



2609 North River Road, Port Allen, Louisiana 70767  
(800) 401-4277 -- FAX (225) 381-2996

## American Radiation Services, Inc.

### Laboratory Analysis Report

ARS1-08-01844

*Prepared for:*

### Nuclear Regulatory Commission (NRC)

USNRC Region 3  
2443 Warrenville Rd. Suite 210  
Lisle, IL 60532

Phone: <sup>3</sup>610.829.9500  
Fax: 630.515.1078  
259

  
Project Manager Review

  
Management Review

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Contact Person: Questions regarding this analytical report should be addressed to:

Project Manager

ProjectManagers@amrad.com

Phone: 225.381.2991  
Fax: 225.381.2996

LELAP Cert# 30658

NELAP Cert# E87558

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 110  
**Sample Collection Date:** 09/17/08 09:02  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-001  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-23.706	95.851	163.988	80.777	pCi/L	ARS-054/EPA 906.0	10/15/08 14:12	BJS	N/A

**NOTES: Inspection # 050-00456 / 2008004 Control # BD 08 1**

  
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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 111DR  
**Sample Collection Date:** 09/17/08 14:23  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-002  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-36.292	94.758	162.442	80.016	pCi/L	ARS-054/EPA 906.0	10/15/08 18:22	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 131D  
**Sample Collection Date:** 09/17/08 14:54  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-003  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-19.345	95.664	163.554	80.563	pCi/L	ARS-054/EPA 906.0	10/15/08 22:31	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 132D  
**Sample Collection Date:** 09/17/08 13:52  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-004  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-12.927	95.996	163.944	80.755	pCi/L	ARS-054/EPA 906.0	10/16/08 2:39	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** F 5D  
**Sample Collection Date:** 09/17/08 10:12  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-005  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	885.526	143.338	163.946	80.757	pCi/L	ARS-054/EPA 906.0	10/16/08 6:47	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 105  
**Sample Collection Date:** 09/17/08 11:21  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-006  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-99.053	94.918	163.852	80.710	pCi/L	ARS-054/EPA 906.0	10/16/08 10:54	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 112D  
**Sample Collection Date:** 09/17/08 13:21  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-007  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-116.107	94.669	163.609	80.590	pCi/L	ARS-054/EPA 906.0	10/16/08 15:02	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 113DR  
**Sample Collection Date:** 09/17/08 10:50  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-008  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	55.927	97.230	163.678	80.625	pCi/L	ARS-054/EPA 906.0	10/16/08 19:10	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 133D  
**Sample Collection Date:** 09/16/08 16:12  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-009  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-56.249	95.777	164.621	81.089	pCi/L	ARS-054/EPA 906.0	10/16/08 23:18	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 134D  
**Sample Collection Date:** 09/16/08 15:45  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-010  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	903.650	143.757	161.791	79.695	pCi/L	ARS-054/EPA 906.0	10/17/08 3:26	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 135D  
**Sample Collection Date:** 09/16/08 13:28  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-011  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	533.425	118.884	164.331	80.946	pCi/L	ARS-054/EPA 906.0	10/17/08 7:34	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 136D  
**Sample Collection Date:** 09/16/08 15:12  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-012  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-57.879	94.877	163.117	80.348	pCi/L	ARS-054/EPA 906.0	10/17/08 11:42	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 137D  
**Sample Collection Date:** 09/16/08 14:37  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-013  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	70.181	94.753	158.855	78.227	pCi/L	ARS-054/EPA 906.0	10/18/08 14:05	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 138D  
**Sample Collection Date:** 09/16/08 13:57  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-014  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	12.785	93.627	159.160	78.377	pCi/L	ARS-054/EPA 906.0	10/18/08 18:12	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 139D  
**Sample Collection Date:** 09/17/08 09:41  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-015  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	143.274	96.051	157.382	77.501	pCi/L	ARS-054/EPA 906.0	10/18/08 22:20	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 140D  
**Sample Collection Date:** 09/17/08 11:53  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-016  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	44.781	94.384	159.283	78.438	pCi/L	ARS-054/EPA 906.0	10/19/08 2:27	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** VB 4 5D  
**Sample Collection Date:** 09/16/08 10:59  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-017  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	10.689	93.892	159.681	78.633	pCi/L	ARS-054/EPA 906.0	10/19/08 6:35	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** VB 4 6D  
**Sample Collection Date:** 09/16/08 10:17  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-018  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	2246.651	263.830	160.589	79.081	pCi/L	ARS-054/EPA 906.0	10/19/08 10:42	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 145D  
**Sample Collection Date:** 09/16/08 11:42  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-019  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	1372.468	182.545	160.184	78.881	pCi/L	ARS-054/EPA 906.0	10/19/08 14:50	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 157D  
**Sample Collection Date:** 09/16/08 12:08  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-020  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	4885.234	525.547	160.258	78.917	pCi/L	ARS-054/EPA 906.0	10/19/08 18:57	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** DS-2, F Ditch  
**Sample Collection Date:** 09/22/08 10:20  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-021  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	-18.960	92.000	157.356	77.488	pCi/L	ARS-054/EPA 906.0	10/19/08 23:05	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 109D  
**Sample Collection Date:** 09/22/08 10:05  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-022  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	27.634	93.709	158.781	78.190	pCi/L	ARS-054/EPA 906.0	10/20/08 3:13	BJS	N/A

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**ARS Sample Delivery Group:** ARS1-08-01844  
**Client Sample ID:** MW 130D  
**Sample Collection Date:** 09/22/08 09:25  
**Sample Matrix:** Aqueous

**Request or PO Number:** N/A  
**ARS Sample ID:** ARS1-08-01844-023  
**Date Received:** 9/24/2008  
**Report Date:** 10/21/08 15:34

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	12.691	92.944	157.997	77.804	pCi/L	ARS-054/EPA 906.0	10/20/08 7:20	BJS	N/A

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## QC Results Report

Sample Delivery Group: ARS1-08-01844

Date Received: 9/24/2008

### Laboratory Control Sample Evaluation

Analysis Batch	QC Type	Analyte	Analysis Results	CSU 1 (1 s)	MDC	Expected Value	Qual	Report Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Percent Recovery (%)	LCS Acceptance Range
ARS1-B08-02700	LCS	H3	1057.72	156.2	161.94161	1260.90		pCi/L	ARS-054/EPA 906.0	10/14/08 21:28	BJS	84	75%-125%

### Blank Evaluation

Analysis Batch	QC Type	Analyte	Analysis Results	CSU 1 (1 s)	MDC	Expected Value	Qual	Report Units	Analysis Test Method	Analysis Date/Time	Analysis Technician
ARS1-B08-02700	MBL	H3	10.750	96.212498	163.59355	NA	U	pCi/L	ARS-054/EPA 906.0	10/15/08 5:50	BJS

### RER Duplicate Evaluation

Analysis Batch	QC Type	Analysis Description	Result 1	CSU 1 (1 s)	Result 2	CSU 2 (1s)	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	RER	RER Acceptance Range
ARS1-B08-02700	LCSD	H3	1057.72	156.2	1061.147	156.5178		pCi/L	ARS-054/EPA 906.0	10/15/08 1:39	BJS	0.01	< 1

### DER Duplicate Evaluation

Analysis Batch	QC Type	Analysis Description	Result 1	CSU 1 (1 s)	Result 2	CSU 2 (1s)	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	DER	DER Acceptance Range
ARS1-B08-02700	LCSD	H3	1057.72	156.2	1061.147	156.5178		pCi/L	ARS-054/EPA 906.0	10/15/08 1:39	BJS	0.03	< 3

  
Project Manager Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of ARS International.

LELAP Certificate# 30658

NELAP Certificate # E87558



2609 North River Road, Port Allen, Louisiana 70767

1 (800) 401-4277 FAX (225) 381-2996

## QC Results Report

Sample Delivery Group: ARS1-08-01844

Date Received: 9/24/2008

### Laboratory Control Sample Evaluation

Analysis Batch	QC Type	Analyte	Analysis Results	CSU 1 (1 s)	MDC	Expected Value	Qual	Report Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Percent Recovery (%)	LCS Acceptance Range
ARS1-B08-02731	LCS	H3	1021.37	151.5	157.62885	1260.90		pCi/L	ARS-054/EPA 906.0	10/17/08 21:35	BJS	81	75%-125%

### Blank Evaluation

Analysis Batch	QC Type	Analyte	Analysis Results	CSU 1 (1 s)	MDC	Expected Value	Qual	Report Units	Analysis Test Method	Analysis Date/Time	Analysis Technician
ARS1-B08-02731	MBL	H3	12.680	92.860814	157.85635	NA	U	pCi/L	ARS-054/EPA 906.0	10/18/08 5:50	BJS

### RER Duplicate Evaluation

Analysis Batch	QC Type	Analysis Description	Result 1	CSU 1 (1 s)	Result 2	CSU 2 (1s)	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	RER	RER Acceptance Range
ARS1-B08-02731	LCSD	H3	1021.37	151.5	1028.8754	152.9131		pCi/L	ARS-054/EPA 906.0	10/18/08 1:42	BJS	0.02	< 1

### DER Duplicate Evaluation

Analysis Batch	QC Type	Analysis Description	Result 1	CSU 1 (1 s)	Result 2	CSU 2 (1s)	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	DER	DER Acceptance Range
ARS1-B08-02731	LCSD	H3	1021.37	151.5	1028.8754	152.9131		pCi/L	ARS-054/EPA 906.0	10/18/08 1:42	BJS	0.07	< 3

  
Project Manager Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the analysis itself. Reproduction of this report in less than full requires the written consent of ARS International.

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NELAP Certificate # E87558



## Notes:

### Comments:

- 1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "m" to the procedure number (i.e. 900.0M).
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
- 5.0) **Total activity** is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only).
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
- 8.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
- 9.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected.

### Method References:

- 1.0) **EPA 600/4-80-032**; Prescribed Procedures for the Measurements of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for Examination of Water and Waste Water, 18<sup>th</sup>, 1992.
- 3.0) **EPA SW-846**; Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995).
- 4.0) **EPA 600/4/79-020**; Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) **HASL 300**
- 6.0) **ARS-040**; An LCSD is not reported with this process. The criteria for the LCS/LCSD analysis for reproducibility have not been established for Low Level Tritium analysis. A prepared standard for Low Level Tritium has not been developed. As a result, the standard we use is based on the dilution of a verified conventional tritium standard. The volume required for Low Level Tritium analysis, in addition to the lack of an available Low Level Tritium standard, introduce variability into the LCS/LCSD analysis that does not represent the actual sample analysis. The preferred measure for reproducibility is to run a duplicate analysis of a sample.

### Definitions:

- |       |                 |   |
|-------|-----------------|---|
| 1.0)  | <b>ND</b>       | Not detected above the detection limit (non-detect).  |
| 2.0)  | <b>MDC</b>      | (Minimum Detectable Concentration) minimum concentration of the analyte that ARS can detect utilizing the specific analysis |
| 3.0)  | <b>MBL</b>      | Method Blank  |
| 4.0)  | <b>DO</b>       | Duplicate Original  |
| 5.0)  | <b>DUP</b>      | Method Duplicate  |
| 6.0)  | <b>MS/MSD</b>   | Matrix Spike/Matrix Spike Duplicate   |
| 7.0)  | <b>S</b>        | Spike   |
| 8.0)  | <b>RS</b>       | Reference Spike   |
| 9.0)  | <b>*SC</b>      | Subcontracted out to another qualified laboratory   |
| 10.0) | <b>NR</b>       | Not Referenced  |
| 11.0) | <b>N/A</b>      | Not Applicable  |
| 12.0) | <b>*</b>        | Reported as a calculated value  |
| 13.0) | <b>**</b>       | False Positive due to interference from <u>Bi-214</u>   |
| 14.0) | <b>U</b>        | Activity is below the MDC   |
| 15.0) | <b>LCS/LCSD</b> | Laboratory Control Standard/Laboratory Control Standard Duplicate   |

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NRC FORM 303  
(1-2007)

U.S. NUCLEAR REGULATORY COMMISSION

LABORATORY USE ONLY

**REQUEST FOR ANALYSIS AND  
CHAIN OF CUSTODY**

CONTROL NUMBER

**BD-08-1**

LABORATORY --  ORISE  OTHER ARS  
(Specify)

SAMPLE LOCATION (LICENSEE)

**Braidwood Station**

INSPECTION NO.

050-00456/2008004

LICENSE NO.

DOCKET NO.

**050-00456**

SAMPLE SUBMITTED

# TOTAL	TYPE	VOLUME	WEIGHT
<b>23</b>	<b>H2O</b>	<b>500 ml/ea</b>	<b>n/a</b>

DATE SAMPLES SUBMITTED

**09/23/2008**

PRIORITY

ROUTINE  
 URGENT

SAMPLE COLLECTION INTERVAL

	MONTH	DAY	YEAR	TIME
START	<b>9</b>	<b>16</b>	<b>2008</b>	<b>10:17am</b>
STOP	<b>9</b>	<b>22</b>	<b>2008</b>	<b>10:20am</b>

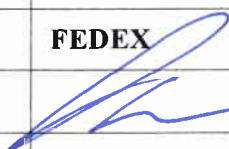
INSPECTOR RESPONSIBLE

**Gene Bonano**

TELEPHONE NUMBER

**630-829-9826**

ANALYSIS TO BE PERFORMED	LIST DESIRED LLD (Optional)	OTHER TYPE OF ANALYSIS (Specify)	LIST DESIRED LLD (Optional)
<input type="checkbox"/> GROSS ALPHA (GA)		<input type="checkbox"/>	
<input type="checkbox"/> GROSS BETA (GB)		<input type="checkbox"/>	
<input type="checkbox"/> GAMMA SPEC (GS)		<input type="checkbox"/>	
<input checked="" type="checkbox"/> TRITIUM (H3)	<b>200 pCi/L</b>	<input type="checkbox"/>	
<input type="checkbox"/> CARBON-14 (C14)		<input type="checkbox"/>	
<input type="checkbox"/> IODINE-125 (I125)		<input type="checkbox"/>	

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY
<b>Gene Bonano</b>	<b>FEDEX</b>	<b>09/23/2008</b>	<b>5:00pm</b>	<b>Samples sent to lab . . .</b>
		<b>9-24-08</b>	<b>10:15am</b>	

FEE RECOVERABLE

YES  NO

TAC NUMBER

050-00456/2008004 (If Assigned)

REMARKS

**Do not process/analyze samples until directed/authorized by Roger Pedersen (Tel.: 301-415-3162), NRR, HQ NRC...**

**Hold samples until notified by NRC...**

**All SAMPLES should be treated as "RADIOACTIVE" . . . IOC: H-3**

**NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASONS ARE NOTED IN REMARKS ABOVE.**

NRC FORM 303A  
(1-2007)

U.S. NUCLEAR REGULATORY COMMISSION

LABORATORY USE ONLY

## SAMPLE RECORD -- Continued

CONTROL NUMBER

LABORATORY --  ORISE  OTHER ARS

BD-08-1

(Specify)

SAMPLE NUMBER	SAMPLE NAME AND DESCRIPTION	COLLECTION DATE/TIME	REMARKS, PRESERVATIVE ANALYSIS REQUESTED, ETC.
BD-08-1-01	MW-110	09/17/2008 9:02am	GW-091708-TW-
BD-08-1-02	MW-111DR	09/17/2008 2:23pm	GW-091708-TW-
BD-08-1-03	MW-131D	09/17/2008 2:54pm	GW-091708-TW-
BD-08-1-04	MW-132D	09/17/2008 1:52pm	GW-091708-TW-
BD-08-1-05	F-5D	09/17/2008 10:12am	GW-091708-TW-
BD-08-1-06	MW-105	09/17/2008 11:21am	GW-091708-TW-
BD-08-1-07	MW-112D	09/17/2008 1:21pm	GW-091708-TW-
BD-08-1-08	MW-113DR	09/17/2008 10:50am	GW-091708-TW-
BD-08-1-09	MW-133D	09/16/2008 4:12pm	GW-091608-TW-
BD-08-1-10	MW-134D	09/16/2008 3:45pm	GW-091608-TW-
BD-08-1-11	MW-135D	09/16/2008 1:28pm	GW-091608-TW-
BD-08-1-12	MW-136D	09/16/2008 3:12pm	GW-091608-TW-
BD-08-1-13	MW-137D	09/16/2008 2:37pm	GW-091608-TW-
BD-08-1-14	MW-138D	09/16/2008 1:57pm	GW-091608-TW-
BD-08-1-15	MW-139D	09/17/2008 9:41am	GW-091708-TW-
BD-08-1-16	MW-140D	09/17/2008 11:53am	GW-091708-TW-
BD-08-1-17	VB-4-5D	09/16/2008 10:59am	GW-091608-TW-
BD-08-1-18	VB-4-6D	09/16/2008 10:17am	GW-091608-TW-
BD-08-1-19	MW-145D	09/16/2008 11:42am	GW-091608-TW-
BD-08-1-20	MW-157D	09/16/2008 12:08pm	GW-091608-TW-
BD-08-1-21	DS-2, F Ditch	09/22/2008 10:20am	
BD-08-1-22	MW-109D	09/22/2008 10:05am	
BD-08-1-23	MW-130D	09/22/2008 9:25am	