

Location: VICTORIA SITE

Test Well: OW-03 L Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.293 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

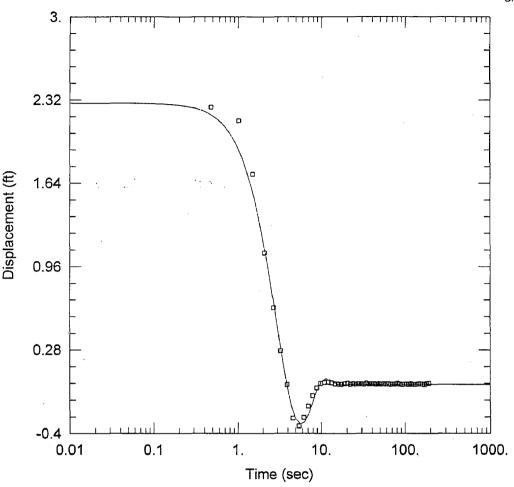
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K \ol@n0e@12R@n/day7/18/2008

Page 305 of 65≠ 2.778 ft



OW-03 L FALLING HEAD TEST (B)

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>
Test Well: OW-03 L

Test Well: <u>OW-03 I</u> Test Date: <u>1/19/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.293 ft
Total Well Penetration Depth: 97 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

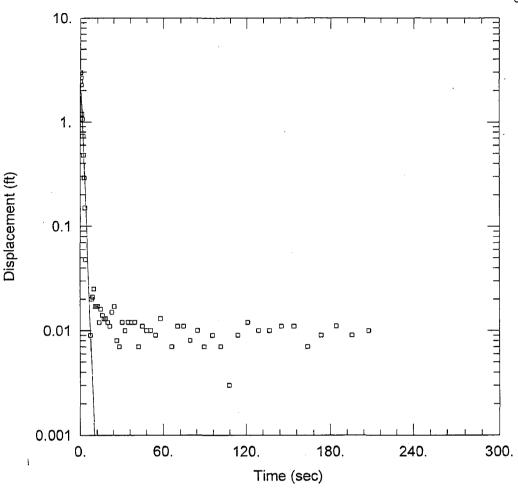
SOLUTION

Aquifer Model: Confined

K val9653ft/day/18/2008

Solution Method: Butler

Page 306 of 657 78.4 ft



OW-03 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-03 L

Test Date: 1/19/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.965 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

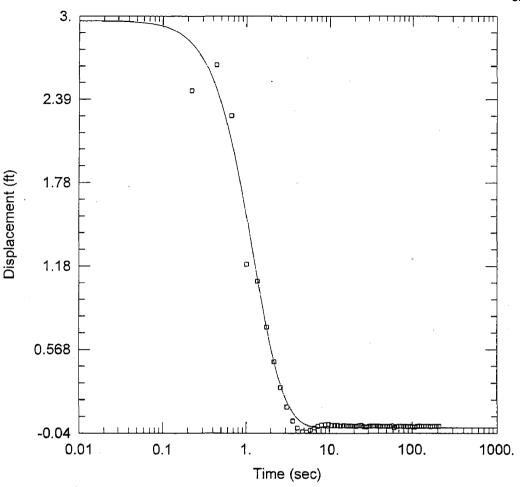
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K v=101n2e048Reft/day/18/2008

Page 307 o**y** 65**∓** 3.175 ft



OW-03 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-03 L

Test Vell: <u>OVV-03 L</u> Test Date: <u>1/19/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-03 L)

Initial Displacement: 2.965 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 43.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K ♥oflia@.48Fft.kday7/18/2008

Page 308 bæ557 10.82 ft



SLUG TEST REPORT

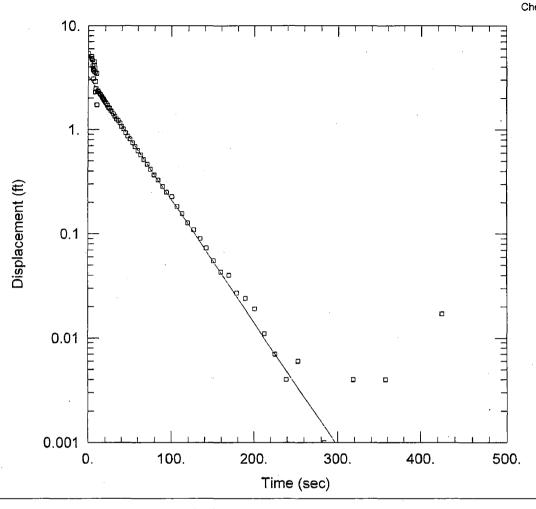
roiect Name: Exelon COL	Project Number: 6469-07-1777 F	Page 1 of 1	OM-037
fient: Bechtel	Contractor: MACTEC		
ocation: Victoria	MACTEC Rep: Jeff MUERO	Date: 1 /19 /	98
NITS			
ength	Feet		
ime	Minutes		
Veli Data	JAM 1-19-68		
tatic Water Level	56 DRY feet		
otal Well Depth	56 feet		
Static Water Column Height (H)	C feet		
	Background Falling	Head	Rising Head
Observed Initial Displacement (H ₀)	NA NA		NA
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)	43 Ceet		
Length of Well Screen (L)	O feet	· .	
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		·
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
	7.1	· · · · · · · · · · · · · · · · · · ·	
Probe Serial Number	103078		
Slug Data	Slug #1		
Length	5.5 Feet hellisDR	y	· · · · · · · · · · · · · · · · · · ·
weight			·
Diameter	1.625 incles		
Slug Test File		Falling	Rising
	OW-03U Backgrund OW-03UF		OW-03 U Rising Heid
Start Time			
End Time			
Notes			
		· · · · · · · · · · · · · · · · · · ·	
Rev 0 Volume 4 Rev. 0 - 7/18/2008	Page 309 of 657		DCN# EXE808

Checked by: CHB Date: 4-4-08

MACTEC

SLUG TEST REPORT

oject Name: Exelon COL	Project Number: 6469-07-1	777 Page 1 of	1 0W-04L	
ient: Bechtel	Contractor: MACTEC	·		
ocation: Victoria	MACTEC REP: JEE Moure			
NITS				
ength	Feet		· · · · · · · · · · · · · · · · · · ·	
ime	Minutes			
Vell Data				
Static Water Level	56,88 feet			
otal Well Depth	113,49 Feet 2 Feet of	sedinant in bottom	·	
Static Water Column Height (H)	56.61 feet		·	
	Background	Falling Head	Rising Head	
Observed Initial Displacement (H ₀)	NA	~5,4'	~ 8'	
Saturated Thickness (b)	feet			
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			
Depth to Top of Well Screen (d)	100 feet			
Length of Well Screen (L)	(O feet			
Radius of Well Casing (rc)	0.083 feet		· · · · · · · · · · · · · · · · · · ·	
Radius of Screen (rw)	0.083 feet			
Radius of Probe (req)				
Radius of Boring (rsk) Skin Effect	0.083 feet			
Probe Serial Number	106721			
			,	
Slug Data	Slug# 2			
Length	5,5 Feet			
weight				
Diameter	1,625 inclus			
Slug Test File	Background	Falling	Rising	
File Name	OW-04 L Background	OW-O4L Falling Hood	OW-OYL Rising Head	
Start Time	9:14:38	9:32:18	9:40:41	
End Time	9129:3.8	9:39:23	9144:39	
Notes				
				
,				
Volume 4 Rev. 0 - 7/18/2009	Page 310 of	657	DUM EAE8US	
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 310 of	657	DCN# EXE808	



OW-04 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-04 L

Test Well: OW-04 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 L)

Initial Displacement: 5.4 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 56.61 ft

Screen Length: 10. ft Well Radius: 0.083 ft

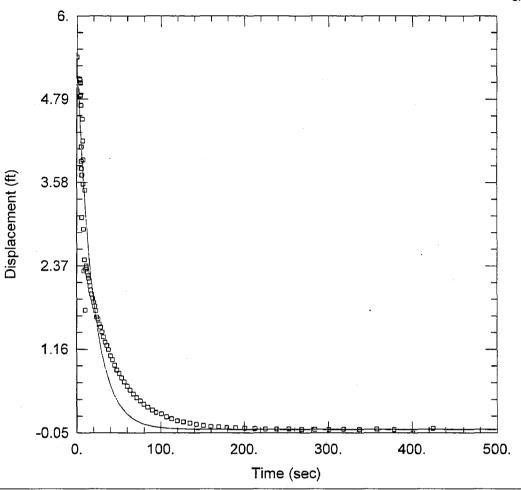
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

Page 311 y 0657 3.241 ft

Checked by: BWA Date: 4/4/08



OW-04 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-04 L

Test Date: <u>0/V-04 L</u>

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 L)

Initial Displacement: 5.4 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 56.61 ft

Screen Length: 10. ft Well Radius: 0.083 ft

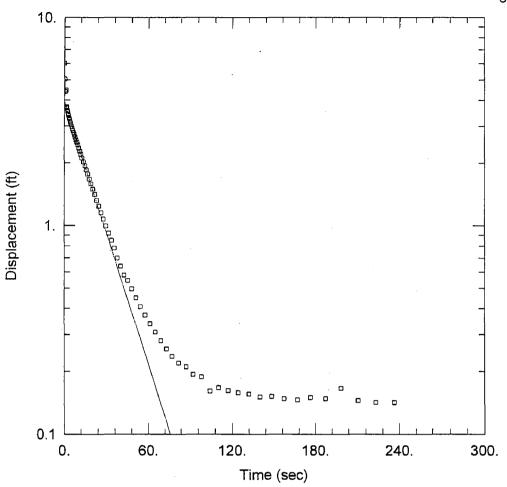
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K 45018m269998ttVctay7/18/2008

Page 312 df 657 0.1 ft



OW-04 L RISING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>

Test Well: OW-04 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 L)

Initial Displacement: 6.024 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 56.61 ft

Screen Length: 10. ft Well Radius: 0.083 ft

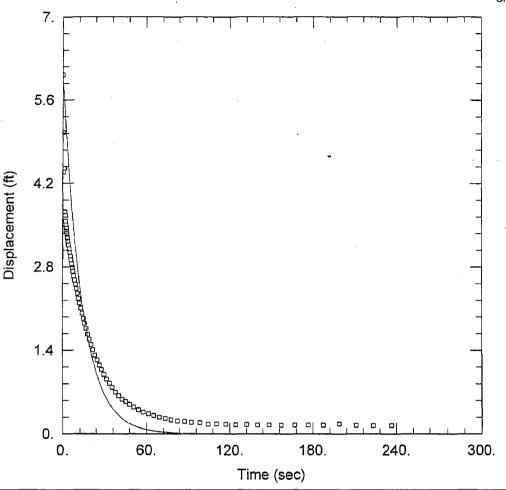
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K v=107m386Reft/.day1/18/2008

Page 313 o**y** 65₹ 3.903 ft



OW-04 L RISING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>
Test Well: <u>OW-04 L</u>

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 L)

Initial Displacement: 6.024 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 56.61 ft

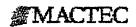
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

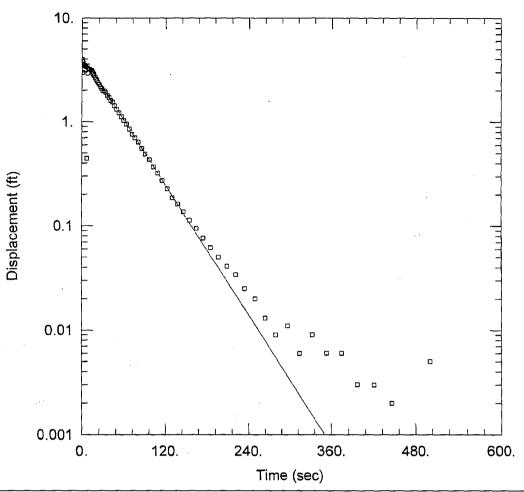
K √5|111666 ft/da y/18/2008 Page 314 d+657 10. ft

Solution Method: Butler



SLUG TEST REPORT

roject Name: Exelon COL	Project Number: 6469-07-	1777 Page 1 of	1 DW-04U
ient: Bechtel	Contractor: MACTEC		
ocation: Victoria	MACTEC Rep: Jeff Moule	Date: 1 / 20 /	<u>6</u> 3
NITS			
ength	Feet		· · · · · · · · · · · · · · · · · · ·
ime	Minutes		
Vell Data	56.88 JAM 1-20-08		
Static Water Level			
otal Well Depth	88.13 feet		
Static Water Column Height (H)	JA 31,8 feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA	~ 4 Feet	~ 3 Feet
Saturated Thickness (b)	feet		·
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)	75 Cect		
Length of Well Screen (L)	(D feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
	V.003 ldet		
Radius of Probe (req)		·	
Radius of Boring (rsk) Skin Effect	0.083 feet	· · · · · · · · · · · · · · · · · · ·	
·	1,		
Probe Serial Number	112335	· · · · · · · · · · · · · · · · · · ·	
Slug Data	5lug#1		<u> </u>
Length	5,5 Fex+		
weight		· · · · · · · · · · · · · · · · · · ·	
Diameter	1.625 inches		
Slug Test File	Background	Falling	Rising
File Name	OW-04V Backgrand	OW-04 u Folling Head	OW-04 U Rising Head
Start Time	9:10:46	9:26:56	Q:36:46
End Time	9:25:46	9:35:21	9:43:04
Notes			
- - -			
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 315 of 0	657	DCN# EXE808



OW-04 U FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-04 U
Test Date: 1/20/07

Saturated Thickness: 3.5 ft

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 U)

Initial Displacement: 3.974 ft
Total Well Penetration Depth: 85. ft

Casing Radius: 0.083 ft

Static Water Column Height: 31.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

y0 = 4.295 ft

SOLUTION

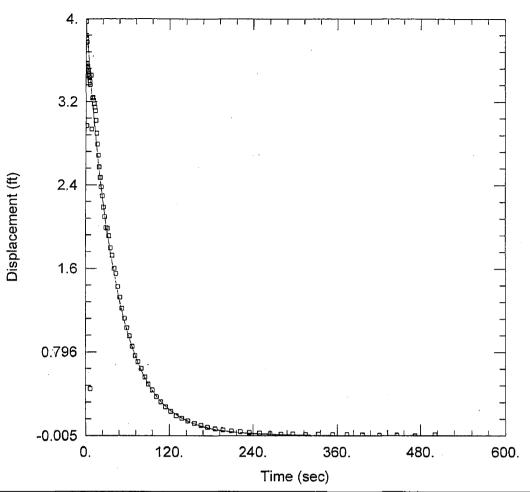
Aquifer Model: Confined

Volume 4 Rev. 0 - 7/18/2008

Solution Method: Bouwer-Rice

K = 9.442 ft/day

Page 316 of 657



OW-04 U FALLING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: 6468 07 177

Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-04 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 3.5 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 U)

Initial Displacement: 3.974 ft

Total Well Penetration Depth: 85. ft

Casing Radius: 0.083 ft

Static Water Column Height: 31.8 ft

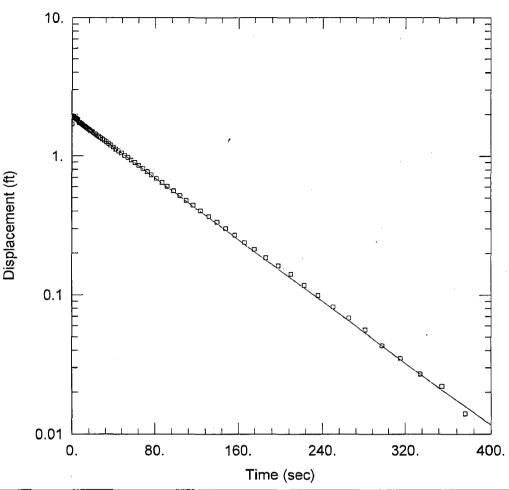
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 10.44 ft/day Volume 4 Rev. 0 - 7/18/2008 Le = 0.1 ft Page 317 of 657



OW-04 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-04 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 3.5 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 U)

Initial Displacement: 1.699 ft

Total Well Penetration Depth: 85. ft

Casing Radius: 0.083 ft

Static Water Column Height: 31.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Page 318 of 657

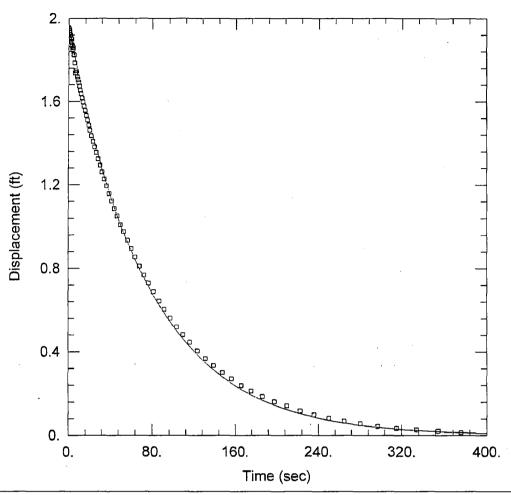
Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 5.057 ft/day

Volume 4 Rev. 0 - 7/18/2008

y0 = 1.928 ft



OW-04 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-04 U

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 3.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-04 U)

Initial Displacement: 1.956 ft

Total Well Penetration Depth: 85. ft

Casing Radius: 0.083 ft

Static Water Column Height: 31.8 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

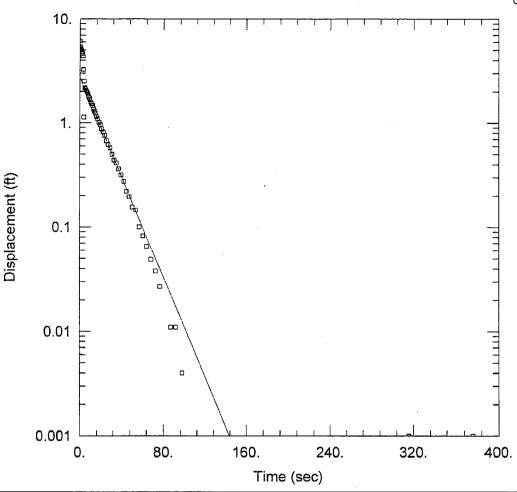
Solution Method: Butler

K = 5.94 ft/day Volume 4 Rev. 0 - 7/18/2008 Page 319 of 657 0.1 ft



SLUG TEST REPORT

roject Name: Exelon COL	Project Number: 6469-07	-1777 Page 1 of	1 omosi		
Client: Bechtel	Contractor: MACTEC				
ocation: Victoria	MACTEC Rep: Jeff moone	Date: 1 / 20	Date: 1 / 20 / 08		
INITS					
ength	Feet				
Time	Minutes				
Weil Data					
Static Water Level	53. ²⁵ feet				
Total Well Depth	133.28 feet 0.7 of	sedinent in bottom			
Static Water Column Height (H)	80,03 feet				
	Background	Falling Head	Rising Head		
Observed Initial Displacement (H ₀)	NA	Falling Head	~3.5'		
Saturated Thickness (b)	feet				
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1				
Depth to Top of Well Screen (d)	120 feet				
Length of Well Screen (L)	(O feet	·	·		
Radius of Well Casing (rc)	0.083 feet				
Radius of Screen (rw)	0.083 feet	•			
Radius of Probe (reg)					
Radius of Boring (rsk) Skin Effect	0.083 feet				
	· · · · · · · · · · · · · · · · · · ·		1. 2		
Probe Serial Number	106721				
Slug Data	Shy#2				
Length	5.5 feet				
weight					
Diameter	1-625 inches	• .			
Slug Test File	Background	Falling	Rising		
File Name	OW-052 Background	OW-05L Falling Head	OW-05L Rising Had		
Start Time	10:56:56	11:12:56	11:20:19		
End Time	11:11:56	11:14:15	11:25:03		
Notes					
					
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 320 o	f 657	DCN# EXE808		



OW-05 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-05 L

Test Well: <u>OW-05 L</u> Test Date: <u>1/20/07</u>

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05U)

Initial Displacement: 5.4 ft

Total Well Penetration Depth: 130. ft

Casing Radius: 0.083 ft

Static Water Column Height: 80.03 ft

Screen Length: 10. ft Well Radius: 0.083 ft

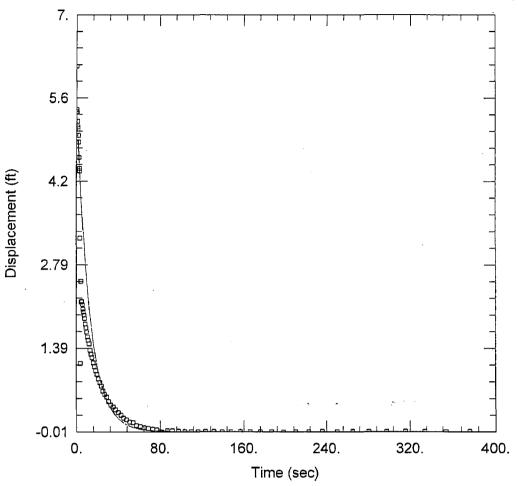
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K ₹08,66147,8€1/day7/18/2008

Page 321 M 257 2.749 ft



OW-05 L FALLING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>
Test Well: OW-05 I

Test Well: OW-05 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05U)

Initial Displacement: 5.4 ft

Total Well Penetration Depth: 130. ft

Static Water Column Height: 80.03 ft

Casing Radius: 0.083 ft

Screen Length: 10. ft Well Radius: 0.083 ft

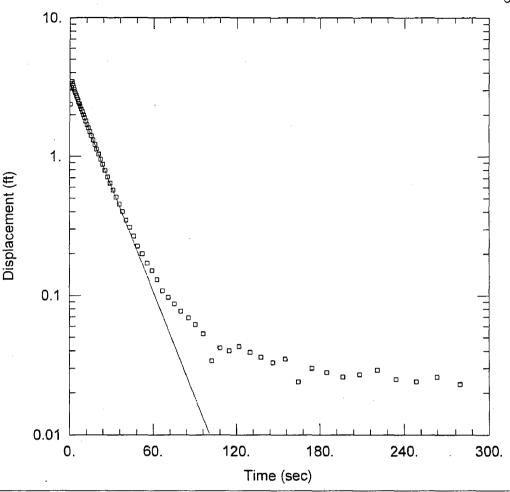
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K volume 78 ft/day, 18/2008

Page 322 of 657 = 55.43 ft



OW-05 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-05 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05 L)

Initial Displacement: 3.189 ft

Total Well Penetration Depth: 130. ft

Casing Radius: 0.083 ft

Static Water Column Height: 80.03 ft

Screen Length: 10. ft Well Radius: 0.083 ft

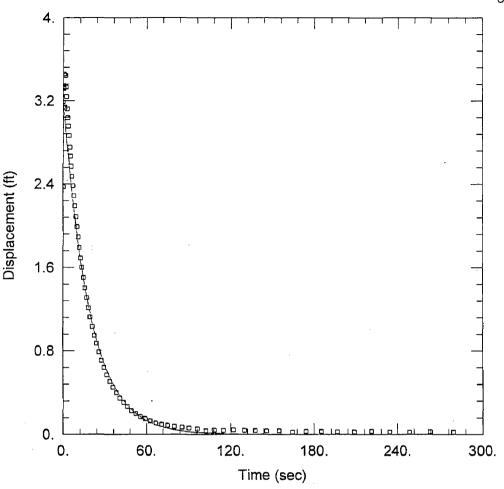
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K volume45 tyday/18/2008

Page 323 of 057 3.453 ft



OW-05 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-05 L

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05 L)

SOLUTION

Initial Displacement: 3.189 ft

Static Water Column Height: 80.03 ft

Total Well Penetration Depth: 130. ft

Screen Length: 10. ft Well Radius: 0.083 ft

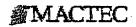
Casing Radius: 0.083 ft

Aquifer Model: Confined

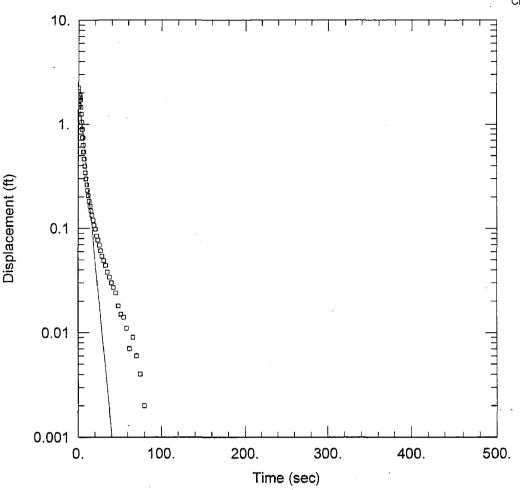
Solution Method: Butler

 $K_{\sqrt{7018}, \frac{3}{23}, \frac{3}{7}, \frac{7}{10}, \frac{1}{10}, \frac{3}{10}, \frac{3$

Page 324 of 857 55.39 ft



Project Name: Exelon COL	Project Number: 6469-07-1	1777 Page	1 of	1	OW-05U
Client: Bechtel	Contractor: MACTEC				
ocation: Victoria	MACTEC Rep: JEFF Moore	Date	: 1/20	08	
INITS		 			
_ength	Feet				
(ime	Minutes				
Well Data				4 -	
Static Water Level	52.54 feet				
Total Well Depth	59,28 feet				
Static Water Column Height (H)	6.74 feet				
	Background	Falling He	ad	Ri	sing Head
Observed Initial Displacement (H ₀)	NA NA	~ 3′		~ 2'	sing risas
Saturated Thickness (b)	feet				
	Assume 1 to 1				
Conductivity Anisotropy (Kv/Kh)	46 Seet			···	
Depth to Top of Well Screen (d)					· · · · · · · · · · · · · · · · · · ·
Length of Well Screen (L)	(O feet		· <u>·</u>	·	
Radius of Well Casing (rc)	0.083 feet		· · · · · · · · · · · · · · · · · · ·		······································
Radius of Screen (rw)	0.083 feet	· · · · · · · · · · · · · · · · · · ·			 -
Radius of Probe (req)					
Radius of Boring (rsk) Skin Effect	0.083 feet	· · · · · · · · · · · · · · · · · · ·			
		·			
Probe Serial Number	112335				· · · · · · · · · · · · · · · · · · ·
				·	<u> </u>
Slug Data	5/4#1				
Length	5.5 Feet				· · · · · ·
welght				· .	
Diameter	-1,625 inches				
Slug Test File	Background	Fallin	9		Rising
File Name	OW-05 U Background	OW-05U Falling	Head	OW-05U	Rising Head
Start Time	10:51:37	11:07:41		11:16:2	o . ´
End Time	11:06:37	11:15:11		11:23:	50°
Notes Bottom Appears Herd-will Place transducer just off Botton For Sly 785+					
1 - 3107 1/2)		· · · · · · · · · · · · · · · · · · ·		-	
					····



OW-05 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-05 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05U)

Initial Displacement: 2.236 ft

Total Well Penetration Depth: 56. ft

Static Water Column Height: 6.74 ft

Casing Radius: 0.083 ft

Screen Length: 10. ft Well Radius: 0.083 ft

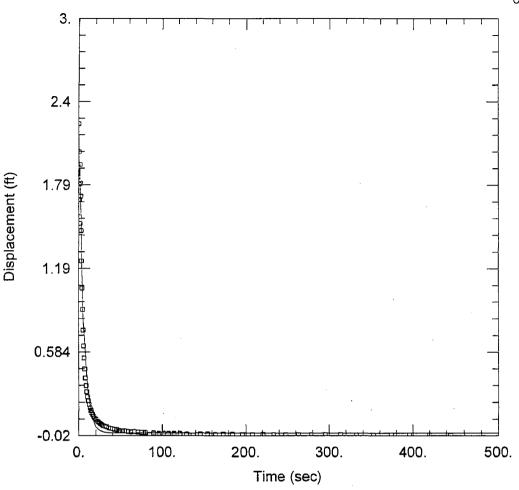
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K v5126e749rt/day7/18/2008

Page 326 M 657 2.161 ft



OW-05 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-05 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-05U)

Initial Displacement: 2.236 ft

50 K

Static Water Column Height: 6.74 ft

Total Well Penetration Depth: <u>56.</u> ft Casing Radius: 0.083 ft

Screen Length: 10. ft Well Radius: 0.083 ft

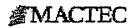
SOLUTION

Aquifer Model: Confined

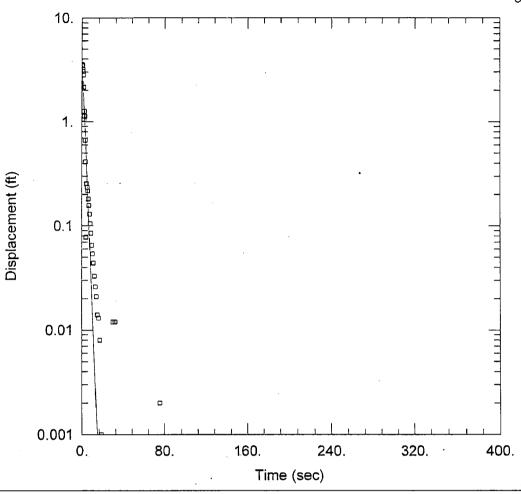
Solution Method: Butler

K vol31e06rt/day7/18/2008

Page 327 of 657 0.1 ft



roject Name: Exelon COL	Project Number: 6469-07-1777		Page 1 of 1 OW OUT		
lient: Bechtel	Contractor: MACTEC	·			U PF-11-60-08
ocation: Victoria	MACTEC Rep: Jeff Moure		Date: 1 /20 /08		
NITS					-,
ength	Feet				
ime	Minutes	·			
Vell Data			• ,		
Static Water Level	54,38 feet				
Total Well Depth	98,62 feet				
Static Water Column Height (H)	44.24 feet				
	Background	Fallin	g Head	Risi	ng Head
Observed Initial Displacement (H ₀)	NA NA	23.4	7	~ 2	
Saturated Thickness (b)	feet				
	Assume 1 to 1	· · · · · · · · · · · · · · · · · · ·	·		· · · · · · · · · · · · · · · · · · ·
Conductivity Anisotropy (Kv/Kh)	85 Lat			······································	
Depth to Top of Well Screen (d)	0 feet				
Length of Well Screen (L)					
Radius of Well Casing (rc)	0.083 feet			/// · · · · .	
Radius of Screen (rw)	0.083 feet			· · · · · · · · · · · · · · · · · · ·	
Radius of Probe (reg)					·
Radius of Boring (rsk) Skin Effect	0.083 feet	·			,
			· · · · · · · · · · · · · · · · · · ·		
Probe Serial Number	106721				
		· · · · · · · · · · · · · · · · · · ·			
Slug Data	5 ly # 2 5.5'				·
Length	5.5'				·
weight					, , , , , , , , , , , , , , , , , , ,
Diameter	1,625 incles		· · · · · · · · · · · · · · · · · · ·		
Slug Test File	Background	F	alling	-	Rising
File Name	UW-UBL Buckground	OW-06L		OW-OLL R	ising Head
Start Time	12:15:32	12:31:27	7	12:37:4	
End Time	12:30:32	12:36:4	6	12:43:7	3
Notes		······································			
					· · · · · · · · · · · · · · · · · · ·
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 328 of 6	657		DCN#	EXE808



OW-06 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-06 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 L)

Initial Displacement: 3.544 ft
Total Well Repetration Depth: 95

Total Well Penetration Depth: 95. ft

Casing Radius: 0.083 ft

Static Water Column Height: 44.24 ft

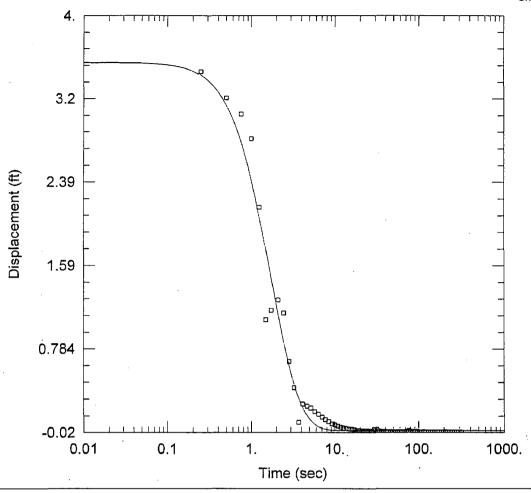
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 87.21 ft/day Volume 4 Rev. 0 - 7/18/2008 y0 = 4.001 ft



OW-06 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-06 L

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 L)

Initial Displacement: 3.544 ft Total Well Penetration Depth: 95. ft

Casing Radius: 0.083 ft

Static Water Column Height: 44.24 ft

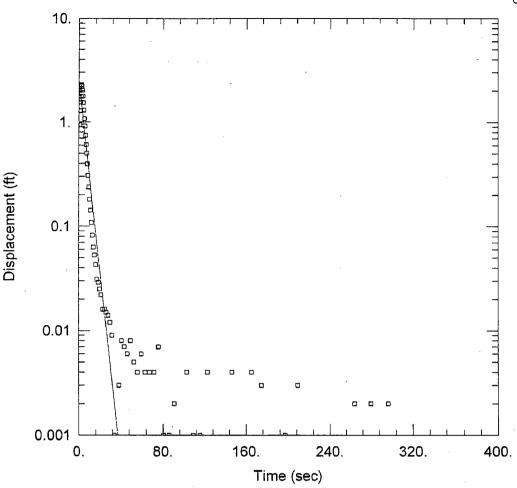
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 88.25 ft/day Volume 4 Rev. 0 - 7/18/2008



OW-06 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-06 L
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 L)

Initial Displacement: 2.154 ft

Total Well Penetration Depth: 95. ft

Casing Radius: 0.083 ft

Static Water Column Height: 44.24 ft

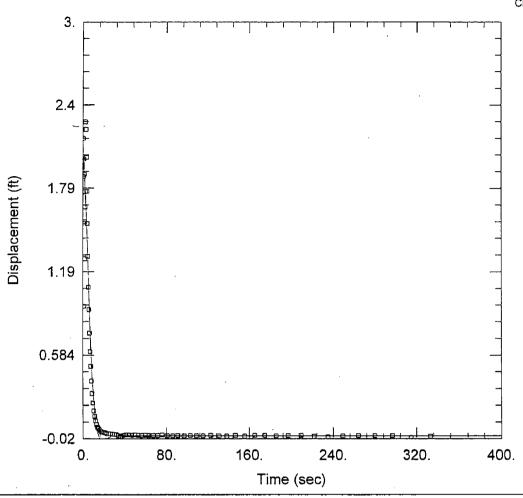
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 31.36 ft/day y0 = 2.35 ft Volume 4 Rev. 0 - 7/18/2008 Page 331 of 657



OW-06 L RISING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1777</u>
Location: <u>VICTORIA SITE</u>

Test Well: OW-06 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 L)

Initial Displacement: <u>2.154</u> ft Static Water Column Height: <u>44.24</u> ft

Total Well Penetration Depth: 95. ft Screen Length: 10. ft Casing Radius: 0.083 ft Well Radius: 0.083 ft

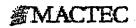
SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 29.45 ft/day Le = 367.7 ft

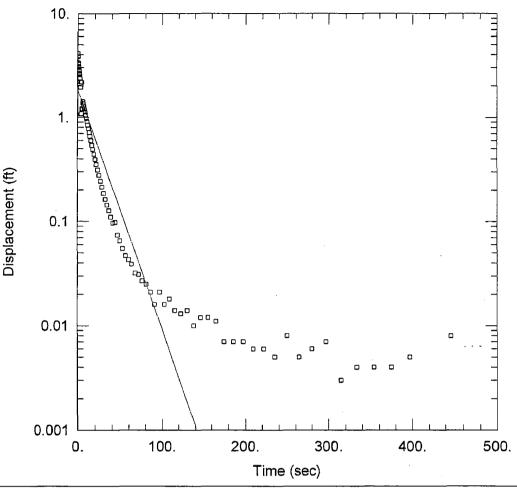
Volume 4 Rev. 0 - 7/18/2008 Page 332 of 657

DCN# EXE808...



roject Name: Exelon COL	Project Number: 6469-07	-1777 Page 1 of	1 OW-0EU
Client: Bechtel	Contractor: MACTEC		
ocation: Victoria	MACTEC Rep: Jeff moore	108	
INITS			
ength	Feet		
ime	Minutes		
Vell Data			
Static Water Level	53.43 feet		
Total Well Depth		ied:most in bullion	
Static Water Column Height (H)	12.55 feet	,	
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA	~4'	~3,5
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)	53 feet		
Length of Well Screen (L)	D feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
integral of Donning (Lony) Community			
Probe Serial Number	112335		·
1 Tobe Oction Humber		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Slug Data	Slug#1		
	5,5'		
Length			
weight	1.625 inches		
Diameter Slug Test File	Background	Falling	Rising
File Name	OW-060 Background	OW-060 Falling Hood	OW-OGU Rising Hand
Start Time	12:09:46	12:25:48	12:34:20
End Time	12:24:46	12:33:18	12:42:16
Notes			
Rev (Volume 4 Rev. 0 - 7/18/2008	Page 333 of	657	DCN# EXE808





OW-06 U FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-06 U

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 U)

Initial Displacement: 4.121 ft Total Well Penetration Depth: 63. ft

Casing Radius: 0.083 ft

Static Water Column Height: 12.55 ft

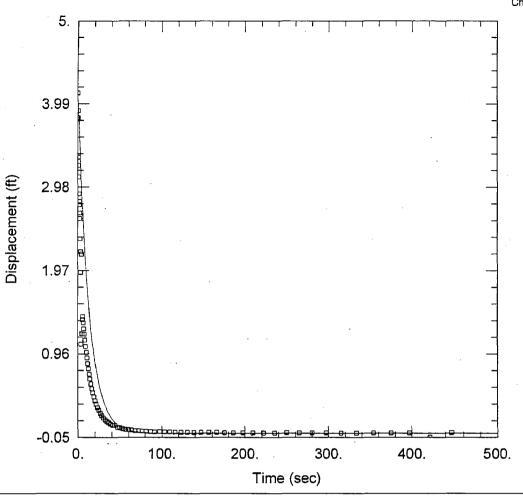
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 10.63 ft/dayVolume 4 Rev. 0 - 7/18/2008 y0 = 1.821 ft



OW-06 U FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-06 U

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 U)

Initial Displacement: 4.121 ft

Total Well Penetration Depth: 63. ft

Casing Radius: 0.083 ft

Static Water Column Height: 12.55 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

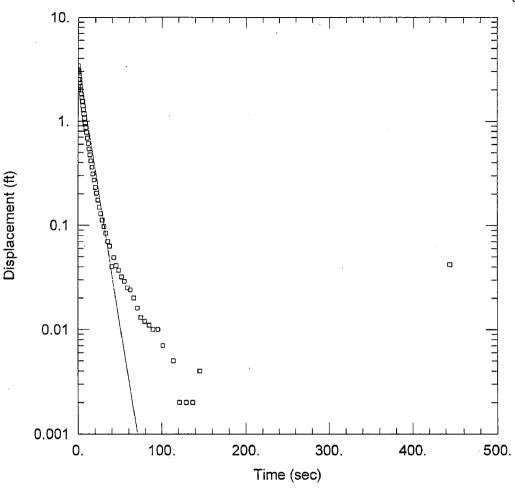
Volume 4 Rev. 0 - 7/18/2008

K = 17.7 ft/day

Solution Method: Butler

Le = 0.1 ft

Page 335 of 657



OW-06 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-06 U

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 U)

Initial Displacement: 3.404 ft Total Well Penetration Depth: 63. ft

Casing Radius: 0.083 ft

Static Water Column Height: 12.55 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

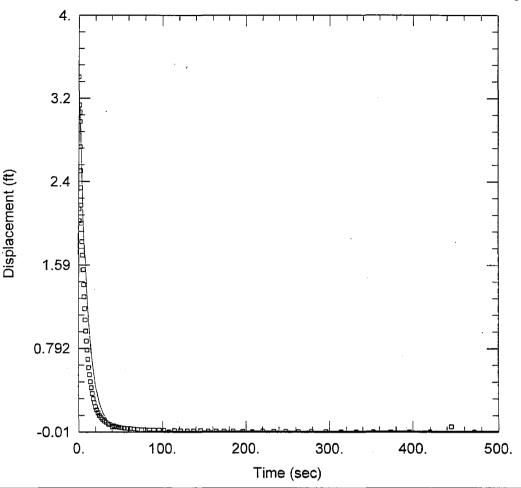
Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 23.25 ft/dayVolume 4 Rev. 0 - 7/18/2008

y0 = 3.47 ftPage 336 of 657

Checked by: Bild Date: 4/4/08



OW-06 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-06 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-06 U)

Initial Displacement: 3.404 ft

Total Well Penetration Depth: 63. ft

Casing Radius: 0.083 ft

Static Water Column Height: 12.55 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 23.08 ft/day

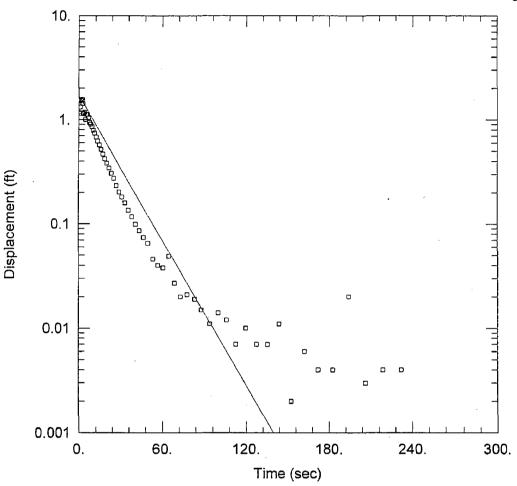
Le = <u>0.1</u> ft Page 337 of 657

Volume 4 Rev. 0 - 7/18/2008

-DCN# EXE808-



Project Name: Exelon COL	Project Number: 6469-07	-1777 Page 1 of	1 OW-07L		
Client: Bechtel	Contractor: MACTEC				
Location: Victoria	MACTEC Rep: Jeff move	Date: 1 / 2	Date: 1 /20 /08		
UNITS	`				
Length	Feet	· .			
Time ·	Minutes				
Well Data					
Static Water Level	58,7 feet				
Total Weli Depth	126.3 feet 3.5 of Se	odines in bottom			
Static Water Column Height (H)	68,1 feet				
	Background	Falling Head .	' Rising Head		
Observed Initial Displacement (H ₀)	NA .	~1,6	~1.6		
Saturated Thickness (b)	feet				
	Assume 1 to 1				
Conductivity Anisotropy (Kv/Kh)	113 feet				
Depth to Top of Well Screen (d)	1 .		· · · · · · · · · · · · · · · · · · ·		
Length of Well Screen (L)	(C) feet		·		
Radius of Well Casing (rc)	<0.083 feet	 	· · · · · · · · · · · · · · · · · · ·		
Radius of Screen (rw)	-0.063 teet	·	· · · · · · · · · · · · · · · · · · ·		
Radius of Probe (req)		 			
Radius of Boring (rsk) Skin Effect	-0.082-feet	<u> </u>			
Probe Serial Number	106721	·			
Slug Data	Double Sly		,		
Length	11	·	 		
weight		·	·		
Diameter	1.625 incles				
Slug Test File	Background	Falling	Rising		
File Name	OW-D7 L Background	OW-OTL Falling Head	OW. UTL Rising Head		
Start Time	3:54:37	4:32:58	4:38:06		
End Time	4:27:37	4:36:57			
Notes					
hate leals in Ow. 07 USL He Same					
Julia			······································		
Volume 4 Rev. 0 - 7/18/2008 Rev 0	Page 338 of 6	DCN# EXE808			



OW-07 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-07 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 1.177 ft

Total Well Penetration Depth: 123. ft

Casing Radius: 0.083 ft

Static Water Column Height: 68.1 ft

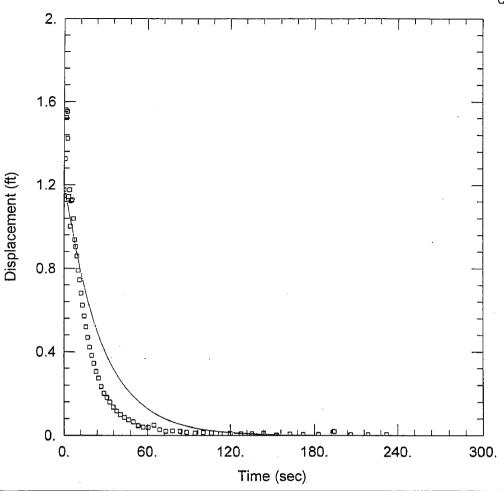
Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 11.55 ft/day Volume 4 Rev. 0 - 7/18/2008 y0 = 1.697 ft Page 339 of 657



OW-07 L FALLING HEAD TEST

PROJECT INFORMATION

Company: <u>EXELON</u>
Client: <u>BECHTEL</u>
Project: 6468 07 177

Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-07 L
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 1.177 ft

Total Well Penetration Depth: 123. ft

Static Water Column Height: 68.1 ft

Screen Length: 10. ft Well Radius: 0.083 ft

Casing Radius: 0.083 ft

SOLUTION

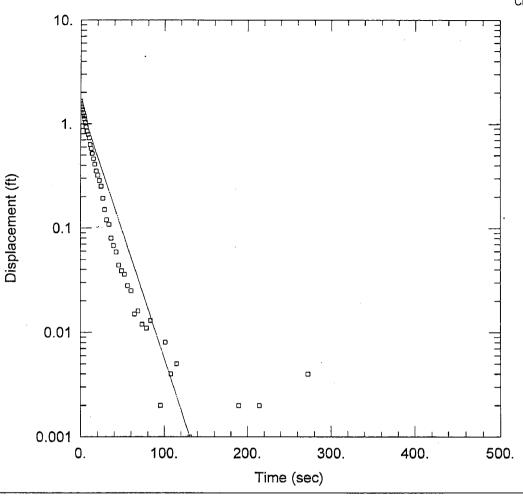
Aquifer Model: Confined

Solution Method: Butler

K = 8.148 ft/day

Volume 4 Rev. 0 - 7/18/2008

Le = 1000. ft Page 340 of 657



OW-07 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-07 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 1.654 ft

Total Well Penetration Depth: 123. ft

Casing Radius: 0.083 ft

Static Water Column Height: 68.1 ft

Screen Length: 10. ft Well Radius: 0.083 ft

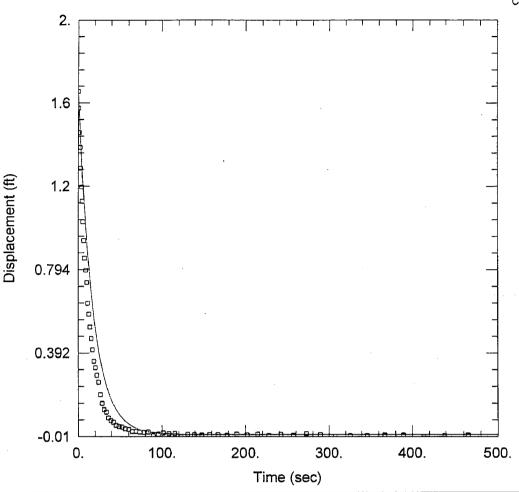
SOLUTION

Aquifer Model: Confined

Solution Method: Bouwer-Rice

K = 12.09 ft/day Volume 4 Rev. 0 - 7/18/2008

y0 = 1.493 ft



OW-07 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL

Project: 6468-07-1777 Location: VICTORIA SITE

Test Well: OW-07 L
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 7. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 1.654 ft

Total Well Penetration Depth: 123. ft

Casing Radius: 0.083 ft

Static Water Column Height: 68.1 ft .

Screen Length: 10. ft

Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

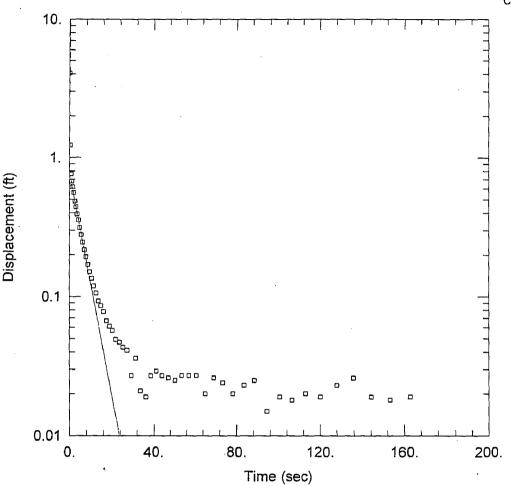
Solution Method: Butler

K = 13.05 ft/day

Le = 0.1 ft

EMACTEC

					
roject Name: Exelon COL	Project Number: 6469-07-	-1777 Page 1 of	1_ OW.07U		
lient: Bechtel	Contractor: MACTEC				
	MACTEC Rep: Jeff moore	Date:	6,08		
NITS					
ength	Feet				
ime	Minutes				
Vell Data					
Static Water Level	58.2 feet				
otal Well Depth	66.13 feet 0,5 of Sec	limait in bother			
Static Water Column Height (H)	7,43 feet				
	Background	Falling Head	Rising Head		
Observed Initial Displacement (H ₀)	NA NA	~ 5	~ 4'		
<u> </u>		<u> </u>	<u> </u>		
Saturated Thickness (b)	feet				
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1				
Depth to Top of Well Screen (d)	53 Feet	······································			
Length of Well Screen (L)	O feet				
Radius of Well Casing (rc)	0.083 feet				
Radius of Screen (rw)	0.083 feet				
Radius of Probe (reg)		·			
Radius of Boring (rsk) Skin Effect	0.083 feet				
· .					
Probe Serial Number	112335				
Slug Data	Sly#1				
	5,5'	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Length	3,-		·		
weight	1,625 incles				
Diameter Styre Test File		Tallin-	Dialina		
Slug Test File	OW-070 Background	OW-070 Falling Head	Ow-070 Rising Head		
File Name Start Time	3.49.09	4:15:25	4: 70:13		
End Time	4:04:09	7:19:10	4:23:02		
			·		
Notes Transduce placed 1'eff bottom	Falling	head test not	unaly zol		
So To pof transduce is at 64	· [to portially uns			
This leaves just enough room for	- Lexil Silver				
the 5.5'slux		Will sures			
1 1 1 212 210 g	5-11-08				
Volume 4 Rev. 0 - 7/18/2008	Page 343 of 657 DCN# EXE808				
Rev 0		-			



OW-07 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Test Well: OW-07 U
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 4.073 ft

<u>.073</u> IL

Static Water Column Height: 7.93 ft

Total Well Penetration Depth: 63. ft

Screen Length: 10. ft Well Radius: 0.083 ft

Casing Radius: 0.083 ft

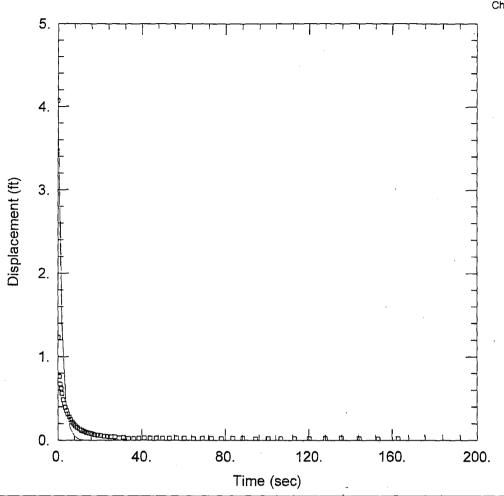
SOLUTION

Aguifer Model: Confined

Solution Method: Bouwer-Rice

K = 26.43 ft/day

y0 = 0.7733 ft



OW-07 U RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-07 U

Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-07 L)

Initial Displacement: 4.073 ft

Static Water Column Height: 7.93 ft

Total Well Penetration Depth: 63. ft Casing Radius: 0.083 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

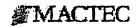
Aquifer Model: Confined

Solution Method: Butler

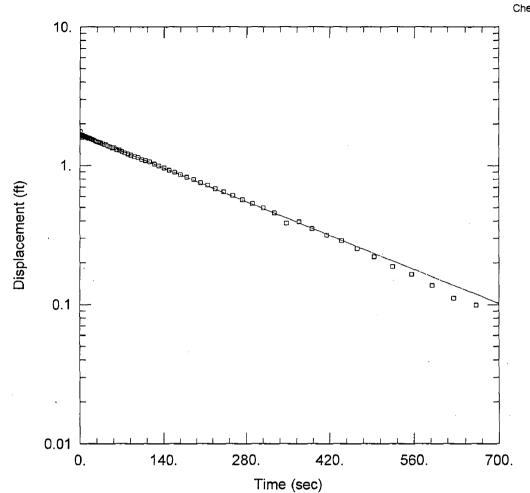
K = 87.14 ft/day

Le = 0.1 ft

Checked by: CHB Date: 4-11-08



Project Name: Exelon COL	Project Number: 6469-07	-1777 Page 1 c	of 1 OW-08L	
Client: Bechtel	Contractor: MACTEC	<u> </u>		
ocation: Victoria	MACTEC Rep: Jeff mach	e Date: 1/3	21 108	
UNITS				
Length	Feet			
Time	Minutes			
Well Data				
Static Water Level	50.11 feet	·		
Total Well Depth	135.60 feet Casing Dep	th reported yet 138'		
Static Water Column Height (H)	85,49 feet	,		
	Background	Falling Head	Rising Head	
Observed Initial Displacement (H ₀)	NA	~ 2.2	~2,5	
Saturated Thickness (b)	feet			
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		· · · · · · · · · · · · · · · · · · ·	
Depth to Top of Well Screen (d)	127 Feet			
	O feet		·	
Length of Well Screen (L)				
Radius of Well Casing (rc)	C:003-feet	· · · · · · · · · · · · · · · · · · ·	·	
Radius of Screen (rw)	D.003 feet	 		
Radius of Probe (req)				
Radius of Boring (rsk) Skin Effect	-0.083 fast		·	
	11 # 2			
Probe Serial Number	119305			
Slug Data	Double Slux	·		
Length	- L1'		·	<u> </u>
weight			·	
Diameter	1,625 incles	. ·	·	
Slug Test File	Background	Falling	Rising	
File Name	OW-081 Backgrand	OW-082 Falling Head	ow-086 Rising Head	
Start Time	9:04:245	9:23:37	9:36:30	
End Time	9:14:29	9:34:44	9:48.24	
Notes	mislabelal 64;	YIL TU		
Had some add date points		Vatt F. U		
at start of ow-08L Pising	<u></u>			
Head that should be deleted t	Č			
make the curve show recorny				
to static.				
Rev 0				



OW-08 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE
Tost Woll: OW 08 I

Test Well: OW-08 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: <u>10.</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-08 L)

Initial Displacement: 1.761 ft

Total Well Penetration Depth: 137. ft

Casing Radius: 0.083 ft

Static Water Column Height: 85.49 ft

Screen Length: 10. ft Well Radius: 0.083 ft

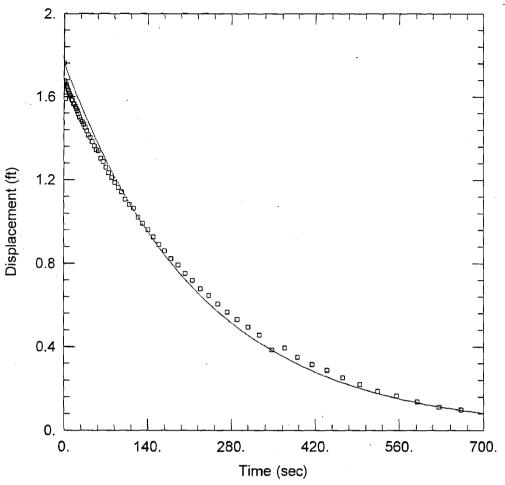
SOLUTION

Aquifer Model: Confined

K = 0.6275 ft/day

Solution Method: Bouwer-Rice

y0 = 1.676 ft



OW-08 L FALLING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-08 L Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-08 L)

Initial Displacement: 1.761 ft

Static Water Column Height: 85.49 ft

Total Well Penetration Depth: 137. ft

Screen Length: 10. ft Well Radius: 0.083 ft

Casing Radius: 0.083 ft

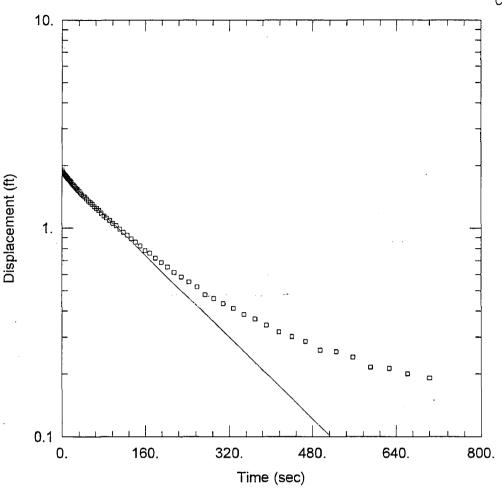
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 0.6921 ft/day

Le = 0.1 ft



OW-08 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON
Client: BECHTEL
Project: 6468-07-1777
Location: VICTORIA SITE

Test Well: OW-08 L
Test Date: 1/20/07

AQUIFER DATA

Saturated Thickness: 10. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-08 L)

Initial Displacement: 1.906 ft

Total Well Penetration Depth: 137. ft

Casing Radius: 0.083 ft

Static Water Column Height: 85.49 ft

Screen Length: 10. ft Well Radius: 0.083 ft

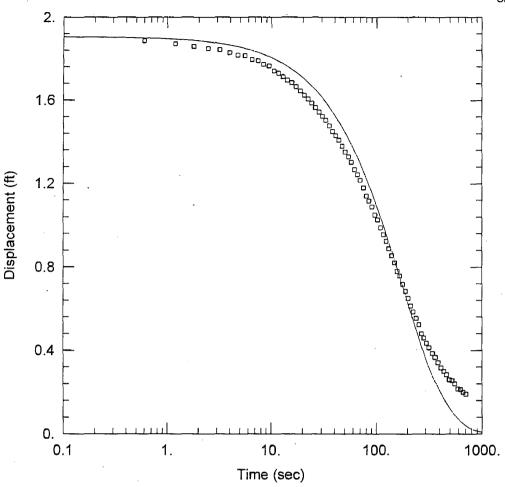
SOLUTION

Aquifer Model: Confined

K = 0.8849 ft/day

Solution Method: Bouwer-Rice

y0 = 1.821 ft



OW-08 L RISING HEAD TEST

PROJECT INFORMATION

Company: EXELON Client: BECHTEL Project: 6468-07-1777 Location: VICTORIA SITE Test Well: OW-08 L

Test Date: 1/20/07

AQUIFER DATA

Anisotropy Ratio (Kz/Kr): 1. Saturated Thickness: 10. ft

WELL DATA (OW-08 L)

Initial Displacement: 1.906 ft

Total Well Penetration Depth: 137. ft

Casing Radius: 0.083 ft

Static Water Column Height: 85.49 ft

Screen Length: 10. ft Well Radius: 0.083 ft

SOLUTION

Aquifer Model: Confined

K = 0.8694 ft/day

Solution Method: Butler

Le = 0.1 ft