

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

American Radiation Services, Inc.

Laboratory Analysis Report ARS1-08-02457

Prepared for:

Nuclear Regulatory Commission (NRC)

Gene Bonano USNRC Region 3 2443 Warrenville Rd. Lisle, IL 60532 eugenio.bonano@nrc.gov

Phone: 630.829.9826 Fax: 630.515.1259

Project Manager 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



January 5, 2009

Nuclear Regulatory Commission Gene Bonano 2443 Warrenville Rd. Lisle, IL 60532

Sample Location: Dresden Nuclear Power Station

Client Sample: D-08-1-01, D-08-1-02, D-08-1-03, D-08-1-04, D-08-1-05, D-08-1-06, D-08-1-07, D-08-1-08, D-08-1-09, D-08-1-10, D-08-1-11, D-08-1-12, D-08-1-13, D-08-1-14, D-08-1-15, D-08-1-16, D-08-1-17, D-08-1-18, D-08-1-19, D-08-1-

08-1-19, D-08-1-20, D-08-1-21, D-08-1-22, D-08-1-23, D-08-1-24

ARS SGD: ARS1-08-02457

Dear Mr. Bonano,

On November 26, 2008, American Radiation Services (ARS) received 24 Ground Water Samples to be analyzed for Tritium. The samples were placed on HOLD until notified by the client on 12/8/08 15:00. The new client deadline for these samples was 1-6-09.

The samples were processed and counted using the appropriate counting equipment and QA/QC for this type of analysis. Results of the analysis and QA/QC are attached in the data package.

The sample and QA/QC's were counted with a count time sufficient to meet a statistical sound detection limits.

Counting equipment Quality Assurance was with in acceptance criteria when the above referenced samples were processed.

If you have any questions please do not hesitate to call at 225-381-2991.

Sincerely,

Virgene Mulligan Laboratory Director



COVER PAGE

Statement of Work for Analytical Laboratories

PROJECT SAMPLE IDENTIFICATION CROSS-REFERENCE TO ARS SAMPLE LABORATORY IDS

CLIENT SAMPLE NUMBER	CLIENT SAMPLE DESCRIPTION	American Radiation Service SAMPLE ID NUMBER(S)
D-08-1-01	MW-DN-124-I	ARS1-08-02457-001
D-08-1-02	MW-DN-124-I	ARS1-08-02457-002
D-08-1-03	MW-DN-124-S	ARS1-08-02457-003
D-08-1-04	MW-DN-124-S	ARS1-08-02457-004
D-08-1-05	DSP-124	ARS1-08-02457-005
D-08-1-06	ÐSP-124	ARS1-08-02457-006
D-08-1-07	W-3	ARS1-08-02457-007
D-08-1-08	W-3	ARS1-08-02457-008
D-08-1-09	DSP-122	ARS1-08-02457-009
D-08-1-10	DSP-122	ARS1-08-02457-010
D-08-1-11	T-6	ARS1-08-02457-011
D-08-1-12	T-6	ARS1-08-02457-012
D-08-1-13	R-1	ARS1-08-02457-013
D-08-1-14	R-1	ARS1-08-02457-014
D-08-1-15	T-5	ARS1-08-02457-015
D-08-1-16	T-5	ARS1-08-02457-016
D-08-1-17	W2R	ARS1-08-02457-017
D-08-1-18	W2R	ARS1-08-02457-018
D-08-1-19	DSP-131	ARS1-08-02457-019
D-08-1-20	DSP-131	ARS1-08-02457-020
D-08-1-21	DSP-132	ARS1-08-02457-021
D-08-1-22	DSP-132	ARS1-08-02457-022
D-08-1-23	E7	ARS1-08-02457-023
D-08-1-24	E7	ARS1-08-02457-024

SAMPLE RECEIPT

The samples were received in good condition. The samples were screened for radioactive contamination as per procedure ARS-062 "Sample Receiving".



ANALYTICAL METHODS

The tritium analyses were performed using American Radiation Services procedure ARS-054, "Tritium In Water".

ANALYTICAL RESULTS

The result data that are flagged with "U" indicates that the activity is below the MDC.

American Radiation Services Project Manager/Laboratory Manager's Comments:

"I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this sample data package and the computer-readable EDD, as applicable, submitted on diskette or by modem, has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature."

"I certify that this electronic image, and all hardcopies produced from this image, accurately represents the data and is in compliance with the client specific requirements, both technically and for completeness, other than the conditions detailed above or in the sample data package narrative. Release, by submission through email, the data contained in this electronic image and the computer-readable EDD (as applicable), has been authorized by the laboratory Manager/Technical Director or the Manager's designee."

ignature Laborato

Laboratory Director, American Radiation Services

Date



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

ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-01

ARS Sample ID:

ARS1-08-02457-001

Sample Collection Date: Sample Matrix: 11/24/08 09:25

Aqueous

Date Received: Report Date: 11/26/2008 01/05/09 13:10

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	79203.522	8170.265	173.502	82.848		pCi/L	ARS-054/EPA 906.0	12/23/08 20:48	BS	N/A
	<u> </u>									
					1					

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-02

ARS Sample ID:

ARS1-08-02457-002

Sample Collection Date: Sample Matrix: 11/24/08 09:25

Aqueous

Date Received: Report Date: 11/26/2008 01/05/09 13:10

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Cherr Recovery
1-3	80971.972	8351.448	173.446	82.821		pCi/L	ARS-054/EPA 906.0	12/23/08 22:28	BS	N/A
					-					

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-03

ARS Sample ID:

ARS1-08-02457-003

Sample Collection Date:

11/24/08 09:41

Date Received:

11/26/2008 01/05/09 13:10

Sample Matrix:

Aqueous

Report Date:

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	54675.711	5657.264	173.926	83.050		pCi/L	ARS-054/EPA 906.0	12/24/08 0:08	BS	N/A
	The state of the s									

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-04

ARS Sample ID:

ARS1-08-02457-004

Sample Collection Date: Sample Matrix: 11/24/08 09:41

Aqueous

Date Received: Report Date: 11/26/2008 01/05/09 13:10

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Cher Recovery
1-3	52525.462	5437.208	174.718	83.428		pCI/L	ARS-054/EPA 906.0	12/24/08 1:48	BS	N/A
		47000000044400			-					
		1707741777441								

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

Project Manager Roview

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

Sample Matrix:

D-08-1-05

Aqueous

ARS Sample ID:

ARS1-08-02457-005

Sample Collection Date:

11/24/08 09:04

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	17567.945	1855.728	172.690	82.460		pCi/L	ARS-054/EPA 906.0	12/24/08 3:28	BS	N/A

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-06 11/24/08 09:04

Aqueous

ARS Sample ID: Date Received:

Report Date:

ARS1-08-02457-006

Sample Collection Date: Sample Matrix:

11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	17362.915	1835.022	173.540	82.866		pCi/L	ARS-054/EPA 906.0	12/24/08 5:07	BS	N/A
	•									

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-07 11/24/08 10:10 ARS Sample ID:

ARS1-08-02457-007

Sample Collection Date:

D

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Sample Matrix:

Aqueous

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	429.023	128.372	173.895	83.035		pCi/L	ARS-054/EPA 906.0	12/24/08 6:47	B5	N/A

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-08

ARS Sample ID:

ARS1-08-02457-008

Sample Collection Date:

11/24/08 10:10

Date Received:

11/26/2008 01/05/09 13:11

Sample Matrix:

Aqueous

Report Date:

Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
223.696	113.324	174.268	83.213		pCi/L	ARS-054/EPA 906.0	12/24/08 8:27	BS	N/A
		Results Error +/- 2 s	Results Error +/- 2 s MDC	Results Error +/- 2 s MDC DLC	Results Error +/- 2 s MDC DLC Qual	Results Error +/- 2 s MDC DEC Qual Units	Results Error +/- 2 s MDC DEC Qual Units Test Method	Results Error +/- 2 s MDC DLC Qual Units Test Method Date/Time	Results Error +/- 2 s MDC DLC Qual Units Test Method Date/Time Technician

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

Sample Matrix:

D-08-1-09

Aqueous

ARS Sample ID:

ARS1-08-02457-009

Sample Collection Date:

11/24/08 11:56

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
1-3	3168.215	387.530	173.442	82.819		pCi/L	ARS-054/EPA 906.0	12/24/08 10:07	BS	N/A

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-10

ARS Sample ID:

ARS1-08-02457-010

Sample Collection Date: Sample Matrix: 11/24/08 11:56 Aqueous Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	2718.659	342.784	173.731	82.957		pCi/L	ARS-054/EPA 906.0	12/24/08 11:47	BS	N/A
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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-11 11/24/08 10:23

Aqueous

ARS Sample ID:

ARS1-08-02457-011

Sample Collection Date: Sample Matrix: Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	282.647	117.375	174.007	83.089		pCI/L	ARS-054/EPA 906.0	12/24/08 13:26	BS	N/A
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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-12

ARS Sample ID:

ARS1-08-02457-012

Sample Collection Date:

11/24/08 10:23

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

te: 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	392.981	125.592	173.929	83.052		pCi/L	ARS-054/EPA 906.0	12/24/08 15:06	BS	N/A

Project Manager Devidw

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-13

ARS Sample ID:

ARS1-08-02457-013

Sample Collection Date:

11/24/08 10:49

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	1048.011	177.200	160.349	76.267		pCi/L	ARS-054/EPA 906.0	1/3/09 0:27	BS	N/A
					4					

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

Project Manager Rowiew

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-14

ARS Sample ID:

ARS1-08-02457-014

Sample Collection Date:

11/24/08 10:49

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

01	/05/09	13:11	
	, 00, 00	10.11	

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	788.851	153.355	160.267	76.228		pCi/L	ARS-054/EPA 906.0	1/3/09 2:07	BS	N/A
					-					

Project Manager Deview

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

NI/A

Client Sample ID:

D-08-1-15

ARS Sample ID:

ARS1-08-02457-015

Sample Collection Date:
Sample Matrix:

11/24/08 10:33

Aqueous

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	883.687	161.648	159.639	75.929		pCi/L	ARS-054/EPA 906.0	1/3/09 3:47	BS	N/A
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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-16

Aqueous

ARS Sample ID:

ARS1-08-02457-016

Sample Collection Date: Sample Matrix: 11/24/08 10:33

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	834.257	157.058	159.476	75.852		pCi/L	ARS-054/EPA 906.0	1/3/09 5:26	BS	N/A

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ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-17

ARS Sample ID:

ARS1-08-02457-017

Sample Collection Date:

11/24/08 09:56

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	292.811	111.143	159.952	76.078		pCi/L	ARS-054/EPA 906.0	1/3/09 7:06	BS	N/A
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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-18

ARS Sample ID:

ARS1-08-02457-018

Sample Collection Date: Sample Matrix: 11/24/08 09:56 Aqueous Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chen Recovery
H-3	319.383	113.331	160.165	76.180		pCi/L	ARS-054/EPA 906.0	1/3/09 8:46	BS	N/A
					-					
JW.										

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-19

ARS Sample ID:

ARS1-08-02457-019

Sample Collection Date:

11/24/08 12:58

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
1-3	226.400	106.250	160.224	76.208		pCi/L	ARS-054/EPA 906.0	1/3/09 10:26	BS	N/A

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID: Sample Collection Date:

Sample Matrix:

D-08-1-20 11/24/08 12:58

Aqueous

ARS Sample ID:

ARS1-08-02457-020

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	102.764	97.264	159.926	76.066	U	pCI/L	ARS-054/EPA 906.0	1/3/09 12:05	BS	N/A
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					-					

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-21

Aqueous

ARS Sample ID:

ARS1-08-02457-021

Sample Collection Date:

Sample Matrix:

11/24/08 12:37

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
1-3	361.901	116.636	160.052	76.126		pCi/L	ARS-054/EPA 906.0	1/3/09 13:45	BS	N/A

NOTES: Dresden Nuclear Power Station 05000237/2008005 Control #: D-08-1 Docket #: 050-00237

Project Manager Beview

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 the client.

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

ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-22

ARS Sample ID:

ARS1-08-02457-022

Sample Collection Date:

11/24/08 12:37

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

te: 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Cherr Recovery
H-3	362.185	116.916	160.522	76.349	J	pCI/L	ARS-054/EPA 906.0	1/3/09 15:25	BS	N/A

Project Manager Review

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

ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-23

ARS Sample ID:

ARS1-08-02457-023

Sample Collection Date:

11/24/08 11:24

Date Received:

11/26/2008

Sample Matrix:

Aqueous

Report Date:

01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	93.529	96.972	160.513	76.345	U	pCI/L	ARS-054/EPA 906.0	1/3/09 17:05	BS	N/A

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ARS Sample Delivery Group:

ARS1-08-02457

Request or PO Number:

N/A

Client Sample ID:

D-08-1-24

ARS Sample ID:

ARS1-08-02457-024

Sample Collection Date: Sample Matrix: 11/24/08 11:24

Aqueous

Date Received: Report Date: 11/26/2008 01/05/09 13:11

Analysis Description	Analysis Results	Analysis Error +/- 2 s	MDC	DLC	Qual	Analysis Units	Analysis Test Method	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
H-3	141.638	100.308	160.564	76.369	U	pCi/L	ARS-054/EPA 906.0	1/3/09 18:45	BS	N/A

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 the client.

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QC Results Report

Sample Delivery Group: ARS1-08-02457

Date Received: 11/26/2008

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-B08-03266	LCS	Н3	1007.134	176,945	172.195	1248.649		pCi/L	ARS-054/EPA 906.0	12/23/08 14:09	BS	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
Ì	ARS1-B08-03266	MBL	Н3	76.052	102.624	172.520	NA	U	pCi/L	ARS-054/EPA 906.0	12/23/08 17:28	BS

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	RÉR AcceptanceR ange
ARS1-B08-03266	LCSD	Н3	1007.134	176,945	1053.138	181.276		pCi/L	ARS-054/EPA 906-0	12/23/08 15:49	BS	0.13	< 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 AcceptanceR ange
ARS1-B08-03266	LCSD	Н3	1007.134	176.945	1053.138	181.276		pCi/L	ARS-054/EPA 906.0	12/23/08 15:49	BS	0.36	< 3

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# 01949



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

QC Results Report

Sample Delivery Group: ARS1-08-02457

Date Received: 11/26/2008

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-B08-03267	LCS	нз	999,290	171.666	158.345	1248.649		pCi/L	ARS-054/EPA 906.0	1/2/09 17:48	BS	80	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-B08-03267	MBL	Н3	88.366	95,865	159.168	NA	U	pCi/L	ARS-054/EPA 906.0	1/2/09 21:07	BS

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 AcceptanceR ange
ARS1-808-03267	LCSD	Н3	999,290	171,666	1010.138	173.164		pCi/L	ARS-054/EPA 906.0	1/2/09 19:28	BS	0.03	< 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 AcceptanceR ange
ARS1-	-B08-03267	LCSD	Н3	999,290	171,666	1010-138	173.164		pCi/L	ARS-054/EPA 906.0	1/2/09 19:28	BS	0.09	< 3

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# 01949



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.
- 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, 18th, 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
- 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:

Notes:

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

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NRC FORM 303	-	I S. NILOL TAR STEEL	-			Р	AGE _	1_ (OF2
(1-2007)		J.S. NUCLEAR REGU		MISSION		LABORA ⁻	TORY	USE ON	ILY
ł	REQUEST FOR AI CHAIN OF C	NALYSIS AND			CONTROL	NUMBER			
L	ABORATORY ORISE						D-08-	1	
		V OTHER	(Specify)	-		15	D-0a-	1	
SAMPLE LOCATION (LICENS Dresden Nuc	clear Power Station	INSPECTION NO.			LICE	NSE NO.		DOCK	ET NO.
	SAMPLE SUBM	050002. MITTED	37/2008005					050-0	00237
# TOTAL	TYPE	VOLUME	WEIGH	HT	DATE SAMP	LES SUBMIT	TED		DRITY
24	H2O	250 ml/ea	n/a			5/2008		UR	UTINE GENT
					SAN	MONTH	LECTIC		
					START	11		YEAR	TIME
INSPECTOR RESPONSIBLE			TELEPHONE NU	MBER	START	11	24	2008	9:04am
	Gene Bonano	-	630-829-	- 1	STOP	11	24	2008	12:58pn
ANALYSIS T	O BE PERFORMED	LIST DESIRED LLD (Optional)		-	F ANALYSI	S (Specif	y)	LIST I	DESIRED (Optional)
GROSS ALPHA	(GA)								
GROSS BETA	(GB)								
GAMMA SPEC	(GS)								
TRITIUM (H3)		200 pCi/L							
CARBON-14 (C	14)								
IODINE-125 (I12	25)								
RELINQUISHED BY	RECEIVED BY	DATE	TIME		REASON F	OR CHAN	IGE OF	CUSTO	DY
Gene Bonano	FEDEX	11/25/2008	5:00pm	Sam	ples sent	to lab.			
	Maria John	11-26-08	10:20						
	0								
E RECOVERABLE	YES NO	TAC NUMBER	/	20080	005	(If Assigne	ed)		
MARKS Do not process/analy2 Iold samples until no	ze samples until directed/a	uthorized by Elaii	ne Keegan (T	el.: 301	415-8517), NRR,]	HQ NI	₹ C	
OTE: SAMPLES WILL E	BE DISCARDED AFTER ANAL	YSIS UNLESS REAS	ONS ARE NOTE	ED IN RE	MARKS AB	OVE.			

NRC FORM 303A U.S. NUCLEAR REGULATORY COMMISSION LABORATORY USE ONLY (1-2007) **SAMPLE RECORD -- Continued** CONTROL NUMBER LABORATORY - ORISE OTHER ARS D-08-1 (Specify) SAMPLE SAMPLE NAME COLLECTION **REMARKS, PRESERVATIVE** NUMBER AND DESCRIPTION DATE/TIME ANALYSIS REQUESTED, ETC. 11/24/2008 D-08-1-01 MW-DN-124-I 9:25AM 11/24/2008 D-08-1-02 MW-DN-124-1 9:25 AM 11/24/2008 D-08-1-03 MW-DN-124-S 9:41 AM 11/24/2008 D-08-1-04 MW-DN-124-S 9:4/AM 11/24/2008 D-08-1-05 **DSP-124** 9:04AM 11/24/2008 D-08-1-06 **DSP-124** 9:04 AM 11/24/2008 D-08-1-07 W-3 10:10 AM 11/24/2008 D-08-1-08 W-3 10:10 AM 11/24/2008 D-08-1-09 **DSP-122** 11:56 12 11/24/2008 D-08-1-10 **DSP-122** 11:56 AM 11/24/2008 D-08-1-11 T-6 10:23 AN 11/24/2008 D-08-1-12 **T-6** 10:23 AM 11/24/2008 D-08-1-13 R-1 10:49 AM 11/24/2008 D-08-1-14 R-1 10:49 AM 11/24/2008 D-08-1-15 T-5 10:33AM 11/24/2008 D-08-1-16 T-5 10:33 AM 11/24/2008 D-08-1-17 W2R 9:56AM 11/24/2008 D-08-1-18 W2R 9:56AM 11/24/2008 D-08-1-19 DSP-131 12:58PM 11/24/2008 D-08-1-20 **DSP-131** 12:58PM 11/24/2008 D-08-1-21 **DSP-132** 12:37 PM 11/24/2008 D-08-1-22 **DSP-132** 12:37PM 11/24/2008 D-08-1-23 **E7** 11:24 AM 11/24/2008 D-08-1-24 **E7** 11:24 AM