URS

June 21, 2011

Duke Energy
Miami Fort Generating Station
11021 Brower Road
North Bend, OH 45052

Attention: Ms. Tara Thomas
Environmental Coordinator

Re: Results – **May 2011**
Low-Level Mercury Sampling
Miami Fort Generating Station
North Bend, Ohio

In accordance with your request, URS prepared the following letter report transmitting low-level mercury test results for samples collected at the Miami Fort Generating Station located in North Bend, Ohio.

The scope of work involved the sampling of intake and discharge waters from the following sources and analysis of those samples for low-level mercury.

1. River Intake
2. Station 601 (WWT Influent)
   [Samples were collected at this station one detention time before samples collected at Outfall 608]
3. Outfall 608 (WWT Effluent)
   [Samples were collected at this outfall one detention time after samples collected at station 601]
4. Outfall 002 (Pond B Discharge)

Each sample was collected following the required Method 1669: *Sampling Ambient Water for Determination of Trace Metals at EPA Water Quality Criteria Levels* (Sampling Method) and analyzed by Method 1631. At the request of Duke Energy, total metal mercury samples were collected from Station 601 and analyzed by Method 7470A. Also at the request of Duke Energy, a dissolved low-level mercury sample was collected by Method 1669 from Outfall 608 and analyzed by Method 1631. The collected dissolved sample was filtered at the laboratory utilizing 0.45 micron filtration.

Field staff from URS' Cincinnati office conducted the sampling and TestAmerica Laboratories Inc. located in North Canton, Ohio performed the analytical procedures. The analytical procedures included the analyses of a collected sample and duplicate sample (duplicates collected at Outfall 608 and Outfall 002), field blank (field blanks collected at the River Intake, Outfall 608, and Outfall 002), and trip blank.

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URS

On May 1, 2011, URS was informed that the sampling event would be postponed until Units 7 and 8 were back in full operation. Duke Energy requested URS to initiate sampling on May 23, 2011. The results from the **May 23 and 24, 2011** sampling event are presented in the attached Table 1. A copy of the laboratory report is enclosed with this letter.

--ooOoo--

URS is pleased to provide continued assistance to Duke Energy in the execution of their environmental monitoring requirements. If there are any questions regarding the content of this report, please do not hesitate to contact the undersigned.

Sincerely,

URS Corporation

Michael A. Wagner
Project Manager

Dennis P. Connair, C.P.G.
Principal

MAW/DPC/Duke Energy-MFS LL Hg 2011
Job No. 14949813

TABLE 1

ANALYTICAL RESULTS
LOW-LEVEL MERCURY
RIVER INTAKE, STATION 601, OUTFALL 608, AND OUTFALL 002 (POND B)

DUKE ENERGY - MIAMI FORT STATION
NORTH BEND, OHIO

	Date Sampled / Results (ng/L, parts per trillion)						
Sample ID	**11/1/10**	**12/1/10**	**1/5/11**	**2/1/11**	**3/1/11**	**4/4/11**	**5/23/11**
River Intake	1.1	3.0	9.7	2.1	15.4	<0.50	4.4
Station 601 (7)	408,000	380,000	315,000	88,200	22,500	132,000	UDFS
Station 601 (7)*	350,000	494,000	6,100	7,600	2,500	7,900	UDFS
Station 601 (7)* [duplicate]	378,000	489,000	6,100	Not Collected	4,100	5,900	UDFS
Station 601 (8)	247,000	184,000	UDFS	101,000	38,400	UDFS	150,000
Station 601 (8)*	104,000	490,000	UDFS	4,300	4,700	UDFS	200,000
Station 601 (8)*[duplicate]	Not Collected	Not Collected	UDFS	3,600	Not Collected	UDFS	190,000
Outfall 608	248	345	97.2	428	180	171	20
Outfall 608 [duplicate]	254	333	102	420	191	180	20
Outfall 608 [dissolved, 0.45 micron]	124	81.7	0.91	40.8	3.7	70.6	15
APB-002	2.9	4.0	3.8	5.3	3.7	0.62	2.1
APB-002 [duplicate]	3.0	3.6	3.4	5.0	4.1	1.3	2.2
Field Blank (RI-FB)	<0.50	<0.50	<0.50	<0.50	1.3	<0.50	<0.50
Field Blank (WWT-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Field Blank (AP-FB)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trip Blank	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Samples collected by URS
Samples analyzed by TestAmerica of North Canton, Ohio
UDFS - Unit down for service, no samples collected.
* = Total mercury analysis utilizing Method 7470A [results converted from ug/L (parts per billion) to ng/L]

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica North Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-523-1
Client Project/Site: 2011 LOW LEVEL HG

For:
Duke Energy Corporation
139 East Fourth Street
ex 510
Cincinnati, Ohio 45202

Attn: Ms. Sue Wallace

Denise Pohl

Authorized for release by:
06/16/2011 01:57:09 PM

Denise Pohl
Project Manager II
denise.pohl@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

Metals

Qualifier	Qualifier Description
F	MS or MSD exceeds the control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.
EPA	United States Environmental Protection Agency
ND	Not Detected above the reporting level.
MDL	Method Detection Limit
RL	Reporting Limit
RE, RE1 (etc.)	Indicates a Re-extraction or Reanalysis of the sample.
%R	Percent Recovery
RPD	Relative Percent Difference, a measure of the relative difference between two points.

Job ID: 240-523-1

Laboratory: TestAmerica North Canton

Narrative

CASE NARRATIVE

Client: Duke Energy Corporation

Project: 2011 LOW LEVEL HG

Report Number: 240-523-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 05/27/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 20.2 C.

DISSOLVED LOW LEVEL MERCURY

Sample 608 WWT DISS (240-523-7) was analyzed for dissolved low level mercury in accordance with EPA Method 1631E. The samples were prepared on 06/01/2011 and analyzed on 06/02/2011.

Mercury failed the recovery criteria low for the MS of sample 608 WWT DISSMS (240-523-7) in batch 240-3757.

Mercury failed the recovery criteria low for the MSD of sample 608 WWT DISSMSD (240-523-7) in batch 240-3757.

Refer to the QC report for details.

No other difficulties were encountered during the dissolved low level mercury analysis.

All other quality control parameters were within the acceptance limits.

Method(s) 1631E: Routine preservation and digestion of samples analyzed by EPA 1631E consists of the addition of 0.2mL bromine monochloride (BrCl) solution. Additional BrCl was required to ensure complete sample oxidation. An additional method digestion blank, with like amounts of BrCl, was prepared and analyzed with the samples. The mercury concentration in this additional method blank was more than the reporting limit. The result was 0.9485 ng/L.

No other analytical or quality issues were noted.

TOTAL MERCURY

Samples 601(8)WWT TOT (240-523-2) and 601(8)WWT TOT DUP (240-523-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 06/01/2011 and analyzed on 06/09/2011.

Samples 601(8)WWT TOT (240-523-2)[20X] and 601(8)WWT TOT DUP (240-523-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the mercury analyses.

Job ID: 240-523-1 (Continued)

Laboratory: TestAmerica North Canton (Continued)

All quality control parameters were within the acceptance limits.

LOW LEVEL MERCURY

Samples 601(8)WWT (240-523-1), 608 WWT FB (240-523-4), 608 WWT (240-523-5), 608 WWT DUP (240-523-6), RI (240-523-8), OUTFALL 002 FB (240-523-9), OUTFALL 002 (240-523-10), OUTFALL 002 DUP (240-523-11) and TRIP BLANK (240-523-12) were analyzed for Low Level Mercury in accordance with EPA Method 1631. The samples were prepared on 06/01/2011 and analyzed on 06/02/2011 and 06/03/2011.

Samples 601(8)WWT (240-523-1)[20000X], 608 WWT (240-523-5)[10X] and 608 WWT DUP (240-523-6)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the mercury analyses.

All quality control parameters were within the acceptance limits.

Method Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	TAL NC
7470A	Mercury (CVAA)	SW846	TAL NC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-523-1	601(8)WWT	Water	05/23/11 18:15	05/27/11 14:00
240-523-2	601(8)WWT TOT	Water	05/23/11 18:20	05/27/11 14:00
240-523-3	601(8)WWT TOT DUP	Water	05/23/11 18:25	05/27/11 14:00
240-523-4	608 WWT FB	Water	05/24/11 08:25	05/27/11 14:00
240-523-5	608 WWT	Water	05/24/11 08:30	05/27/11 14:00
240-523-6	608 WWT DUP	Water	05/24/11 08:35	05/27/11 14:00
240-523-7	608 WWT DISS	Water	05/24/11 08:40	05/27/11 14:00
240-523-8	RI	Water	05/24/11 09:05	05/27/11 14:00
240-523-9	OUTFALL 002 FB	Water	05/24/11 09:30	05/27/11 14:00
240-523-10	OUTFALL 002	Water	05/24/11 09:35	05/27/11 14:00
240-523-11	OUTFALL 002 DUP	Water	05/24/11 09:40	05/27/11 14:00
240-523-12	TRIP BLANK	Water	05/24/11 00:00	05/27/11 14:00

Detection Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Client Sample ID: 601(8)WWT — Lab Sample ID: 240-523-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	150000		10000		ng/L	20000		1631E	Total/NA

Client Sample ID: 601(8)WWT TOT — Lab Sample ID: 240-523-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	200		4.0		ug/L	20		7470A	Total/NA

Client Sample ID: 601(8)WWT TOT DUP — Lab Sample ID: 240-523-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	190		4.0		ug/L	20		7470A	Total/NA

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-523-4

No Detections.

Client Sample ID: 608 WWT — Lab Sample ID: 240-523-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	20		5.0		ng/L	10		1631E	Total/NA

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-523-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	20		5.0		ng/L	10		1631E	Total/NA

Client Sample ID: 608 WWT DISS — Lab Sample ID: 240-523-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	15		2.5		ng/L	5		1631E	Dissolved

Client Sample ID: RI — Lab Sample ID: 240-523-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	4.4		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: OUTFALL 002 FB — Lab Sample ID: 240-523-9

No Detections.

Client Sample ID: OUTFALL 002 — Lab Sample ID: 240-523-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	2.1		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: OUTFALL 002 DUP — Lab Sample ID: 240-523-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	2.2		0.50		ng/L	1		1631E	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-523-12

No Detections.

Client Sample Results

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Client Sample ID: 601(8)WWT — Lab Sample ID: 240-523-1

Date Collected: 05/23/11 18:15 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	150000		10000		ng/L		06/01/11 14:30	06/03/11 06:47	20000

Client Sample ID: 601(8)WWT TOT — Lab Sample ID: 240-523-2

Date Collected: 05/23/11 18:20 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	200		4.0		ug/L		06/01/11 11:15	06/09/11 15:06	20

Client Sample ID: 601(8)WWT TOT DUP — Lab Sample ID: 240-523-3

Date Collected: 05/23/11 18:25 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	190		4.0		ug/L		06/01/11 11:15	06/09/11 15:07	20

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-523-4

Date Collected: 05/24/11 08:25 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		06/01/11 14:30	06/02/11 09:46	1

Client Sample ID: 608 WWT — Lab Sample ID: 240-523-5

Date Collected: 05/24/11 08:30 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	20		5.0		ng/L		06/01/11 14:30	06/02/11 09:54	10

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-523-6

Date Collected: 05/24/11 08:35 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	20		5.0		ng/L		06/01/11 14:30	06/02/11 10:03	10

Client Sample ID: 608 WWT DISS — Lab Sample ID: 240-523-7

Date Collected: 05/24/11 08:40 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	15		2.5		ng/L		06/01/11 14:30	06/02/11 10:11	5

Client Sample Results

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Client Sample ID: RI — Lab Sample ID: 240-523-8

Date Collected: 05/24/11 09:05 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.4		0.50		ng/L		06/01/11 14:30	06/02/11 13:40	1

Client Sample ID: OUTFALL 002 FB — Lab Sample ID: 240-523-9

Date Collected: 05/24/11 09:30 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		06/01/11 14:30	06/02/11 10:45	1

Client Sample ID: OUTFALL 002 — Lab Sample ID: 240-523-10

Date Collected: 05/24/11 09:35 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.1		0.50		ng/L		06/01/11 14:30	06/02/11 10:54	1

Client Sample ID: OUTFALL 002 DUP — Lab Sample ID: 240-523-11

Date Collected: 05/24/11 09:40 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.2		0.50		ng/L		06/01/11 14:30	06/02/11 11:02	1

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-523-12

Date Collected: 05/24/11 00:00 — **Matrix: Water**
Date Received: 05/27/11 14:00

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		06/01/11 14:30	06/02/11 11:11	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 240-3311/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 3757 — **Prep Batch: 3311**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.50	U	0.50		ng/L		06/01/11 14:30	06/02/11 09:28	1

Lab Sample ID: LCS 240-3311/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 3757 — **Prep Batch: 3311**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	5.00	4.97		ng/L		99	77 - 125

Lab Sample ID: 240-523-7 MS — **Client Sample ID: 608 WWT DISS**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 3757 — **Prep Batch: 3311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	15		5.00	13.3	F	ng/L		-39	71 - 125

Lab Sample ID: 240-523-7 MSD — **Client Sample ID: 608 WWT DISS**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 3757 — **Prep Batch: 3311**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Mercury	15		5.00	11.0	F	ng/L		-86	71 - 125	19	24

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-3191/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 3810 — **Prep Batch: 3191**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20		ug/L		06/01/11 11:15	06/06/11 16:09	1

Lab Sample ID: LCS 240-3191/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 3810 — **Prep Batch: 3191**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	5.00	4.82		ug/L		96	81 - 123

Lab Sample ID: MRL 240-4216/9-A MRL — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4337 — **Prep Batch: 4216**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	% Rec	% Rec. Limits
Mercury	0.200	0.20	U	ug/L		96	

QC Association Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Metals

Prep Batch: 3191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-3191/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-3191/2-A	Lab Control Sample	Total/NA	Water	7470A	
240-523-2	601(8)WWT TOT	Total/NA	Water	7470A	
240-523-3	601(8)WWT TOT DUP	Total/NA	Water	7470A	

Prep Batch: 3311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-3311/1-A	Method Blank	Total/NA	Water	1631E	
LCS 240-3311/2-A	Lab Control Sample	Total/NA	Water	1631E	
240-523-1	601(8)WWT	Total/NA	Water	1631E	
240-523-4	608 WWT FB	Total/NA	Water	1631E	
240-523-5	608 WWT	Total/NA	Water	1631E	
240-523-6	608 WWT DUP	Total/NA	Water	1631E	
240-523-7	608 WWT DISS	Dissolved	Water	1631E	
240-523-7 MS	608 WWT DISS	Dissolved	Water	1631E	
240-523-7 MSD	608 WWT DISS	Dissolved	Water	1631E	
240-523-8	RI	Total/NA	Water	1631E	
240-523-9	OUTFALL 002 FB	Total/NA	Water	1631E	
240-523-10	OUTFALL 002	Total/NA	Water	1631E	
240-523-11	OUTFALL 002 DUP	Total/NA	Water	1631E	
240-523-12	TRIP BLANK	Total/NA	Water	1631E	

Analysis Batch: 3757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-3311/2-A	Lab Control Sample	Total/NA	Water	1631E	3311
MB 240-3311/1-A	Method Blank	Total/NA	Water	1631E	3311
240-523-4	608 WWT FB	Total/NA	Water	1631E	3311
240-523-5	608 WWT	Total/NA	Water	1631E	3311
240-523-6	608 WWT DUP	Total/NA	Water	1631E	3311
240-523-7	608 WWT DISS	Dissolved	Water	1631E	3311
240-523-7 MS	608 WWT DISS	Dissolved	Water	1631E	3311
240-523-7 MSD	608 WWT DISS	Dissolved	Water	1631E	3311
240-523-9	OUTFALL 002 FB	Total/NA	Water	1631E	3311
240-523-10	OUTFALL 002	Total/NA	Water	1631E	3311
240-523-11	OUTFALL 002 DUP	Total/NA	Water	1631E	3311
240-523-12	TRIP BLANK	Total/NA	Water	1631E	3311
240-523-1	601(8)WWT	Total/NA	Water	1631E	3311

Analysis Batch: 3810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-3191/1-A	Method Blank	Total/NA	Water	7470A	3191
LCS 240-3191/2-A	Lab Control Sample	Total/NA	Water	7470A	3191

Analysis Batch: 3867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-523-8	RI	Total/NA	Water	1631E	3311

Prep Batch: 4216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-4216/9-A MRL	Lab Control Sample	Total/NA	Water	7470A	

QC Association Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Metals (Continued)

Analysis Batch: 4337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-4216/9-A MRL	Lab Control Sample	Total/NA	Water	7470A	4216
240-523-2	601(8)WWT TOT	Total/NA	Water	7470A	3191
240-523-3	601(8)WWT TOT DUP	Total/NA	Water	7470A	3191

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Client Sample ID: 601(8)WWT — Lab Sample ID: 240-523-1

Date Collected: 05/23/11 18:15 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		20000	3757	06/03/11 06:47	CJ	TAL NC

Client Sample ID: 601(8)WWT TOT — Lab Sample ID: 240-523-2

Date Collected: 05/23/11 18:20 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			3191	06/01/11 11:15	LM	TAL NC
Total/NA	Analysis	7470A		20	4337	06/09/11 15:06	RT	TAL NC

Client Sample ID: 601(8)WWT TOT DUP — Lab Sample ID: 240-523-3

Date Collected: 05/23/11 18:25 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			3191	06/01/11 11:15	LM	TAL NC
Total/NA	Analysis	7470A		20	4337	06/09/11 15:07	RT	TAL NC

Client Sample ID: 608 WWT FB — Lab Sample ID: 240-523-4

Date Collected: 05/24/11 08:25 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3757	06/02/11 09:46	CJ	TAL NC

Client Sample ID: 608 WWT — Lab Sample ID: 240-523-5

Date Collected: 05/24/11 08:30 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		10	3757	06/02/11 09:54	CJ	TAL NC

Client Sample ID: 608 WWT DUP — Lab Sample ID: 240-523-6

Date Collected: 05/24/11 08:35 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		10	3757	06/02/11 10:03	CJ	TAL NC

Lab Chronicle

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Client Sample ID: 608 WWT DISS — Lab Sample ID: 240-523-7

Date Collected: 05/24/11 08:40 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Dissolved	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Dissolved	Analysis	1631E		5	3757	06/02/11 10:11	CJ	TAL NC

Client Sample ID: RI — Lab Sample ID: 240-523-8

Date Collected: 05/24/11 09:05 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3867	06/02/11 13:40	CJ	TAL NC

Client Sample ID: OUTFALL 002 FB — Lab Sample ID: 240-523-9

Date Collected: 05/24/11 09:30 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3757	06/02/11 10:45	CJ	TAL NC

Client Sample ID: OUTFALL 002 — Lab Sample ID: 240-523-10

Date Collected: 05/24/11 09:35 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3757	06/02/11 10:54	CJ	TAL NC

Client Sample ID: OUTFALL 002 DUP — Lab Sample ID: 240-523-11

Date Collected: 05/24/11 09:40 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3757	06/02/11 11:02	CJ	TAL NC

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-523-12

Date Collected: 05/24/11 00:00 — **Matrix: Water**
Date Received: 05/27/11 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			3311	06/01/11 14:30	CJ	TAL NC
Total/NA	Analysis	1631E		1	3757	06/02/11 11:11	CJ	TAL NC

Laboratory References:
TAL NC = TestAmerica North Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Duke Energy Corporation
Project/Site: 2011 LOW LEVEL HG

TestAmerica Job ID: 240-523-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica North Canton	ACLASS	DoD ELAP	0	ADE-1437
TestAmerica North Canton	California	NELAC	9	01144CA
TestAmerica North Canton	Connecticut	State Program	1	PH-0590
TestAmerica North Canton	Florida	NELAC	4	E87225
TestAmerica North Canton	Georgia	Georgia EPD	4	N/A
TestAmerica North Canton	Illinois	NELAC	5	200004
TestAmerica North Canton	Kansas	NELAC	7	E-10336
TestAmerica North Canton	Kentucky	State Program	4	58
TestAmerica North Canton	Minnesota	NELAC	5	039-999-348
TestAmerica North Canton	Nevada	State Program	9	OH-000482008A
TestAmerica North Canton	New Jersey	NELAC	2	OH001
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	New York	NELAC	2	10975
TestAmerica North Canton	Ohio	OVAP	5	CL0024
TestAmerica North Canton	Pennsylvania	NELAC	3	68-00340
TestAmerica North Canton	USDA	USDA	0	P330-08-00123
TestAmerica North Canton	West Virginia	West Virginia DEP	3	210
TestAmerica North Canton	Wisconsin	State Program	5	999518190

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Duke Energy	Client Project Manager: M. WAGNER	Site Contact: T. THOMAS	Lab Contact:	COC No:
Address: MIAMI FORT STATION	Telephone: 513 651-3440	Telephone: (513) 467-4900	Telephone:	1 of 2 COCs
City/State/Zip: N. BEND, OH	Email: mike-wagner@inscorp.com	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: (513) 467-4900		TAT if different from below ~~STANDARD~~		Walk-in client ☐
Project Name: 2011 Low Level Hg	Method of Shipment/Carrier:	☐ 3 weeks		Lab pickup ☐
Project Number: 14949813	Shipping/Tracking No:	☐ 2 weeks		Loc: 240
PO#		☐ 1 week		523
		☐ 2 days		#1
		☐ 1 day		A

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	Analyses: Low Level Hg	TOT Hg	Special Instructs / Special Instructions:
601(8) WWT	5-23-11	1815		X									4		N	G	X		POTENTIALLY ELEVATED Hg AND POSSIBLE HYDROCARBON - SUSPECT DIESEL FUEL
601(8) WWT TOT	↓	1820		X					1				~~4~~		↓	↓		X	
601 (8) WWT TOT DUP	↓	1825		X					1				~~4~~					X	
608 WWT FB	5-24-11	0825		X									2				X		
608 WWT	↓	0830		X									4				X		
608 WWT DUP	↓	0835		X									4				X		
608 WWT DISS	↓	0840		X									4				X		
RI	↓	0905		X									4				X		
OUTFALL 002 FB	↓	0930		X									2				X		
OUTFALL 002	↓	0935		X									4		↓	↓	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	URS Corp	05-24-11 1245	[signature]	Test America	5/24/11, 1245
[signature]	Test America	5/24/11 1430			
			Received in Laboratory by: [signature]	Company: TAL	Date/Time: 5-25-11 0900

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TAL-0018 (1008)

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Duke Energy	Client Project Manager: M. Wagner	Site Contact: T. Thomas	Lab Contact:	COC No:
Address: Miami Fort Station	Telephone: 513 651-3440	Telephone: (513) 467-4900	Telephone:	____ of ____ COCs
City/State/Zip: North Bend, OH.	Email: mike_wagner@urscorp.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: (513) 467-4900		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: 2011 Low Level Hg	Method of Shipment/Carrier:			Job/SDG No:
Project Number: 14949813	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Low Level Hg	Sample Specific Notes / Special Instructions:
OUTFALL 002 Dup		0940		X									4		N	G	X	
Trip Blank	—	—		X									2		N	G	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
URS	CORP	05-24-11 / 1245		TestAmerica	5/24/11 12:45
	TestAmerica	5/24/11 / 14:30			
			Received in Laboratory by:	TAL	5-25-11 0900

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TAL-0018 (1008)

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 240-523
North Canton Facility

Client DUKE ENERGY Project 2011 LLHg By [signature] (Signature)
Cooler Received on 5/25/11 Opened on 5/27/11
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ____
TestAmerica Cooler # 5019 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other ____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable ____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? ____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☒ None ☐ Other ____
6. Cooler temperature upon receipt 20.2 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ ____
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☒
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒
Contacted PM ____ Date ____ by ____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning ____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

high temp ok LLHg

15. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.
Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100110-HNO_3; *Sulfuric Acid Lot#* 110410-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN/NaOH$. What time was preservative added to sample(s)? ____

Client ID	pH	Date	Initials
601(8) WWT TOT	<2	5/27/11	TB
TOT DUP	<2		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd

Login Sample Receipt Checklist

Client: Duke Energy Corporation

Job Number: 240-523-1

Login Number: 523
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica North Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	NO ICE NEEDED LLHG
Cooler Temperature is acceptable.	True	20.2
Cooler Temperature is recorded.	True	20.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	