



Zoe Cox
Byron Station
Exelon Nuclear
4450 N. German Church Road
Byron IL 61010

Report of Analysis/Certificate of Conformance

05/03/2007

LIMS #: L31731
Project ID#: EX001-3ESPBYRON-06
Received: 04/26/2007
Delivery Date: 05/17/2007
P.O. #: 01000298 REL.#00011
Release #:
SDG #:

This is to certify that Teledyne Brown Engineering - Environmental Services located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Keith Jeter
Operations Manager

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
BY-AR-5	L31731-1	BY-AR-5
BY-AR-6	L31731-2	BY-AR-6
BY-DF-24	L31731-3	BY-DF-24
BY-GW-9	L31731-4	BY-GW-9
BY-AR-4	L31731-5	BY-AR-4
BY-AR-11	L31731-6	BY-AR-11
BY-WELL 7	L31731-7	BY-WELL 7

N-13

Case Narrative

05/02/2007 13:51

L31731

EX001-3ESPBYRON-06

Exclon

Sample L31731-5 (BY-AR-4) was broken at the laboratory. The client was notified and the station will be resampled.

Report of Analysis

05/03/07 13:35



L31731

Byron Station

EX001-3ESPBYPYRON-06

6 *Zoe Cox*

Sample ID: BY-AR-5		Collect Start: 04/21/2007 12:25				Matrix: Ground Water (WG)							
Station: BY-AR-5		Collect Stop: 04/21/2007 13:15				Volume:							
Description:		Receive Date: 04/26/2007				% Moisture:							
LIMS Number: L31731-1													
Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
H-3 (DIST)	2010	-6.07E+01	9.95E+01	1.70E+02	pCi/L		10	ml		04/30/07	75	M	U
Comment: 1 Well ran dry; waited 30 min; pumped enough for sample.													
Sample ID: BY-AR-6		Collect Start: 04/21/2007 11:10				Matrix: Ground Water (WG)							
Station: BY-AR-6		Collect Stop: 04/21/2007 11:55				Volume:							
Description:		Receive Date: 04/26/2007				% Moisture:							
LIMS Number: L31731-2													
Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
H-3 (DIST)	2010	1.12E+01	1.03E+02	1.69E+02	pCi/L		10	ml		04/30/07	75	M	U
Sample ID: BY-DF-24		Collect Start: 04/19/2007 10:20				Matrix: Ground Water (WG)							
Station: BY-DF-24		Collect Stop: 04/19/2007 10:50				Volume:							
Description:		Receive Date: 04/26/2007				% Moisture:							
LIMS Number: L31731-3													
Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
H-3 (DIST)	2010	-1.35E+01	1.03E+02	1.70E+02	pCi/L		10	ml		04/30/07	75	M	U
Sample ID: BY-GW-9		Collect Start: 04/21/2007 09:55				Matrix: Ground Water (WG)							
Station: BY-GW-9		Collect Stop: 04/21/2007 10:25				Volume:							
Description:		Receive Date: 04/26/2007				% Moisture:							
LIMS Number: L31731-4													
Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
H-3 (DIST)	2010	3.33E+01	1.04E+02	1.68E+02	pCi/L		10	ml		04/30/07	75	M	U

Flag Values

- U = Compound/Analyte not detected or less than 3 sigma
- +
- U* = Activity concentration exceeds MDC and 3 sigma; peak identified (gamma only)
- High = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
- Spec = Activity concentration exceeds customer reporting value
- L = MDC exceeds customer technical specification
- L = Low recovery
- H = High recovery

- No = Peak not identified in gamma spectrum
- Yes = Peak identified in gamma spectrum
- **** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

Report of Analysis

05/03/07 13:35



L31731

Byron Station

EX001-3ESPBYRON-06

X Zoe Cox *X*

Sample ID: BY-AR-11	Collect Start: 04/23/2007 11:00	Matrix: Ground Water	(WG)
Station: BY-AR-11	Collect Stop: 04/23/2007 11:25	Volume:	
Description:	Receive Date: 04/26/2007	% Moisture:	
LIMS Number: L31731-6			

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
H-3 (DIST)	2010	1.82E+03	2.42E+02	2.37E+02	pCi/L		10	ml		04/30/07	37.53	M	+ High

Comment: 1 Lost suction; grab sample.

Sample ID: BY-WELL 7	Collect Start: 04/21/2007 14:00	Matrix: Ground Water	(WG)
Station: BY-WELL 7	Collect Stop: 04/21/2007 14:00	Volume:	
Description:	Receive Date: 04/26/2007	% Moisture:	
LIMS Number: L31731-7			

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values
SAMPLE	NA												U

Comment: 1 Well dry.

Flag Values

- U = Compound/Analyte not detected or less than 3 sigma
- + = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
- U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
- High = Activity concentration exceeds customer reporting value
- Spec = MDC exceeds customer technical specification
- L = Low recovery
- H = High recovery

- No = Peak not identified in gamma spectrum
- Yes = Peak identified in gamma spectrum
- **** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Bolded text indicates reportable value.

L31731 4 OF 10

04/26/07 13:08

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

SR #: SR13691

Client: Exelon

Project #: EX001-3ESPBYPON-06

LIMS #: L31731

Initiated By: PMARSHALL
Init Date: 04/26/07 Receive Date: 04/26/07

Notification of Variance

Person Notified: *Zoe Cox / Ellen Saar* Contacted By: *R. Charles*
 Notify Date: *4/26/07*
 Notify Method: *email*
 Notify Comment: *attached*

Client Response

Person Responding: *Ellen Saar / Zoe Cox*
 Response Date: *4/26/07*
 Response Method: *email*
 Response Comment: *attached - they will resample*

Criteria	Yes	No	NA	Comment
1 Shipping container custody seals present and intact.			NA	
2 Sample container custody seals present and intact.			NA	
3 Sample containers received in good condition.		Y		
4 Chain of custody received with samples		Y		
5 All samples listed on chain of custody received		Y		
6 Sample container labels present and legible.		Y		
7 Information on container labels correspond with chain of custody BY-GW-9 BY-AR-6 BY-AR-11 BY-AR-5			N	Collection date on container is 7/21/07 Collection date/time on container is 7/21/07@12:00 Collection time on container is 11:10 Collection time on container is 12:45
8 Sample(s) properly preserved and in appropriate container(s)			NA	
9 Other (Describe) BY-AR-4			N	Sample jar broke. Sample lost.

Charles, Rebecca

From: ~~zoe.cox@exeloncorp.com~~
Sent: Thursday, April 26, 2007 4:44 PM
To: ~~esaar@midwestlaboratory.com~~; ~~Charles, Rebecca~~
Subject: RE: Broken sample

That's OK with me. Does this work for you guys, Rebecca?

~~Zoe L. Cox~~
 Environmental Specialist
 Exelon Nuclear-Byron Station
 (815) 406-3035
 zoe.cox@exeloncorp.com

-----Original Message-----
From: ~~Ellen Saar [mailto:esaar@midwestlaboratory.com]~~
Sent: Thursday, April 26, 2007 3:41 PM
To: ~~Cox, Zoe L.; Rebecca.Charles@tbe.com~~
Subject: RE: Broken sample

I just talked to Tom and he will resample on Tuesday when he is doing his REMP collection. He has to wait for us to ship him another glass bottle; he didn't have any left over. Is this ok?

~~Ellen~~

-----Original Message-----
From: ~~zoe.cox@exeloncorp.com [mailto:zoe.cox@exeloncorp.com]~~
Sent: Thursday, April 26, 2007 1:48 PM
To: ~~Rebecca.Charles@tbe.com; esaar@midwestlaboratory.com~~
Subject: RE: Broken sample

~~Ellen~~
 Can Tom resample this well? It is one of the ones that has shown tritium in the past and we need to keep up with the semi-annual sample schedule. Please let me and Rebecca know if Tom can resample this well and send another sample to Teledyne Brown for analysis.

Thanks.
~~Zoe L. Cox~~
 Environmental Specialist
 Exelon Nuclear-Byron Station
 (815) 406-3035
~~zoe.cox@exeloncorp.com~~

-----Original Message-----
From: ~~Charles, Rebecca [mailto:Rebecca.Charles@tbe.com]~~
Sent: Thursday, April 26, 2007 1:34 PM
To: ~~Cox, Zoe L.; Ellen Saar~~
Subject: Broken sample

All,

A sample was broken at the laboratory. The analysis had not yet been performed. The entire sample was lost. The sample was BY-AR-4 collected April 23, 2007. This was a tritium groundwater sample from Byron. Can the sample be replaced? Otherwise we will note the problem on the report and continue with the rest of the analyses.

6
X Rebecca Charles X
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

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Raw Data Sheet (rawdata)
 May 03 2007, 01:56 pm

Work Order: L31731

Customer: Exalco

Page: 1

Nuclide: H-3 (DIST)

Project: EX001-3ESFBYRON-06

Sample ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt (min)	Bkg counts	Bkg dt (min)	Eff. Factor	Decay & Ingrwth	Analyst
L31731-1		H-3 DIST		10 ml			0		30-apr-07 00:13	LS7	128	75	1.97	75	.201		DW
BY-AR-5																	
Activity: -6.07E+01 Error: 9.95E+01 MDC: 1.7E+02 *																	
L31731-2		H-3 DIST		10 ml			0		30-apr-07 01:32	LS7	152	75	1.97	75	.202		DW
BY-AR-6																	
Activity: 1.12E+01 Error: 1.03E+02 MDC: 1.69E+02 *																	
L31731-3		H-3 DIST		10 ml			0		30-apr-07 02:51	LS7	143	75	1.97	75	.2		DW
BY-DV-24																	
Activity: -1.35E+01 Error: 1.03E+02 MDC: 1.7E+02 *																	
L31731-4		H-3 DIST		10 ml			0		30-apr-07 04:10	LS7	159	75	1.97	75	.203		DW
BY-GW-9																	
Activity: 3.33E+01 Error: 1.04E+02 MDC: 1.68E+02 *																	
L31731-6		H-3 DIST		10 ml			0		30-apr-07 05:29	LS7	382	37.53	1.97	75	.203		DW
BY-AR-11																	
Activity: 1.82E+03 * Error: 2.42E+02 MDC: 2.37E+02																	

QC Summary Report

for L31731

5/3/2007

1:50:55PM



H-3 (DIST)

Method Blank Summary

<u>TBE Sample ID</u>	<u>Radionuclide</u>	<u>Matrix</u>	<u>Count Date/Time</u>	<u>Blank Result</u>	<u>Units</u>	<u>Qualifier</u>	<u>P/F</u>
WG5182-1	H-3 (DIST)	WO	04/28/2007 22:58	< 1.720E+00	pCi/Total	U	P

LCS Sample Summary

<u>TBE Sample ID</u>	<u>Radionuclide</u>	<u>Matrix</u>	<u>Count Date/Time</u>	<u>Spike Value</u>	<u>LCS Result</u>	<u>Units</u>	<u>Spike Recovery</u>	<u>Range</u>	<u>Qualifier</u>	<u>P/F</u>
WG5182-2	H-3 (DIST)	WO	04/29/2007 0:16	5.05E+002	4.680E+02	pCi/Total	92.7	70-130	+	P

Spike ID: 3H-041706-1

Spike conc: 5.05E+002

Spike Vol: 1.00E+000

Duplicate Summary

<u>TBE Sample ID</u>	<u>Radionuclide</u>	<u>Matrix</u>	<u>Count Date/Time</u>	<u>Original Result</u>	<u>DUP Result</u>	<u>Units</u>	<u>RPD</u>	<u>Range</u>	<u>Qualifier</u>	<u>P/F</u>
WG5182-3 L31685-1	H-3 (DIST)	WG	04/29/2007 0:38	< 1.680E+02	< 1.690E+02	pCi/L		<30	**	NE

- + Positive Result
- U Compound/analyte was analyzed, peak not identified and/or not detected above MDC
- * < 5 times the MDC are not evaluated
- ** Nuclide not detected
- *** Spiking level < 5 times activity
- P Pass
- F Fail
- NE Not evaluated