



**TELEDYNE  
BROWN ENGINEERING, INC.**

A Teledyne Technologies Company

2508 Quality Lane  
Knoxville, TN 37931-3133

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

**Report of Analysis/Certificate of Conformance**

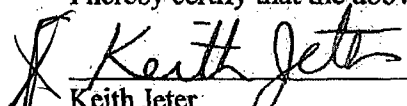
05/18/2007

LIMS #: L31840  
Project ID# EX001-3ESPBYRON-06  
Received: 05/08/2007  
Delivery Date 05/29/2007  
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 received by the laboratory, 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  
Operations Manager

*Cross Reference Table*

| Client ID | Laboratory ID | Station ID (if applicable) |
|-----------|---------------|----------------------------|
| BY-AR-4   | L31840-1      | BY-AR-4                    |

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N-14

# Report of Analysis

05/18/07 15:00

**L31840**

Byron Station

EX001-3ESPBYPYRON-06



| Sample ID: <b>BY-AR-4</b>                |      | Collect Start: 05/01/2007 15:45 |                     |          |       | Matrix: Ground Water (WG) |                |               |                |            |            |             |             |
|--|------|---------------------------------|---------------------|----------|-------|---------------------------|----------------|---------------|----------------|------------|------------|-------------|-------------|
| Station: <b>BY-AR-4</b>                  |      | Collect Stop: 05/01/2007 15:45  |                     |          |       | Volume:                   |                |               |                |            |            |             |             |
| Description:                             |      | Receive Date: 05/08/2007        |                     |          |       | % Moisture:               |                |               |                |            |            |             |             |
| LIMS Number: <b>L31840-1</b>             |      |                                 |                     |          |       |                           |                |               |                |            |            |             |             |
| 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 | 3.05E+03                        | 3.57E+02            | 2.79E+02 | pCi/L |                           | 10             | ml            |                | 05/11/07   | 25.5       | M           | +   High    |
| Comment: 1. Recollected due to breakage. |      |                                 |                     |          |       |                           |                |               |                |            |            |             |             |

**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.**



05/08/07 14:35

SR #: SR13860

Client: Exelon

Teledyne Brown Engineering  
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPBYRON-06

LIMS #: L31840

Initiated By: JPMARSHALL  
Init Date: 05/08/07 Receive Date: 05/08/07

Notification of Variance

Person Notified: Contacted By:  
Notify Date:  
Notify Method:  
Notify Comment:

Client Response

Person Responding:  
Response Date:  
Response Method:  
Response Comment

| 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 | Y   |    |    |         |
| 8 Sample(s) properly preserved and in appropriate container(s)     |     |    | NA |         |
| 9 Other (Describe)   |     |    | NA |         |

# QC Summary Report for L31840

05/18/2007 15:01

New



## 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> |
|----------------------|---------------------|---------------|------------------------|---------------------|--------------|------------------|------------|
| WG5220-1             | H-3 (DIST)          | WO            | 05/09/2007 22:17       | < 1.380E+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> |
|----------------------|---------------------|---------------|------------------------|--------------------|-------------------|--------------|-----------------------|--------------|------------------|------------|
| WG5220-2             | H-3 (DIST)          | WO            | 05/10/2007 00:00       | 5.05E+02           | 5.120E+02         | pCi/Total    | 101.4                 | 70-130       | +                | P          |
| Spike ID:            |                     | 3H-041706-1   |                        |                    |                   |              |                       |              |                  |            |
| Spike Conc:          |                     | 5.05E+02      |                        |                    |                   |              |                       |              |                  |            |
| Spike Vol:           |                     | 1.00E+00      |                        |                    |                   |              |                       |              |                  |            |

### 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> |
|----------------------|---------------------|---------------|------------------------|------------------------|-------------------|--------------|------------|--------------|------------------|------------|
| WG5220-3<br>L31826-1 | H-3 (DIST)          | WT            | 05/10/2007 00:20       | < 1.540E+02            | < 1.380E+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 evaluate

Raw Data Sheet (rawdata)  
May 18 2007, 03:22 pm

Work Order: L31840

Customer: Exelion

Page: 1

Nuclide: H-3 (DIST)

Project: EX001-JESPBYRON-06

| Sample ID  | Run # | Analysis | Reference | Volume/<br>Aliquot | Scavenge<br>Date/Time | Milking<br>Date/Time | Mount<br>Weight | Count<br>Recovery  | Counter<br>ID | Total<br>counts | Sample<br>dt (min) | Bkg<br>counts | Bkg<br>dt (min) | Decay &<br>Eff. Factor | Ingrowth | Analyst |
|--|-------|----------|-----------|--------------------|-----------------------|----------------------|-----------------|--------------------|---------------|-----------------|--------------------|---------------|-----------------|------------------------|----------|---------|
| L31840-1   |       | H-3 DIST |           | 10 ml              |                       |                      | 0               | 11-may-07<br>00:54 | LS7           | 392             | 25.5               | 1.81          | 75              | .2                     |          | DW      |
| BY-AR-4  |       |          |           |                    |                       |                      |                 |                    |               |                 |                    |               |                 |                        |          |         |
| Activity: 3.05E+03 * Error: 3.57E+02 MDC: 2.79E+02 |       |          |           |                    |                       |                      |                 |                    |               |                 |                    |               |                 |                        |          |         |