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ALTERNATE SOURCE DEMONSTRATION

CCR UNIT ASH LANDFILL NO. 2

Crist Generating Plant
Gulf Power Company
Escambia County, Florida

Prepared for

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CERTIFICATION STATEMENT

Alternate Source Demonstration
Crist Generating Plant
CCR Unit Ash Landfill No. 2
Escambia County, Florida
January 11, 2019

I, Todd Anderson, a qualified professional engineer registered in the State of Florida, certify that the above document was completed consistent with the requirements stipulated in 40 CFR 257.95(g)(3)(ii) and that the information contained herein is, to the best of my knowledge, accurate.

Digitally signed by Todd D. Anderson, PE
Date: 2019.01.11 15:20:37 -05'00'

Seal and Signature | Date

1. INTRODUCTION

On behalf of Gulf Power Company (Gulf Power), Geosyntec Consultants Inc. (Geosyntec) has prepared this alternate source demonstration (ASD) report for Ash Landfill No. 2 at Gulf Power's Crist Generating Plant (Plant Crist) located in Escambia County, Florida (Site). This ASD has been prepared to meet the requirements of the United States Environmental Protection Agency's (USEPA's) Coal Combustion Residuals (CCR) Rule 40 CFR Part 257.95(g)(3)(ii) which states that the owner or operator may:

> *Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by §257.90(e), in addition to the certification by a qualified professional engineer.*

1.1 Background

Pursuant to the CCR Rule, Gulf Power installed and certified a groundwater monitoring system at the Site for the CCR Unit Ash Landfill No. 2 (**Figure 1**). Analysis of data collected from the groundwater monitoring system through June 2018 indicated the presence of a single assessment monitoring constituent (molybdenum) at a statistically significant level (SSL) above the applicable groundwater protection standard (GWPS) in MW-303 associated with Ash Landfill No. 2.

1.2 Purpose

The purpose of this report is to demonstrate that a source other than Ash Landfill No. 2 caused the SSLs of molybdenum in the CCR groundwater monitoring system.

2. ALTERNATE SOURCE DEMONSTRATION APPROACH

2.1 Overview

Gulf Power has identified an SSL for molybdenum in MW-303 downgradient of Ash Landfill No. 2 at Plant Crist. This report demonstrates that the elevated molybdenum concentration above the applicable GWPS in MW-303 is not the result of Ash Landfill No. 2 at Plant Crist but is instead is due to an alternate source.

The CCR Rule does not establish specific requirements for an ASD. However, appropriate guidance is contained in the *USEPA Solid Waste Disposal Facility Criteria Technical Manual* (USEPA, 1993) for municipal solid waste landfills. The approach to this ASD is modeled based on the USEPA guidance document (USEPA, 1993) and relies on the following lines of evidence:

- Analysis of groundwater at the Site;
- Analysis of soils at the Site; and
- Analysis of surface water and sediment at the Site.

A brief description of the components of this ASD is presented below. A detailed analysis of data and discussion is presented in Section 3.

2.2 Analysis of Groundwater

The temporal and spatial variability of molybdenum concentrations in groundwater at the Site were evaluated using CCR groundwater monitoring data, direct push technology (DPT) groundwater data, and groundwater data collected from monitoring wells in the vicinity of Ash Landfill No. 2 and MW-303.

2.3 Analysis of Soils

The potential for molybdenum in the Site soils to influence groundwater monitoring wells was evaluated by analyzing DPT soil boring data for the presence of molybdenum in the vicinity of the Ash Landfill No. 2.

2.4 Analysis of Surface Water and Sediment

The presence of molybdenum in Site stormwater was evaluated by obtaining sediment and surface water samples from stormwater ponds in the vicinity of Ash Landfill No. 2 (**Figure 1**). The Ash Landfill No. 2 stormwater pond (LF2-SWP) is located hydraulically downgradient of Ash Landfill No. 2, and the Closed Interim Landfill stormwater ponds (CIL-SWPs) are located up/side gradient of Ash Landfill No. 2 and downgradient of the Closed Interim Landfill.

3. ALTERNATE SOURCE DEMONSTRATION

3.1 Site Investigations

An SSL for molybdenum in groundwater was observed in MW-303 during CCR groundwater monitoring for Ash Landfill No. 2 at Plant Crist. At other detection monitoring wells surrounding Ash Landfill No. 2, including MW-304, MW-305, and MW-308, molybdenum was less than the GWPS and no additional SSLs (for molybdenum or other Appendix IV constituents) were reported. This indicates that the molybdenum in MW-303 may be from an alternate source.

Therefore, Gulf Power completed an ASD at the Site that included the collection of samples from Site media to (i) evaluate the source of the elevated molybdenum observed in MW-303 and (ii) assess the groundwater flow direction surrounding Ash Landfill No. 2. A detailed discussion of the two field events is provided in the subsequent sections.

3.1.1 Initial Investigation of Molybdenum in Soils

Geosyntec obtained soil samples from soil cores previously collected during historical monitoring well installation activities in the vicinity of monitoring well MW-303 and background well locations that had been sealed in plastic bags and placed in long-term storage at Plant Crist's climate-controlled warehouse. Thirty-four samples were obtained from the soil cores on August 14 and 31, 2018 for laboratory analysis. Soil samples were selected based on their proximity to MW-303 (**Figure 2**) and lithology. Sampling intervals included elevations that were above, within, and below the screen interval elevation of MW-303 with respect to the North American Vertical Datum of 1988 (NAVD88). The screen interval elevation of MW-303 is approximately 11 to 21 feet (ft) below the NAVD88.

Samples were submitted for analysis of molybdenum. Generally, samples with reported detections of molybdenum were also analyzed by synthetic precipitation leaching procedure (SPLP). The sampling intervals and laboratory results for the soil samples are summarized in **Table 1** and the boring locations relative to MW-303 are shown on **Figure 2.** Laboratory analytical results are provided in **Appendix A**.

The results of this investigation are summarized below:

- Numerous molybdenum concentrations were "(I)" qualified, indicating that these concentrations were estimated and between the method detection limit and the practical quantification limit of the laboratory method.

- Laboratory results reported detections of total molybdenum in 16 of 34 total samples analyzed (approximately 47%) at concentrations between 0.0395(I) and 3.06(I) milligrams per kilogram (mg/kg).
- Molybdenum was only detected in 2 of 7 soil borings in the vicinity of Ash Landfill No. 2. Aside from molybdenum detections in soil samples from upgradient boring MWP-13R, the only molybdenum detection reported in the vicinity of Ash Landfill No. 2 was 0.54(I) mg/kg at MW-3D (subsequently renamed MWI-1) from an elevation of -30 ft NAVD88 (9 ft below the MW-303 screen interval).
- Only one SPLP leachate concentration was reported for molybdenum at 1.48(I) micrograms per liter (µg/L) at a sample location in the vicinity of Ash Landfill No. 1 (MWC-8R-30'). This value is below the GWPS for molybdenum of 100 µg/L.

The results of this investigation indicated that molybdenum was detected at relatively low and estimated levels ("I" qualified values) including one location near Ash Landfill No. 2. Additionally, the SPLP concentration of 1.48(I) µg/L at MWC-8R-30' was well below the GWPS. These data indicate that molybdenum is present in Site soils. Additional field investigations were completed in November and December 2018 to further evaluate the source of molybdenum.

3.1.2 Groundwater Levels

Groundwater levels were obtained from CCR compliance monitoring wells and other monitoring wells on December 11, 2018 to evaluate the potential hydraulic connection between MW-303 and Ash Landfill No. 2. A potentiometric surface map depicting the groundwater flow direction based on these groundwater elevations is summarized in **Table 2** and on **Figure 3**. Key observations are discussed below:

- Ash Landfill No. 2 is hydraulically downgradient of the Closed Interim Landfill;
- MW-302, MWI-2, CIL-SWP1, and CIL-SWP2 are located hydraulically upgradient of Ash Landfill No. 2;
- MW-303 is located hydraulically sidegradient of Ash Landfill No. 2;
- MW-308 is located hydraulically sidegradient/downgradient of Ash Landfill No. 2;
- MW-304 and LF2-SWP are located hydraulically downgradient of Ash Landfill No. 2.

3.1.3 Molybdenum in Groundwater

In addition to the June 2018 groundwater sampling event of the CCR compliance monitoring wells, additional groundwater data was collected from select monitoring wells at the Site on December 13 and 14, 2018. Sample locations are shown on **Figure 4**. The groundwater samples were analyzed for total and dissolved molybdenum. The results are summarized in **Table 3 (**laboratory analytical reports and field sample sheets are provided in **Appendix A and B**, respectively**)** and discussed below:

- Molybdenum concentrations were below detection limits for monitoring wells sidegradient and downgradient of Ash Landfill No. 2, including MWP-10 located sidegradient and MW-304 and MW-308 located downgradient;
- Molybdenum concentrations were above the GWPS in groundwater monitoring well MW-302, which is located upgradient of Ash Landfill No. 2 and downgradient of the Closed Interim Landfill; and
- Molybdenum concentrations also exceeded the GWPS in groundwater monitoring wells MW-303 and MWI-2, locations that are hydraulically sidegradient and upgradient, respectively of Ash Landfill No. 2 and downgradient/sidegradient of the Closed Interim Landfill.

In addition to evaluating groundwater in established monitoring wells, depth-discrete DPT groundwater samples were obtained from four locations installed in the vicinity of MW-303 on December 13 and 14, 2018 (**Figure 4**). The samples were analyzed for total and dissolved molybdenum. The results are summarized in **Table 4** and on **Figure 5** (laboratory analytical reports and field sample sheets are provided in **Appendix A and B**, respectively) as well as discussed below:

- Four depth intervals were sampled at each location and total molybdenum was detected in each sample, with 11 of the 16 samples above the GWPS of 100 µg/L. Concentrations of dissolved molybdenum were generally lower than total molybdenum but the observed trends with depth were similar;
- The depth interval elevation with the greatest molybdenum (total or dissolved) concentration was approximately -3.6 ft NAVD88 at each of the four locations;
- DPT-W-2 located between Ash Landfill No. 2 and MW-303 generally reported the lowest total concentrations of molybdenum; and
- DPT-W-3 located sidegradient to MW-303, furthest from Ash Landfill No. 2, reported the highest concentrations of molybdenum, with all four depth intervals containing molybdenum in exceedance of the GWPS.

3.1.4 Molybdenum in Soils

On December 11 and 12, 2018, DPT soil samples were collected at four locations in the vicinity of MW-303 as shown on **Figure 4**. Samples were collected from four to five depth intervals and submitted for analysis of total molybdenum. The results of the DPT soil sampling data are summarized in **Table 5** and shown on **Figure 6 (**laboratory analytical reports and field samples sheets are provided in **Appendix A and B**, respectively). The results are discussed below:

- Molybdenum was detected in 16 of the 17 samples collected at concentrations ranging from 0.237 to 15.8 mg/kg.
- The maximum concentration of molybdenum (15.8 mg/kg) was at DPT-S-4 at an elevation of approximately -14 ft NAVD88. DPT-S-4 is located between the CIL-SWPs and MW-303, sidegradient of Ash Landfill No. 2.
- The depth elevations where elevated concentrations of molybdenum were observed occurred between approximately 10 and -14 ft NAVD88 for DPT-S-1, DPT-S-3, and DPT-S-4. These locations are downgradient of the of the Closed Interim Landfill and the CIL-SWPs.
- Molybdenum concentrations in the soil samples from DPT-S-2 located between Ash Landfill No. 2 and MW-303, were generally the lowest. Three of the four molybdenum concentrations from this boring were "I" qualified, indicating that these concentrations were estimated and between the method detection limit and the practical quantification limit of the laboratory method.

3.1.5 Molybdenum in Surface Water

The presence of molybdenum was investigated in Site surface water and sediment samples collected from the three stormwater ponds in the vicinity of Ash Landfill No. 2. Surface water samples were collected from LF2-SWP, CIL-SWP1, and CIL-SWP2, and sediment samples were collected from CIL-SWP1 and CIL-SWP2 on 29 November 2018 (**Figure 4**). Surface water samples were analyzed for total and dissolved molybdenum, while sediment samples were analyzed for total molybdenum. The results for molybdenum are presented in **Table 6 (**laboratory analytical reports and field sample sheets are provided in **Appendix A and B**, respectively). The results are discussed below:

- Molybdenum was not detected in LF2-SWP which is downgradient of Ash Landfill No. 2 and receives runoff from that CCR Unit.
- The sediments and surface water from CIL-SWP1 and CIL-SWP2 reported elevated molybdenum concentrations. Surface water concentrations are similar in magnitude to that observed in MW-303, consistent with MW-303 being

downgradient of the Closed Interim Landfill and the CIL-SWPs receiving runoff from the Closed Interim Landfill.

3.2 Potential Alternate Source

The potentiometric surface map provided in **Figure 3** demonstrates that MW-303 is located sidegradient of Ash Landfill No. 2. Monitoring wells located upgradient/sidegradient of Ash Landfill No. 2 (MW-302 and MWI-2) reported elevated molybdenum levels (i.e., exceeding the GWPS) while molybdenum was not detected in monitoring wells located downgradient of Ash Landfill No. 2 (MW-304 and MW-308). These data indicate that Ash Landfill No. 2 is not the source of molybdenum observed in MW-303.

The lowest molybdenum concentrations reported in DPT soil and groundwater samples were generally observed at DPT-S-2 and DPT-W-2 located between Ash Landfill No. 2 and MW-303. This data further indicates that Ash Landfill No. 2 is not the source of the SSL of molybdenum in MW-303. If a transport pathway for molybdenum existed between Ash Landfill No. 2 and MW-303, the highest concentrations of molybdenum would be expected at those locations. However, this was not the case.

Molybdenum was detected in the surface water and sediment of CIL-SWP1 and CIL-SWP2, and in monitoring wells hydraulically downgradient of the Closed Interim Landfill, including MW-302, MW-303, and MWI-2. This data, combined with the lack of widespread elevated molybdenum detections across the Site, indicates that the Closed Interim Landfill is the source of elevated molybdenum observed in MW-303. The Closed Interim Landfill is regulated under FDEP National Pollutant Discharge Elimination System (NPDES) permit and is in compliance with the requirements therein.

4. CONCLUSIONS

This ASD was prepared pursuant to 40 CFR 257.95(g)(3)(ii) and provides the following lines of evidence that serve to demonstrate that the source of molybdenum is not the Ash Landfill No. 2 CCR Unit:

- Based on an analysis of the most recent groundwater elevation data, monitoring well MW-303 is not downgradient of Ash Landfill No. 2. This well is downgradient of the Closed Interim Landfill, which is south of Ash Landfill No. 2.
- Elevated molybdenum levels exceeding the GWPS of 100 µg/L were observed in monitoring wells and DPT groundwater sampling points up/side gradient of Ash Landfill No. 2 and downgradient of the Closed Interim Landfill.
- Molybdenum was not detected in the surface water of LF2-SWP.
- Molybdenum was detected in the sediment and surface water of the CIL-SWPs, with surface water concentrations similar in magnitude to that observed in MW-303.
- The source of the SSL reported for molybdenum in MW-303 is not Ash Landfill No. 2 and is likely the Closed Interim Landfill.

This ASD documents that the SSL reported for molybdenum is from a source other than the Ash Landfill No. 2. Accordingly, an assessment of corrective measures or remedial action will not be performed for Ash Landfill No. 2 at this time. Assessment and/or detection monitoring, as applicable, will continue for Ash Landfill No. 2.

5. REFERENCES

United States Environmental Protection Agency (USEPA), November 1993. *USEPA Solid Waste Disposal Facility Criteria Technical Manual.*

TABLES

TABLE 1: MOLYBDENUM RESULTS FROM HISTORICAL SOIL CORES

Plant Crist, Gulf Power Company, Pensacola, Florida

Sample ID	Sample Elevation (ft NAVD88)	Sample Date	Total Molybdenum Content (mg/kg)	Molybdenum SPLP (mg/L)
GE-5S/D-25'	4	8/14/2018	**0.484 I**	---
GE-5S/D-35'	-6	8/14/2018	0.211 U	---
GE-5S/D-38'	-9	8/14/2018	**0.327 I**	---
GE-5S/D-45'	-16	8/14/2018	**0.257 I**	---
MWC-5DR-58	-30	8/31/2018	**2.48 I**	0.000850 U
MWC-5DR-77'	-49	8/31/2018	0.403 U	---
MWC-5DR-94'	-66	8/31/2018	**1.79 I**	0.000850 U
MWC-8R-30'	74	8/31/2018	**3.06 I**	**0.00148 I**
MWC-8R-42'	62	8/31/2018	**2.09 I**	0.000850 U
MWC-8R-57'	47	8/31/2018	**0.977 I**	0.000850 U
MWC-8R-95'	9	8/14/2018	**0.0395 I**	---
MWC-8R-102'	2	8/14/2018	**0.291 I**	---
MWC-8R-112'	-8	8/14/2018	0.194 U	---
MWC-8R-132'	-28	8/14/2018	**0.836 I**	0.00200 U
MW-D-35'	81	8/31/2018	0.434 U	0.000850 U
MW-D-88'	28	8/14/2018	**0.232 I**	---
MW-D-110'	6	8/14/2018	0.210 U	---
MWP-13R-22	78	8/31/2018	0.443 U	---
MWP-13R-42	58	8/31/2018	0.454 U	---
MWP-13R-52	48	8/31/2018	0.429 U	---
MWP-13R-62'	38	8/14/2018	0.229 U	0.00200 U
MWP-13R-72'	28	8/14/2018	**0.455 I**	---
MWP-13R-102'	-2	8/14/2018	0.233 U	---
MWP-13R-112'	-12	8/14/2018	**0.346 I**	---
MWP-13R-122'	-22	8/14/2018	**0.668 I**	---
EXB-02-62'	-24	8/31/2018	0.409 U	---
EXB-02-72'	-34	8/31/2018	0.452 U	0.000850 U
GE-4DR-52'	-36	8/31/2018	0.480 U	0.000850 U
MWC-7R-30'	2	8/31/2018	0.467 U	0.000850 U
MWC-7R-62'	-30	8/31/2018	0.523 U	0.000850 U
MW-3D-60'	-30	8/31/2018	**0.540 I**	0.000850 U
MW-4D-48'	-29	8/31/2018	0.454 U	0.000850 U
MWP-11R-45'	20	8/31/2018	0.460 U	0.000850 U
MWP-11R-65'	0	8/31/2018	0.486 U	0.000850 U

Notes:

1. The GE-5 location is the same as the MWC-5 location.
2. The MW-3D location is the same as the MWI-1 location.
3. The MW-4D location is the same as the MWI-2 location.
4. ft NAVD88 indicates feet in reference to the North American Vertical Datum of 1988.
5. mg/kg indicates milligrams per kilogram.
6. mg/L indicates milligrams per liter.
7. SPLP indicates Synthetic Precipitation Leaching Procedure.
8. U indicates that the compound was analyzed but not detected.
9. I indicates that the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
10. --- indicates not analyzed.
11. **Detected constituents are shown in bold.**

TABLE 2: GROUNDWATER ELEVATIONS

Plant Crist, Gulf Power Company, Pensacola, Florida

Well ID	Sample Date	TOC Elevation (ft NAVD88)	Top of Screen Elevation (ft NAVD88)	Bottom of Screen Elevation (ft NAVD88)	Depth to Water (ft below TOC)	Groundwater Elevation (ft NAVD88)
MW-302	12/11/2018	57.97	-8.01	-18.01	45.08	12.89
MWP-10	12/11/2018	69.39	-1	-16	57.56	11.83
MW-304	12/11/2018	41.82	-3.97	-13.97	33.17	8.65
MWP-8	12/11/2018	52.48	-8	-12	42.80	9.68
MWI-1	12/11/2018	32.95	-6	-21	25.35	7.60
MWI-4	12/11/2018	34.59	-18	-28	24.47	10.12
MWI-2	12/11/2018	22.06	-6	-21	9.13	12.93
MW-303	12/11/2018	44.97	-11.13	-21.13	33.37	11.60
MW-308	12/11/2018	42.65	-12.86	-22.86	31.90	10.75

Notes:

1. NAVD88 = North American Vertical Datum of 1988

2. TOC = Top of Casing

2. ft = feet

TABLE 3: MOLYBDENUM IN GROUNDWATER

Plant Crist, Gulf Power Company, Pensacola, Florida

Sample ID	Sample Date	Molybdenum	Result (mg/L)
MW-302	12/13/2018	Total	0.333
		Dissolved	0.384
MW-303	12/13/2018	Total	0.975
		Dissolved	0.916
MW-304	12/13/2018	Total	0.002 U
		Dissolved	0.002 U
MW-308	12/13/2018	Total	0.002 U
		Dissolved	0.002 U
MWP-10	12/14/2018	Total	0.002 U
		Dissolved	0.002 U
MWI-2	12/14/2018	Total	1.13
		Dissolved	1.12

Notes:

1. mg/L = milligrams per liter
2. U = Indicates that the compound was analyzed for but not detected.

TABLE 4: MOLYBDENUM IN GROUNDWATER DPT SAMPLES

Plant Crist, Gulf Power Company, Pensacola, Florida

Sample ID	Sample Date	Sample Depth (Bottom of Interval) (ft bls)	Sample Depth (Top of Interval) (ft bls)	Average Sample Depth (ft bls)	Average Elevation (ft NAVD88)	Molybdenum	Result (mg/L)
DPT-W-1	12/14/2018	35.5	31.5	33.5	8.37	Total	0.0293
						Dissolved	0.00337 I
		47.5	43.5	45.5	-3.63	Total	1.95
						Dissolved	1.26
		58	54	56	-14.13	Total	0.181
						Dissolved	0.0577
		67.5	63.5	65.5	-23.63	Total	0.0595
						Dissolved	0.002 U
DPT-W-2	12/13/2018	38	34	36	5.87	Total	0.191
						Dissolved	0.002 U
		47.5	43.5	45.5	-3.63	Total	0.611
						Dissolved	0.241
		58	54	56	-14.13	Total	0.154
						Dissolved	0.002 U
		67.5	63.5	65.5	-23.63	Total	0.0938
						Dissolved	0.002 U
DPT-W-3	12/14/2018	35.5	31.5	33.5	8.37	Total	0.826
						Dissolved	0.00785 I
		47.5	43.5	45.5	-3.63	Total	2.05
						Dissolved	0.722
		58	54	56	-14.13	Total	0.119
						Dissolved	0.00561 I
		67.5	63.5	65.5	-23.63	Total	0.242
						Dissolved	0.002 U
DPT-W-4	12/13/12018	35.5	31.5	33.5	8.37	Total	0.0443
						Dissolved	0.00415 I
		47.5	43.5	45.5	-3.63	Total	1.11
						Dissolved	0.476
		58	54	56	-14.13	Total	0.560
						Dissolved	0.168
		67.5	63.5	65.5	-23.63	Total	0.0687
						Dissolved	0.002 U

Notes:

1. NAVD88 = North American Vertical Datum of 1988
2. bls = below land surface
3. DPT = Direct Push Technology
4. ft = feet
5. mg/L = milligrams per liter
6. I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
7. U = Indicates that the compound was analyzed for but not detected.

TABLE 5: MOLYBDENUM IN SOIL DPT SAMPLES

Plant Crist, Gulf Power Company, Pensacola, Florida

Sample ID	Sample Date	Sample Depth (ft bls)	Sample Depth Elevation (ft NAVD88)	Total Molybdenum (mg/kg)
DPT-S-1	12/11/2018	20	21.87	0.207 U
		34	7.87	0.332 I
		48	-6.13	12.7
		58	-16.13	3.14
DPT-S-2	12/11/2018	14	27.87	2.73
		28	13.87	0.339 I
		38	3.87	0.380 I
	12/12/2018	60	-18.13	0.432 I
DPT-S-3	12/12/2018	14.5	27.37	0.588 I
		31	10.87	8.40
		46	-4.13	6.14
		63	-21.13	0.886 I
DPT-S-4	12/12/2018	14	27.87	0.536 I
		31	10.87	0.262 I
		47	-5.13	2.50
		56	-14.13	15.8
		63	-21.13	0.237 I

Notes:

1. NAVD88 = North American Vertical Datum of 1988
2. bls = below land surface
3. DPT = Direct Push Technology
4. mg/kg = milligram per kilogram
5. ft = feet
6. I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
7. U = Indicates that the compound was analyzed for but not detected.

TABLE 6: MOLYBDENUM IN SURFACE WATER AND SEDIMENT SAMPLES

Plant Crist, Gulf Power Company, Pensacola, Florida

Sample ID	Sample Date	Molybdenum	Result	Unit
SW-1	11/29/2018	Total	0.002 U	mg/L
		Dissolved	0.002 U	mg/L
SW-2	11/29/2018	Total	0.367	mg/L
		Dissolved	0.361	mg/L
SW-3	11/29/2018	Total	0.591	mg/L
		Dissolved	0.569	mg/L
SED-1	11/29/2018	Total	11.0	mg/kg
SED-2	11/29/2018	Total	2.22	mg/kg

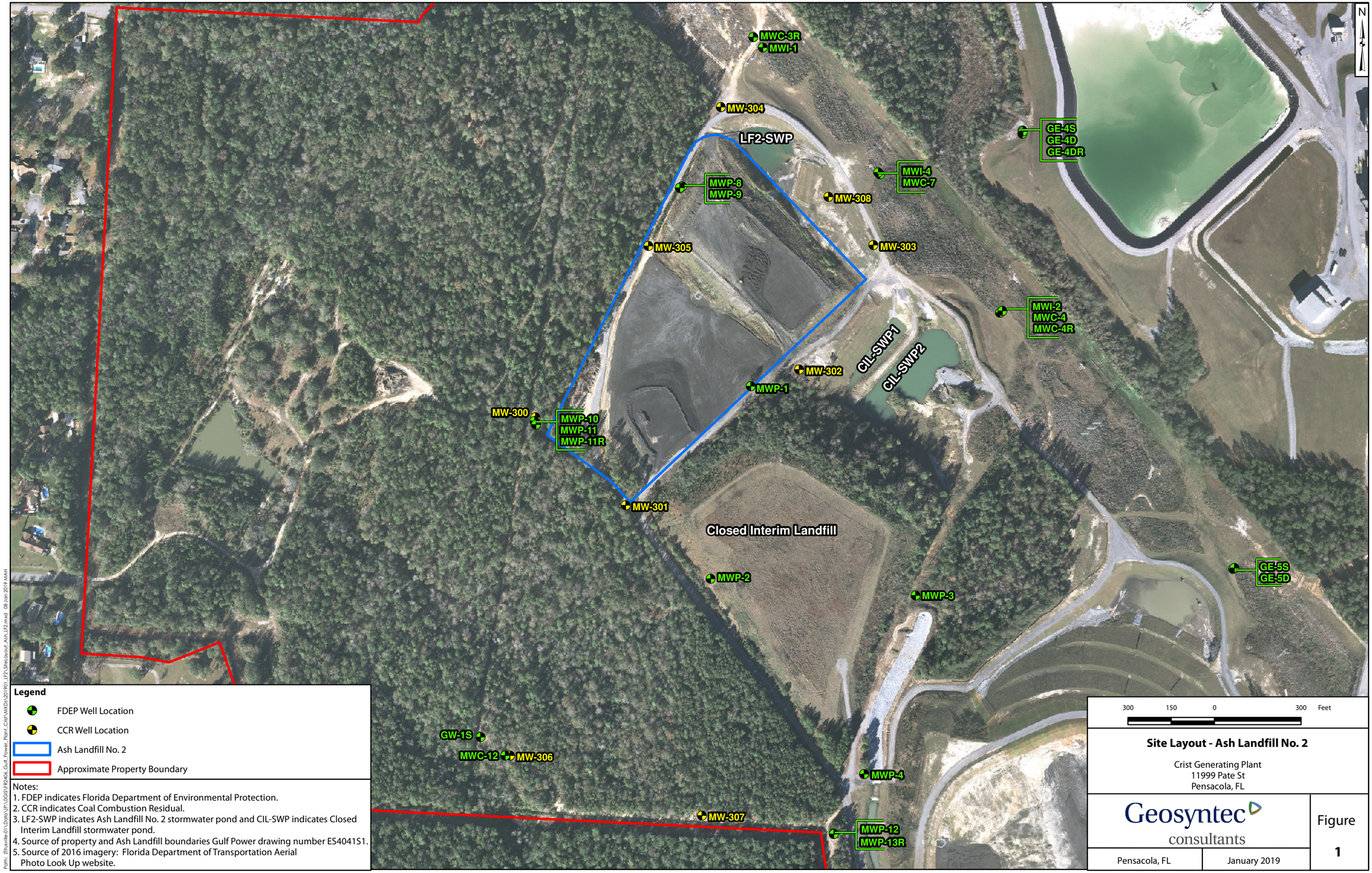
Notes:

1. SW = surface water; SED = sediment

2. U = Indicates that the compound was analyzed for but not detected.

2. mg/L = milligrams per liter; mg/kg = milligrams per kilogram

FIGURES



Legend

- FDEP Well Location
- CCR Well Location
- Ash Landfill No. 2
- Approximate Property Boundary

Notes:
1. FDEP indicates Florida Department of Environmental Protection.
2. CCR indicates Coal Combustion Residual.
3. LF2-SWP indicates Ash Landfill No. 2 stormwater pond and CIL-SWP indicates Closed Interim Landfill stormwater pond.
4. Source of property and Ash Landfill boundaries Gulf Power drawing number ES4041S1.
5. Source of 2016 imagery: Florida Department of Transportation Aerial Photo Look Up website.

Site Layout - Ash Landfill No. 2

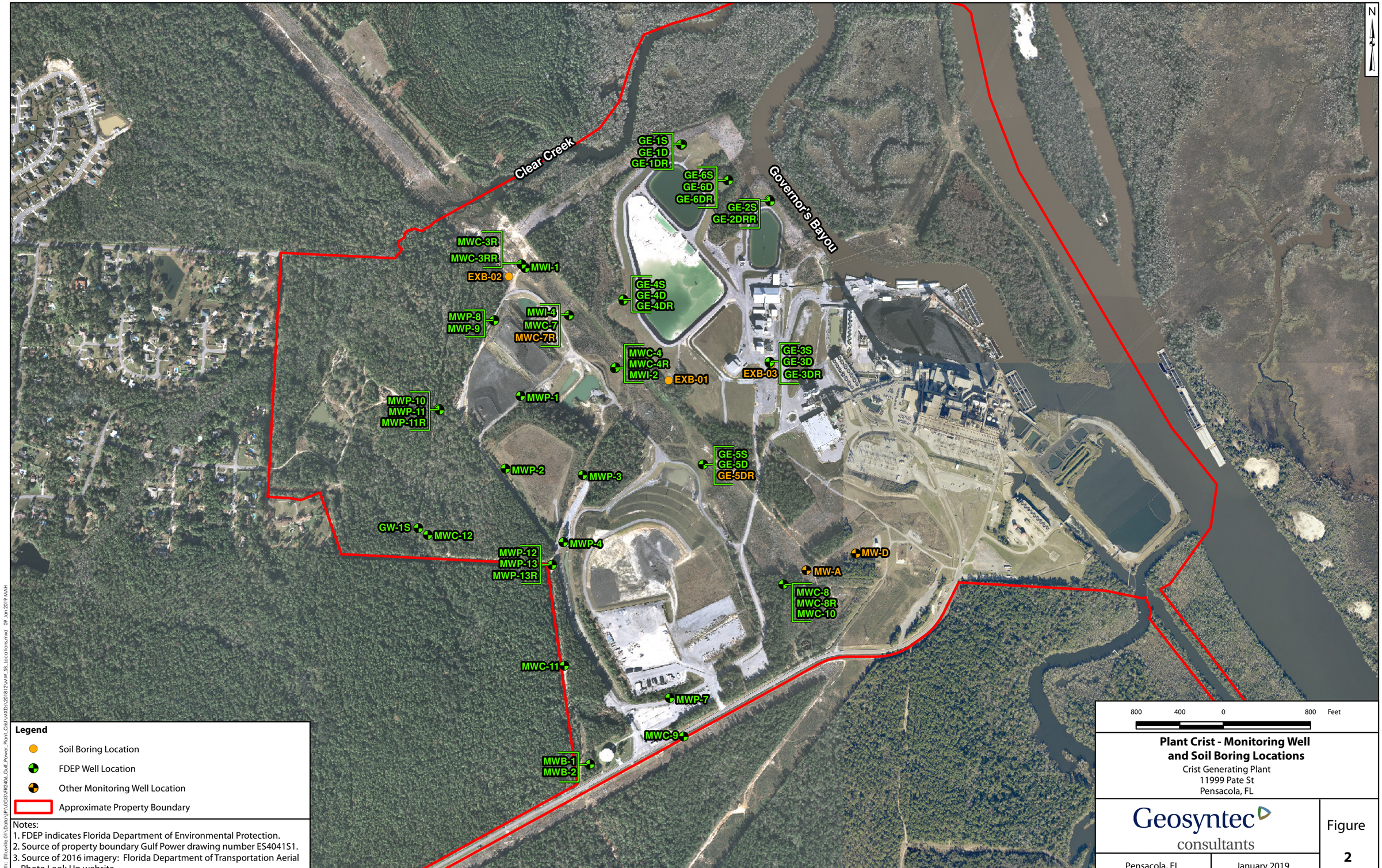
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 1

Path: [Filesville01\Data\]P:\GGS\FR2406_Gulf_Power_Plant_Crist\MXD\x201901_LF2\SiteLayout_Ash_LF2.mxd 08 Jan 2019 MAH



Legend

- Soil Boring Location
- FDEP Well Location
- Other Monitoring Well Location
- Approximate Property Boundary

Notes:
1. FDEP indicates Florida Department of Environmental Protection.
2. Source of property boundary Gulf Power drawing number ES4041S1.
3. Source of 2016 imagery: Florida Department of Transportation Aerial Photo Look Up website.

Plant Crist - Monitoring Well and Soil Boring Locations

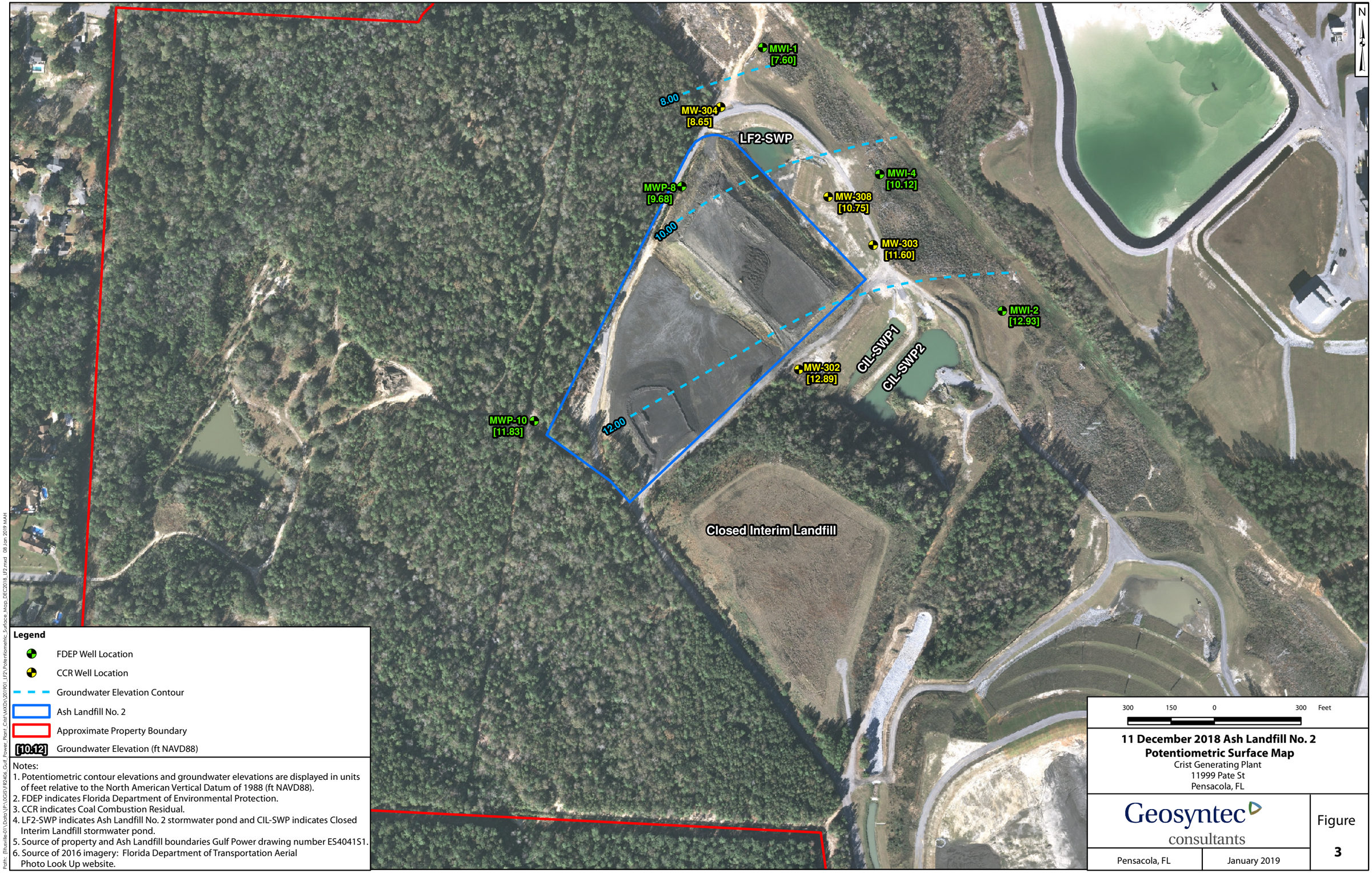
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 2

Path: [Ifiaxville-01\Data\]P:\GGS\FR2406, Gulf, Power, Plant, Crist\MXD\201812\MW_SB_locations.mxd 09 Jan 2019 MAH



Notes:
1. Potentiometric contour elevations and groundwater elevations are displayed in units of feet relative to the North American Vertical Datum of 1988 (ft NAVD88).
2. FDEP indicates Florida Department of Environmental Protection.
3. CCR indicates Coal Combustion Residual.
4. LF2-SWP indicates Ash Landfill No. 2 stormwater pond and CIL-SWP indicates Closed Interim Landfill stormwater pond.
5. Source of property and Ash Landfill boundaries Gulf Power drawing number ES4041S1.
6. Source of 2016 imagery: Florida Department of Transportation Aerial Photo Look Up website.

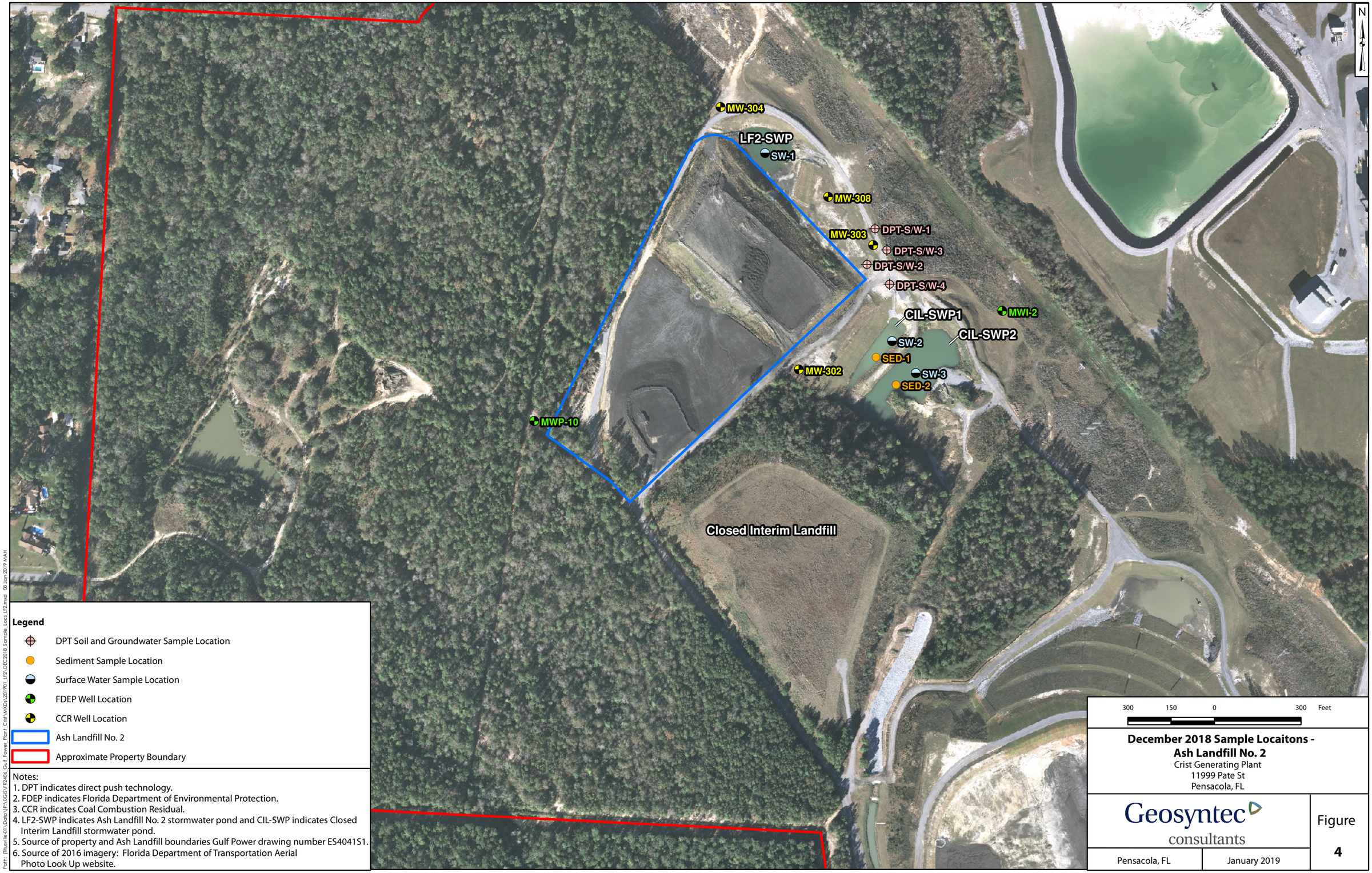
11 December 2018 Ash Landfill No. 2
Potentiometric Surface Map
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 3

Path: [Illustrator]\Data\JPI\GGS\FR2406_Gulf_Power_Plant_Crist\MXD\x201901_LF2\Potentiometric_Surface_Map_DEC2018_LF2.mxd 08 Jan 2019 MAH



Notes:
1. DPT indicates direct push technology.
2. FDEP indicates Florida Department of Environmental Protection.
3. CCR indicates Coal Combustion Residual.
4. LF2-SWP indicates Ash Landfill No. 2 stormwater pond and CIL-SWP indicates Closed Interim Landfill stormwater pond.
5. Source of property and Ash Landfill boundaries Gulf Power drawing number ES4041S1.
6. Source of 2016 imagery: Florida Department of Transportation Aerial Photo Look Up website.

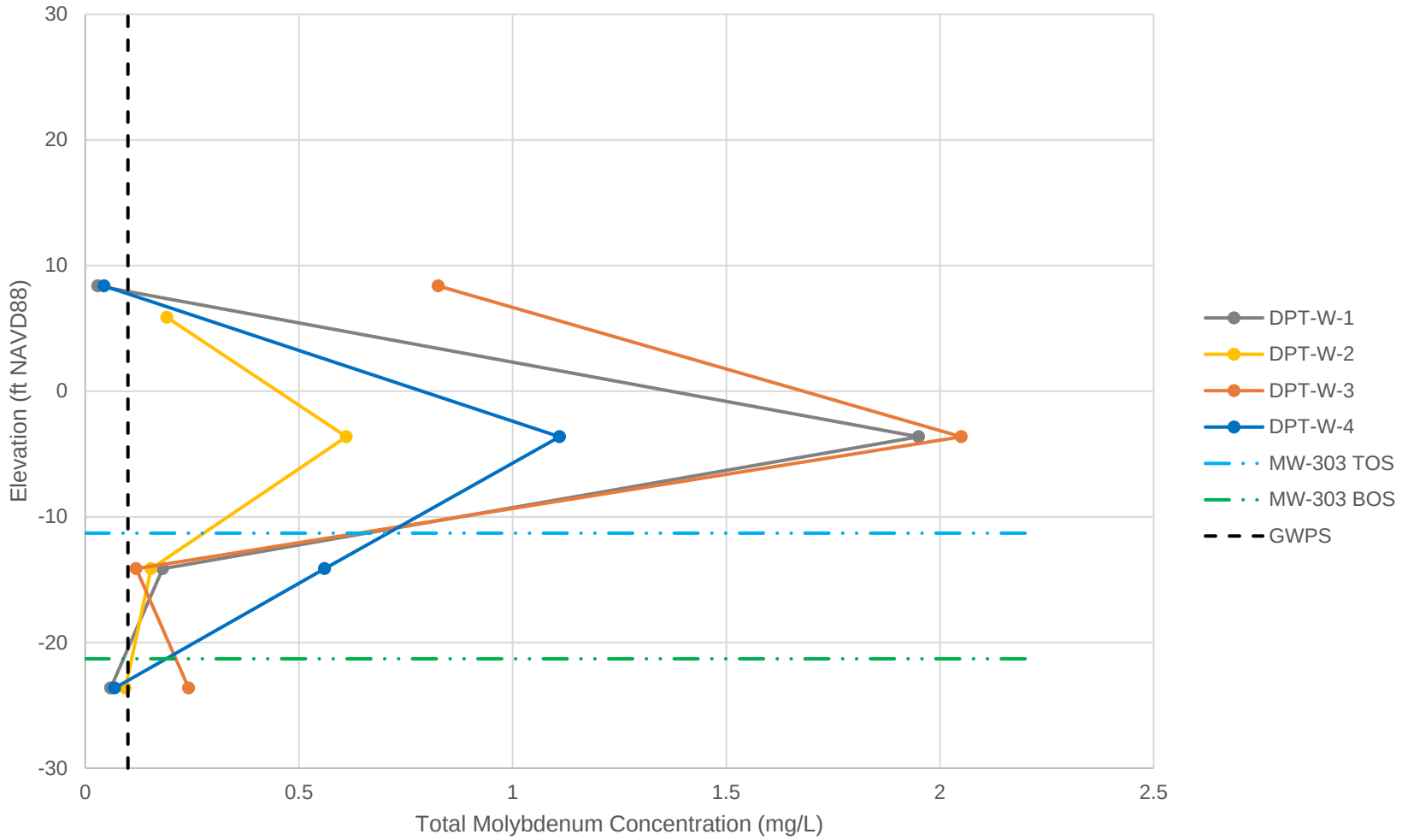
December 2018 Sample Locaitons - Ash Landfill No. 2
Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants

Pensacola, FL | January 2019

Figure 4

Path: [Huxville01\Data\]Fr\GGS\FR2406_Gulf_Power_Plant_Crist\MXD\x201901_LF2\DEC2018_Sample_Locs_LF2.mxd 09 Jan 2019 MAH



Notes:

1. DPT = Direct Push Technology
2. mg/L = milligrams per liter
3. NAVD88 = North American Vertical Datum of 1988
4. TOS = Top of Screen
5. BOS = Bottom of Screen
6. GWPS = Groundwater Protection Standard (0.1 mg/L)

Total Molybdenum Concentration in DPT Groundwater Samples

Crist Generating Plant
11999 Pate St
Pensacola, FL

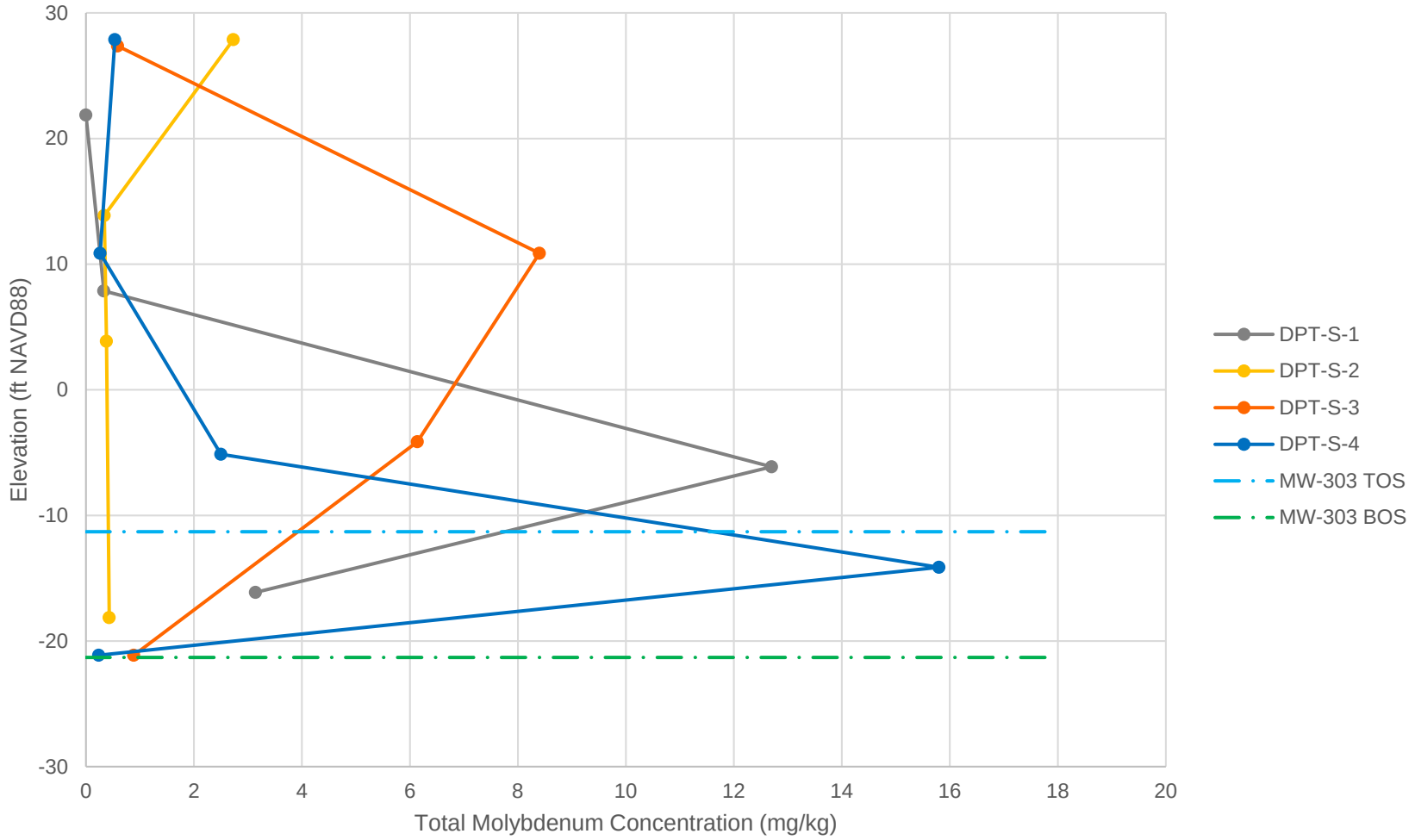
Geosyntec consultants
Pensacola, Florida

Project No. TXR0943

January 2019

Figure

5



Notes:

1. DPT = Direct Push Technology
2. mg/kg = milligrams per kilogram
3. NAVD88 = North American Vertical Datum of 1988
4. TOS = Top of Screen
5. BOS = Bottom of Screen

Total Molybdenum Concentration in DPT Soil Samples

Crist Generating Plant
11999 Pate St
Pensacola, FL

Geosyntec consultants
Pensacola, Florida

Project No. TXR0943

January 2019

Figure

6

APPENDIX A

Laboratory Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-157728-1
TestAmerica Sample Delivery Group: Cobalt
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
8/17/2018 4:41:28 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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QC Sample Results 16
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Receipt Checklists 19
Certification Summary 20

Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

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 PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-157728-1	GE-5S/D-25'	Solid	08/14/18 11:18	08/14/18 14:23
400-157728-2	GE-5S/D-35'	Solid	08/14/18 11:15	08/14/18 14:23
400-157728-3	GE-5S/D-38'	Solid	08/14/18 11:11	08/14/18 14:23
400-157728-4	GE-5S/D-45'	Solid	08/14/18 11:14	08/14/18 14:23
400-157728-5	MWC-8R-95'	Solid	08/14/18 11:26	08/14/18 14:23
400-157728-6	MWC-8R-102'	Solid	08/14/18 11:28	08/14/18 14:23
400-157728-7	MWC-8R-112'	Solid	08/14/18 11:30	08/14/18 14:23
400-157728-8	MWC-8R-132'	Solid	08/14/18 11:32	08/14/18 14:23
400-157728-9	MW-D-88'	Solid	08/14/18 11:50	08/14/18 14:23
400-157728-10	MW-D-110	Solid	08/14/18 11:46	08/14/18 14:23
400-157728-11	P-13R-62'	Solid	08/14/18 13:16	08/14/18 14:23
400-157728-12	P-13R-72'	Solid	08/14/18 13:18	08/14/18 14:23
400-157728-13	P-13R-102'	Solid	08/14/18 13:20	08/14/18 14:23
400-157728-14	P-13R-112'	Solid	08/14/18 13:23	08/14/18 14:23
400-157728-15	P-13R-122'	Solid	08/14/18 13:22	08/14/18 14:23

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: GE-5S/D-25'
Lab Sample ID: 400-157728-1
Date Collected: 08/14/18 11:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 94.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.298	U	0.992	0.298	mg/Kg	☼	08/16/18 09:05	08/16/18 15:49	1

Client Sample ID: GE-5S/D-35'
Lab Sample ID: 400-157728-2
Date Collected: 08/14/18 11:15
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.6

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.317	U	1.06	0.317	mg/Kg	☼	08/16/18 09:05	08/16/18 16:05	1

Client Sample ID: GE-5S/D-38'
Lab Sample ID: 400-157728-3
Date Collected: 08/14/18 11:11
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.314	U	1.05	0.314	mg/Kg	☼	08/16/18 09:05	08/16/18 16:08	1

Client Sample ID: GE-5S/D-45'
Lab Sample ID: 400-157728-4
Date Collected: 08/14/18 11:14
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 96.9

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.280	U	0.934	0.280	mg/Kg	☼	08/16/18 09:05	08/16/18 16:21	1

Client Sample ID: MWC-8R-95'
Lab Sample ID: 400-157728-5
Date Collected: 08/14/18 11:26
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 858.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0321	U	0.107	0.0321	mg/Kg	☼	08/16/18 09:05	08/16/18 16:25	1

Client Sample ID: MWC-8R-102'
Lab Sample ID: 400-157728-6
Date Collected: 08/14/18 11:28
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 89.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.327	U	1.09	0.327	mg/Kg	☼	08/16/18 09:05	08/16/18 16:28	1

Client Sample ID: MWC-8R-112'
Lab Sample ID: 400-157728-7
Date Collected: 08/14/18 11:30
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 93.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.291	U	0.969	0.291	mg/Kg	☼	08/16/18 09:05	08/16/18 16:31	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: MWC-8R-132'

Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	3.75		1.21	0.363	mg/Kg	☼	08/16/18 09:05	08/16/18 16:35	1

Client Sample ID: MW-D-88'

Lab Sample ID: 400-157728-9
Date Collected: 08/14/18 11:50
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 88.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.307	U	1.02	0.307	mg/Kg	☼	08/16/18 09:05	08/16/18 16:38	1

Client Sample ID: MW-D-110

Lab Sample ID: 400-157728-10
Date Collected: 08/14/18 11:46
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 92.1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.315	U	1.05	0.315	mg/Kg	☼	08/16/18 09:05	08/16/18 16:41	1

Client Sample ID: P-13R-62'

Lab Sample ID: 400-157728-11
Date Collected: 08/14/18 13:16
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.770	I	1.15	0.344	mg/Kg	☼	08/16/18 09:05	08/16/18 16:45	1

Client Sample ID: P-13R-72'

Lab Sample ID: 400-157728-12
Date Collected: 08/14/18 13:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 84.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.330	U	1.10	0.330	mg/Kg	☼	08/16/18 09:05	08/16/18 16:48	1

Client Sample ID: P-13R-102'

Lab Sample ID: 400-157728-13
Date Collected: 08/14/18 13:20
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 85.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.350	U	1.17	0.350	mg/Kg	☼	08/16/18 09:05	08/16/18 16:51	1

Client Sample ID: P-13R-112'

Lab Sample ID: 400-157728-14
Date Collected: 08/14/18 13:23
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 90.3

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.303	U	1.01	0.303	mg/Kg	☼	08/16/18 09:05	08/16/18 17:04	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: P-13R-122'

Date Collected: 08/14/18 13:22
Date Received: 08/14/18 14:23

Lab Sample ID: 400-157728-15

Matrix: Solid
Percent Solids: 77.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.375	U	1.25	0.375	mg/Kg	☼	08/16/18 09:05	08/16/18 17:08	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: GE-5S/D-25'
Lab Sample ID: 400-157728-1
Date Collected: 08/14/18 11:18
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: GE-5S/D-25'
Lab Sample ID: 400-157728-1
Date Collected: 08/14/18 11:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 15:49	GESP	TAL PEN

Client Sample ID: GE-5S/D-35'
Lab Sample ID: 400-157728-2
Date Collected: 08/14/18 11:15
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: GE-5S/D-35'
Lab Sample ID: 400-157728-2
Date Collected: 08/14/18 11:15
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:05	GESP	TAL PEN

Client Sample ID: GE-5S/D-38'
Lab Sample ID: 400-157728-3
Date Collected: 08/14/18 11:11
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: GE-5S/D-38'
Lab Sample ID: 400-157728-3
Date Collected: 08/14/18 11:11
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:08	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: GE-5S/D-45'
Lab Sample ID: 400-157728-4
Date Collected: 08/14/18 11:14
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: GE-5S/D-45'
Lab Sample ID: 400-157728-4
Date Collected: 08/14/18 11:14
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:21	GESP	TAL PEN

Client Sample ID: MWC-8R-95'
Lab Sample ID: 400-157728-5
Date Collected: 08/14/18 11:26
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MWC-8R-95'
Lab Sample ID: 400-157728-5
Date Collected: 08/14/18 11:26
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 858.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:25	GESP	TAL PEN

Client Sample ID: MWC-8R-102'
Lab Sample ID: 400-157728-6
Date Collected: 08/14/18 11:28
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MWC-8R-102'
Lab Sample ID: 400-157728-6
Date Collected: 08/14/18 11:28
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:28	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: MWC-8R-112'
Lab Sample ID: 400-157728-7
Date Collected: 08/14/18 11:30
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MWC-8R-112'
Lab Sample ID: 400-157728-7
Date Collected: 08/14/18 11:30
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:31	GESP	TAL PEN

Client Sample ID: MWC-8R-132'
Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MWC-8R-132'
Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:35	GESP	TAL PEN

Client Sample ID: MW-D-88'
Lab Sample ID: 400-157728-9
Date Collected: 08/14/18 11:50
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MW-D-88'
Lab Sample ID: 400-157728-9
Date Collected: 08/14/18 11:50
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:38	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: MW-D-110 — Lab Sample ID: 400-157728-10

Date Collected: 08/14/18 11:46
Date Received: 08/14/18 14:23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: MW-D-110 — Lab Sample ID: 400-157728-10

Date Collected: 08/14/18 11:46
Date Received: 08/14/18 14:23
Matrix: Solid
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:41	GESP	TAL PEN

Client Sample ID: P-13R-62' — Lab Sample ID: 400-157728-11

Date Collected: 08/14/18 13:16
Date Received: 08/14/18 14:23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: P-13R-62' — Lab Sample ID: 400-157728-11

Date Collected: 08/14/18 13:16
Date Received: 08/14/18 14:23
Matrix: Solid
Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:45	GESP	TAL PEN

Client Sample ID: P-13R-72' — Lab Sample ID: 400-157728-12

Date Collected: 08/14/18 13:18
Date Received: 08/14/18 14:23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: P-13R-72' — Lab Sample ID: 400-157728-12

Date Collected: 08/14/18 13:18
Date Received: 08/14/18 14:23
Matrix: Solid
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:48	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Client Sample ID: P-13R-102'
Lab Sample ID: 400-157728-13
Date Collected: 08/14/18 13:20
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: P-13R-102'
Lab Sample ID: 400-157728-13
Date Collected: 08/14/18 13:20
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:51	GESP	TAL PEN

Client Sample ID: P-13R-112'
Lab Sample ID: 400-157728-14
Date Collected: 08/14/18 13:23
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: P-13R-112'
Lab Sample ID: 400-157728-14
Date Collected: 08/14/18 13:23
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 17:04	GESP	TAL PEN

Client Sample ID: P-13R-122'
Lab Sample ID: 400-157728-15
Date Collected: 08/14/18 13:22
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	408323	08/17/18 09:18	TMP	TAL PEN

Client Sample ID: P-13R-122'
Lab Sample ID: 400-157728-15
Date Collected: 08/14/18 13:22
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 17:08	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Metals

Prep Batch: 408117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-1	GE-5S/D-25'	Total/NA	Solid	3050B	
400-157728-2	GE-5S/D-35'	Total/NA	Solid	3050B	
400-157728-3	GE-5S/D-38'	Total/NA	Solid	3050B	
400-157728-4	GE-5S/D-45'	Total/NA	Solid	3050B	
400-157728-5	MWC-8R-95'	Total/NA	Solid	3050B	
400-157728-6	MWC-8R-102'	Total/NA	Solid	3050B	
400-157728-7	MWC-8R-112'	Total/NA	Solid	3050B	
400-157728-8	MWC-8R-132'	Total/NA	Solid	3050B	
400-157728-9	MW-D-88'	Total/NA	Solid	3050B	
400-157728-10	MW-D-110	Total/NA	Solid	3050B	
400-157728-11	P-13R-62'	Total/NA	Solid	3050B	
400-157728-12	P-13R-72'	Total/NA	Solid	3050B	
400-157728-13	P-13R-102'	Total/NA	Solid	3050B	
400-157728-14	P-13R-112'	Total/NA	Solid	3050B	
400-157728-15	P-13R-122'	Total/NA	Solid	3050B	
MB 400-408117/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-408117/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-157728-1 MS	GE-5S/D-25'	Total/NA	Solid	3050B	
400-157728-1 MSD	GE-5S/D-25'	Total/NA	Solid	3050B	

Analysis Batch: 408304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-1	GE-5S/D-25'	Total/NA	Solid	6010C	408117
400-157728-2	GE-5S/D-35'	Total/NA	Solid	6010C	408117
400-157728-3	GE-5S/D-38'	Total/NA	Solid	6010C	408117
400-157728-4	GE-5S/D-45'	Total/NA	Solid	6010C	408117
400-157728-5	MWC-8R-95'	Total/NA	Solid	6010C	408117
400-157728-6	MWC-8R-102'	Total/NA	Solid	6010C	408117
400-157728-7	MWC-8R-112'	Total/NA	Solid	6010C	408117
400-157728-8	MWC-8R-132'	Total/NA	Solid	6010C	408117
400-157728-9	MW-D-88'	Total/NA	Solid	6010C	408117
400-157728-10	MW-D-110	Total/NA	Solid	6010C	408117
400-157728-11	P-13R-62'	Total/NA	Solid	6010C	408117
400-157728-12	P-13R-72'	Total/NA	Solid	6010C	408117
400-157728-13	P-13R-102'	Total/NA	Solid	6010C	408117
400-157728-14	P-13R-112'	Total/NA	Solid	6010C	408117
400-157728-15	P-13R-122'	Total/NA	Solid	6010C	408117
MB 400-408117/1-A	Method Blank	Total/NA	Solid	6010C	408117
LCS 400-408117/2-A	Lab Control Sample	Total/NA	Solid	6010C	408117
400-157728-1 MS	GE-5S/D-25'	Total/NA	Solid	6010C	408117
400-157728-1 MSD	GE-5S/D-25'	Total/NA	Solid	6010C	408117

General Chemistry

Analysis Batch: 408323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-1	GE-5S/D-25'	Total/NA	Solid	Moisture	
400-157728-2	GE-5S/D-35'	Total/NA	Solid	Moisture	
400-157728-3	GE-5S/D-38'	Total/NA	Solid	Moisture	
400-157728-4	GE-5S/D-45'	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 408323 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-5	MWC-8R-95'	Total/NA	Solid	Moisture	
400-157728-6	MWC-8R-102'	Total/NA	Solid	Moisture	
400-157728-7	MWC-8R-112'	Total/NA	Solid	Moisture	
400-157728-8	MWC-8R-132'	Total/NA	Solid	Moisture	
400-157728-9	MW-D-88'	Total/NA	Solid	Moisture	
400-157728-10	MW-D-110	Total/NA	Solid	Moisture	
400-157728-11	P-13R-62'	Total/NA	Solid	Moisture	
400-157728-12	P-13R-72'	Total/NA	Solid	Moisture	
400-157728-13	P-13R-102'	Total/NA	Solid	Moisture	
400-157728-14	P-13R-112'	Total/NA	Solid	Moisture	
400-157728-15	P-13R-122'	Total/NA	Solid	Moisture	
400-157728-1 DU	GE-5S/D-25'	Total/NA	Solid	Moisture	

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-408117/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.298	U	0.994	0.298	mg/Kg		08/16/18 09:05	08/16/18 15:42	1

Lab Sample ID: LCS 400-408117/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cobalt			99.5	100.4		mg/Kg		101	80 - 120		

Lab Sample ID: 400-157728-1 MS — **Client Sample ID: GE-5S/D-25'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cobalt	0.298	U	101	97.90		mg/Kg	☼	97	75 - 125		

Lab Sample ID: 400-157728-1 MSD — **Client Sample ID: GE-5S/D-25'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	0.298	U	99.8	97.36		mg/Kg	☼	98	75 - 125	1	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. JOHNSON	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76466-29903.1
Client Contact: Kristi Mitchell	Phone: 850-483-5100	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 3
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): STANDARD			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Colbalt	Project #: 40000612			
Site: PLANT CRIST	SSOW#:			

Analysis Requested

400-157728 COC

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Colbalt	6010C - Colbalt	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
GE-5S/D-25'	8/14/18	11:18	C	Solid			X	X		HOLD SPLP PENDING TOTAL Co RESULTS
GE-5S/D-35'		11:15	C	Solid			X	X		
GE-5S/D-38'		11:11	C	Solid			X	X		
GE-5S/D-45'		11:14	C	Solid			X	X		
MWC-8R-95'		11:26	C	Solid			X	X		
MWC-8R-102'		11:28	C	Solid			X	X		
MWC-8R-112'		11:30	C	Solid			X	X		
MWC-8R-132'		11:32	C	Solid			X	X		
MW-D-88'		11:50	C	Solid			X	X		
MW-D-110'		11:46	C	Solid			X	X		
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
M. Zdat	8/14/2018 14:23	GCO		8/14/18 1423	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company: JAPEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 24.2°C IR8

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. JOHNSON	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76466-29903.2
Client Contact: Kristi Mitchell	Phone: 850-483-5100	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 3
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): STANDARD			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Colbalt	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Colbalt	6010C - Colbalt	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
P-13R-62'	8/14/18	13:16		Solid			X	X		HOLD SPLP
P-13R-72'		13:18		Solid			X	X		ANALYSES
P-13R-102'		13:20		Solid			X	X		PENDING TOTAL
P-13R-112'		13:23		Solid			X	X		CO RESULTS
P-13R-122'		13:22		Solid			X	X		
				Solid						
				Solid						
				Solid						
				Solid						
				Solid						
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
M. Fralat	8/14/2018 14:23	GEO		8/14/18 1423	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 24.2°C	Company TAPEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 24.2°C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-157728-1
SDG Number: Cobalt

Login Number: 157728
List Number: 1
Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	24.2°C IR8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-1
SDG: Cobalt

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-18
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-157728-2
TestAmerica SDG: SPLP Cobalt & Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
8/28/2018 7:06:54 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
1312	SPLP Extraction	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-157728-8	MWC-8R-132'	Solid	08/14/18 11:32	08/14/18 14:23
400-157728-11	P-13R-62'	Solid	08/14/18 13:16	08/14/18 14:23

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Client Sample ID: MWC-8R-132'

Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23

Method: 6010C - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.141**		0.0100	0.00300	mg/L		08/26/18 07:32	08/26/18 14:48	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		08/26/18 07:32	08/26/18 14:48	1

Client Sample ID: P-13R-62'

Lab Sample ID: 400-157728-11
Date Collected: 08/14/18 13:16
Matrix: Solid
Date Received: 08/14/18 14:23

Method: 6010C - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.00300	U	0.0100	0.00300	mg/L		08/26/18 07:32	08/26/18 14:22	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		08/26/18 07:32	08/26/18 14:22	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Client Sample ID: MWC-8R-132'

Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			409043	08/23/18 14:50	SLB	TAL PEN
SPLP East	Prep	3010A			409265	08/26/18 07:32	CWF	TAL PEN
SPLP East	Analysis	6010C		1	409313	08/26/18 14:48	GESP	TAL PEN

Client Sample ID: P-13R-62'

Lab Sample ID: 400-157728-11
Date Collected: 08/14/18 13:16
Matrix: Solid
Date Received: 08/14/18 14:23

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			409043	08/23/18 14:50	SLB	TAL PEN
SPLP East	Prep	3010A			409265	08/26/18 07:32	CWF	TAL PEN
SPLP East	Analysis	6010C		1	409313	08/26/18 14:22	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Metals

Leach Batch: 409043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-8	MWC-8R-132'	SPLP East	Solid	1312	
400-157728-11	P-13R-62'	SPLP East	Solid	1312	
LB 400-409043/1-D	Method Blank	SPLP East	Solid	1312	
400-157728-11 MS	P-13R-62'	SPLP East	Solid	1312	
400-157728-11 MSD	P-13R-62'	SPLP East	Solid	1312	

Prep Batch: 409265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-8	MWC-8R-132'	SPLP East	Solid	3010A	409043
400-157728-11	P-13R-62'	SPLP East	Solid	3010A	409043
LB 400-409043/1-D	Method Blank	SPLP East	Solid	3010A	409043
LCS 400-409265/2-A	Lab Control Sample	Total/NA	Solid	3010A	
400-157728-11 MS	P-13R-62'	SPLP East	Solid	3010A	409043
400-157728-11 MSD	P-13R-62'	SPLP East	Solid	3010A	409043

Analysis Batch: 409313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-8	MWC-8R-132'	SPLP East	Solid	6010C	409265
400-157728-11	P-13R-62'	SPLP East	Solid	6010C	409265
LB 400-409043/1-D	Method Blank	SPLP East	Solid	6010C	409265
LCS 400-409265/2-A	Lab Control Sample	Total/NA	Solid	6010C	409265
400-157728-11 MS	P-13R-62'	SPLP East	Solid	6010C	409265
400-157728-11 MSD	P-13R-62'	SPLP East	Solid	6010C	409265

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: LCS 400-409265/2-A
Matrix: Solid
Analysis Batch: 409313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 409265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	1.00	0.9812		mg/L		98	80 - 120
Molybdenum	1.00	1.061		mg/L		106	80 - 120

Lab Sample ID: LB 400-409043/1-D
Matrix: Solid
Analysis Batch: 409313

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 409265

Analyte	LB Result	LB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.00300	U	0.0100	0.00300	mg/L		08/26/18 07:32	08/26/18 14:15	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		08/26/18 07:32	08/26/18 14:15	1

Lab Sample ID: 400-157728-11 MS
Matrix: Solid
Analysis Batch: 409313

Client Sample ID: P-13R-62'
Prep Type: SPLP East
Prep Batch: 409265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.00300	U	1.00	0.9587		mg/L		96	75 - 125
Molybdenum	0.00200	U	1.00	1.028		mg/L		103	75 - 125

Lab Sample ID: 400-157728-11 MSD
Matrix: Solid
Analysis Batch: 409313

Client Sample ID: P-13R-62'
Prep Type: SPLP East
Prep Batch: 409265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	0.00300	U	1.00	0.9896		mg/L		99	75 - 125	3	20
Molybdenum	0.00200	U	1.00	1.057		mg/L		106	75 - 125	3	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. JOHNSON	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76466-29903.1
Client Contact: Kristi Mitchell	Phone: 850-483-5100	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 3
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): STANDARD			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Colbalt	Project #: 40000612			
Site: PLANT CRIST	SSOW#:			

Analysis Requested

400-157728 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Colbalt	6010C - Colbalt	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
GE-5S/D-25'	8/14/18	11:18	C	Solid			X	X		HOLD SPLP PENDING TOTAL Co RESULTS
GE-5S/D-35'		11:15	C	Solid			X	X		
GE-5S/D-38'		11:11	C	Solid			X	X		
GE-5S/D-45'		11:14	C	Solid			X	X		
MWC-8R-95'		11:26	C	Solid			X	X		
MWC-8R-102'		11:28	C	Solid			X	X		
MWC-8R-112'		11:30	C	Solid			X	X		
MWC-8R-132'		11:32	C	Solid			X	X		
MW-D-88'		11:50	C	Solid			X	X		
MW-D-110'		11:46	C	Solid			X	X		
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
M. Zdat	8/14/2018 14:23	GCO		8/14/18 1423	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company: JAPEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 24.2°C IR8

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. JOHNSON	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76466-29903.2
Client Contact: Kristi Mitchell	Phone: 850-483-5100	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 3
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): STANDARD			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Colbalt	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Colbalt	6010C - Colbalt	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
P-13R-62'	8/14/18	13:16		Solid			X	X		HOLD SPLP
P-13R-72'		13:18		Solid			X	X		ANALYSES
P-13R-102'		13:20		Solid			X	X		PENDING TOTAL
P-13R-112'		13:23		Solid			X	X		CO RESULTS
P-13R-122'		13:22		Solid			X	X		
				Solid						
				Solid						
				Solid						
				Solid						
				Solid						
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
M. Johnson	8/14/2018 14:23	GPC		8/14/18 1423	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 24.2°C	Company TAPEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 24.2°C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-157728-2
SDG Number: SPLP Cobalt & Molybdenum

Login Number: 157728
List Number: 1
Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	24.2°C IR8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-2
SDG: SPLP Cobalt & Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-157728-3
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
8/23/2018 4:50:02 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-157728-1	GE-5S/D-25'	Solid	08/14/18 11:18	08/14/18 14:23
400-157728-2	GE-5S/D-35'	Solid	08/14/18 11:15	08/14/18 14:23
400-157728-3	GE-5S/D-38'	Solid	08/14/18 11:11	08/14/18 14:23
400-157728-4	GE-5S/D-45'	Solid	08/14/18 11:14	08/14/18 14:23
400-157728-5	MWC-8R-95'	Solid	08/14/18 11:26	08/14/18 14:23
400-157728-6	MWC-8R-102'	Solid	08/14/18 11:28	08/14/18 14:23
400-157728-7	MWC-8R-112'	Solid	08/14/18 11:30	08/14/18 14:23
400-157728-8	MWC-8R-132'	Solid	08/14/18 11:32	08/14/18 14:23
400-157728-9	MW-D-88'	Solid	08/14/18 11:50	08/14/18 14:23
400-157728-10	MW-D-110	Solid	08/14/18 11:46	08/14/18 14:23
400-157728-11	P-13R-62'	Solid	08/14/18 13:16	08/14/18 14:23
400-157728-12	P-13R-72'	Solid	08/14/18 13:18	08/14/18 14:23
400-157728-13	P-13R-102'	Solid	08/14/18 13:20	08/14/18 14:23
400-157728-14	P-13R-112'	Solid	08/14/18 13:23	08/14/18 14:23
400-157728-15	P-13R-122'	Solid	08/14/18 13:22	08/14/18 14:23

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: GE-5S/D-25'
Lab Sample ID: 400-157728-1
Date Collected: 08/14/18 11:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 94.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.484	I	0.992	0.198	mg/Kg	☼	08/16/18 09:05	08/16/18 15:49	1

Client Sample ID: GE-5S/D-35'
Lab Sample ID: 400-157728-2
Date Collected: 08/14/18 11:15
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.6

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.211	U	1.06	0.211	mg/Kg	☼	08/16/18 09:05	08/16/18 16:05	1

Client Sample ID: GE-5S/D-38'
Lab Sample ID: 400-157728-3
Date Collected: 08/14/18 11:11
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.327	I	1.05	0.210	mg/Kg	☼	08/16/18 09:05	08/16/18 16:08	1

Client Sample ID: GE-5S/D-45'
Lab Sample ID: 400-157728-4
Date Collected: 08/14/18 11:14
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 96.9

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.257	I	0.934	0.187	mg/Kg	☼	08/16/18 09:05	08/16/18 16:21	1

Client Sample ID: MWC-8R-95'
Lab Sample ID: 400-157728-5
Date Collected: 08/14/18 11:26
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 858.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0395	I	0.107	0.0214	mg/Kg	☼	08/16/18 09:05	08/16/18 16:25	1

Client Sample ID: MWC-8R-102'
Lab Sample ID: 400-157728-6
Date Collected: 08/14/18 11:28
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 89.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.291	I	1.09	0.218	mg/Kg	☼	08/16/18 09:05	08/16/18 16:28	1

Client Sample ID: MWC-8R-112'
Lab Sample ID: 400-157728-7
Date Collected: 08/14/18 11:30
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 93.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.194	U	0.969	0.194	mg/Kg	☼	08/16/18 09:05	08/16/18 16:31	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: MWC-8R-132'
Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.836	I	1.21	0.242	mg/Kg	☼	08/16/18 09:05	08/16/18 16:35	1

Client Sample ID: MW-D-88'
Lab Sample ID: 400-157728-9
Date Collected: 08/14/18 11:50
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 88.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.232	I	1.02	0.205	mg/Kg	☼	08/16/18 09:05	08/16/18 16:38	1

Client Sample ID: MW-D-110
Lab Sample ID: 400-157728-10
Date Collected: 08/14/18 11:46
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 92.1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.210	U	1.05	0.210	mg/Kg	☼	08/16/18 09:05	08/16/18 16:41	1

Client Sample ID: P-13R-62'
Lab Sample ID: 400-157728-11
Date Collected: 08/14/18 13:16
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.229	U	1.15	0.229	mg/Kg	☼	08/16/18 09:05	08/16/18 16:45	1

Client Sample ID: P-13R-72'
Lab Sample ID: 400-157728-12
Date Collected: 08/14/18 13:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 84.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.455	I	1.10	0.220	mg/Kg	☼	08/16/18 09:05	08/16/18 16:48	1

Client Sample ID: P-13R-102'
Lab Sample ID: 400-157728-13
Date Collected: 08/14/18 13:20
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 85.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.233	U	1.17	0.233	mg/Kg	☼	08/16/18 09:05	08/16/18 16:51	1

Client Sample ID: P-13R-112'
Lab Sample ID: 400-157728-14
Date Collected: 08/14/18 13:23
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 90.3

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.346	I	1.01	0.202	mg/Kg	☼	08/16/18 09:05	08/16/18 17:04	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: P-13R-122'

Date Collected: 08/14/18 13:22
Date Received: 08/14/18 14:23

Lab Sample ID: 400-157728-15

Matrix: Solid
Percent Solids: 77.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.668	I	1.25	0.250	mg/Kg	☼	08/16/18 09:05	08/16/18 17:08	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: GE-5S/D-25'
Lab Sample ID: 400-157728-1
Date Collected: 08/14/18 11:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 15:49	GESP	TAL PEN

Client Sample ID: GE-5S/D-35'
Lab Sample ID: 400-157728-2
Date Collected: 08/14/18 11:15
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:05	GESP	TAL PEN

Client Sample ID: GE-5S/D-38'
Lab Sample ID: 400-157728-3
Date Collected: 08/14/18 11:11
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:08	GESP	TAL PEN

Client Sample ID: GE-5S/D-45'
Lab Sample ID: 400-157728-4
Date Collected: 08/14/18 11:14
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:21	GESP	TAL PEN

Client Sample ID: MWC-8R-95'
Lab Sample ID: 400-157728-5
Date Collected: 08/14/18 11:26
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 858.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:25	GESP	TAL PEN

Client Sample ID: MWC-8R-102'
Lab Sample ID: 400-157728-6
Date Collected: 08/14/18 11:28
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:28	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: MWC-8R-112'
Lab Sample ID: 400-157728-7
Date Collected: 08/14/18 11:30
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:31	GESP	TAL PEN

Client Sample ID: MWC-8R-132'
Lab Sample ID: 400-157728-8
Date Collected: 08/14/18 11:32
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:35	GESP	TAL PEN

Client Sample ID: MW-D-88'
Lab Sample ID: 400-157728-9
Date Collected: 08/14/18 11:50
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:38	GESP	TAL PEN

Client Sample ID: MW-D-110
Lab Sample ID: 400-157728-10
Date Collected: 08/14/18 11:46
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:41	GESP	TAL PEN

Client Sample ID: P-13R-62'
Lab Sample ID: 400-157728-11
Date Collected: 08/14/18 13:16
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:45	GESP	TAL PEN

Client Sample ID: P-13R-72'
Lab Sample ID: 400-157728-12
Date Collected: 08/14/18 13:18
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:48	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Client Sample ID: P-13R-102'

Lab Sample ID: 400-157728-13
Date Collected: 08/14/18 13:20
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 16:51	GESP	TAL PEN

Client Sample ID: P-13R-112'

Lab Sample ID: 400-157728-14
Date Collected: 08/14/18 13:23
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 17:04	GESP	TAL PEN

Client Sample ID: P-13R-122'

Lab Sample ID: 400-157728-15
Date Collected: 08/14/18 13:22
Matrix: Solid
Date Received: 08/14/18 14:23
Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			408117	08/16/18 09:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	408304	08/16/18 17:08	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Metals

Prep Batch: 408117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-1	GE-5S/D-25'	Total/NA	Solid	3050B	
400-157728-2	GE-5S/D-35'	Total/NA	Solid	3050B	
400-157728-3	GE-5S/D-38'	Total/NA	Solid	3050B	
400-157728-4	GE-5S/D-45'	Total/NA	Solid	3050B	
400-157728-5	MWC-8R-95'	Total/NA	Solid	3050B	
400-157728-6	MWC-8R-102'	Total/NA	Solid	3050B	
400-157728-7	MWC-8R-112'	Total/NA	Solid	3050B	
400-157728-8	MWC-8R-132'	Total/NA	Solid	3050B	
400-157728-9	MW-D-88'	Total/NA	Solid	3050B	
400-157728-10	MW-D-110	Total/NA	Solid	3050B	
400-157728-11	P-13R-62'	Total/NA	Solid	3050B	
400-157728-12	P-13R-72'	Total/NA	Solid	3050B	
400-157728-13	P-13R-102'	Total/NA	Solid	3050B	
400-157728-14	P-13R-112'	Total/NA	Solid	3050B	
400-157728-15	P-13R-122'	Total/NA	Solid	3050B	
MB 400-408117/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-408117/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-157728-1 MS	GE-5S/D-25'	Total/NA	Solid	3050B	
400-157728-1 MSD	GE-5S/D-25'	Total/NA	Solid	3050B	

Analysis Batch: 408304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-157728-1	GE-5S/D-25'	Total/NA	Solid	6010C	408117
400-157728-2	GE-5S/D-35'	Total/NA	Solid	6010C	408117
400-157728-3	GE-5S/D-38'	Total/NA	Solid	6010C	408117
400-157728-4	GE-5S/D-45'	Total/NA	Solid	6010C	408117
400-157728-5	MWC-8R-95'	Total/NA	Solid	6010C	408117
400-157728-6	MWC-8R-102'	Total/NA	Solid	6010C	408117
400-157728-7	MWC-8R-112'	Total/NA	Solid	6010C	408117
400-157728-8	MWC-8R-132'	Total/NA	Solid	6010C	408117
400-157728-9	MW-D-88'	Total/NA	Solid	6010C	408117
400-157728-10	MW-D-110	Total/NA	Solid	6010C	408117
400-157728-11	P-13R-62'	Total/NA	Solid	6010C	408117
400-157728-12	P-13R-72'	Total/NA	Solid	6010C	408117
400-157728-13	P-13R-102'	Total/NA	Solid	6010C	408117
400-157728-14	P-13R-112'	Total/NA	Solid	6010C	408117
400-157728-15	P-13R-122'	Total/NA	Solid	6010C	408117
MB 400-408117/1-A	Method Blank	Total/NA	Solid	6010C	408117
LCS 400-408117/2-A	Lab Control Sample	Total/NA	Solid	6010C	408117
400-157728-1 MS	GE-5S/D-25'	Total/NA	Solid	6010C	408117
400-157728-1 MSD	GE-5S/D-25'	Total/NA	Solid	6010C	408117

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-408117/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.199	U	0.994	0.199	mg/Kg		08/16/18 09:05	08/16/18 15:42	1

Lab Sample ID: LCS 400-408117/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum			99.5	111.8		mg/Kg		112	80 - 120		

Lab Sample ID: 400-157728-1 MS — **Client Sample ID: GE-5S/D-25'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum	0.484	I	101	102.0		mg/Kg	☼	101	75 - 125		

Lab Sample ID: 400-157728-1 MSD — **Client Sample ID: GE-5S/D-25'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 408304 — **Prep Batch: 408117**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.484	I	99.8	100.7		mg/Kg	☼	100	75 - 125	1	20

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-157728-3
SDG Number: Molybdenum

Login Number: 157728
List Number: 1
Creator: Ott, Tina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	24.2°C IR8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-157728-3
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-18
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-158570-1
Client Project/Site: Cobalt & Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
9/6/2018 4:42:21 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Job ID: 400-158570-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-158570-1

Metals
Method(s) 6020: The post digestion spike % recovery for Cobalt associated with batch 410547 was outside of control limits.

Method Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

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 PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-158570-1	MW-D-35	Solid	08/31/18 10:30	08/31/18 12:55
400-158570-2	MWC-8R-30	Solid	08/31/18 10:40	08/31/18 12:55
400-158570-3	MWC-8R-42	Solid	08/31/18 10:45	08/31/18 12:55
400-158570-4	MWC-8R-57	Solid	08/31/18 10:48	08/31/18 12:55
400-158570-5	MWC-5DR-58	Solid	08/31/18 10:56	08/31/18 12:55
400-158570-6	MWC-5DR-77	Solid	08/31/18 11:02	08/31/18 12:55
400-158570-7	MWC-5DR-94	Solid	08/31/18 11:08	08/31/18 12:55
400-158570-8	MWP-13R-22	Solid	08/31/18 11:12	08/31/18 12:55
400-158570-9	MWP-13R-42	Solid	08/31/18 11:15	08/31/18 12:55
400-158570-10	MWP-13R-52	Solid	08/31/18 11:16	08/31/18 12:55
400-158570-11	MWP-11R-45	Solid	08/31/18 11:23	08/31/18 12:55
400-158570-12	MWP-11R-65	Solid	08/31/18 11:30	08/31/18 12:55
400-158570-13	EXB-02-62	Solid	08/31/18 11:36	08/31/18 12:55
400-158570-14	EXB-02-72	Solid	08/31/18 11:37	08/31/18 12:55
400-158570-15	MW-3D(MWI-1)-60	Solid	08/31/18 11:45	08/31/18 12:55
400-158570-16	MW-4D(MWI-2)-48	Solid	08/31/18 11:53	08/31/18 12:55
400-158570-17	MWC-7R-30	Solid	08/31/18 12:00	08/31/18 12:55
400-158570-18	MWC-7R-62	Solid	08/31/18 12:03	08/31/18 12:55
400-158570-19	GE-4DR-52	Solid	08/31/18 12:08	08/31/18 12:55

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MW-D-35
Lab Sample ID: 400-158570-1
Date Collected: 08/31/18 10:30
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 90.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0956	I	0.543	0.0825	mg/Kg	☼	09/04/18 13:28	09/05/18 17:26	10
Molybdenum	0.434	U	3.26	0.434	mg/Kg	☼	09/04/18 13:28	09/05/18 17:26	10

Client Sample ID: MWC-8R-30
Lab Sample ID: 400-158570-2
Date Collected: 08/31/18 10:40
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 85.8

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	15.4		0.541	0.0822	mg/Kg	☼	09/04/18 13:28	09/05/18 17:49	10
Molybdenum	3.06	I	3.25	0.433	mg/Kg	☼	09/04/18 13:28	09/05/18 17:49	10

Client Sample ID: MWC-8R-42
Lab Sample ID: 400-158570-3
Date Collected: 08/31/18 10:45
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 95.8

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.208	I	0.487	0.0740	mg/Kg	☼	09/04/18 13:28	09/05/18 18:16	10
Molybdenum	2.09	I	2.92	0.389	mg/Kg	☼	09/04/18 13:28	09/05/18 18:16	10

Client Sample ID: MWC-8R-57
Lab Sample ID: 400-158570-4
Date Collected: 08/31/18 10:48
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 97.3

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	6.02		0.528	0.0803	mg/Kg	☼	09/04/18 13:28	09/05/18 18:20	10
Molybdenum	0.977	I	3.17	0.422	mg/Kg	☼	09/04/18 13:28	09/05/18 18:20	10

Client Sample ID: MWC-5DR-58
Lab Sample ID: 400-158570-5
Date Collected: 08/31/18 10:56
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 98.6

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.235	I	0.515	0.0783	mg/Kg	☼	09/04/18 13:28	09/05/18 18:25	10
Molybdenum	2.48	I	3.09	0.412	mg/Kg	☼	09/04/18 13:28	09/05/18 18:25	10

Client Sample ID: MWC-5DR-77
Lab Sample ID: 400-158570-6
Date Collected: 08/31/18 11:02
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 96.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0766	U	0.504	0.0766	mg/Kg	☼	09/04/18 13:28	09/05/18 18:29	10
Molybdenum	0.403	U	3.03	0.403	mg/Kg	☼	09/04/18 13:28	09/05/18 18:29	10

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MWC-5DR-94

Lab Sample ID: 400-158570-7
Date Collected: 08/31/18 11:08
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 81.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.276**	**I**	0.586	0.0891	mg/Kg	☼	09/04/18 13:28	09/05/18 18:34	10
Molybdenum	**1.79**	**I**	3.52	0.469	mg/Kg	☼	09/04/18 13:28	09/05/18 18:34	10

Client Sample ID: MWP-13R-22

Lab Sample ID: 400-158570-8
Date Collected: 08/31/18 11:12
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 88.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0842	U	0.554	0.0842	mg/Kg	☼	09/04/18 13:28	09/05/18 18:38	10
Molybdenum	0.443	U	3.32	0.443	mg/Kg	☼	09/04/18 13:28	09/05/18 18:38	10

Client Sample ID: MWP-13R-42

Lab Sample ID: 400-158570-9
Date Collected: 08/31/18 11:15
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 87.3

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0862	U	0.567	0.0862	mg/Kg	☼	09/04/18 13:28	09/05/18 18:43	10
Molybdenum	0.454	U	3.40	0.454	mg/Kg	☼	09/04/18 13:28	09/05/18 18:43	10

Client Sample ID: MWP-13R-52

Lab Sample ID: 400-158570-10
Date Collected: 08/31/18 11:16
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 85.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0814	U	0.536	0.0814	mg/Kg	☼	09/04/18 13:28	09/05/18 18:47	10
Molybdenum	0.429	U	3.21	0.429	mg/Kg	☼	09/04/18 13:28	09/05/18 18:47	10

Client Sample ID: MWP-11R-45

Lab Sample ID: 400-158570-11
Date Collected: 08/31/18 11:23
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 85.4

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.0874**	**I**	0.575	0.0874	mg/Kg	☼	09/04/18 13:28	09/05/18 18:52	10
Molybdenum	0.460	U	3.45	0.460	mg/Kg	☼	09/04/18 13:28	09/05/18 18:52	10

Client Sample ID: MWP-11R-65

Lab Sample ID: 400-158570-12
Date Collected: 08/31/18 11:30
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 79.9

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.300**	**I**	0.608	0.0923	mg/Kg	☼	09/04/18 13:28	09/05/18 18:56	10
Molybdenum	0.486	U	3.65	0.486	mg/Kg	☼	09/04/18 13:28	09/05/18 18:56	10

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: EXB-02-62
Lab Sample ID: 400-158570-13
Date Collected: 08/31/18 11:36
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 97.0

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0778	U	0.512	0.0778	mg/Kg	☼	09/04/18 13:28	09/05/18 19:23	10
Molybdenum	0.409	U	3.07	0.409	mg/Kg	☼	09/04/18 13:28	09/05/18 19:23	10

Client Sample ID: EXB-02-72
Lab Sample ID: 400-158570-14
Date Collected: 08/31/18 11:37
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 88.0

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**19.6**		0.565	0.0859	mg/Kg	☼	09/04/18 13:28	09/05/18 19:27	10
Molybdenum	0.452	U	3.39	0.452	mg/Kg	☼	09/04/18 13:28	09/05/18 19:27	10

Client Sample ID: MW-3D(MWI-1)-60
Lab Sample ID: 400-158570-15
Date Collected: 08/31/18 11:45
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 98.2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.190**	**I**	0.480	0.0729	mg/Kg	☼	09/04/18 13:28	09/05/18 19:32	10
Molybdenum	**0.540**	**I**	2.88	0.384	mg/Kg	☼	09/04/18 13:28	09/05/18 19:32	10

Client Sample ID: MW-4D(MWI-2)-48
Lab Sample ID: 400-158570-16
Date Collected: 08/31/18 11:53
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 83.7

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.896**		0.567	0.0862	mg/Kg	☼	09/04/18 13:28	09/05/18 19:37	10
Molybdenum	0.454	U	3.40	0.454	mg/Kg	☼	09/04/18 13:28	09/05/18 19:37	10

Client Sample ID: MWC-7R-30
Lab Sample ID: 400-158570-17
Date Collected: 08/31/18 12:00
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 82.9

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.09**		0.583	0.0886	mg/Kg	☼	09/04/18 13:28	09/05/18 19:41	10
Molybdenum	0.467	U	3.50	0.467	mg/Kg	☼	09/04/18 13:28	09/05/18 19:41	10

Client Sample ID: MWC-7R-62
Lab Sample ID: 400-158570-18
Date Collected: 08/31/18 12:03
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 75.9

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.13**		0.653	0.0993	mg/Kg	☼	09/04/18 13:28	09/05/18 19:45	10
Molybdenum	0.523	U	3.92	0.523	mg/Kg	☼	09/04/18 13:28	09/05/18 19:45	10

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: GE-4DR-52

Date Collected: 08/31/18 12:08
Date Received: 08/31/18 12:55

Lab Sample ID: 400-158570-19

Matrix: Solid
Percent Solids: 81.1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.135**	**I**	0.599	0.0911	mg/Kg	☼	09/04/18 13:28	09/05/18 19:50	10
Molybdenum	0.480	U	3.60	0.480	mg/Kg	☼	09/04/18 13:28	09/05/18 19:50	10

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MW-D-35 — Lab Sample ID: 400-158570-1

Date Collected: 08/31/18 10:30
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MW-D-35 — Lab Sample ID: 400-158570-1

Date Collected: 08/31/18 10:30
Date Received: 08/31/18 12:55
Matrix: Solid
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 17:26	DRE	TAL PEN

Client Sample ID: MWC-8R-30 — Lab Sample ID: 400-158570-2

Date Collected: 08/31/18 10:40
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-8R-30 — Lab Sample ID: 400-158570-2

Date Collected: 08/31/18 10:40
Date Received: 08/31/18 12:55
Matrix: Solid
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 17:49	DRE	TAL PEN

Client Sample ID: MWC-8R-42 — Lab Sample ID: 400-158570-3

Date Collected: 08/31/18 10:45
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-8R-42 — Lab Sample ID: 400-158570-3

Date Collected: 08/31/18 10:45
Date Received: 08/31/18 12:55
Matrix: Solid
Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:16	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MWC-8R-57 — Lab Sample ID: 400-158570-4

Date Collected: 08/31/18 10:48 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-8R-57 — Lab Sample ID: 400-158570-4

Date Collected: 08/31/18 10:48 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 97.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:20	DRE	TAL PEN

Client Sample ID: MWC-5DR-58 — Lab Sample ID: 400-158570-5

Date Collected: 08/31/18 10:56 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-5DR-58 — Lab Sample ID: 400-158570-5

Date Collected: 08/31/18 10:56 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 98.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:25	DRE	TAL PEN

Client Sample ID: MWC-5DR-77 — Lab Sample ID: 400-158570-6

Date Collected: 08/31/18 11:02 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-5DR-77 — Lab Sample ID: 400-158570-6

Date Collected: 08/31/18 11:02 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 96.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:29	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MWC-5DR-94 — Lab Sample ID: 400-158570-7

Date Collected: 08/31/18 11:08 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-5DR-94 — Lab Sample ID: 400-158570-7

Date Collected: 08/31/18 11:08 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 81.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:34	DRE	TAL PEN

Client Sample ID: MWP-13R-22 — Lab Sample ID: 400-158570-8

Date Collected: 08/31/18 11:12 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWP-13R-22 — Lab Sample ID: 400-158570-8

Date Collected: 08/31/18 11:12 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 88.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:38	DRE	TAL PEN

Client Sample ID: MWP-13R-42 — Lab Sample ID: 400-158570-9

Date Collected: 08/31/18 11:15 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWP-13R-42 — Lab Sample ID: 400-158570-9

Date Collected: 08/31/18 11:15 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 87.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:43	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MWP-13R-52 — Lab Sample ID: 400-158570-10

Date Collected: 08/31/18 11:16 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWP-13R-52 — Lab Sample ID: 400-158570-10

Date Collected: 08/31/18 11:16 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 85.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:47	DRE	TAL PEN

Client Sample ID: MWP-11R-45 — Lab Sample ID: 400-158570-11

Date Collected: 08/31/18 11:23 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWP-11R-45 — Lab Sample ID: 400-158570-11

Date Collected: 08/31/18 11:23 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 85.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:52	DRE	TAL PEN

Client Sample ID: MWP-11R-65 — Lab Sample ID: 400-158570-12

Date Collected: 08/31/18 11:30 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWP-11R-65 — Lab Sample ID: 400-158570-12

Date Collected: 08/31/18 11:30 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 79.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 18:56	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: EXB-02-62 — Lab Sample ID: 400-158570-13

Date Collected: 08/31/18 11:36 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: EXB-02-62 — Lab Sample ID: 400-158570-13

Date Collected: 08/31/18 11:36 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 97.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:23	DRE	TAL PEN

Client Sample ID: EXB-02-72 — Lab Sample ID: 400-158570-14

Date Collected: 08/31/18 11:37 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: EXB-02-72 — Lab Sample ID: 400-158570-14

Date Collected: 08/31/18 11:37 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 88.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:27	DRE	TAL PEN

Client Sample ID: MW-3D(MWI-1)-60 — Lab Sample ID: 400-158570-15

Date Collected: 08/31/18 11:45 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MW-3D(MWI-1)-60 — Lab Sample ID: 400-158570-15

Date Collected: 08/31/18 11:45 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 98.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:32	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: MW-4D(MWI-2)-48 — Lab Sample ID: 400-158570-16

Date Collected: 08/31/18 11:53 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MW-4D(MWI-2)-48 — Lab Sample ID: 400-158570-16

Date Collected: 08/31/18 11:53 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 83.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:37	DRE	TAL PEN

Client Sample ID: MWC-7R-30 — Lab Sample ID: 400-158570-17

Date Collected: 08/31/18 12:00 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-7R-30 — Lab Sample ID: 400-158570-17

Date Collected: 08/31/18 12:00 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 82.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:41	DRE	TAL PEN

Client Sample ID: MWC-7R-62 — Lab Sample ID: 400-158570-18

Date Collected: 08/31/18 12:03 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: MWC-7R-62 — Lab Sample ID: 400-158570-18

Date Collected: 08/31/18 12:03 — **Matrix: Solid**
Date Received: 08/31/18 12:55 — **Percent Solids: 75.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:45	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Client Sample ID: GE-4DR-52
Lab Sample ID: 400-158570-19

Date Collected: 08/31/18 12:08
Matrix: Solid
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	410355	09/05/18 10:21	TMP	TAL PEN

Client Sample ID: GE-4DR-52
Lab Sample ID: 400-158570-19

Date Collected: 08/31/18 12:08
Matrix: Solid
Date Received: 08/31/18 12:55
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			410262	09/04/18 13:28	DRE	TAL PEN
Total/NA	Analysis	6020		10	410547	09/05/18 19:50	DRE	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Metals

Prep Batch: 410262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	Total/NA	Solid	3050B	
400-158570-2	MWC-8R-30	Total/NA	Solid	3050B	
400-158570-3	MWC-8R-42	Total/NA	Solid	3050B	
400-158570-4	MWC-8R-57	Total/NA	Solid	3050B	
400-158570-5	MWC-5DR-58	Total/NA	Solid	3050B	
400-158570-6	MWC-5DR-77	Total/NA	Solid	3050B	
400-158570-7	MWC-5DR-94	Total/NA	Solid	3050B	
400-158570-8	MWP-13R-22	Total/NA	Solid	3050B	
400-158570-9	MWP-13R-42	Total/NA	Solid	3050B	
400-158570-10	MWP-13R-52	Total/NA	Solid	3050B	
400-158570-11	MWP-11R-45	Total/NA	Solid	3050B	
400-158570-12	MWP-11R-65	Total/NA	Solid	3050B	
400-158570-13	EXB-02-62	Total/NA	Solid	3050B	
400-158570-14	EXB-02-72	Total/NA	Solid	3050B	
400-158570-15	MW-3D(MWI-1)-60	Total/NA	Solid	3050B	
400-158570-16	MW-4D(MWI-2)-48	Total/NA	Solid	3050B	
400-158570-17	MWC-7R-30	Total/NA	Solid	3050B	
400-158570-18	MWC-7R-62	Total/NA	Solid	3050B	
400-158570-19	GE-4DR-52	Total/NA	Solid	3050B	
MB 400-410262/1-A ^10	Method Blank	Total/NA	Solid	3050B	
LCS 400-410262/2-A ^10	Lab Control Sample	Total/NA	Solid	3050B	
400-158570-1 MS	MW-D-35	Total/NA	Solid	3050B	
400-158570-1 MSD	MW-D-35	Total/NA	Solid	3050B	

Analysis Batch: 410547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	Total/NA	Solid	6020	410262
400-158570-2	MWC-8R-30	Total/NA	Solid	6020	410262
400-158570-3	MWC-8R-42	Total/NA	Solid	6020	410262
400-158570-4	MWC-8R-57	Total/NA	Solid	6020	410262
400-158570-5	MWC-5DR-58	Total/NA	Solid	6020	410262
400-158570-6	MWC-5DR-77	Total/NA	Solid	6020	410262
400-158570-7	MWC-5DR-94	Total/NA	Solid	6020	410262
400-158570-8	MWP-13R-22	Total/NA	Solid	6020	410262
400-158570-9	MWP-13R-42	Total/NA	Solid	6020	410262
400-158570-10	MWP-13R-52	Total/NA	Solid	6020	410262
400-158570-11	MWP-11R-45	Total/NA	Solid	6020	410262
400-158570-12	MWP-11R-65	Total/NA	Solid	6020	410262
400-158570-13	EXB-02-62	Total/NA	Solid	6020	410262
400-158570-14	EXB-02-72	Total/NA	Solid	6020	410262
400-158570-15	MW-3D(MWI-1)-60	Total/NA	Solid	6020	410262
400-158570-16	MW-4D(MWI-2)-48	Total/NA	Solid	6020	410262
400-158570-17	MWC-7R-30	Total/NA	Solid	6020	410262
400-158570-18	MWC-7R-62	Total/NA	Solid	6020	410262
400-158570-19	GE-4DR-52	Total/NA	Solid	6020	410262
MB 400-410262/1-A ^10	Method Blank	Total/NA	Solid	6020	410262
LCS 400-410262/2-A ^10	Lab Control Sample	Total/NA	Solid	6020	410262
400-158570-1 MS	MW-D-35	Total/NA	Solid	6020	410262
400-158570-1 MSD	MW-D-35	Total/NA	Solid	6020	410262

QC Association Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

General Chemistry

Analysis Batch: 410355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	Total/NA	Solid	Moisture	
400-158570-2	MWC-8R-30	Total/NA	Solid	Moisture	
400-158570-3	MWC-8R-42	Total/NA	Solid	Moisture	
400-158570-4	MWC-8R-57	Total/NA	Solid	Moisture	
400-158570-5	MWC-5DR-58	Total/NA	Solid	Moisture	
400-158570-6	MWC-5DR-77	Total/NA	Solid	Moisture	
400-158570-7	MWC-5DR-94	Total/NA	Solid	Moisture	
400-158570-8	MWP-13R-22	Total/NA	Solid	Moisture	
400-158570-9	MWP-13R-42	Total/NA	Solid	Moisture	
400-158570-10	MWP-13R-52	Total/NA	Solid	Moisture	
400-158570-11	MWP-11R-45	Total/NA	Solid	Moisture	
400-158570-12	MWP-11R-65	Total/NA	Solid	Moisture	
400-158570-13	EXB-02-62	Total/NA	Solid	Moisture	
400-158570-14	EXB-02-72	Total/NA	Solid	Moisture	
400-158570-15	MW-3D(MWI-1)-60	Total/NA	Solid	Moisture	
400-158570-16	MW-4D(MWI-2)-48	Total/NA	Solid	Moisture	
400-158570-17	MWC-7R-30	Total/NA	Solid	Moisture	
400-158570-18	MWC-7R-62	Total/NA	Solid	Moisture	
400-158570-19	GE-4DR-52	Total/NA	Solid	Moisture	
400-158570-1 DU	MW-D-35	Total/NA	Solid	Moisture	

QC Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 400-410262/1-A ^10
Matrix: Solid
Analysis Batch: 410547

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 410262

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.0737	U	0.485	0.0737	mg/Kg		09/04/18 13:28	09/05/18 17:17	10
Molybdenum	0.388	U	2.91	0.388	mg/Kg		09/04/18 13:28	09/05/18 17:17	10

Lab Sample ID: LCS 400-410262/2-A ^10
Matrix: Solid
Analysis Batch: 410547

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 410262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	9.88	10.97		mg/Kg		111	80 - 120
Molybdenum	9.88	10.29		mg/Kg		104	80 - 120

Lab Sample ID: 400-158570-1 MS
Matrix: Solid
Analysis Batch: 410547

Client Sample ID: MW-D-35
Prep Type: Total/NA
Prep Batch: 410262

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0956	I	5.39	6.249		mg/Kg	☼	114	75 - 125
Molybdenum	0.434	U	5.39	5.819		mg/Kg	☼	108	75 - 125

Lab Sample ID: 400-158570-1 MSD
Matrix: Solid
Analysis Batch: 410547

Client Sample ID: MW-D-35
Prep Type: Total/NA
Prep Batch: 410262

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	0.0956	I	5.17	5.767		mg/Kg	☼	110	75 - 125	8	20
Molybdenum	0.434	U	5.17	5.157		mg/Kg	☼	100	75 - 125	12	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Jul Johnson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76598-29937.2
Client Contact: Kristi Mitchell	Phone: 850-483-5100	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24-48 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Molybdenum 6020	6010C - Molybdenum 6020	Cobalt 6020	Co SPLP 6020	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
MW-D-35	8/31/18	1030	G	Solid			X	X	X	X		hold SPLP pending total results
MWC-8R-30	8/31/18	1040		Solid								
MWC-8R-42	8/31/18	1045		Solid								
MWC-8R-57	8/31/18	1048		Solid								
MWC-5DR-58	8/31/18	1056		Solid								
MWC-5DR-77	8/31/18	1102		Solid								
MWC-5DR-94	8/31/18	1108		Solid								
MWP-13R-22	8/31/18	1112		Solid								
MWP-13R-42	8/31/18	1115		Solid								
MWP-13R-52	8/31/18	1116		S								400-158570 COC
MWP-11R-45	8/31/18	1123		S								

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/31/18 1255	Gulf Power			
			[signature]	8-31-18 1255	TA-PEN

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 27.0°C IR7

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Jill Johnson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-76598-29937.1
Client Contact: Kristi Mitchell	Phone: 8504835700	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page ~~X~~ of ~~X~~ 2 of 2
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24-48 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site: Chst	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	~~6010C~~ 6020 - SPLP Molybdenum	~~6010C~~ 6020 - Molybdenum	Cobalt 6020	Co SPLP 6020	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N		
MWP-11R-65	8/31/18	1130	G	Solid			X	X	X	X		hold SPLP pending total results
EXB-02-62	8/31/18	1136	G	Solid								
EXB-02-72	8/31/18	1137		Solid								
MW-3D (MWI-1)-60	8/31/18	1145		Solid								
MW-4D (MWI-2)-48	8/31/18	1153		Solid								
MWC-7R-30	8/31/18	1200		Solid								
MWC-7R-62	8/31/18	1203		Solid								
GE-4DR-52	8/31/18	1208		Solid								
				Solid								
				Solid								
				Solid								

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	8/31/18 1255	Gulf Power			
			[signature]	8-31-18 1255	TA-PEN

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 27.0 IR7

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-158570-1
SDG Number:

Login Number: 158570
List Number: 1
Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	27.0°C IR7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-18 *
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-158570-2
TestAmerica Sample Delivery Group: SPLP
Client Project/Site: Cobalt & Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
9/17/2018 6:14:59 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Job ID: 400-158570-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-158570-2

Metals
Method(s) 6020: The following sample was diluted to bring the concentration of target analytes within the calibration range: EXB-02-72 (400-158570-14). Elevated reporting limits (RLs) are provided.

Method Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL PEN
1312	SPLP Extraction	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-158570-1	MW-D-35	Solid	08/31/18 10:30	08/31/18 12:55
400-158570-2	MWC-8R-30	Solid	08/31/18 10:40	08/31/18 12:55
400-158570-3	MWC-8R-42	Solid	08/31/18 10:45	08/31/18 12:55
400-158570-4	MWC-8R-57	Solid	08/31/18 10:48	08/31/18 12:55
400-158570-5	MWC-5DR-58	Solid	08/31/18 10:56	08/31/18 12:55
400-158570-7	MWC-5DR-94	Solid	08/31/18 11:08	08/31/18 12:55
400-158570-11	MWP-11R-45	Solid	08/31/18 11:23	08/31/18 12:55
400-158570-12	MWP-11R-65	Solid	08/31/18 11:30	08/31/18 12:55
400-158570-14	EXB-02-72	Solid	08/31/18 11:37	08/31/18 12:55
400-158570-15	MW-3D(MWI-1)-60	Solid	08/31/18 11:45	08/31/18 12:55
400-158570-16	MW-4D(MWI-2)-48	Solid	08/31/18 11:53	08/31/18 12:55
400-158570-17	MWC-7R-30	Solid	08/31/18 12:00	08/31/18 12:55
400-158570-18	MWC-7R-62	Solid	08/31/18 12:03	08/31/18 12:55
400-158570-19	GE-4DR-52	Solid	08/31/18 12:08	08/31/18 12:55

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MW-D-35
Lab Sample ID: 400-158570-1
Date Collected: 08/31/18 10:30
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 19:43	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 19:43	5

Client Sample ID: MWC-8R-30
Lab Sample ID: 400-158570-2
Date Collected: 08/31/18 10:40
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.588**		0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 20:28	5
Molybdenum	**0.00148**	**I**	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 20:28	5

Client Sample ID: MWC-8R-42
Lab Sample ID: 400-158570-3
Date Collected: 08/31/18 10:45
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 20:32	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 20:32	5

Client Sample ID: MWC-8R-57
Lab Sample ID: 400-158570-4
Date Collected: 08/31/18 10:48
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**0.239**		0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 20:37	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 20:37	5

Client Sample ID: MWC-5DR-58
Lab Sample ID: 400-158570-5
Date Collected: 08/31/18 10:56
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 20:41	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 20:41	5

Client Sample ID: MWC-5DR-94
Lab Sample ID: 400-158570-7
Date Collected: 08/31/18 11:08
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 20:45	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 20:45	5

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MWP-11R-45
Lab Sample ID: 400-158570-11
Date Collected: 08/31/18 11:23
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 14:05	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 14:05	5

Client Sample ID: MWP-11R-65
Lab Sample ID: 400-158570-12
Date Collected: 08/31/18 11:30
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 14:28	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 14:28	5

Client Sample ID: EXB-02-72
Lab Sample ID: 400-158570-14
Date Collected: 08/31/18 11:37
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 14:32	5

Method: 6020 - Metals (ICP/MS) - SPLP East - DL

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**1.04**		0.0125	0.00200	mg/L		09/14/18 08:03	09/17/18 15:23	25

Client Sample ID: MW-3D(MWI-1)-60
Lab Sample ID: 400-158570-15
Date Collected: 08/31/18 11:45
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 14:37	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 14:37	5

Client Sample ID: MW-4D(MWI-2)-48
Lab Sample ID: 400-158570-16
Date Collected: 08/31/18 11:53
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 15:04	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 15:04	5

Client Sample ID: MWC-7R-30
Lab Sample ID: 400-158570-17
Date Collected: 08/31/18 12:00
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 15:10	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 15:10	5

Client Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MWC-7R-62

Lab Sample ID: 400-158570-18
Date Collected: 08/31/18 12:03
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 15:14	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 15:14	5

Client Sample ID: GE-4DR-52

Lab Sample ID: 400-158570-19
Date Collected: 08/31/18 12:08
Matrix: Solid
Date Received: 08/31/18 12:55

Method: 6020 - Metals (ICP/MS) - SPLP East

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 15:19	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 15:19	5

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MW-D-35 — Lab Sample ID: 400-158570-1

Date Collected: 08/31/18 10:30
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 19:43	DRE	TAL PEN

Client Sample ID: MWC-8R-30 — Lab Sample ID: 400-158570-2

Date Collected: 08/31/18 10:40
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 20:28	DRE	TAL PEN

Client Sample ID: MWC-8R-42 — Lab Sample ID: 400-158570-3

Date Collected: 08/31/18 10:45
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 20:32	DRE	TAL PEN

Client Sample ID: MWC-8R-57 — Lab Sample ID: 400-158570-4

Date Collected: 08/31/18 10:48
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 20:37	DRE	TAL PEN

Client Sample ID: MWC-5DR-58 — Lab Sample ID: 400-158570-5

Date Collected: 08/31/18 10:56
Date Received: 08/31/18 12:55
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 20:41	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MWC-5DR-94 — Lab Sample ID: 400-158570-7

Date Collected: 08/31/18 11:08 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411121	09/11/18 15:32	SLB	TAL PEN
SPLP East	Prep	3010A			411348	09/13/18 08:14	DRE	TAL PEN
SPLP East	Analysis	6020		5	411740	09/13/18 20:45	DRE	TAL PEN

Client Sample ID: MWP-11R-45 — Lab Sample ID: 400-158570-11

Date Collected: 08/31/18 11:23 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 14:05	DRE	TAL PEN

Client Sample ID: MWP-11R-65 — Lab Sample ID: 400-158570-12

Date Collected: 08/31/18 11:30 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 14:28	DRE	TAL PEN

Client Sample ID: EXB-02-72 — Lab Sample ID: 400-158570-14

Date Collected: 08/31/18 11:37 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 14:32	DRE	TAL PEN
SPLP East	Leach	1312	DL		411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A	DL		411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020	DL	25	411858	09/17/18 15:23	DRE	TAL PEN

Client Sample ID: MW-3D(MWI-1)-60 — Lab Sample ID: 400-158570-15

Date Collected: 08/31/18 11:45 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 14:37	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Client Sample ID: MW-4D(MWI-2)-48 — Lab Sample ID: 400-158570-16

Date Collected: 08/31/18 11:53 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 15:04	DRE	TAL PEN

Client Sample ID: MWC-7R-30 — Lab Sample ID: 400-158570-17

Date Collected: 08/31/18 12:00 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 15:10	DRE	TAL PEN

Client Sample ID: MWC-7R-62 — Lab Sample ID: 400-158570-18

Date Collected: 08/31/18 12:03 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 15:14	DRE	TAL PEN

Client Sample ID: GE-4DR-52 — Lab Sample ID: 400-158570-19

Date Collected: 08/31/18 12:08 — **Matrix: Solid**
Date Received: 08/31/18 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP East	Leach	1312			411276	09/12/18 14:41	SLB	TAL PEN
SPLP East	Prep	3010A			411476	09/14/18 08:03	KWN	TAL PEN
SPLP East	Analysis	6020		5	411858	09/17/18 15:19	DRE	TAL PEN

Laboratory References:
TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Metals

Leach Batch: 411121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	SPLP East	Solid	1312	
400-158570-2	MWC-8R-30	SPLP East	Solid	1312	
400-158570-3	MWC-8R-42	SPLP East	Solid	1312	
400-158570-4	MWC-8R-57	SPLP East	Solid	1312	
400-158570-5	MWC-5DR-58	SPLP East	Solid	1312	
400-158570-7	MWC-5DR-94	SPLP East	Solid	1312	
LB 400-411121/1-B ^5	Method Blank	SPLP East	Solid	1312	
400-158570-1 MS	MW-D-35	SPLP East	Solid	1312	
400-158570-1 MSD	MW-D-35	SPLP East	Solid	1312	

Leach Batch: 411276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-11	MWP-11R-45	SPLP East	Solid	1312	
400-158570-12	MWP-11R-65	SPLP East	Solid	1312	
400-158570-14 - DL	EXB-02-72	SPLP East	Solid	1312	
400-158570-14	EXB-02-72	SPLP East	Solid	1312	
400-158570-15	MW-3D(MWI-1)-60	SPLP East	Solid	1312	
400-158570-16	MW-4D(MWI-2)-48	SPLP East	Solid	1312	
400-158570-17	MWC-7R-30	SPLP East	Solid	1312	
400-158570-18	MWC-7R-62	SPLP East	Solid	1312	
400-158570-19	GE-4DR-52	SPLP East	Solid	1312	
LB 400-411276/1-B ^5	Method Blank	SPLP East	Solid	1312	
400-158570-11 MS	MWP-11R-45	SPLP East	Solid	1312	
400-158570-11 MSD	MWP-11R-45	SPLP East	Solid	1312	

Prep Batch: 411348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	SPLP East	Solid	3010A	411121
400-158570-2	MWC-8R-30	SPLP East	Solid	3010A	411121
400-158570-3	MWC-8R-42	SPLP East	Solid	3010A	411121
400-158570-4	MWC-8R-57	SPLP East	Solid	3010A	411121
400-158570-5	MWC-5DR-58	SPLP East	Solid	3010A	411121
400-158570-7	MWC-5DR-94	SPLP East	Solid	3010A	411121
LB 400-411121/1-B ^5	Method Blank	SPLP East	Solid	3010A	411121
LCS 400-411348/2-A ^5	Lab Control Sample	Total/NA	Solid	3010A	
400-158570-1 MS	MW-D-35	SPLP East	Solid	3010A	411121
400-158570-1 MSD	MW-D-35	SPLP East	Solid	3010A	411121

Prep Batch: 411476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-11	MWP-11R-45	SPLP East	Solid	3010A	411276
400-158570-12	MWP-11R-65	SPLP East	Solid	3010A	411276
400-158570-14	EXB-02-72	SPLP East	Solid	3010A	411276
400-158570-14 - DL	EXB-02-72	SPLP East	Solid	3010A	411276
400-158570-15	MW-3D(MWI-1)-60	SPLP East	Solid	3010A	411276
400-158570-16	MW-4D(MWI-2)-48	SPLP East	Solid	3010A	411276
400-158570-17	MWC-7R-30	SPLP East	Solid	3010A	411276
400-158570-18	MWC-7R-62	SPLP East	Solid	3010A	411276
400-158570-19	GE-4DR-52	SPLP East	Solid	3010A	411276
LB 400-411276/1-B ^5	Method Blank	SPLP East	Solid	3010A	411276
LCS 400-411476/2-A ^5	Lab Control Sample	Total/NA	Solid	3010A	

Metals (Continued)

Prep Batch: 411476 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-11 MS	MWP-11R-45	SPLP East	Solid	3010A	411276
400-158570-11 MSD	MWP-11R-45	SPLP East	Solid	3010A	411276

Analysis Batch: 411740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-1	MW-D-35	SPLP East	Solid	6020	411348
400-158570-2	MWC-8R-30	SPLP East	Solid	6020	411348
400-158570-3	MWC-8R-42	SPLP East	Solid	6020	411348
400-158570-4	MWC-8R-57	SPLP East	Solid	6020	411348
400-158570-5	MWC-5DR-58	SPLP East	Solid	6020	411348
400-158570-7	MWC-5DR-94	SPLP East	Solid	6020	411348
LB 400-411121/1-B ^5	Method Blank	SPLP East	Solid	6020	411348
LCS 400-411348/2-A ^5	Lab Control Sample	Total/NA	Solid	6020	411348
400-158570-1 MS	MW-D-35	SPLP East	Solid	6020	411348
400-158570-1 MSD	MW-D-35	SPLP East	Solid	6020	411348

Analysis Batch: 411858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-158570-11	MWP-11R-45	SPLP East	Solid	6020	411476
400-158570-12	MWP-11R-65	SPLP East	Solid	6020	411476
400-158570-14	EXB-02-72	SPLP East	Solid	6020	411476
400-158570-14 - DL	EXB-02-72	SPLP East	Solid	6020	411476
400-158570-15	MW-3D(MWI-1)-60	SPLP East	Solid	6020	411476
400-158570-16	MW-4D(MWI-2)-48	SPLP East	Solid	6020	411476
400-158570-17	MWC-7R-30	SPLP East	Solid	6020	411476
400-158570-18	MWC-7R-62	SPLP East	Solid	6020	411476
400-158570-19	GE-4DR-52	SPLP East	Solid	6020	411476
LB 400-411276/1-B ^5	Method Blank	SPLP East	Solid	6020	411476
LCS 400-411476/2-A ^5	Lab Control Sample	Total/NA	Solid	6020	411476
400-158570-11 MS	MWP-11R-45	SPLP East	Solid	6020	411476
400-158570-11 MSD	MWP-11R-45	SPLP East	Solid	6020	411476

QC Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: LCS 400-411348/2-A ^5
Matrix: Solid
Analysis Batch: 411740

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.05312		mg/L		106	80 - 120
Molybdenum	0.0500	0.04734		mg/L		95	80 - 120

Lab Sample ID: LCS 400-411476/2-A ^5
Matrix: Solid
Analysis Batch: 411858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411476

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.0500	0.04517		mg/L		90	80 - 120
Molybdenum	0.0500	0.04077		mg/L		82	80 - 120

Lab Sample ID: LB 400-411121/1-B ^5
Matrix: Solid
Analysis Batch: 411740

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 411348

Analyte	LB Result	LB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/13/18 08:14	09/13/18 19:34	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/13/18 08:14	09/13/18 19:34	5

Lab Sample ID: 400-158570-1 MS
Matrix: Solid
Analysis Batch: 411740

Client Sample ID: MW-D-35
Prep Type: SPLP East
Prep Batch: 411348

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.000400	U	0.0500	0.05307		mg/L		106	75 - 125
Molybdenum	0.000850	U	0.0500	0.04918		mg/L		98	75 - 125

Lab Sample ID: 400-158570-1 MSD
Matrix: Solid
Analysis Batch: 411740

Client Sample ID: MW-D-35
Prep Type: SPLP East
Prep Batch: 411348

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	0.000400	U	0.0500	0.05338		mg/L		107	75 - 125	1	20
Molybdenum	0.000850	U	0.0500	0.04899		mg/L		98	75 - 125	0	20

Lab Sample ID: LB 400-411276/1-B ^5
Matrix: Solid
Analysis Batch: 411858

Client Sample ID: Method Blank
Prep Type: SPLP East
Prep Batch: 411476

Analyte	LB Result	LB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	0.000400	U	0.00250	0.000400	mg/L		09/14/18 08:03	09/17/18 13:56	5
Molybdenum	0.000850	U	0.0150	0.000850	mg/L		09/14/18 08:03	09/17/18 13:56	5

Lab Sample ID: 400-158570-11 MS
Matrix: Solid
Analysis Batch: 411858

Client Sample ID: MWP-11R-45
Prep Type: SPLP East
Prep Batch: 411476

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cobalt	0.000400	U	0.0500	0.04569		mg/L		91	75 - 125

QC Sample Results

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 400-158570-11 MS
Matrix: Solid
Analysis Batch: 411858

Client Sample ID: MWP-11R-45
Prep Type: SPLP East
Prep Batch: 411476

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum	0.000850	U	0.0500	0.04322		mg/L		86	75 - 125		

Lab Sample ID: 400-158570-11 MSD
Matrix: Solid
Analysis Batch: 411858

Client Sample ID: MWP-11R-45
Prep Type: SPLP East
Prep Batch: 411476

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	0.000400	U	0.0500	0.04530		mg/L		91	75 - 125	1	20
Molybdenum	0.000850	U	0.0500	0.04182		mg/L		84	75 - 125	3	20

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-158570-2
SDG Number: SPLP

Login Number: 158570
List Number: 1
Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	27.0°C IR7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Cobalt & Molybdenum

TestAmerica Job ID: 400-158570-2
SDG: SPLP

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-19
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-18
Iowa	State Program	7	367	08-01-18 *
Kansas	NELAP	7	E-10253	10-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA170005	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-18 *
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-14	09-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-162751-1
Client Project/Site: Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/10/2018 4:59:31 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-162751-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-162751-1

Metals
Method(s) 6010C: The trailing CCV recovered high for sodium. The QC listed meet their respective data quality objectives. This data has been qualified and reported.

General Chemistry
Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPSW-2 (400-162751-2) and DPSW-3 (400-162751-3). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 NO3 F: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421468 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162751-A-3 MS) and (400-162751-A-3 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 422181 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPSW-1 (400-162751-1), DPSW-2 (400-162751-2), DPSW-3 (400-162751-3), (400-162751-A-3 MS) and (400-162751-A-3 MSD). Elevated reporting limits (RLs) are provided.

Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162751-1	DPSW-1	Water	11/29/18 15:41	11/29/18 16:35
400-162751-2	DPSW-2	Water	11/29/18 15:14	11/29/18 16:35
400-162751-3	DPSW-3	Water	11/29/18 14:31	11/29/18 16:35
400-162751-4	DPSED-1	Solid	11/29/18 15:16	11/29/18 16:35
400-162751-5	DPSED-2	Solid	11/29/18 14:18	11/29/18 16:35

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-1

Date Collected: 11/29/18 15:41
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**200**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:21	1
Potassium	**4.93**		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:21	1
Magnesium	**46.9**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:21	1
Sodium	**23.0**		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:07	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 14:58	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Chloride	**28.0**		2.00	1.40	mg/L			12/05/18 11:04	1
Sulfate	**739**		150	42.0	mg/L			12/06/18 10:32	30

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-2

Date Collected: 11/29/18 15:14
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-2

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	79.3		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:24	1
Potassium	13.2		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:24	1
Magnesium	5.19		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:24	1
Sodium	52.3		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:24	1
Molybdenum	0.367		0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.361		0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 15:02	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Chloride	55.4		4.00	2.80	mg/L			12/05/18 13:28	2
Sulfate	158		100	28.0	mg/L			12/06/18 10:05	20

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-3

Date Collected: 11/29/18 14:31
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-3

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	111		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:28	1
Potassium	20.2		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:28	1
Magnesium	6.23		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:28	1
Sodium	81.3		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:10	1
Molybdenum	0.591		0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.569		0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 15:05	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.124		0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	69.4		1.00	0.980	mg/L			12/04/18 14:54	1
Bicarbonate Alkalinity as CaCO3	69.4		1.00	0.980	mg/L			12/04/18 14:54	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:54	1
Chloride	75.1		4.00	2.80	mg/L			12/05/18 13:30	2
Sulfate	270		50.0	14.0	mg/L			12/06/18 12:13	10

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSED-1

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-4

Matrix: Solid
Percent Solids: 61.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	11.0		1.51	0.302	mg/Kg	☼	12/06/18 11:18	12/07/18 22:02	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSED-2

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-5

Matrix: Solid
Percent Solids: 74.6

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	2.22		1.34	0.267	mg/Kg	☼	12/06/18 11:18	12/07/18 22:05	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-1 — Lab Sample ID: 400-162751-1

Date Collected: 11/29/18 15:41
Date Received: 11/29/18 16:35
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 14:58	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:21	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:07	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:45	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	422059	12/05/18 11:04	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	422145	12/06/18 10:32	RRC	TAL PEN

Client Sample ID: DPSW-2 — Lab Sample ID: 400-162751-2

Date Collected: 11/29/18 15:14
Date Received: 11/29/18 16:35
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 15:02	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:24	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:24	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	422059	12/05/18 13:28	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	422145	12/06/18 10:05	RRC	TAL PEN

Client Sample ID: DPSW-3 — Lab Sample ID: 400-162751-3

Date Collected: 11/29/18 14:31
Date Received: 11/29/18 16:35
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 15:05	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:28	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:10	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	422059	12/05/18 13:30	RRC	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	422181	12/06/18 12:13	RRC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSED-1 — Lab Sample ID: 400-162751-4

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	421756	12/03/18 15:40	KRA	TAL PEN

Client Sample ID: DPSED-1 — Lab Sample ID: 400-162751-4

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35
Matrix: Solid
Percent Solids: 61.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422136	12/06/18 11:18	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 22:02	GESP	TAL PEN

Client Sample ID: DPSED-2 — Lab Sample ID: 400-162751-5

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	421756	12/03/18 15:40	KRA	TAL PEN

Client Sample ID: DPSED-2 — Lab Sample ID: 400-162751-5

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35
Matrix: Solid
Percent Solids: 74.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422136	12/06/18 11:18	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 22:05	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Metals

Prep Batch: 421563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Dissolved	Water	3005A	
400-162751-2	DPSW-2	Dissolved	Water	3005A	
400-162751-3	DPSW-3	Dissolved	Water	3005A	
MB 400-421563/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 400-421563/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-162712-J-1-C MS	Matrix Spike	Dissolved	Water	3005A	
400-162712-J-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 421960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Dissolved	Water	6010C	421563
400-162751-2	DPSW-2	Dissolved	Water	6010C	421563
400-162751-3	DPSW-3	Dissolved	Water	6010C	421563
MB 400-421563/1-A	Method Blank	Total Recoverable	Water	6010C	421563
LCS 400-421563/2-A	Lab Control Sample	Total Recoverable	Water	6010C	421563
400-162712-J-1-C MS	Matrix Spike	Dissolved	Water	6010C	421563
400-162712-J-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	6010C	421563

Prep Batch: 422024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	3010A	
400-162751-2	DPSW-2	Total/NA	Water	3010A	
400-162751-3	DPSW-3	Total/NA	Water	3010A	
MB 400-422024/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-422024/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-162956-D-1-B MS	Matrix Spike	Total/NA	Water	3010A	
400-162956-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 422130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	6010C	422024
400-162751-2	DPSW-2	Total/NA	Water	6010C	422024
400-162751-3	DPSW-3	Total/NA	Water	6010C	422024
MB 400-422024/1-A	Method Blank	Total/NA	Water	6010C	422024
LCS 400-422024/2-A	Lab Control Sample	Total/NA	Water	6010C	422024
400-162956-D-1-B MS	Matrix Spike	Total/NA	Water	6010C	422024
400-162956-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	422024

Prep Batch: 422136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-4	DPSED-1	Total/NA	Solid	3050B	
400-162751-5	DPSED-2	Total/NA	Solid	3050B	
MB 400-422136/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-422136/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-160481-A-24-G MS	Matrix Spike	Total/NA	Solid	3050B	
400-160481-A-24-H MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 422506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	6010C	422024
400-162751-2	DPSW-2	Total/NA	Water	6010C	422024

Metals (Continued)

Analysis Batch: 422506 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-3	DPSW-3	Total/NA	Water	6010C	422024
400-162751-4	DPSED-1	Total/NA	Solid	6010C	422136
400-162751-5	DPSED-2	Total/NA	Solid	6010C	422136
MB 400-422136/1-A	Method Blank	Total/NA	Solid	6010C	422136
LCS 400-422136/2-A	Lab Control Sample	Total/NA	Solid	6010C	422136
400-160481-A-24-G MS	Matrix Spike	Total/NA	Solid	6010C	422136
400-160481-A-24-H MSD	Matrix Spike Duplicate	Total/NA	Solid	6010C	422136

General Chemistry

Analysis Batch: 421756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-4	DPSED-1	Total/NA	Solid	Moisture	
400-162751-5	DPSED-2	Total/NA	Solid	Moisture	
400-162735-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 421917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 2320B	
400-162751-2	DPSW-2	Total/NA	Water	SM 2320B	
400-162751-3	DPSW-3	Total/NA	Water	SM 2320B	
MB 400-421917/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-421917/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-162780-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 422059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 Cl- E	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 Cl- E	
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 Cl- E	
MB 400-422059/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-422059/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-422059/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162751-1 MS	DPSW-1	Total/NA	Water	SM 4500 Cl- E	
400-162751-1 MSD	DPSW-1	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 422145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 SO4 E	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-422145/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-422145/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422145/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 422181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 SO4 E	
MB 400-422181/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	

General Chemistry (Continued)

Analysis Batch: 422181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-422181/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422181/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162751-3 MS	DPSW-3	Total/NA	Water	SM 4500 SO4 E	
400-162751-3 MSD	DPSW-3	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 422396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	4500 NO3 F	
400-162751-2	DPSW-2	Total/NA	Water	4500 NO3 F	
400-162751-3	DPSW-3	Total/NA	Water	4500 NO3 F	
400-162738-D-1 MS	Matrix Spike	Total/NA	Water	4500 NO3 F	
400-162738-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	4500 NO3 F	

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-422024/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/05/18 11:05	12/05/18 23:39	1
Potassium	0.100	U	1.00	0.100	mg/L		12/05/18 11:05	12/05/18 23:39	1
Magnesium	0.03213	I	0.500	0.0300	mg/L		12/05/18 11:05	12/05/18 23:39	1
Sodium	0.500	U	1.00	0.500	mg/L		12/05/18 11:05	12/05/18 23:39	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/05/18 11:05	12/05/18 23:39	1

Lab Sample ID: LCS 400-422024/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	10.72		mg/L		107	80 - 120
Potassium	10.0	10.63		mg/L		106	80 - 120
Magnesium	10.0	10.28		mg/L		103	80 - 120
Sodium	10.0	10.71		mg/L		107	80 - 120
Molybdenum	1.00	1.069		mg/L		107	80 - 120

Lab Sample ID: 400-162956-D-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	65.0		10.0	74.50		mg/L		95	75 - 125
Potassium	4.57		10.0	15.37		mg/L		108	75 - 125
Magnesium	17.2		10.0	27.46		mg/L		102	75 - 125
Sodium	143		10.0	151.5		mg/L		83	75 - 125
Molybdenum	0.00217	I	1.00	1.059		mg/L		106	75 - 125

Lab Sample ID: 400-162956-D-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	65.0		10.0	75.63		mg/L		107	75 - 125	2	20
Potassium	4.57		10.0	15.51		mg/L		109	75 - 125	1	20
Magnesium	17.2		10.0	27.77		mg/L		105	75 - 125	1	20
Sodium	143		10.0	154.1		mg/L		110	75 - 125	2	20
Molybdenum	0.00217	I	1.00	1.074		mg/L		107	75 - 125	1	20

Lab Sample ID: MB 400-422136/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.201	U	1.00	0.201	mg/Kg		12/06/18 11:18	12/07/18 20:28	1

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 400-422136/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum			99.9	102.9		mg/Kg		103	80 - 120		

Lab Sample ID: 400-160481-A-24-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum	1.57		118	107.4		mg/Kg	☼	90	75 - 125		

Lab Sample ID: 400-160481-A-24-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	1.57		118	106.9		mg/Kg	☼	89	75 - 125	0	20

Lab Sample ID: MB 400-421563/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 13:49	1

Lab Sample ID: LCS 400-421563/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum, Dissolved			1.00	1.038		mg/L		104	80 - 120		

Lab Sample ID: 400-162712-J-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum, Dissolved	0.00710	I	1.00	1.064		mg/L		106	75 - 125		

Lab Sample ID: 400-162712-J-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00710	I	1.00	1.177		mg/L		117	75 - 125	10	20

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-421917/4
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1

Lab Sample ID: LCS 400-421917/5
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	100.8		mg/L		101	80 - 120

Lab Sample ID: 400-162780-C-1 DU
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	22.1		22.64		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	22.1		22.64		mg/L		2	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-422059/6
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/05/18 11:04	1

Lab Sample ID: LCS 400-422059/7
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.15		mg/L		107	90 - 110

Lab Sample ID: MRL 400-422059/3
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.792	I	mg/L		90	50 - 150

Lab Sample ID: 400-162751-1 MS
Matrix: Water
Analysis Batch: 422059

Client Sample ID: DPSW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	28.0		10.0	36.92		mg/L		89	73 - 120

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-162751-1 MSD — **Client Sample ID: DPSW-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422059

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	28.0		10.0	37.17		mg/L		92	73 - 120	1	8

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-422145/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/06/18 09:19	1

Lab Sample ID: LCS 400-422145/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.52		mg/L		97	90 - 110

Lab Sample ID: MRL 400-422145/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.111	I	mg/L		82	50 - 150

Lab Sample ID: 400-162774-F-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0		10.0	19.76		mg/L		98	77 - 128

Lab Sample ID: 400-162774-F-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0		10.0	18.77		mg/L		88	77 - 128	5	5

Lab Sample ID: MB 400-422181/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/06/18 11:04	1

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: LCS 400-422181/7
Matrix: Water
Analysis Batch: 422181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			15.0	14.51		mg/L		97	90 - 110		

Lab Sample ID: MRL 400-422181/3
Matrix: Water
Analysis Batch: 422181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.015	I	mg/L		80	50 - 150		

Lab Sample ID: 400-162751-3 MS
Matrix: Water
Analysis Batch: 422181

Client Sample ID: DPSW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	270		10.0	260.4	J3	mg/L		-95	77 - 128		

Lab Sample ID: 400-162751-3 MSD
Matrix: Water
Analysis Batch: 422181

Client Sample ID: DPSW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	270		10.0	257.5	J3	mg/L		-123	77 - 128	1	5

SERIAL NUMBER:

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001
Fax: 850-478-2671
Website: www.testamericainc.com

QUOTE NO.	BOTTLE ORDER NO.	JOB NO.

CLIENT: Kristi Mitchell
ADDRESS: BIN 731 One Energy Place
PAGE 1 OF 1

PROJECT NAME: Molybdenum
PROJECT NO.: 40000612
CLIENT PROJECT MANAGER:
PROJECT LOC. (STATE): FL

SAMPLED BY: Ted Wilson (Geosyntec)
CONTRACT / P.O. NO.:
CLIENT PHONE: 850-444-6427
CLIENT E-MAIL OR FAX: krmitchel@southernco.com

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☐ NORMAL - 10 BUSINESS DAYS
● 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☐ OTHER:

SAMPLE DISPOSAL: ☐ RETURN TO CLIENT ● DISPOSAL BY LAB
☐ SEE CONTRACT ☐ OTHER:

POSSIBLE HAZARD IDENTIFICATION: ● NON-HAZARD; Δ FLAMMABLE; Δ RADIOACTIVE; Δ POISON B; Δ UNKNOWN; Δ OTHER:

NO. OF COOLERS PER SHIPMENT:

SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT:

LAB USE ONLY - SAMPLE NUMBER

REQUESTED ANALYSIS / NUMBER OF CONTAINERS SUBMITTED

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	No Preservative	HCL - Hydrochloric Acid	HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid or H3PO4	NAOH - Sodium Hydroxide	CH3OH - Methanol	NAHSO4 - Sodium Bisulfate	NA2S2O3 - Sodium Thiosulfate	Other:	Drinking Water	Aqueous GW, SW, WW	Solid, Semisolid, Sediment	Air	NonAqueous (Oil,Solvent, etc.)	6010C-Ca, Mg, Na, K	2320B-Alk, total, Phenol & Carb.	SM4500-Cl-E, SM4500-SiO2-B	Nitrate	6010C-Molybdenum	6010C-Field Filtered MO	6010C-Molybdenum
11/29/2018	15:41	DPSW-1			X	X							X				1	1	1	1	1	1	
	15:14	DPSW-2			X	X							X				1	1	1	1	1	1	
	14:31	DPSW-3			X	X							X				1	1	1	1	1	1	
	15:16	DPSED-1	X											X									1
	14:18	DPSED-2	X											X									1

400-162751 COC

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS	11/29/18	1635						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT?	CUSTODY SEAL NO.	TEMPERATURE OF COOLERS & REMARKS:
Kathy R Avery	11-29-18	1635	Δ YES Δ NO		4.2°C IR8

12/10/2018

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162751-1

Login Number: 162751
List Number: 1
Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2°C IR8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-18
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-162751-1
Client Project/Site: Molybdenum
Revision: 1

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/20/2018 5:00:32 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-162751-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-162751-1

Metals
Method(s) 6010C: The trailing CCV recovered high for sodium. The QC listed meet their respective data quality objectives. This data has been qualified and reported.

General Chemistry
Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPSW-2 (400-162751-2) and DPSW-3 (400-162751-3). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 NO3 F: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 421468 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-162751-A-3 MS) and (400-162751-A-3 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 422181 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPSW-1 (400-162751-1), DPSW-2 (400-162751-2), DPSW-3 (400-162751-3), (400-162751-A-3 MS) and (400-162751-A-3 MSD). Elevated reporting limits (RLs) are provided.

Report revised to report out the Nitrite and Nitrite-Nitrate per client request.

Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL PEN
SM 4500 NO3 F	Nitrogen, Nitrate-Nitrite	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-162751-1	DPSW-1	Water	11/29/18 15:41	11/29/18 16:35
400-162751-2	DPSW-2	Water	11/29/18 15:14	11/29/18 16:35
400-162751-3	DPSW-3	Water	11/29/18 14:31	11/29/18 16:35
400-162751-4	DPSED-1	Solid	11/29/18 15:16	11/29/18 16:35
400-162751-5	DPSED-2	Solid	11/29/18 14:18	11/29/18 16:35

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-1

Date Collected: 11/29/18 15:41
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**200**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:21	1
Potassium	**4.93**		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:21	1
Magnesium	**46.9**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:21	1
Sodium	**23.0**		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:07	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 14:58	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:45	1
Chloride	**28.0**		2.00	1.40	mg/L			12/05/18 11:04	1
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			11/30/18 09:01	1
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 10:22	1
Sulfate	**739**		150	42.0	mg/L			12/06/18 10:32	30

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-2

Date Collected: 11/29/18 15:14
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-2

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**79.3**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:24	1
Potassium	**13.2**		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:24	1
Magnesium	**5.19**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:24	1
Sodium	**52.3**		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:24	1
Molybdenum	**0.367**		0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:24	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**0.361**		0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 15:02	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:48	1
Chloride	**55.4**		4.00	2.80	mg/L			12/05/18 13:28	2
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			11/30/18 09:01	1
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 10:23	1
Sulfate	**158**		100	28.0	mg/L			12/06/18 10:05	20

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-3

Date Collected: 11/29/18 14:31
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-3

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**111**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:28	1
Potassium	**20.2**		1.00	0.100	mg/L		12/05/18 11:05	12/06/18 00:28	1
Magnesium	**6.23**		0.500	0.0300	mg/L		12/05/18 11:05	12/06/18 00:28	1
Sodium	**81.3**		1.00	0.500	mg/L		12/05/18 11:05	12/07/18 20:10	1
Molybdenum	**0.591**		0.0100	0.00200	mg/L		12/05/18 11:05	12/06/18 00:28	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**0.569**		0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 15:05	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.124**		0.0500	0.0180	mg/L			11/30/18 09:01	1
Alkalinity, Total	**69.4**		1.00	0.980	mg/L			12/04/18 14:54	1
Bicarbonate Alkalinity as CaCO3	**69.4**		1.00	0.980	mg/L			12/04/18 14:54	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 14:54	1
Chloride	**75.1**		4.00	2.80	mg/L			12/05/18 13:30	2
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			11/30/18 09:01	1
Nitrate Nitrite as N	**0.124**		0.0500	0.0180	mg/L			11/30/18 10:23	1
Sulfate	**270**		50.0	14.0	mg/L			12/06/18 12:13	10

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSED-1

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-4

Matrix: Solid
Percent Solids: 61.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	11.0		1.51	0.302	mg/Kg	☼	12/06/18 11:18	12/07/18 22:02	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSED-2

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35

Lab Sample ID: 400-162751-5

Matrix: Solid
Percent Solids: 74.6

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	2.22		1.34	0.267	mg/Kg	☼	12/06/18 11:18	12/07/18 22:05	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-1

Lab Sample ID: 400-162751-1
Date Collected: 11/29/18 15:41
Matrix: Water
Date Received: 11/29/18 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 14:58	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:21	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:07	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:45	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	422059	12/05/18 11:04	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	421729	11/30/18 09:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	421468	11/30/18 10:22	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	422145	12/06/18 10:32	RRC	TAL PEN

Client Sample ID: DPSW-2

Lab Sample ID: 400-162751-2
Date Collected: 11/29/18 15:14
Matrix: Water
Date Received: 11/29/18 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 15:02	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:24	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:24	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:48	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	422059	12/05/18 13:28	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	421729	11/30/18 09:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	421468	11/30/18 10:23	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	422145	12/06/18 10:05	RRC	TAL PEN

Client Sample ID: DPSW-3

Lab Sample ID: 400-162751-3
Date Collected: 11/29/18 14:31
Matrix: Water
Date Received: 11/29/18 16:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			421563	11/30/18 17:37	KWN	TAL PEN
Dissolved	Analysis	6010C		1	421960	12/04/18 15:05	GESP	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422130	12/06/18 00:28	AC	TAL PEN
Total/NA	Prep	3010A			422024	12/05/18 11:05	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 20:10	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Client Sample ID: DPSW-3 — Lab Sample ID: 400-162751-3

Date Collected: 11/29/18 14:31
Date Received: 11/29/18 16:35
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	4500 NO3 F		1	422396	11/30/18 09:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	421917	12/04/18 14:54	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	422059	12/05/18 13:30	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	421729	11/30/18 09:01	BAB	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	421468	11/30/18 10:23	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	422181	12/06/18 12:13	RRC	TAL PEN

Client Sample ID: DPSED-1 — Lab Sample ID: 400-162751-4

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	421756	12/03/18 15:40	KRA	TAL PEN

Client Sample ID: DPSED-1 — Lab Sample ID: 400-162751-4

Date Collected: 11/29/18 15:16
Date Received: 11/29/18 16:35
Matrix: Solid
Percent Solids: 61.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422136	12/06/18 11:18	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 22:02	GESP	TAL PEN

Client Sample ID: DPSED-2 — Lab Sample ID: 400-162751-5

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	421756	12/03/18 15:40	KRA	TAL PEN

Client Sample ID: DPSED-2 — Lab Sample ID: 400-162751-5

Date Collected: 11/29/18 14:18
Date Received: 11/29/18 16:35
Matrix: Solid
Percent Solids: 74.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422136	12/06/18 11:18	KWN	TAL PEN
Total/NA	Analysis	6010C		1	422506	12/07/18 22:05	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Metals

Prep Batch: 421563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Dissolved	Water	3005A	
400-162751-2	DPSW-2	Dissolved	Water	3005A	
400-162751-3	DPSW-3	Dissolved	Water	3005A	
MB 400-421563/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 400-421563/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-162712-J-1-C MS	Matrix Spike	Dissolved	Water	3005A	
400-162712-J-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 421960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Dissolved	Water	6010C	421563
400-162751-2	DPSW-2	Dissolved	Water	6010C	421563
400-162751-3	DPSW-3	Dissolved	Water	6010C	421563
MB 400-421563/1-A	Method Blank	Total Recoverable	Water	6010C	421563
LCS 400-421563/2-A	Lab Control Sample	Total Recoverable	Water	6010C	421563
400-162712-J-1-C MS	Matrix Spike	Dissolved	Water	6010C	421563
400-162712-J-1-D MSD	Matrix Spike Duplicate	Dissolved	Water	6010C	421563

Prep Batch: 422024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	3010A	
400-162751-2	DPSW-2	Total/NA	Water	3010A	
400-162751-3	DPSW-3	Total/NA	Water	3010A	
MB 400-422024/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-422024/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-162956-D-1-B MS	Matrix Spike	Total/NA	Water	3010A	
400-162956-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 422130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	6010C	422024
400-162751-2	DPSW-2	Total/NA	Water	6010C	422024
400-162751-3	DPSW-3	Total/NA	Water	6010C	422024
MB 400-422024/1-A	Method Blank	Total/NA	Water	6010C	422024
LCS 400-422024/2-A	Lab Control Sample	Total/NA	Water	6010C	422024
400-162956-D-1-B MS	Matrix Spike	Total/NA	Water	6010C	422024
400-162956-D-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	422024

Prep Batch: 422136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-4	DPSED-1	Total/NA	Solid	3050B	
400-162751-5	DPSED-2	Total/NA	Solid	3050B	
MB 400-422136/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-422136/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-160481-A-24-G MS	Matrix Spike	Total/NA	Solid	3050B	
400-160481-A-24-H MSD	Matrix Spike Duplicate	Total/NA	Solid	3050B	

Analysis Batch: 422506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	6010C	422024
400-162751-2	DPSW-2	Total/NA	Water	6010C	422024

Metals (Continued)

Analysis Batch: 422506 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-3	DPSW-3	Total/NA	Water	6010C	422024
400-162751-4	DPSED-1	Total/NA	Solid	6010C	422136
400-162751-5	DPSED-2	Total/NA	Solid	6010C	422136
MB 400-422136/1-A	Method Blank	Total/NA	Solid	6010C	422136
LCS 400-422136/2-A	Lab Control Sample	Total/NA	Solid	6010C	422136
400-160481-A-24-G MS	Matrix Spike	Total/NA	Solid	6010C	422136
400-160481-A-24-H MSD	Matrix Spike Duplicate	Total/NA	Solid	6010C	422136

General Chemistry

Analysis Batch: 421468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 NO3 F	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 NO3 F	
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 NO3 F	
MB 400-421468/14	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 400-421468/15	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MRL 400-421468/13	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
400-162740-F-9 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-162740-F-9 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 421729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 NO2 B	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 NO2 B	
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 NO2 B	
MB 400-421729/6	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 400-421729/7	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MRL 400-421729/3	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
400-162738-D-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO2 B	
400-162738-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO2 B	
400-162787-H-1 DU	Duplicate	Total/NA	Water	SM 4500 NO2 B	

Analysis Batch: 421756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-4	DPSED-1	Total/NA	Solid	Moisture	
400-162751-5	DPSED-2	Total/NA	Solid	Moisture	
400-162735-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 421917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 2320B	
400-162751-2	DPSW-2	Total/NA	Water	SM 2320B	
400-162751-3	DPSW-3	Total/NA	Water	SM 2320B	
MB 400-421917/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-421917/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-162780-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 422059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 Cl- E	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 Cl- E	
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 Cl- E	
MB 400-422059/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-422059/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-422059/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-162751-1 MS	DPSW-1	Total/NA	Water	SM 4500 Cl- E	
400-162751-1 MSD	DPSW-1	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 422145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	SM 4500 SO4 E	
400-162751-2	DPSW-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-422145/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-422145/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422145/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-162774-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 422181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-3	DPSW-3	Total/NA	Water	SM 4500 SO4 E	
MB 400-422181/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-422181/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-422181/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-162751-3 MS	DPSW-3	Total/NA	Water	SM 4500 SO4 E	
400-162751-3 MSD	DPSW-3	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 422396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-162751-1	DPSW-1	Total/NA	Water	4500 NO3 F	
400-162751-2	DPSW-2	Total/NA	Water	4500 NO3 F	
400-162751-3	DPSW-3	Total/NA	Water	4500 NO3 F	
400-162738-D-1 MS	Matrix Spike	Total/NA	Water	4500 NO3 F	
400-162738-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	4500 NO3 F	

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-422024/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/05/18 11:05	12/05/18 23:39	1
Potassium	0.100	U	1.00	0.100	mg/L		12/05/18 11:05	12/05/18 23:39	1
Magnesium	0.03213	I	0.500	0.0300	mg/L		12/05/18 11:05	12/05/18 23:39	1
Sodium	0.500	U	1.00	0.500	mg/L		12/05/18 11:05	12/05/18 23:39	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/05/18 11:05	12/05/18 23:39	1

Lab Sample ID: LCS 400-422024/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	10.72		mg/L		107	80 - 120
Potassium	10.0	10.63		mg/L		106	80 - 120
Magnesium	10.0	10.28		mg/L		103	80 - 120
Sodium	10.0	10.71		mg/L		107	80 - 120
Molybdenum	1.00	1.069		mg/L		107	80 - 120

Lab Sample ID: 400-162956-D-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	65.0		10.0	74.50		mg/L		95	75 - 125
Potassium	4.57		10.0	15.37		mg/L		108	75 - 125
Magnesium	17.2		10.0	27.46		mg/L		102	75 - 125
Sodium	143		10.0	151.5		mg/L		83	75 - 125
Molybdenum	0.00217	I	1.00	1.059		mg/L		106	75 - 125

Lab Sample ID: 400-162956-D-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422130 — **Prep Batch: 422024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	65.0		10.0	75.63		mg/L		107	75 - 125	2	20
Potassium	4.57		10.0	15.51		mg/L		109	75 - 125	1	20
Magnesium	17.2		10.0	27.77		mg/L		105	75 - 125	1	20
Sodium	143		10.0	154.1		mg/L		110	75 - 125	2	20
Molybdenum	0.00217	I	1.00	1.074		mg/L		107	75 - 125	1	20

Lab Sample ID: MB 400-422136/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.201	U	1.00	0.201	mg/Kg		12/06/18 11:18	12/07/18 20:28	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 400-422136/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	99.9	102.9		mg/Kg		103	80 - 120

Lab Sample ID: 400-160481-A-24-G MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.57		118	107.4		mg/Kg	☼	90	75 - 125

Lab Sample ID: 400-160481-A-24-H MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 422506 — **Prep Batch: 422136**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	1.57		118	106.9		mg/Kg	☼	89	75 - 125	0	20

Lab Sample ID: MB 400-421563/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		11/30/18 17:37	12/04/18 13:49	1

Lab Sample ID: LCS 400-421563/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.038		mg/L		104	80 - 120

Lab Sample ID: 400-162712-J-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00710	I	1.00	1.064		mg/L		106	75 - 125

Lab Sample ID: 400-162712-J-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 421960 — **Prep Batch: 421563**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00710	I	1.00	1.177		mg/L		117	75 - 125	10	20

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-421917/4
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/04/18 12:39	1

Lab Sample ID: LCS 400-421917/5
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	100.8		mg/L		101	80 - 120

Lab Sample ID: 400-162780-C-1 DU
Matrix: Water
Analysis Batch: 421917

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	22.1		22.64		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	22.1		22.64		mg/L		2	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-422059/6
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/05/18 11:04	1

Lab Sample ID: LCS 400-422059/7
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.15		mg/L		107	90 - 110

Lab Sample ID: MRL 400-422059/3
Matrix: Water
Analysis Batch: 422059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.792	I	mg/L		90	50 - 150

Lab Sample ID: 400-162751-1 MS
Matrix: Water
Analysis Batch: 422059

Client Sample ID: DPSW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	28.0		10.0	36.92		mg/L		89	73 - 120

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-162751-1 MSD — **Client Sample ID: DPSW-1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422059

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	28.0		10.0	37.17		mg/L		92	73 - 120	1	8

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 400-421729/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			11/30/18 08:16	1

Lab Sample ID: LCS 400-421729/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.300	0.2713		mg/L		90	90 - 110

Lab Sample ID: MRL 400-421729/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.100	0.1008		mg/L		101	50 - 150

Lab Sample ID: 400-162738-D-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.0180	U	0.200	0.1962		mg/L		98	80 - 118

Lab Sample ID: 400-162738-D-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.0180	U	0.200	0.1940		mg/L		97	80 - 118	1	9

Lab Sample ID: 400-162787-H-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421729

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	0.0180	U	0.0180	U	mg/L		NC	9

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-421468/14 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421468

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			11/30/18 09:46	1

Lab Sample ID: LCS 400-421468/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421468

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.500	0.5210		mg/L		104	90 - 110

Lab Sample ID: MRL 400-421468/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421468

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.0500	0.03000	I	mg/L		60	50 - 150

Lab Sample ID: 400-162740-F-9 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421468

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.0180	U	1.00	0.5680	J3	mg/L		57	90 - 110

Lab Sample ID: 400-162740-F-9 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 421468

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.0180	U	1.00	0.5650	J3	mg/L		56	90 - 110	1	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-422145/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/06/18 09:19	1

Lab Sample ID: LCS 400-422145/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.52		mg/L		97	90 - 110

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: MRL 400-422145/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.111	I	mg/L		82	50 - 150

Lab Sample ID: 400-162774-F-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	10.0		10.0	19.76		mg/L		98	77 - 128

Lab Sample ID: 400-162774-F-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422145

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	10.0		10.0	18.77		mg/L		88	77 - 128	5	5

Lab Sample ID: MB 400-422181/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/06/18 11:04	1

Lab Sample ID: LCS 400-422181/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	14.51		mg/L		97	90 - 110

Lab Sample ID: MRL 400-422181/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.015	I	mg/L		80	50 - 150

Lab Sample ID: 400-162751-3 MS — **Client Sample ID: DPSW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	270		10.0	260.4	J3	mg/L		-95	77 - 128

Lab Sample ID: 400-162751-3 MSD — **Client Sample ID: DPSW-3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 422181

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	270		10.0	257.5	J3	mg/L		-123	77 - 128	1	5

SERIAL NUMBER:

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001
Fax: 850-478-2671
Website: www.testamericainc.com

QUOTE NO.	BOTTLE ORDER NO.	JOB NO.

CLIENT: Kristi Mitchell
ADDRESS: BIN 731 One Energy Place
PAGE 1 OF 1

PROJECT NAME: Molybdenum
PROJECT NO.: 40000612
CLIENT PROJECT MANAGER:
PROJECT LOC. (STATE): FL

SAMPLED BY: Ted Wilson (Geosyntec)
CONTRACT / P.O. NO.:
CLIENT PHONE: 850-444-6427
CLIENT E-MAIL OR FAX: krmitchel@southernco.com

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☐ NORMAL - 10 BUSINESS DAYS
● 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☐ OTHER:

SAMPLE DISPOSAL: ☐ RETURN TO CLIENT ● DISPOSAL BY LAB
☐ SEE CONTRACT ☐ OTHER:

POSSIBLE HAZARD IDENTIFICATION: ● NON-HAZARD; Δ FLAMMABLE; Δ RADIOACTIVE; Δ POISON B; Δ UNKNOWN; Δ OTHER:

NO. OF COOLERS PER SHIPMENT:

LAB USE ONLY - SAMPLE NUMBER

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	No Preservative	HCL - Hydrochloric Acid	HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid or H3PO4	NAOH - Sodium Hydroxide	CH3OH - Methanol	NAHSO4 - Sodium Bisulfate	NA2S2O3 - Sodium Thiosulfate	Other:	Drinking Water	Aqueous GW, SW, WW	Solid, Semisolid, Sediment	Air	NonAqueous (Oil,Solvent, etc.)	6010C-Ca, Mg, Na, K	2320B-Alk, total, Phenol & Carb.	SM4500-Cl-E, SM4500-SiO2-B	Nitrate	6010C-Molybdenum	6010C-Field Filtered MO	6010C-Molybdenum	SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT
11/29/2018	15:41	DPSW-1			X	X							X				1	1	1	1	1	1		
	15:14	DPSW-2			X	X							X				1	1	1	1	1	1		
	14:31	DPSW-3			X	X							X				1	1	1	1	1	1		
	15:16	DPSED-1	X											X									1	
	14:18	DPSED-2	X											X									1	

NUMBER OF CONTAINERS SUBMITTED

400-162751 COC

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS	11/29/18	~~14~~ 1635						

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT?	CUSTODY SEAL NO.	TEMPERATURE OF COOLERS & REMARKS:
Kathy R Avery	11-29-18	1635	Δ YES Δ NO		4.2°C FRB

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-162751-1

Login Number: 162751
List Number: 1
Creator: Johnson, Jeremy N

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2°C IR8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-162751-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163328-1
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/14/2018 5:07:20 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

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 PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163328-1	DPT-S-1 20'	Solid	12/11/18 09:13	12/11/18 17:05
400-163328-2	DPT-S-1 34'	Solid	12/11/18 09:52	12/11/18 17:05
400-163328-3	DPT-S-1 48'	Solid	12/11/18 10:40	12/11/18 17:05
400-163328-4	DPT-S-1 58'	Solid	12/11/18 11:45	12/11/18 17:05
400-163328-5	DPT-S-2 14'	Solid	12/11/18 16:10	12/11/18 17:05
400-163328-6	DPT-S-2 28'	Solid	12/11/18 16:30	12/11/18 17:05
400-163328-7	DPT-S-2 38'	Solid	12/11/18 16:40	12/11/18 17:05

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Client Sample ID: DPT-S-1 20'
Lab Sample ID: 400-163328-1
Date Collected: 12/11/18 09:13
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 94.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.207	U	1.03	0.207	mg/Kg	☼	12/11/18 18:02	12/12/18 16:52	1

Client Sample ID: DPT-S-1 34'
Lab Sample ID: 400-163328-2
Date Collected: 12/11/18 09:52
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 78.1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.332	I	1.16	0.232	mg/Kg	☼	12/11/18 18:02	12/12/18 17:19	1

Client Sample ID: DPT-S-1 48'
Lab Sample ID: 400-163328-3
Date Collected: 12/11/18 10:40
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 78.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	12.7		1.17	0.233	mg/Kg	☼	12/11/18 18:02	12/12/18 17:23	1

Client Sample ID: DPT-S-1 58'
Lab Sample ID: 400-163328-4
Date Collected: 12/11/18 11:45
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 80.3

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	3.14		1.23	0.247	mg/Kg	☼	12/11/18 18:02	12/12/18 17:26	1

Client Sample ID: DPT-S-2 14'
Lab Sample ID: 400-163328-5
Date Collected: 12/11/18 16:10
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 81.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	2.73		1.15	0.229	mg/Kg	☼	12/11/18 18:02	12/12/18 17:30	1

Client Sample ID: DPT-S-2 28'
Lab Sample ID: 400-163328-6
Date Collected: 12/11/18 16:30
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 96.3

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.339	I	0.994	0.199	mg/Kg	☼	12/11/18 18:02	12/12/18 17:33	1

Client Sample ID: DPT-S-2 38'
Lab Sample ID: 400-163328-7
Date Collected: 12/11/18 16:40
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 81.0

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.380	I	1.19	0.238	mg/Kg	☼	12/11/18 18:02	12/12/18 17:37	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Client Sample ID: DPT-S-1 20'
Lab Sample ID: 400-163328-1
Date Collected: 12/11/18 09:13
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-1 20'
Lab Sample ID: 400-163328-1
Date Collected: 12/11/18 09:13
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 16:52	AC	TAL PEN

Client Sample ID: DPT-S-1 34'
Lab Sample ID: 400-163328-2
Date Collected: 12/11/18 09:52
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-1 34'
Lab Sample ID: 400-163328-2
Date Collected: 12/11/18 09:52
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 78.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:19	AC	TAL PEN

Client Sample ID: DPT-S-1 48'
Lab Sample ID: 400-163328-3
Date Collected: 12/11/18 10:40
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-1 48'
Lab Sample ID: 400-163328-3
Date Collected: 12/11/18 10:40
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:23	AC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Client Sample ID: DPT-S-1 58'
Lab Sample ID: 400-163328-4
Date Collected: 12/11/18 11:45
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-1 58'
Lab Sample ID: 400-163328-4
Date Collected: 12/11/18 11:45
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:26	AC	TAL PEN

Client Sample ID: DPT-S-2 14'
Lab Sample ID: 400-163328-5
Date Collected: 12/11/18 16:10
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-2 14'
Lab Sample ID: 400-163328-5
Date Collected: 12/11/18 16:10
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:30	AC	TAL PEN

Client Sample ID: DPT-S-2 28'
Lab Sample ID: 400-163328-6
Date Collected: 12/11/18 16:30
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-2 28'
Lab Sample ID: 400-163328-6
Date Collected: 12/11/18 16:30
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:33	AC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Client Sample ID: DPT-S-2 38'

Lab Sample ID: 400-163328-7
Date Collected: 12/11/18 16:40
Matrix: Solid
Date Received: 12/11/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423150	12/13/18 17:24	KRA	TAL PEN

Client Sample ID: DPT-S-2 38'

Lab Sample ID: 400-163328-7
Date Collected: 12/11/18 16:40
Matrix: Solid
Date Received: 12/11/18 17:05
Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			422801	12/11/18 18:02	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423023	12/12/18 17:37	AC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Metals

Prep Batch: 422801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163328-1	DPT-S-1 20'	Total/NA	Solid	3050B	
400-163328-2	DPT-S-1 34'	Total/NA	Solid	3050B	
400-163328-3	DPT-S-1 48'	Total/NA	Solid	3050B	
400-163328-4	DPT-S-1 58'	Total/NA	Solid	3050B	
400-163328-5	DPT-S-2 14'	Total/NA	Solid	3050B	
400-163328-6	DPT-S-2 28'	Total/NA	Solid	3050B	
400-163328-7	DPT-S-2 38'	Total/NA	Solid	3050B	
MB 400-422801/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-422801/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-163328-1 MS	DPT-S-1 20'	Total/NA	Solid	3050B	
400-163328-1 MSD	DPT-S-1 20'	Total/NA	Solid	3050B	

Analysis Batch: 423023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163328-1	DPT-S-1 20'	Total/NA	Solid	6010C	422801
400-163328-2	DPT-S-1 34'	Total/NA	Solid	6010C	422801
400-163328-3	DPT-S-1 48'	Total/NA	Solid	6010C	422801
400-163328-4	DPT-S-1 58'	Total/NA	Solid	6010C	422801
400-163328-5	DPT-S-2 14'	Total/NA	Solid	6010C	422801
400-163328-6	DPT-S-2 28'	Total/NA	Solid	6010C	422801
400-163328-7	DPT-S-2 38'	Total/NA	Solid	6010C	422801
MB 400-422801/1-A	Method Blank	Total/NA	Solid	6010C	422801
LCS 400-422801/2-A	Lab Control Sample	Total/NA	Solid	6010C	422801
400-163328-1 MS	DPT-S-1 20'	Total/NA	Solid	6010C	422801
400-163328-1 MSD	DPT-S-1 20'	Total/NA	Solid	6010C	422801

General Chemistry

Analysis Batch: 423150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163328-1	DPT-S-1 20'	Total/NA	Solid	Moisture	
400-163328-2	DPT-S-1 34'	Total/NA	Solid	Moisture	
400-163328-3	DPT-S-1 48'	Total/NA	Solid	Moisture	
400-163328-4	DPT-S-1 58'	Total/NA	Solid	Moisture	
400-163328-5	DPT-S-2 14'	Total/NA	Solid	Moisture	
400-163328-6	DPT-S-2 28'	Total/NA	Solid	Moisture	
400-163328-7	DPT-S-2 38'	Total/NA	Solid	Moisture	
400-163309-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-422801/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 423023 — **Prep Batch: 422801**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.199	U	0.995	0.199	mg/Kg		12/11/18 18:02	12/12/18 16:45	1

Lab Sample ID: LCS 400-422801/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 423023 — **Prep Batch: 422801**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum			100	104.7		mg/Kg		105	80 - 120		

Lab Sample ID: 400-163328-1 MS — **Client Sample ID: DPT-S-1 20'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 423023 — **Prep Batch: 422801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum	0.207	U	103	105.7		mg/Kg	☼	103	75 - 125		

Lab Sample ID: 400-163328-1 MSD — **Client Sample ID: DPT-S-1 20'**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 423023 — **Prep Batch: 422801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.207	U	102	103.0		mg/Kg	☼	101	75 - 125	3	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.1
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs.			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site: Plant Crist	SSOW#:			

Analysis Requested

400-163328 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Molybdenum	6010C - Molybdenum	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
DPT-S-1 20'	12/11/18	9:13	G	Solid			✓	✓		
DPT-S-1 34'	"	9:52	"	Solid			✓	✓		
DPT-S-1 48'	"	10:40	"	Solid			✓	✓		
DPT-S-1 58'	"	11:45	"	Solid			✓	✓		
DPT-S-2 14'	"	16:10	"	Solid			✓	✓		
DPT-S-2 28'	"	16:30	"	Solid			✓	✓		
DPT-S-2 38'	"	16:40	"	Solid			✓	✓		
				Solid						
				Solid						
				Solid						
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12-11-2018/1705	Geosyntec	Kathy R Owen	12-11-18 1705	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.1°C IR7

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163328-1
SDG Number: Molybdenum

Login Number: 163328
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1°C IR-7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163328-1
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163405-1
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/18/2018 5:10:56 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN
3050B	Preparation, Metals	SW846	TAL PEN

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 PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163405-1	DPT-S-2 60'	Solid	12/12/18 09:05	12/12/18 16:51
400-163405-2	DPT-S-3 14.5'	Solid	12/12/18 10:00	12/12/18 16:51
400-163405-3	DPT-S-3 31'	Solid	12/12/18 10:10	12/12/18 16:51
400-163405-4	DPT-S-3 46'	Solid	12/12/18 10:30	12/12/18 16:51
400-163405-5	DPT-S-3 63'	Solid	12/12/18 11:00	12/12/18 16:51
400-163405-6	DPT-S-4 14'	Solid	12/12/18 13:30	12/12/18 16:51
400-163405-7	DPT-S-4 31'	Solid	12/12/18 13:50	12/12/18 16:51
400-163405-8	DPT-S-4 47'	Solid	12/12/18 14:40	12/12/18 16:51
400-163405-9	DPT-S-4 56'	Solid	12/12/18 15:30	12/12/18 16:51
400-163405-10	DPT-S-4 63'	Solid	12/12/18 16:10	12/12/18 16:51

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-2 60'
Lab Sample ID: 400-163405-1
Date Collected: 12/12/18 09:05 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 85.1**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.432	I	1.08	0.215	mg/Kg	☼	12/13/18 10:53	12/13/18 23:30	1

Client Sample ID: DPT-S-3 14.5'
Lab Sample ID: 400-163405-2
Date Collected: 12/12/18 10:00 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 85.8**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.588	I	1.09	0.219	mg/Kg	☼	12/13/18 10:53	12/13/18 23:34	1

Client Sample ID: DPT-S-3 31'
Lab Sample ID: 400-163405-3
Date Collected: 12/12/18 10:10 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 86.1**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	8.40		1.12	0.224	mg/Kg	☼	12/13/18 10:53	12/14/18 00:01	1

Client Sample ID: DPT-S-3 46'
Lab Sample ID: 400-163405-4
Date Collected: 12/12/18 10:30 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 87.8**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	6.14		1.12	0.223	mg/Kg	☼	12/13/18 10:53	12/14/18 00:05	1

Client Sample ID: DPT-S-3 63'
Lab Sample ID: 400-163405-5
Date Collected: 12/12/18 11:00 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 84.6**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.886	I	1.10	0.220	mg/Kg	☼	12/13/18 10:53	12/14/18 00:08	1

Client Sample ID: DPT-S-4 14'
Lab Sample ID: 400-163405-6
Date Collected: 12/12/18 13:30 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 89.5**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.536	I	1.11	0.223	mg/Kg	☼	12/13/18 10:53	12/14/18 00:12	1

Client Sample ID: DPT-S-4 31'
Lab Sample ID: 400-163405-7
Date Collected: 12/12/18 13:50 — **Matrix: Solid**
Date Received: 12/12/18 16:51 — **Percent Solids: 86.9**

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.262	I	1.15	0.230	mg/Kg	☼	12/13/18 10:53	12/14/18 00:16	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-4 47'

Lab Sample ID: 400-163405-8
Date Collected: 12/12/18 14:40
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 85.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	2.50		1.09	0.219	mg/Kg	☼	12/13/18 10:53	12/14/18 00:19	1

Client Sample ID: DPT-S-4 56'

Lab Sample ID: 400-163405-9
Date Collected: 12/12/18 15:30
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 83.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	15.8		1.11	0.221	mg/Kg	☼	12/13/18 10:53	12/14/18 00:23	1

Client Sample ID: DPT-S-4 63'

Lab Sample ID: 400-163405-10
Date Collected: 12/12/18 16:10
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 82.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.237	I	1.14	0.228	mg/Kg	☼	12/13/18 10:53	12/14/18 00:26	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-2 60'
Lab Sample ID: 400-163405-1
Date Collected: 12/12/18 09:05
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-2 60'
Lab Sample ID: 400-163405-1
Date Collected: 12/12/18 09:05
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/13/18 23:30	GESP	TAL PEN

Client Sample ID: DPT-S-3 14.5'
Lab Sample ID: 400-163405-2
Date Collected: 12/12/18 10:00
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-3 14.5'
Lab Sample ID: 400-163405-2
Date Collected: 12/12/18 10:00
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/13/18 23:34	GESP	TAL PEN

Client Sample ID: DPT-S-3 31'
Lab Sample ID: 400-163405-3
Date Collected: 12/12/18 10:10
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-3 31'
Lab Sample ID: 400-163405-3
Date Collected: 12/12/18 10:10
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:01	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-3 46'
Lab Sample ID: 400-163405-4
Date Collected: 12/12/18 10:30
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-3 46'
Lab Sample ID: 400-163405-4
Date Collected: 12/12/18 10:30
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 87.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:05	GESP	TAL PEN

Client Sample ID: DPT-S-3 63'
Lab Sample ID: 400-163405-5
Date Collected: 12/12/18 11:00
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-3 63'
Lab Sample ID: 400-163405-5
Date Collected: 12/12/18 11:00
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:08	GESP	TAL PEN

Client Sample ID: DPT-S-4 14'
Lab Sample ID: 400-163405-6
Date Collected: 12/12/18 13:30
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-4 14'
Lab Sample ID: 400-163405-6
Date Collected: 12/12/18 13:30
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:12	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-4 31'
Lab Sample ID: 400-163405-7
Date Collected: 12/12/18 13:50
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-4 31'
Lab Sample ID: 400-163405-7
Date Collected: 12/12/18 13:50
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:16	GESP	TAL PEN

Client Sample ID: DPT-S-4 47'
Lab Sample ID: 400-163405-8
Date Collected: 12/12/18 14:40
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-4 47'
Lab Sample ID: 400-163405-8
Date Collected: 12/12/18 14:40
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:19	GESP	TAL PEN

Client Sample ID: DPT-S-4 56'
Lab Sample ID: 400-163405-9
Date Collected: 12/12/18 15:30
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-4 56'
Lab Sample ID: 400-163405-9
Date Collected: 12/12/18 15:30
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:23	GESP	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Client Sample ID: DPT-S-4 63'

Lab Sample ID: 400-163405-10
Date Collected: 12/12/18 16:10
Matrix: Solid
Date Received: 12/12/18 16:51

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	423463	12/17/18 08:03	TMP	TAL PEN

Client Sample ID: DPT-S-4 63'

Lab Sample ID: 400-163405-10
Date Collected: 12/12/18 16:10
Matrix: Solid
Date Received: 12/12/18 16:51
Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			423050	12/13/18 10:53	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423179	12/14/18 00:26	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Metals

Prep Batch: 423050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163405-1	DPT-S-2 60'	Total/NA	Solid	3050B	
400-163405-2	DPT-S-3 14.5'	Total/NA	Solid	3050B	
400-163405-3	DPT-S-3 31'	Total/NA	Solid	3050B	
400-163405-4	DPT-S-3 46'	Total/NA	Solid	3050B	
400-163405-5	DPT-S-3 63'	Total/NA	Solid	3050B	
400-163405-6	DPT-S-4 14'	Total/NA	Solid	3050B	
400-163405-7	DPT-S-4 31'	Total/NA	Solid	3050B	
400-163405-8	DPT-S-4 47'	Total/NA	Solid	3050B	
400-163405-9	DPT-S-4 56'	Total/NA	Solid	3050B	
400-163405-10	DPT-S-4 63'	Total/NA	Solid	3050B	
MB 400-423050/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 400-423050/2-A	Lab Control Sample	Total/NA	Solid	3050B	
400-163405-2 MS	DPT-S-3 14.5'	Total/NA	Solid	3050B	
400-163405-2 MSD	DPT-S-3 14.5'	Total/NA	Solid	3050B	

Analysis Batch: 423179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163405-1	DPT-S-2 60'	Total/NA	Solid	6010C	423050
400-163405-2	DPT-S-3 14.5'	Total/NA	Solid	6010C	423050
400-163405-3	DPT-S-3 31'	Total/NA	Solid	6010C	423050
400-163405-4	DPT-S-3 46'	Total/NA	Solid	6010C	423050
400-163405-5	DPT-S-3 63'	Total/NA	Solid	6010C	423050
400-163405-6	DPT-S-4 14'	Total/NA	Solid	6010C	423050
400-163405-7	DPT-S-4 31'	Total/NA	Solid	6010C	423050
400-163405-8	DPT-S-4 47'	Total/NA	Solid	6010C	423050
400-163405-9	DPT-S-4 56'	Total/NA	Solid	6010C	423050
400-163405-10	DPT-S-4 63'	Total/NA	Solid	6010C	423050
MB 400-423050/1-A	Method Blank	Total/NA	Solid	6010C	423050
LCS 400-423050/2-A	Lab Control Sample	Total/NA	Solid	6010C	423050
400-163405-2 MS	DPT-S-3 14.5'	Total/NA	Solid	6010C	423050
400-163405-2 MSD	DPT-S-3 14.5'	Total/NA	Solid	6010C	423050

General Chemistry

Analysis Batch: 423463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163405-1	DPT-S-2 60'	Total/NA	Solid	Moisture	
400-163405-2	DPT-S-3 14.5'	Total/NA	Solid	Moisture	
400-163405-3	DPT-S-3 31'	Total/NA	Solid	Moisture	
400-163405-4	DPT-S-3 46'	Total/NA	Solid	Moisture	
400-163405-5	DPT-S-3 63'	Total/NA	Solid	Moisture	
400-163405-6	DPT-S-4 14'	Total/NA	Solid	Moisture	
400-163405-7	DPT-S-4 31'	Total/NA	Solid	Moisture	
400-163405-8	DPT-S-4 47'	Total/NA	Solid	Moisture	
400-163405-9	DPT-S-4 56'	Total/NA	Solid	Moisture	
400-163405-10	DPT-S-4 63'	Total/NA	Solid	Moisture	
400-163394-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423050/1-A
Matrix: Solid
Analysis Batch: 423179

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 423050

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.199	U	0.994	0.199	mg/Kg		12/13/18 10:53	12/13/18 23:23	1

Lab Sample ID: LCS 400-423050/2-A
Matrix: Solid
Analysis Batch: 423179

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 423050

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum			99.9	101.4		mg/Kg		102	80 - 120		

Lab Sample ID: 400-163405-2 MS
Matrix: Solid
Analysis Batch: 423179

Client Sample ID: DPT-S-3 14.5'
Prep Type: Total/NA
Prep Batch: 423050

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Molybdenum	0.588	I	108	102.0		mg/Kg	☼	94	75 - 125		

Lab Sample ID: 400-163405-2 MSD
Matrix: Solid
Analysis Batch: 423179

Client Sample ID: DPT-S-3 14.5'
Prep Type: Total/NA
Prep Batch: 423050

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.588	I	113	110.1		mg/Kg	☼	97	75 - 125	8	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.2
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 2 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs.			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

400-163405 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Molybdenum	6010C - Molybdenum	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
DPT-S-2 60'	12/12/18	9:05	G	Solid			✓	✓		
DPT-S-3 14.5'	12/12/18	10:00	G	Solid			✓	✓		
DPT-S-3 31'	12/12/18	10:10	G	Solid			✓	✓		
DPT-S-3 46'	12/12/18	10:30	G	Solid			✓	✓		
DPT-S-3 63'	12/12/18	11:00	G	Solid			✓	✓		
DPT-S-4 14'	12/12/18	13:30	G	Solid			✓	✓		
DPT-S-4 31'	12/12/18	13:50	G	Solid			✓	✓		
DPT-S-4 47'	12/12/18	14:40	G	Solid			✓	✓		
DPT-S-4 56'	12/12/18	15:30	G	Solid			✓	✓		
DPT-S-4 63'	12/12/18	16:10	G	Solid			✓	✓		
				Solid						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Ted Wilson	12/12/18 16:51	Geosyntec	Kathy R Avery	12/12/18 1651	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.4°C IR 8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163405-1
SDG Number: Molybdenum

Login Number: 163405
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.9°C IR-8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163405-1
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163469-1
Client Project/Site: Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/19/2018 4:12:14 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163469-1	MW 304	Water	12/13/18 11:54	12/13/18 16:39
400-163469-2	MW 308	Water	12/13/18 13:03	12/13/18 16:39
400-163469-3	MW 303	Water	12/13/18 13:59	12/13/18 16:39
400-163469-4	MW 302	Water	12/13/18 14:56	12/13/18 16:39

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Client Sample ID: MW 304

Lab Sample ID: 400-163469-1
Date Collected: 12/13/18 11:54
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/14/18 16:38	12/17/18 13:42	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:17	1

Client Sample ID: MW 308

Lab Sample ID: 400-163469-2
Date Collected: 12/13/18 13:03
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/14/18 16:38	12/17/18 13:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:32	1

Client Sample ID: MW 303

Lab Sample ID: 400-163469-3
Date Collected: 12/13/18 13:59
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	**0.975**		0.0100	0.00200	mg/L		12/14/18 16:38	12/17/18 14:03	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**0.916**		0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:35	1

Client Sample ID: MW 302

Lab Sample ID: 400-163469-4
Date Collected: 12/13/18 14:56
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	**0.333**		0.0100	0.00200	mg/L		12/14/18 16:38	12/17/18 14:06	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**0.384**		0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:39	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Client Sample ID: MW 304 — Lab Sample ID: 400-163469-1

Date Collected: 12/13/18 11:54
Date Received: 12/13/18 16:39
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:17	DRE	TAL PEN
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 13:42	AC	TAL PEN

Client Sample ID: MW 308 — Lab Sample ID: 400-163469-2

Date Collected: 12/13/18 13:03
Date Received: 12/13/18 16:39
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:32	DRE	TAL PEN
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 13:59	AC	TAL PEN

Client Sample ID: MW 303 — Lab Sample ID: 400-163469-3

Date Collected: 12/13/18 13:59
Date Received: 12/13/18 16:39
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:35	DRE	TAL PEN
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 14:03	AC	TAL PEN

Client Sample ID: MW 302 — Lab Sample ID: 400-163469-4

Date Collected: 12/13/18 14:56
Date Received: 12/13/18 16:39
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:39	DRE	TAL PEN
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 14:06	AC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Metals

Filtration Batch: 423247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-423247/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	FILTRATION	
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Prep Batch: 423249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Dissolved	Water	3005A	
400-163469-2	MW 308	Dissolved	Water	3005A	
400-163469-3	MW 303	Dissolved	Water	3005A	
400-163469-4	MW 302	Dissolved	Water	3005A	
MB 400-423247/1-B	Method Blank	Dissolved	Water	3005A	423247
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	3005A	423247
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	3005A	423247
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	423247

Prep Batch: 423310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	3010A	
400-163469-2	MW 308	Total/NA	Water	3010A	
400-163469-3	MW 303	Total/NA	Water	3010A	
400-163469-4	MW 302	Total/NA	Water	3010A	
MB 400-423310/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423310/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163469-1 MS	MW 304	Total/NA	Water	3010A	
400-163469-1 MSD	MW 304	Total/NA	Water	3010A	

Analysis Batch: 423573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Dissolved	Water	6010C	423249
400-163469-2	MW 308	Dissolved	Water	6010C	423249
400-163469-3	MW 303	Dissolved	Water	6010C	423249
400-163469-4	MW 302	Dissolved	Water	6010C	423249
MB 400-423247/1-B	Method Blank	Dissolved	Water	6010C	423249
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	6010C	423249
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	6010C	423249
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	6010C	423249

Analysis Batch: 423630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	6010C	423310
400-163469-2	MW 308	Total/NA	Water	6010C	423310
400-163469-3	MW 303	Total/NA	Water	6010C	423310
400-163469-4	MW 302	Total/NA	Water	6010C	423310
MB 400-423310/1-A	Method Blank	Total/NA	Water	6010C	423310
LCS 400-423310/2-A	Lab Control Sample	Total/NA	Water	6010C	423310
400-163469-1 MS	MW 304	Total/NA	Water	6010C	423310
400-163469-1 MSD	MW 304	Total/NA	Water	6010C	423310

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423310/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/14/18 16:38	12/17/18 13:35	1

Lab Sample ID: LCS 400-423310/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	1.083		mg/L		108	80 - 120

Lab Sample ID: 400-163469-1 MS — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.00200	U	1.00	1.012		mg/L		101	75 - 125

Lab Sample ID: 400-163469-1 MSD — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.00200	U	1.00	1.062		mg/L		106	75 - 125	5	20

Lab Sample ID: MB 400-423247/1-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 22:10	1

Lab Sample ID: LCS 400-423247/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.072		mg/L		107	80 - 120

Lab Sample ID: 400-163320-P-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00200	U	1.00	1.016		mg/L		102	75 - 125

Lab Sample ID: 400-163320-P-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00200	U	1.00	1.033		mg/L		103	75 - 125	2	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
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Client Information	Sampler: Mollie Taylor	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79407-29937.1
Client Contact: Kristi Mitchell	Phone:	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hour TAT			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

400-163469 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Molybdenum	6010C - Field Filtered Molybdenum	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_NO2_B, SM4500_SO4_E	Nitrate_Calc, SM4500_NO3_F	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	D	N	N	S		
MW304	12.13.18	1154	G	Water			1	1	1	1	1	1		
MW308	12.13.18	1303	G	Water			1	1	1	1	1	1		
MW303	12.13.18	1359	G	Water			1	1	1	1	1	1		
MW302	12.13.18	1450	G	Water			1	1	1	1	1	1		
				Water										
				Water										

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Mollie Taylor	12/13/2018 1639	Geosyntec	Kathy R Owen	12-13-18 1639	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 13.8°C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163469-1

Login Number: 163469
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	13.8°C IR-8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA180023	12-31-18
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163469-2
Client Project/Site: Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/24/2018 2:55:14 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-163469-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-163469-2

Metals
Method(s) 6010C: The method blank for preparation batch 423310 and analytical batch 423630 contained Magnesium above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 6010C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 423310 and analytical batch 423630 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 6010C: The following sample was diluted due to the nature of the sample matrix: MW 302 (400-163469-4). Elevated reporting limits (RLs) are provided.

General Chemistry
Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163469-A-1 MS) and (400-163469-A-1 MSD)

Method(s) SM 4500 Cl- E: The matrix spike duplicate (MSD) recoveries for analytical batch 424317 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW 304 (400-163469-1), MW 308 (400-163469-2), MW 303 (400-163469-3), (400-163469-A-1 MS) and (400-163469-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 424194 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163469-A-1 MS) and (400-163469-A-1 MSD)

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW 304 (400-163469-1), MW 308 (400-163469-2), MW 303 (400-163469-3), MW 302 (400-163469-4), (400-163469-A-1 MS) and (400-163469-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL PEN
SM 4500 NO3 F	Nitrogen, Nitrate-Nitrite	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163469-1	MW 304	Water	12/13/18 11:54	12/13/18 16:39
400-163469-2	MW 308	Water	12/13/18 13:03	12/13/18 16:39
400-163469-3	MW 303	Water	12/13/18 13:59	12/13/18 16:39
400-163469-4	MW 302	Water	12/13/18 14:56	12/13/18 16:39

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 304

Date Collected: 12/13/18 11:54
Date Received: 12/13/18 16:39

Lab Sample ID: 400-163469-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	128		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:42	1
Potassium	8.03		1.00	0.100	mg/L		12/14/18 16:38	12/17/18 13:42	1
Magnesium	52.0		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:42	1
Sodium	71.2		1.00	0.500	mg/L		12/14/18 16:38	12/17/18 13:42	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0890		0.0500	0.0180	mg/L			12/14/18 07:59	1
Alkalinity, Total	67.1		1.00	0.980	mg/L			12/21/18 15:28	1
Bicarbonate Alkalinity as CaCO3	67.1		1.00	0.980	mg/L			12/21/18 15:28	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:28	1
Chloride	94.7		10.0	7.00	mg/L			12/21/18 18:14	5
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1
Nitrate Nitrite as N	0.0890		0.0500	0.0180	mg/L			12/14/18 10:55	1
Sulfate	432		150	42.0	mg/L			12/21/18 09:38	30

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 308

Date Collected: 12/13/18 13:03
Date Received: 12/13/18 16:39

Lab Sample ID: 400-163469-2

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	53.7		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:59	1
Potassium	10.9		1.00	0.100	mg/L		12/14/18 16:38	12/17/18 13:59	1
Magnesium	7.47		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:59	1
Sodium	51.1		1.00	0.500	mg/L		12/14/18 16:38	12/17/18 13:59	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0383	I	0.0500	0.0180	mg/L			12/14/18 07:59	1
Alkalinity, Total	55.5		1.00	0.980	mg/L			12/21/18 15:33	1
Bicarbonate Alkalinity as CaCO3	55.5		1.00	0.980	mg/L			12/21/18 15:33	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:33	1
Chloride	58.1		4.00	2.80	mg/L			12/21/18 18:20	2
Nitrite as N	0.0857	I	0.100	0.0180	mg/L			12/14/18 07:59	1
Nitrate Nitrite as N	0.124		0.0500	0.0180	mg/L			12/14/18 10:56	1
Sulfate	127		100	28.0	mg/L			12/21/18 09:43	20

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 303

Date Collected: 12/13/18 13:59
Date Received: 12/13/18 16:39

Lab Sample ID: 400-163469-3

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	59.0		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 14:03	1
Potassium	18.6		1.00	0.100	mg/L		12/14/18 16:38	12/17/18 14:03	1
Magnesium	7.02		0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 14:03	1
Sodium	77.0		1.00	0.500	mg/L		12/14/18 16:38	12/17/18 14:03	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.155		0.0500	0.0180	mg/L			12/14/18 07:59	1
Alkalinity, Total	60.9		1.00	0.980	mg/L			12/21/18 15:39	1
Bicarbonate Alkalinity as CaCO3	60.9		1.00	0.980	mg/L			12/21/18 15:39	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:39	1
Chloride	70.1		10.0	7.00	mg/L			12/21/18 18:20	5
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1
Nitrate Nitrite as N	0.155		0.0500	0.0180	mg/L			12/14/18 10:56	1
Sulfate	169		100	28.0	mg/L			12/21/18 09:43	20

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 302

Date Collected: 12/13/18 14:56
Date Received: 12/13/18 16:39

Lab Sample ID: 400-163469-4

Matrix: Water

Method: 6010C - Metals (ICP) - DL

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	75.5		2.50	0.150	mg/L		12/14/18 16:38	12/18/18 23:24	5
Potassium	17.5		5.00	0.500	mg/L		12/14/18 16:38	12/18/18 23:24	5
Magnesium	8.05		2.50	0.150	mg/L		12/14/18 16:38	12/18/18 23:24	5
Sodium	65.9		5.00	2.50	mg/L		12/14/18 16:38	12/18/18 23:24	5

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0960		0.0500	0.0180	mg/L			12/14/18 08:01	1
Alkalinity, Total	93.2		1.00	0.980	mg/L			12/21/18 15:46	1
Bicarbonate Alkalinity as CaCO3	93.2		1.00	0.980	mg/L			12/21/18 15:46	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:46	1
Chloride	48.5		2.00	1.40	mg/L			12/21/18 18:43	1
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 08:01	1
Nitrate Nitrite as N	0.0960		0.0500	0.0180	mg/L			12/14/18 10:57	1
Sulfate	176		100	28.0	mg/L			12/21/18 09:47	20

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Qualifiers

Metals

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 304
Lab Sample ID: 400-163469-1
Date Collected: 12/13/18 11:54
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 13:42	AC	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:28	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	424317	12/21/18 18:14	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423236	12/14/18 10:55	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		30	424194	12/21/18 09:38	RRC	TAL PEN

Client Sample ID: MW 308
Lab Sample ID: 400-163469-2
Date Collected: 12/13/18 13:03
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 13:59	AC	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:33	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		2	424317	12/21/18 18:20	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423236	12/14/18 10:56	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424194	12/21/18 09:43	RRC	TAL PEN

Client Sample ID: MW 303
Lab Sample ID: 400-163469-3
Date Collected: 12/13/18 13:59
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423630	12/17/18 14:03	AC	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:39	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	424317	12/21/18 18:20	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 07:59	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423236	12/14/18 10:56	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424194	12/21/18 09:43	RRC	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Client Sample ID: MW 302

Date Collected: 12/13/18 14:56
Date Received: 12/13/18 16:39

Lab Sample ID: 400-163469-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A	DL		423310	12/14/18 16:38	KWN	TAL PEN
Total/NA	Analysis	6010C	DL	5	423822	12/18/18 23:24	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:46	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	424331	12/21/18 18:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423236	12/14/18 10:57	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	424194	12/21/18 09:47	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Metals

Prep Batch: 423310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	3010A	
400-163469-2	MW 308	Total/NA	Water	3010A	
400-163469-3	MW 303	Total/NA	Water	3010A	
400-163469-4 - DL	MW 302	Total/NA	Water	3010A	
MB 400-423310/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423310/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163469-1 MS	MW 304	Total/NA	Water	3010A	
400-163469-1 MSD	MW 304	Total/NA	Water	3010A	

Analysis Batch: 423630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	6010C	423310
400-163469-2	MW 308	Total/NA	Water	6010C	423310
400-163469-3	MW 303	Total/NA	Water	6010C	423310
MB 400-423310/1-A	Method Blank	Total/NA	Water	6010C	423310
LCS 400-423310/2-A	Lab Control Sample	Total/NA	Water	6010C	423310
400-163469-1 MS	MW 304	Total/NA	Water	6010C	423310
400-163469-1 MSD	MW 304	Total/NA	Water	6010C	423310

Analysis Batch: 423822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-4 - DL	MW 302	Total/NA	Water	6010C	423310

General Chemistry

Analysis Batch: 423236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	SM 4500 NO3 F	
400-163469-2	MW 308	Total/NA	Water	SM 4500 NO3 F	
400-163469-3	MW 303	Total/NA	Water	SM 4500 NO3 F	
400-163469-4	MW 302	Total/NA	Water	SM 4500 NO3 F	
MB 400-423236/7	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 400-423236/8	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MRL 400-423236/6	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
400-163428-C-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-163428-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 423740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	SM 4500 NO2 B	
400-163469-2	MW 308	Total/NA	Water	SM 4500 NO2 B	
400-163469-3	MW 303	Total/NA	Water	SM 4500 NO2 B	
400-163469-4	MW 302	Total/NA	Water	SM 4500 NO2 B	
MB 400-423740/6	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 400-423740/7	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MRL 400-423740/3	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
400-163469-1 MS	MW 304	Total/NA	Water	SM 4500 NO2 B	
400-163469-1 MSD	MW 304	Total/NA	Water	SM 4500 NO2 B	
400-163502-G-8 DU	Duplicate	Total/NA	Water	SM 4500 NO2 B	

General Chemistry (Continued)

Analysis Batch: 423796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	4500 NO3 F	
400-163469-2	MW 308	Total/NA	Water	4500 NO3 F	
400-163469-3	MW 303	Total/NA	Water	4500 NO3 F	
400-163469-4	MW 302	Total/NA	Water	4500 NO3 F	

Analysis Batch: 424194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	SM 4500 SO4 E	
400-163469-2	MW 308	Total/NA	Water	SM 4500 SO4 E	
400-163469-3	MW 303	Total/NA	Water	SM 4500 SO4 E	
400-163469-4	MW 302	Total/NA	Water	SM 4500 SO4 E	
MB 400-424194/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-424194/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-424194/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-163469-1 MS	MW 304	Total/NA	Water	SM 4500 SO4 E	
400-163469-1 MSD	MW 304	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 424281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	SM 2320B	
400-163469-2	MW 308	Total/NA	Water	SM 2320B	
400-163469-3	MW 303	Total/NA	Water	SM 2320B	
400-163469-4	MW 302	Total/NA	Water	SM 2320B	
MB 400-424281/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-424281/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-163471-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 424317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-1	MW 304	Total/NA	Water	SM 4500 Cl- E	
400-163469-2	MW 308	Total/NA	Water	SM 4500 Cl- E	
400-163469-3	MW 303	Total/NA	Water	SM 4500 Cl- E	
MB 400-424317/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424317/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424317/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163469-1 MS	MW 304	Total/NA	Water	SM 4500 Cl- E	
400-163469-1 MSD	MW 304	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 424331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163469-4	MW 302	Total/NA	Water	SM 4500 Cl- E	
MB 400-424331/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424331/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424331/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163351-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163351-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423310/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:35	1
Potassium	0.100	U	1.00	0.100	mg/L		12/14/18 16:38	12/17/18 13:35	1
Magnesium	0.03246	I	0.500	0.0300	mg/L		12/14/18 16:38	12/17/18 13:35	1
Sodium	0.500	U	1.00	0.500	mg/L		12/14/18 16:38	12/17/18 13:35	1

Lab Sample ID: LCS 400-423310/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	10.82		mg/L		108	80 - 120
Potassium	10.0	10.93		mg/L		109	80 - 120
Magnesium	10.0	11.04		mg/L		110	80 - 120
Sodium	10.0	11.23		mg/L		112	80 - 120

Lab Sample ID: 400-163469-1 MS — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	128		10.0	131.4	J3	mg/L		32	75 - 125
Potassium	8.03		10.0	17.87		mg/L		98	75 - 125
Magnesium	52.0		10.0	59.62		mg/L		76	75 - 125
Sodium	71.2		10.0	79.06		mg/L		78	75 - 125

Lab Sample ID: 400-163469-1 MSD — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423630 — **Prep Batch: 423310**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	128		10.0	137.9		mg/L		96	75 - 125	5	20
Potassium	8.03		10.0	19.01		mg/L		110	75 - 125	6	20
Magnesium	52.0		10.0	62.69		mg/L		106	75 - 125	5	20
Sodium	71.2		10.0	83.19		mg/L		120	75 - 125	5	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-424281/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 400-424281/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	105.9		mg/L		106	80 - 120

Lab Sample ID: 400-163471-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	30.9		31.51		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	30.9		31.51		mg/L		2	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-424317/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424317

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/21/18 17:41	1

Lab Sample ID: LCS 400-424317/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.04		mg/L		107	90 - 110

Lab Sample ID: MRL 400-424317/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424317

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.815	I	mg/L		91	50 - 150

Lab Sample ID: 400-163469-1 MS — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424317

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	94.7		10.0	102.3		mg/L		76	73 - 120

Lab Sample ID: 400-163469-1 MSD — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424317

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	94.7		10.0	100.9	J3	mg/L		62	73 - 120	1	8

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MB 400-424331/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/21/18 18:43	1

Lab Sample ID: LCS 400-424331/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.47		mg/L		108	90 - 110

Lab Sample ID: MRL 400-424331/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.822	I	mg/L		91	50 - 150

Lab Sample ID: 400-163351-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.76		10.0	17.90		mg/L		111	73 - 120

Lab Sample ID: 400-163351-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.76		10.0	17.95		mg/L		112	73 - 120	0	8

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 400-423740/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1

Lab Sample ID: LCS 400-423740/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.300	0.2711		mg/L		90	90 - 110

Method: SM 4500 NO2 B - Nitrogen, Nitrite (Continued)

Lab Sample ID: MRL 400-423740/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			0.200	0.1961		mg/L		98	50 - 150		

Lab Sample ID: 400-163469-1 MS — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N	0.0180	U	0.200	0.1985		mg/L		99	80 - 118		

Lab Sample ID: 400-163469-1 MSD — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.0180	U	0.200	0.1918		mg/L		96	80 - 118	3	9

Lab Sample ID: 400-163502-G-8 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	0.0180	U		0.0180	U	mg/L				NC	9

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-423236/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423236

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 10:44	1

Lab Sample ID: LCS 400-423236/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423236

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.500	0.5130		mg/L		103	90 - 110		

Lab Sample ID: MRL 400-423236/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423236

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.0500	0.03800	I	mg/L		76	50 - 150		

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 400-163428-C-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423236

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.0180	U	1.00	0.9620		mg/L		96	90 - 110		

Lab Sample ID: 400-163428-C-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423236

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.0180	U	1.00	0.9530		mg/L		95	90 - 110	1	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-424194/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424194

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/21/18 09:04	1

Lab Sample ID: LCS 400-424194/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424194

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			15.0	14.49		mg/L		97	90 - 110		

Lab Sample ID: MRL 400-424194/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424194

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.319	I	mg/L		86	50 - 150		

Lab Sample ID: 400-163469-1 MS — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424194

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	432		9.90	393.6	J3	mg/L		-390	77 - 128		

Lab Sample ID: 400-163469-1 MSD — **Client Sample ID: MW 304**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424194

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	432		9.90	489.5	J3	mg/L		579	77 - 128	22	5

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Mollie Taylor	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79407-29937.1
Client Contact: Kristi Mitchell	Phone:	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 1
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hour TAT			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

400-163469 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Molybdenum	6010C - Field Filtered Molybdenum	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_NO2_B, SM4500_SO4_E	Nitrate_Calc, SM4500_NO3_F	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	D	N	N	S		
MW304	12.13.18	1154	G	Water			1	1	1	1	1	1		
MW308	12.13.18	1303	G	Water			1	1	1	1	1	1		
MW303	12.13.18	1359	G	Water			1	1	1	1	1	1		
MW302	12.13.18	1450	G	Water			1	1	1	1	1	1		
				Water										
				Water										

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Mollie Taylor	12.13.2018 1639	Geosyntec	Kathy R Owen	12-13-18 1639	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 13.8°C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163469-2

Login Number: 163469
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	13.8°C IR-8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163469-2

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163471-1
Client Project/Site: Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/19/2018 4:53:21 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163471-1	DPT-W-4 35.5'-31.5'	Water	12/13/18 08:10	12/13/18 16:39
400-163471-2	DPT-W-4 47.5'-43.5'	Water	12/13/18 09:00	12/13/18 16:39
400-163471-3	DPT-W-4 58'-54'	Water	12/13/18 09:45	12/13/18 16:39
400-163471-4	DPT-W-4 67.5'-63.5'	Water	12/13/18 10:35	12/13/18 16:39
400-163471-5	DPT-W-2 38'-34'	Water	12/13/18 13:20	12/13/18 16:39
400-163471-6	DPT-W-2 47.5'-43.5'	Water	12/13/18 13:55	12/13/18 16:39
400-163471-7	DPT-W-2 58'-54'	Water	12/13/18 14:45	12/13/18 16:39
400-163471-8	DPT-W-2 67.5'-63.5'	Water	12/13/18 15:30	12/13/18 16:39

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Client Sample ID: DPT-W-4 35.5'-31.5'

Lab Sample ID: 400-163471-1
Date Collected: 12/13/18 08:10
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0443		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 20:48	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00415	I	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 22:49	1

Client Sample ID: DPT-W-4 47.5'-43.5'

Lab Sample ID: 400-163471-2
Date Collected: 12/13/18 09:00
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	1.11		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 20:52	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.476		0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 22:53	1

Client Sample ID: DPT-W-4 58'-54'

Lab Sample ID: 400-163471-3
Date Collected: 12/13/18 09:45
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.560		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 20:55	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.168		0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 22:56	1

Client Sample ID: DPT-W-4 67.5'-63.5'

Lab Sample ID: 400-163471-4
Date Collected: 12/13/18 10:35
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0687		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 20:59	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:00	1

Client Sample ID: DPT-W-2 38'-34'

Lab Sample ID: 400-163471-5
Date Collected: 12/13/18 13:20
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.191		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 21:13	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Client Sample ID: DPT-W-2 38'-34'

Lab Sample ID: 400-163471-5
Date Collected: 12/13/18 13:20
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:03	1

Client Sample ID: DPT-W-2 47.5'-43.5'

Lab Sample ID: 400-163471-6
Date Collected: 12/13/18 13:55
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	**0.611**		0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 21:16	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**0.241**		0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:07	1

Client Sample ID: DPT-W-2 58'-54'

Lab Sample ID: 400-163471-7
Date Collected: 12/13/18 14:45
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	**0.154**		0.0500	0.0100	mg/L		12/14/18 10:52	12/14/18 21:20	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:10	1

Client Sample ID: DPT-W-2 67.5'-63.5'

Lab Sample ID: 400-163471-8
Date Collected: 12/13/18 15:30
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	**0.0938**		0.0200	0.00400	mg/L		12/14/18 10:52	12/14/18 21:23	2

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 23:14	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Client Sample ID: DPT-W-4 35.5'-31.5'

Lab Sample ID: 400-163471-1
Date Collected: 12/13/18 08:10
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 22:49	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:48	DRE	TAL PEN

Client Sample ID: DPT-W-4 47.5'-43.5'

Lab Sample ID: 400-163471-2
Date Collected: 12/13/18 09:00
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 22:53	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:52	DRE	TAL PEN

Client Sample ID: DPT-W-4 58'-54'

Lab Sample ID: 400-163471-3
Date Collected: 12/13/18 09:45
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 22:56	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:55	DRE	TAL PEN

Client Sample ID: DPT-W-4 67.5'-63.5'

Lab Sample ID: 400-163471-4
Date Collected: 12/13/18 10:35
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:00	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:59	DRE	TAL PEN

Client Sample ID: DPT-W-2 38'-34'

Lab Sample ID: 400-163471-5
Date Collected: 12/13/18 13:20
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:03	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Client Sample ID: DPT-W-2 38'-34'

Lab Sample ID: 400-163471-5
Date Collected: 12/13/18 13:20
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1	423573	12/14/18 21:13	DRE	TAL PEN

Client Sample ID: DPT-W-2 47.5'-43.5'

Lab Sample ID: 400-163471-6
Date Collected: 12/13/18 13:55
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:07	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 21:16	DRE	TAL PEN

Client Sample ID: DPT-W-2 58'-54'

Lab Sample ID: 400-163471-7
Date Collected: 12/13/18 14:45
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:10	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		5	423573	12/14/18 21:20	DRE	TAL PEN

Client Sample ID: DPT-W-2 67.5'-63.5'

Lab Sample ID: 400-163471-8
Date Collected: 12/13/18 15:30
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423249	12/14/18 12:56	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423573	12/14/18 23:14	DRE	TAL PEN
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		2	423573	12/14/18 21:23	DRE	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Metals

Prep Batch: 423219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	3010A	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	3010A	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	3010A	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	3010A	
400-163471-5	DPT-W-2 38'-34'	Total/NA	Water	3010A	
400-163471-6	DPT-W-2 47.5'-43.5'	Total/NA	Water	3010A	
400-163471-7	DPT-W-2 58'-54'	Total/NA	Water	3010A	
400-163471-8	DPT-W-2 67.5'-63.5'	Total/NA	Water	3010A	
MB 400-423219/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423219/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163388-E-21-E MS	Matrix Spike	Total/NA	Water	3010A	
400-163388-E-21-F MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Filtration Batch: 423247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-423247/1-B	Method Blank	Dissolved	Water	FILTRATION	
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	FILTRATION	
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	FILTRATION	
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	FILTRATION	

Prep Batch: 423249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Dissolved	Water	3005A	
400-163471-2	DPT-W-4 47.5'-43.5'	Dissolved	Water	3005A	
400-163471-3	DPT-W-4 58'-54'	Dissolved	Water	3005A	
400-163471-4	DPT-W-4 67.5'-63.5'	Dissolved	Water	3005A	
400-163471-5	DPT-W-2 38'-34'	Dissolved	Water	3005A	
400-163471-6	DPT-W-2 47.5'-43.5'	Dissolved	Water	3005A	
400-163471-7	DPT-W-2 58'-54'	Dissolved	Water	3005A	
400-163471-8	DPT-W-2 67.5'-63.5'	Dissolved	Water	3005A	
MB 400-423247/1-B	Method Blank	Dissolved	Water	3005A	423247
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	3005A	423247
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	3005A	423247
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	423247

Analysis Batch: 423573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Dissolved	Water	6010C	423249
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	6010C	423219
400-163471-2	DPT-W-4 47.5'-43.5'	Dissolved	Water	6010C	423249
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	6010C	423219
400-163471-3	DPT-W-4 58'-54'	Dissolved	Water	6010C	423249
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	6010C	423219
400-163471-4	DPT-W-4 67.5'-63.5'	Dissolved	Water	6010C	423249
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	6010C	423219
400-163471-5	DPT-W-2 38'-34'	Dissolved	Water	6010C	423249
400-163471-5	DPT-W-2 38'-34'	Total/NA	Water	6010C	423219
400-163471-6	DPT-W-2 47.5'-43.5'	Dissolved	Water	6010C	423249
400-163471-6	DPT-W-2 47.5'-43.5'	Total/NA	Water	6010C	423219
400-163471-7	DPT-W-2 58'-54'	Dissolved	Water	6010C	423249
400-163471-7	DPT-W-2 58'-54'	Total/NA	Water	6010C	423219

Metals (Continued)

Analysis Batch: 423573 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-8	DPT-W-2 67.5'-63.5'	Dissolved	Water	6010C	423249
400-163471-8	DPT-W-2 67.5'-63.5'	Total/NA	Water	6010C	423219
MB 400-423219/1-A	Method Blank	Total/NA	Water	6010C	423219
MB 400-423247/1-B	Method Blank	Dissolved	Water	6010C	423249
LCS 400-423219/2-A	Lab Control Sample	Total/NA	Water	6010C	423219
LCS 400-423247/2-B	Lab Control Sample	Dissolved	Water	6010C	423249
400-163320-P-1-E MS	Matrix Spike	Dissolved	Water	6010C	423249
400-163320-P-1-F MSD	Matrix Spike Duplicate	Dissolved	Water	6010C	423249
400-163388-E-21-E MS	Matrix Spike	Total/NA	Water	6010C	423219
400-163388-E-21-F MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	423219

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423219/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/14/18 10:52	12/14/18 20:06	1

Lab Sample ID: LCS 400-423219/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	1.095		mg/L		109	80 - 120

Lab Sample ID: 400-163388-E-21-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.00594	I	1.00	1.042		mg/L		104	75 - 125

Lab Sample ID: 400-163388-E-21-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.00594	I	1.00	1.118		mg/L		111	75 - 125	7	20

Lab Sample ID: MB 400-423247/1-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/14/18 12:56	12/14/18 22:10	1

Lab Sample ID: LCS 400-423247/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.072		mg/L		107	80 - 120

Lab Sample ID: 400-163320-P-1-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00200	U	1.00	1.016		mg/L		102	75 - 125

Lab Sample ID: 400-163320-P-1-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423573 — **Prep Batch: 423249**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00200	U	1.00	1.033		mg/L		103	75 - 125	2	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.4
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 4 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

400-163471 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Molybdenum	6010C - Field Filtered Molybdenum	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D		
DPT-W-4 35.5'-31.5'	12/13/18	8:10	G	Water			✓	✓		
DPT-W-4 47.5'-43.5'	"	9:00	G	Water			✓	✓		
DPT-W-4 58'-54'	"	9:45	G	Water			✓	✓		
DPT-W-4 67.5'-63.5'	"	10:35	G	Water			✓	✓		
DPT-W-2 38'-34'	"	13:20	G	Water			✓	✓		
DPT-W-2 47.5'-43.5'	"	13:55	G	Water			✓	✓		
DPT-W-2 58'-54'	"	14:45	G	Water			✓	✓		
DPT-W-2 67.5'-63.5'	"	15:30	G	Water			✓	✓		
				Water						
				Water						
				Water						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12.13.2018 / 1639	Geosyntec	Kathy R Allen	12-13-18 1639	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.9°C IR8

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.6
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 6 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_SO4_E	Nitrate_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	S		
DPT-W-4 35.5'-31.5'	12/13/18	8:10	G	Water			✓	✓	✓	✓		
DPT-W-4 47.5'-43.5'	"	9:00	G	Water			✓	✓	✓	✓		
DPT-W-4 58'-54'	"	9:45	G	Water			✓	✓	✓	✓		
DPT-W-4 67.5'-63.5'	"	10:35	G	Water			✓	✓	✓	✓		
				Water								
				Water								

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Jaeger	12-13-2018/1639	GRS	Kathy R Owen	12-13-18 1639	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.9 °C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163471-1

Login Number: 163471
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.9°C IR-8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-1

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163471-2
Client Project/Site: Molybdenum

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/24/2018 2:55:41 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-163471-2

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-163471-2

Metals
Method(s) 6010C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 423219 and analytical batch 423573 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

General Chemistry
Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPT-W-4 58'-54' (400-163471-3) and DPT-W-4 67.5'-63.5' (400-163471-4). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 NO3 F: The following samples were diluted due to the amount of sediment in the sample: DPT-W-4 35.5'-31.5' (400-163471-1), DPT-W-4 47.5'-43.5' (400-163471-2), DPT-W-4 58'-54' (400-163471-3) and DPT-W-4 67.5'-63.5' (400-163471-4). Elevated reporting limits (RL) are provided.

Method(s) SM 4500 NO3 F: The method blank for analytical batch 423216 contained Nitrate-Nitrite above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163471-A-1 MS) and (400-163471-A-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 423306 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: DPT-W-4 35.5'-31.5' (400-163471-1), DPT-W-4 47.5'-43.5' (400-163471-2), DPT-W-4 58'-54' (400-163471-3), DPT-W-4 67.5'-63.5' (400-163471-4), (400-163471-A-1 MS) and (400-163471-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL PEN
SM 4500 NO3 F	Nitrogen, Nitrate-Nitrite	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163471-1	DPT-W-4 35.5'-31.5'	Water	12/13/18 08:10	12/13/18 16:39
400-163471-2	DPT-W-4 47.5'-43.5'	Water	12/13/18 09:00	12/13/18 16:39
400-163471-3	DPT-W-4 58'-54'	Water	12/13/18 09:45	12/13/18 16:39
400-163471-4	DPT-W-4 67.5'-63.5'	Water	12/13/18 10:35	12/13/18 16:39

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 35.5'-31.5'

Lab Sample ID: 400-163471-1

Date Collected: 12/13/18 08:10
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**6.56**		1.00	0.100	mg/L		12/14/18 10:52	12/14/18 20:48	1

Method: 6010C - Metals (ICP) - RA

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**44.2**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:07	1
Magnesium	**1.94**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:07	1
Sodium	**16.6**		1.00	0.500	mg/L		12/14/18 10:52	12/19/18 00:07	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 08:01	1
Alkalinity, Total	**30.9**		1.00	0.980	mg/L			12/21/18 15:00	1
Bicarbonate Alkalinity as CaCO3	**30.9**		1.00	0.980	mg/L			12/21/18 15:00	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:00	1
Chloride	**23.6**		2.00	1.40	mg/L			12/21/18 18:43	1
Nitrite as N	**0.0214**	**I**	0.100	0.0180	mg/L			12/14/18 08:01	1
Nitrate Nitrite as N	0.0900	U	0.250	0.0900	mg/L			12/14/18 09:46	5
Sulfate	**94.9**		25.0	7.00	mg/L			12/14/18 15:11	5

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 47.5'-43.5'

Lab Sample ID: 400-163471-2

Date Collected: 12/13/18 09:00
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**16.3**		1.00	0.100	mg/L		12/14/18 10:52	12/14/18 20:52	1

Method: 6010C - Metals (ICP) - RA

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**63.7**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:10	1
Magnesium	**7.02**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:10	1
Sodium	**22.5**		1.00	0.500	mg/L		12/14/18 10:52	12/19/18 00:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 08:01	1
Alkalinity, Total	**87.3**		1.00	0.980	mg/L			12/21/18 15:12	1
Bicarbonate Alkalinity as CaCO3	**87.3**		1.00	0.980	mg/L			12/21/18 15:12	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:12	1
Chloride	**24.9**		2.00	1.40	mg/L			12/21/18 18:46	1
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 08:01	1
Nitrate Nitrite as N	0.0900	U	0.250	0.0900	mg/L			12/14/18 09:47	5
Sulfate	**86.0**		25.0	7.00	mg/L			12/14/18 15:03	5

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 58'-54'

Lab Sample ID: 400-163471-3

Date Collected: 12/13/18 09:45
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**17.0**		1.00	0.100	mg/L		12/14/18 10:52	12/14/18 20:55	1

Method: 6010C - Metals (ICP) - RA

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**86.3**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:14	1
Magnesium	**12.0**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:14	1
Sodium	**117**		1.00	0.500	mg/L		12/14/18 10:52	12/19/18 00:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 08:01	1
Alkalinity, Total	**79.0**		1.00	0.980	mg/L			12/21/18 15:17	1
Bicarbonate Alkalinity as CaCO3	**79.0**		1.00	0.980	mg/L			12/21/18 15:17	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:17	1
Chloride	**117**		10.0	7.00	mg/L			12/21/18 19:12	5
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 08:01	1
Nitrate Nitrite as N	0.0900	U	0.250	0.0900	mg/L			12/14/18 09:48	5
Sulfate	**282**		100	28.0	mg/L			12/14/18 15:03	20

Client Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 67.5'-63.5'

Lab Sample ID: 400-163471-4

Date Collected: 12/13/18 10:35
Matrix: Water
Date Received: 12/13/18 16:39

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**25.4**		1.00	0.100	mg/L		12/14/18 10:52	12/14/18 20:59	1

Method: 6010C - Metals (ICP) - RA

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**53.5**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:17	1
Magnesium	**8.29**		0.500	0.0300	mg/L		12/14/18 10:52	12/19/18 00:17	1
Sodium	**81.0**		1.00	0.500	mg/L		12/14/18 10:52	12/19/18 00:17	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 08:01	1
Alkalinity, Total	**12.8**		1.00	0.980	mg/L			12/21/18 15:23	1
Bicarbonate Alkalinity as CaCO3	**12.8**		1.00	0.980	mg/L			12/21/18 15:23	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 15:23	1
Chloride	**128**		10.0	7.00	mg/L			12/21/18 19:12	5
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 08:01	1
Nitrate Nitrite as N	0.0900	U	0.250	0.0900	mg/L			12/14/18 09:49	5
Sulfate	**249**		100	28.0	mg/L			12/14/18 15:03	20

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Qualifiers

Metals

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 35.5'-31.5'

Lab Sample ID: 400-163471-1
Date Collected: 12/13/18 08:10
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:48	DRE	TAL PEN
Total/NA	Prep	3010A	RA		423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C	RA	1	423822	12/19/18 00:07	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:00	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	424331	12/21/18 18:43	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		5	423216	12/14/18 09:46	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	423306	12/14/18 15:11	RRC	TAL PEN

Client Sample ID: DPT-W-4 47.5'-43.5'

Lab Sample ID: 400-163471-2
Date Collected: 12/13/18 09:00
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:52	DRE	TAL PEN
Total/NA	Prep	3010A	RA		423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C	RA	1	423822	12/19/18 00:10	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:12	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	424331	12/21/18 18:46	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		5	423216	12/14/18 09:47	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		5	423306	12/14/18 15:03	RRC	TAL PEN

Client Sample ID: DPT-W-4 58'-54'

Lab Sample ID: 400-163471-3
Date Collected: 12/13/18 09:45
Matrix: Water
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:55	DRE	TAL PEN
Total/NA	Prep	3010A	RA		423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C	RA	1	423822	12/19/18 00:14	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:17	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	424331	12/21/18 19:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		5	423216	12/14/18 09:48	KJR	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Client Sample ID: DPT-W-4 58'-54'

Lab Sample ID: 400-163471-3
Matrix: Water
Date Collected: 12/13/18 09:45
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 SO4 E		20	423306	12/14/18 15:03	RRC	TAL PEN

Client Sample ID: DPT-W-4 67.5'-63.5'

Lab Sample ID: 400-163471-4
Matrix: Water
Date Collected: 12/13/18 10:35
Date Received: 12/13/18 16:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423573	12/14/18 20:59	DRE	TAL PEN
Total/NA	Prep	3010A	RA		423219	12/14/18 10:52	KWN	TAL PEN
Total/NA	Analysis	6010C	RA	1	423822	12/19/18 00:17	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424281	12/21/18 15:23	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		5	424331	12/21/18 19:12	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 08:01	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		5	423216	12/14/18 09:49	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		20	423306	12/14/18 15:03	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Metals

Prep Batch: 423219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1 - RA	DPT-W-4 35.5'-31.5'	Total/NA	Water	3010A	
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	3010A	
400-163471-2 - RA	DPT-W-4 47.5'-43.5'	Total/NA	Water	3010A	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	3010A	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	3010A	
400-163471-3 - RA	DPT-W-4 58'-54'	Total/NA	Water	3010A	
400-163471-4 - RA	DPT-W-4 67.5'-63.5'	Total/NA	Water	3010A	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	3010A	
MB 400-423219/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423219/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163388-E-21-E MS	Matrix Spike	Total/NA	Water	3010A	
400-163388-E-21-F MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 423573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	6010C	423219
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	6010C	423219
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	6010C	423219
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	6010C	423219
MB 400-423219/1-A	Method Blank	Total/NA	Water	6010C	423219
LCS 400-423219/2-A	Lab Control Sample	Total/NA	Water	6010C	423219
400-163388-E-21-E MS	Matrix Spike	Total/NA	Water	6010C	423219
400-163388-E-21-F MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	423219

Analysis Batch: 423822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1 - RA	DPT-W-4 35.5'-31.5'	Total/NA	Water	6010C	423219
400-163471-2 - RA	DPT-W-4 47.5'-43.5'	Total/NA	Water	6010C	423219
400-163471-3 - RA	DPT-W-4 58'-54'	Total/NA	Water	6010C	423219
400-163471-4 - RA	DPT-W-4 67.5'-63.5'	Total/NA	Water	6010C	423219
MB 400-423219/1-A	Method Blank	Total/NA	Water	6010C	423219
LCS 400-423219/2-A	Lab Control Sample	Total/NA	Water	6010C	423219

General Chemistry

Analysis Batch: 423216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 NO3 F	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	SM 4500 NO3 F	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	SM 4500 NO3 F	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	SM 4500 NO3 F	
MB 400-423216/14	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 400-423216/15	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MRL 400-423216/13	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
400-163388-C-13 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-163388-C-13 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	
400-163388-C-17 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-163388-C-17 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	

General Chemistry (Continued)

Analysis Batch: 423306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 SO4 E	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	SM 4500 SO4 E	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	SM 4500 SO4 E	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	SM 4500 SO4 E	
MB 400-423306/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-423306/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-423306/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-163471-1 MS	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 SO4 E	
400-163471-1 MSD	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 423740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 NO2 B	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	SM 4500 NO2 B	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	SM 4500 NO2 B	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	SM 4500 NO2 B	
MB 400-423740/6	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 400-423740/7	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MRL 400-423740/3	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO2 B	
400-163502-G-8 DU	Duplicate	Total/NA	Water	SM 4500 NO2 B	

Analysis Batch: 423796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	4500 NO3 F	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	4500 NO3 F	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	4500 NO3 F	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	4500 NO3 F	

Analysis Batch: 424281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 2320B	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	SM 2320B	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	SM 2320B	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	SM 2320B	
MB 400-424281/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-424281/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-163471-1 DU	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 2320B	

Analysis Batch: 424331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163471-1	DPT-W-4 35.5'-31.5'	Total/NA	Water	SM 4500 Cl- E	
400-163471-2	DPT-W-4 47.5'-43.5'	Total/NA	Water	SM 4500 Cl- E	
400-163471-3	DPT-W-4 58'-54'	Total/NA	Water	SM 4500 Cl- E	
400-163471-4	DPT-W-4 67.5'-63.5'	Total/NA	Water	SM 4500 Cl- E	
MB 400-424331/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424331/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424331/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163351-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163351-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

General Chemistry (Continued)

Analysis Batch: 424331 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163351-A-4 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163351-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423219/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	0.100	U	1.00	0.100	mg/L		12/14/18 10:52	12/14/18 20:06	1
Magnesium	0.0300	U	0.500	0.0300	mg/L		12/14/18 10:52	12/14/18 20:06	1
Sodium	0.500	U	1.00	0.500	mg/L		12/14/18 10:52	12/14/18 20:06	1

Lab Sample ID: MB 400-423219/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423219**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/14/18 10:52	12/18/18 23:49	1
Potassium	0.100	U	1.00	0.100	mg/L		12/14/18 10:52	12/18/18 23:49	1
Magnesium	0.0300	U	0.500	0.0300	mg/L		12/14/18 10:52	12/18/18 23:49	1
Sodium	0.500	U	1.00	0.500	mg/L		12/14/18 10:52	12/18/18 23:49	1

Lab Sample ID: LCS 400-423219/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	11.14		mg/L		111	80 - 120
Magnesium	10.0	11.55		mg/L		116	80 - 120
Sodium	10.0	11.30		mg/L		113	80 - 120

Lab Sample ID: LCS 400-423219/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423219**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	9.666		mg/L		97	80 - 120
Potassium	10.0	10.00		mg/L		100	80 - 120
Magnesium	10.0	10.07		mg/L		101	80 - 120
Sodium	10.0	10.60		mg/L		106	80 - 120

Lab Sample ID: 400-163388-E-21-E MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	13.9		10.0	24.22		mg/L		103	75 - 125
Potassium	12.2		10.0	22.45		mg/L		102	75 - 125
Magnesium	6.51		10.0	16.89		mg/L		104	75 - 125
Sodium	228		10.0	230.9	J3	mg/L		28	75 - 125

Lab Sample ID: 400-163388-E-21-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	13.9		10.0	25.89		mg/L		120	75 - 125	7	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 400-163388-E-21-F MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423573 — **Prep Batch: 423219**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	12.2		10.0	24.02		mg/L		118	75 - 125	7	20
Magnesium	6.51		10.0	18.14		mg/L		116	75 - 125	7	20
Sodium	228		10.0	245.9	J3	mg/L		178	75 - 125	6	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-424281/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/21/18 14:39	1

Lab Sample ID: LCS 400-424281/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	105.9		mg/L		106	80 - 120

Lab Sample ID: 400-163471-1 DU — **Client Sample ID: DPT-W-4 35.5'-31.5'**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424281

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	30.9		31.51		mg/L		2	20
Bicarbonate Alkalinity as CaCO3	30.9		31.51		mg/L		2	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-424331/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/21/18 18:43	1

Lab Sample ID: LCS 400-424331/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	32.47		mg/L		108	90 - 110

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: MRL 400-424331/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.822	I	mg/L		91	50 - 150

Lab Sample ID: 400-163351-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.76		10.0	17.90		mg/L		111	73 - 120

Lab Sample ID: 400-163351-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.76		10.0	17.95		mg/L		112	73 - 120	0	8

Lab Sample ID: 400-163351-A-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	3.62		10.0	15.06		mg/L		114	73 - 120

Lab Sample ID: 400-163351-A-4 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424331

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	3.62		10.0	14.77		mg/L		112	73 - 120	2	8

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 400-423740/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1

Lab Sample ID: LCS 400-423740/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.300	0.2711		mg/L		90	90 - 110

Method: SM 4500 NO2 B - Nitrogen, Nitrite (Continued)

Lab Sample ID: MRL 400-423740/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			0.200	0.1961		mg/L		98	50 - 150		

Lab Sample ID: 400-163469-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N	0.0180	U	0.200	0.1985		mg/L		99	80 - 118		

Lab Sample ID: 400-163469-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.0180	U	0.200	0.1918		mg/L		96	80 - 118	3	9

Lab Sample ID: 400-163502-G-8 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	0.0180	U		0.0180	U	mg/L				NC	9

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-423216/14 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 09:42	1

Lab Sample ID: LCS 400-423216/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.500	0.5240		mg/L		105	90 - 110		

Lab Sample ID: MRL 400-423216/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.0500	0.04100	I	mg/L		82	50 - 150		

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 400-163388-C-13 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	16.5		10.0	17.20	J3	mg/L		7	90 - 110		

Lab Sample ID: 400-163388-C-13 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	16.5		10.0	17.09	J3	mg/L		6	90 - 110	1	4

Lab Sample ID: 400-163388-C-17 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	7.56		10.0	8.570	J3	mg/L		10	90 - 110		

Lab Sample ID: 400-163388-C-17 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423216

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	7.56		10.0	8.670	J3	mg/L		11	90 - 110	1	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-423306/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423306

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/14/18 14:20	1

Lab Sample ID: LCS 400-423306/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423306

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			15.0	14.13		mg/L		94	90 - 110		

Lab Sample ID: MRL 400-423306/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423306

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	5.086		mg/L		102	50 - 150		

Method: SM 4500 SO4 E - Sulfate, Total (Continued)

Lab Sample ID: 400-163471-1 MS
Matrix: Water
Analysis Batch: 423306

Client Sample ID: DPT-W-4 35.5'-31.5'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	94.9		10.0	100.0	J3	mg/L		52	77 - 128		

Lab Sample ID: 400-163471-1 MSD
Matrix: Water
Analysis Batch: 423306

Client Sample ID: DPT-W-4 35.5'-31.5'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	94.9		10.0	99.85	J3	mg/L		50	77 - 128	0	5

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.4
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 4 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

400-163471 COC

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Molybdenum	6010C - Field Filtered Molybdenum	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D		
DPT-W-4 35.5'-31.5'	12/13/18	8:10	G	Water			✓	✓		
DPT-W-4 47.5'-43.5'	"	9:00	G	Water			✓	✓		
DPT-W-4 58'-54'	"	9:45	G	Water			✓	✓		
DPT-W-4 67.5'-63.5'	"	10:35	G	Water			✓	✓		
DPT-W-2 38'-34'	"	13:20	G	Water			✓	✓		
DPT-W-2 47.5'-43.5'	"	13:55	G	Water			✓	✓		
DPT-W-2 58'-54'	"	14:45	G	Water			✓	✓		
DPT-W-2 67.5'-63.5'	"	15:30	G	Water			✓	✓		
				Water						
				Water						
				Water						

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12.13.2018/1639	Geosyntec	Kathy R Allen	12-13-18 1639	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.9°C IR8

Ver: 08/04/2016

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.6
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 6 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_SO4_E	Nitrate_Calc	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	S		
DPT-W-4 35.5'-31.5'	12/13/18	8:10	G	Water			✓	✓	✓	✓		
DPT-W-4 47.5'-43.5'	"	9:00	G	Water			✓	✓	✓	✓		
DPT-W-4 58'-54'	"	9:45	G	Water			✓	✓	✓	✓		
DPT-W-4 67.5'-63.5'	"	10:35	G	Water			✓	✓	✓	✓		
				Water								
				Water								

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Jaeger	12-13-2018/1639	GRS	Kathy R Owen	12-13-18 1639	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.9 °C IR8

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163471-2

Login Number: 163471
List Number: 1
Creator: Perez, Trina M

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.9°C IR-8
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Molybdenum

TestAmerica Job ID: 400-163471-2

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163540-1
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/19/2018 5:05:04 PM

Cheyenne Whitmire, Project Manager II
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163540-1	DPT-W-3 35.5'-31.5'	Water	12/14/18 08:40	12/14/18 17:05
400-163540-2	DPT-W-3 47.5'-43.5'	Water	12/14/18 09:30	12/14/18 17:05
400-163540-3	DPT-W-3 58'-54'	Water	12/14/18 10:10	12/14/18 17:05
400-163540-4	DPT-W-3 67.5'-63.5'	Water	12/14/18 10:10	12/14/18 17:05
400-163540-5	DPT-W-1 35.5'-31.5'	Water	12/14/18 13:05	12/14/18 17:05
400-163540-6	DPT-W-1 47.5'-43.5'	Water	12/14/18 13:30	12/14/18 17:05
400-163540-7	DPT-W-1 58'-54'	Water	12/14/18 14:20	12/14/18 17:05
400-163540-8	DPT-W-1 67.5'-63.5'	Water	12/14/18 14:55	12/14/18 17:05

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Client Sample ID: DPT-W-3 35.5'-31.5'

Lab Sample ID: 400-163540-1
Date Collected: 12/14/18 08:40
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.826		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 16:40	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00785	I	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 14:46	1

Client Sample ID: DPT-W-3 47.5'-43.5'

Lab Sample ID: 400-163540-2
Date Collected: 12/14/18 09:30
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	2.05		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:07	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.722		0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:03	1

Client Sample ID: DPT-W-3 58'-54'

Lab Sample ID: 400-163540-3
Date Collected: 12/14/18 10:10
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.119		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:11	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00561	I	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:07	1

Client Sample ID: DPT-W-3 67.5'-63.5'

Lab Sample ID: 400-163540-4
Date Collected: 12/14/18 10:10
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP) - DL

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.242		0.0500	0.0100	mg/L		12/17/18 16:25	12/18/18 17:14	5

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:21	1

Client Sample ID: DPT-W-1 35.5'-31.5'

Lab Sample ID: 400-163540-5
Date Collected: 12/14/18 13:05
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0293		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:18	1

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Client Sample ID: DPT-W-1 35.5'-31.5'

Lab Sample ID: 400-163540-5
Date Collected: 12/14/18 13:05
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00337	I	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:25	1

Client Sample ID: DPT-W-1 47.5'-43.5'

Lab Sample ID: 400-163540-6
Date Collected: 12/14/18 13:30
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	1.95		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:21	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	1.26		0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:28	1

Client Sample ID: DPT-W-1 58'-54'

Lab Sample ID: 400-163540-7
Date Collected: 12/14/18 14:20
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.181		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:25	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.0577		0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:32	1

Client Sample ID: DPT-W-1 67.5'-63.5'

Lab Sample ID: 400-163540-8
Date Collected: 12/14/18 14:55
Matrix: Water
Date Received: 12/14/18 17:05

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.0595		0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 17:39	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 15:35	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound 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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Client Sample ID: DPT-W-3 35.5'-31.5'

Lab Sample ID: 400-163540-1
Date Collected: 12/14/18 08:40
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 14:46	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 16:40	GESP	TAL PEN

Client Sample ID: DPT-W-3 47.5'-43.5'

Lab Sample ID: 400-163540-2
Date Collected: 12/14/18 09:30
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:03	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 17:07	GESP	TAL PEN

Client Sample ID: DPT-W-3 58'-54'

Lab Sample ID: 400-163540-3
Date Collected: 12/14/18 10:10
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:07	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 17:11	GESP	TAL PEN

Client Sample ID: DPT-W-3 67.5'-63.5'

Lab Sample ID: 400-163540-4
Date Collected: 12/14/18 10:10
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:21	GESP	TAL PEN
Total/NA	Prep	3010A	DL		423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C	DL	5	423822	12/18/18 17:14	GESP	TAL PEN

Client Sample ID: DPT-W-1 35.5'-31.5'

Lab Sample ID: 400-163540-5
Date Collected: 12/14/18 13:05
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:25	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Client Sample ID: DPT-W-1 35.5'-31.5'

Lab Sample ID: 400-163540-5
Date Collected: 12/14/18 13:05
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1	423822	12/18/18 17:18	GESP	TAL PEN

Client Sample ID: DPT-W-1 47.5'-43.5'

Lab Sample ID: 400-163540-6
Date Collected: 12/14/18 13:30
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:28	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 17:21	GESP	TAL PEN

Client Sample ID: DPT-W-1 58'-54'

Lab Sample ID: 400-163540-7
Date Collected: 12/14/18 14:20
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:32	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 17:25	GESP	TAL PEN

Client Sample ID: DPT-W-1 67.5'-63.5'

Lab Sample ID: 400-163540-8
Date Collected: 12/14/18 14:55
Matrix: Water
Date Received: 12/14/18 17:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423491	12/17/18 09:52	DRE	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/18/18 15:35	GESP	TAL PEN
Total/NA	Prep	3010A			423485	12/17/18 16:25	DRE	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 17:39	GESP	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Metals

Prep Batch: 423485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163540-1	DPT-W-3 35.5'-31.5'	Total/NA	Water	3010A	
400-163540-2	DPT-W-3 47.5'-43.5'	Total/NA	Water	3010A	
400-163540-3	DPT-W-3 58'-54'	Total/NA	Water	3010A	
400-163540-4 - DL	DPT-W-3 67.5'-63.5'	Total/NA	Water	3010A	
400-163540-5	DPT-W-1 35.5'-31.5'	Total/NA	Water	3010A	
400-163540-6	DPT-W-1 47.5'-43.5'	Total/NA	Water	3010A	
400-163540-7	DPT-W-1 58'-54'	Total/NA	Water	3010A	
400-163540-8	DPT-W-1 67.5'-63.5'	Total/NA	Water	3010A	
MB 400-423485/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423485/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163540-1 MS	DPT-W-3 35.5'-31.5'	Total/NA	Water	3010A	
400-163540-1 MSD	DPT-W-3 35.5'-31.5'	Total/NA	Water	3010A	

Prep Batch: 423491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163540-1	DPT-W-3 35.5'-31.5'	Dissolved	Water	3005A	
400-163540-2	DPT-W-3 47.5'-43.5'	Dissolved	Water	3005A	
400-163540-3	DPT-W-3 58'-54'	Dissolved	Water	3005A	
400-163540-4	DPT-W-3 67.5'-63.5'	Dissolved	Water	3005A	
400-163540-5	DPT-W-1 35.5'-31.5'	Dissolved	Water	3005A	
400-163540-6	DPT-W-1 47.5'-43.5'	Dissolved	Water	3005A	
400-163540-7	DPT-W-1 58'-54'	Dissolved	Water	3005A	
400-163540-8	DPT-W-1 67.5'-63.5'	Dissolved	Water	3005A	
MB 400-423491/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 400-423491/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-163540-1 MS	DPT-W-3 35.5'-31.5'	Dissolved	Water	3005A	
400-163540-1 MSD	DPT-W-3 35.5'-31.5'	Dissolved	Water	3005A	

Analysis Batch: 423822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163540-1	DPT-W-3 35.5'-31.5'	Dissolved	Water	6010C	423491
400-163540-1	DPT-W-3 35.5'-31.5'	Total/NA	Water	6010C	423485
400-163540-2	DPT-W-3 47.5'-43.5'	Dissolved	Water	6010C	423491
400-163540-2	DPT-W-3 47.5'-43.5'	Total/NA	Water	6010C	423485
400-163540-3	DPT-W-3 58'-54'	Dissolved	Water	6010C	423491
400-163540-3	DPT-W-3 58'-54'	Total/NA	Water	6010C	423485
400-163540-4	DPT-W-3 67.5'-63.5'	Dissolved	Water	6010C	423491
400-163540-4 - DL	DPT-W-3 67.5'-63.5'	Total/NA	Water	6010C	423485
400-163540-5	DPT-W-1 35.5'-31.5'	Dissolved	Water	6010C	423491
400-163540-5	DPT-W-1 35.5'-31.5'	Total/NA	Water	6010C	423485
400-163540-6	DPT-W-1 47.5'-43.5'	Dissolved	Water	6010C	423491
400-163540-6	DPT-W-1 47.5'-43.5'	Total/NA	Water	6010C	423485
400-163540-7	DPT-W-1 58'-54'	Dissolved	Water	6010C	423491
400-163540-7	DPT-W-1 58'-54'	Total/NA	Water	6010C	423485
400-163540-8	DPT-W-1 67.5'-63.5'	Dissolved	Water	6010C	423491
400-163540-8	DPT-W-1 67.5'-63.5'	Total/NA	Water	6010C	423485
MB 400-423485/1-A	Method Blank	Total/NA	Water	6010C	423485
MB 400-423491/1-A	Method Blank	Total Recoverable	Water	6010C	423491
LCS 400-423485/2-A	Lab Control Sample	Total/NA	Water	6010C	423485
LCS 400-423491/2-A	Lab Control Sample	Total Recoverable	Water	6010C	423491
400-163540-1 MS	DPT-W-3 35.5'-31.5'	Dissolved	Water	6010C	423491

Metals (Continued)

Analysis Batch: 423822 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163540-1 MS	DPT-W-3 35.5'-31.5'	Total/NA	Water	6010C	423485
400-163540-1 MSD	DPT-W-3 35.5'-31.5'	Dissolved	Water	6010C	423491
400-163540-1 MSD	DPT-W-3 35.5'-31.5'	Total/NA	Water	6010C	423485

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423485/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423485**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/17/18 16:25	12/18/18 16:33	1

Lab Sample ID: LCS 400-423485/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423485**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	1.058		mg/L		106	80 - 120

Lab Sample ID: 400-163540-1 MS — **Client Sample ID: DPT-W-3 35.5'-31.5'**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423485**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.826		1.00	1.923		mg/L		110	75 - 125

Lab Sample ID: 400-163540-1 MSD — **Client Sample ID: DPT-W-3 35.5'-31.5'**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423485**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.826		1.00	1.676		mg/L		85	75 - 125	14	20

Lab Sample ID: MB 400-423491/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 423822 — **Prep Batch: 423491**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/17/18 09:52	12/18/18 14:40	1

Lab Sample ID: LCS 400-423491/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 423822 — **Prep Batch: 423491**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.069		mg/L		107	80 - 120

Lab Sample ID: 400-163540-1 MS — **Client Sample ID: DPT-W-3 35.5'-31.5'**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423822 — **Prep Batch: 423491**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00785	I	1.00	1.079		mg/L		107	75 - 125

Lab Sample ID: 400-163540-1 MSD — **Client Sample ID: DPT-W-3 35.5'-31.5'**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423822 — **Prep Batch: 423491**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00785	I	1.00	1.034		mg/L		103	75 - 125	4	20

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ted Wilson	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79047-29937.1
Client Contact: Kristi Mitchell	Phone: 717-994-3210	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 1 of 2
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hrs			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site: Plant Crist	SSOW#:			

Analysis Requested

400-163540 COC

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - SPLP Molybdenum	6010C - Molybdenum	6010C - Molybdenum	6010C - Field Filtered Molybdenum	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	D		
DPT-W-3 35.5'-31.5'	12/14/18	8:40	G	~~Solid~~ Water					✓	✓		
DPT-W-3 47.5'-43.5'	12/14/18	9:36	G	~~Solid~~ Water					✓	✓		
DPT-W-3 58'-54'	12/14/18	10:10	G	~~Solid~~ Water					✓	✓		
DPT-W-3 67.5'-63.5'	12/14/18	10:60	G	~~Solid~~ Water					✓	✓		
DPT-W-1 35.5'-31.5'	12/14/18	13:05	G	Water					✓	✓		
DPT-W-1 47.5'-43.5'	12/14/18	13:30	G	Water					✓	✓		
DPT-W-1 58'-54'	12/14/18	14:20	G	Water					✓	✓		
DPT-W-1 67.5'-63.5'	12/14/18	14:55	G	Water					✓	✓		
				Water								
				Water								
				Water								

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12-14-2018/1705	Geosyntec		12/14/18 1705	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.0°C IR7

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163540-1
SDG Number: Molybdenum

Login Number: 163540
List Number: 1
Creator: Brown, Nathan

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163540-1
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163543-1
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/20/2018 5:07:19 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-163543-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-163543-1

General Chemistry

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 423683 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) SM 4500 Cl- E: Due to the concentration of chlorides in the parent sample the MS/MSD were diluted after the spike. The spike amounts were diluted after the spike. (400-163122-A-1 MS) and (400-163122-A-1 MSD)

Method(s) SM 4500 Cl- E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 423683 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 Cl- E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MWI-2 (400-163543-2), (400-163122-A-1), (400-163122-A-1 MS) and (400-163122-A-1 MSD). Elevated reporting limits (RLs) are provided.

Method(s) SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD were diluted after the spike. The spike amounts were adjusted by the dilution factor. (400-163093-G-1 MS) and (400-163093-G-1 MSD)

Method(s) SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 423756 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MWI-2 (400-163543-2), (400-163093-G-1), (400-163093-G-1 MS) and (400-163093-G-1 MSD). Elevated reporting limits (RLs) are provided.

Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL PEN
SM 4500 NO3 F	Nitrogen, Nitrate-Nitrite	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163543-2	MWI-2	Water	12/14/18 13:39	12/14/18 17:05

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Client Sample ID: MWI-2

Date Collected: 12/14/18 13:39
Date Received: 12/14/18 17:05

Lab Sample ID: 400-163543-2

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**105**		0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:27	1
Potassium	**31.9**		1.00	0.100	mg/L		12/18/18 13:03	12/19/18 02:27	1
Magnesium	**12.3**		0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:27	1
Sodium	**153**		1.00	0.500	mg/L		12/18/18 13:03	12/19/18 02:27	1
Molybdenum	**1.13**		0.0100	0.00200	mg/L		12/18/18 13:03	12/19/18 02:27	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	**1.12**		0.0100	0.00200	mg/L		12/18/18 13:29	12/19/18 02:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 18:53	1
Alkalinity, Total	**91.9**		1.00	0.980	mg/L			12/20/18 09:05	1
Bicarbonate Alkalinity as CaCO3	**91.9**		1.00	0.980	mg/L			12/20/18 09:05	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 09:05	1
Chloride	**227**		20.0	14.0	mg/L			12/18/18 11:30	10
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 18:53	1
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/18/18 17:11	1
Sulfate	**271**		50.0	14.0	mg/L			12/18/18 15:55	10

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Client Sample ID: MWI-2

Date Collected: 12/14/18 13:39
Date Received: 12/14/18 17:05

Lab Sample ID: 400-163543-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423709	12/18/18 13:29	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/19/18 02:10	GESP	TAL PEN
Total/NA	Prep	3010A			423690	12/18/18 13:03	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/19/18 02:27	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 18:53	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424051	12/20/18 09:05	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		10	423683	12/18/18 11:30	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 18:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423783	12/18/18 17:11	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		10	423756	12/18/18 15:55	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Metals

Prep Batch: 423690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	3010A	
MB 400-423690/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423690/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 423709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Dissolved	Water	3005A	
MB 400-423709/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 400-423709/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-163543-C-1-B MS	Matrix Spike	Dissolved	Water	3005A	
400-163543-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	3005A	

Analysis Batch: 423822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Dissolved	Water	6010C	423709
400-163543-2	MWI-2	Total/NA	Water	6010C	423690
MB 400-423690/1-A	Method Blank	Total/NA	Water	6010C	423690
MB 400-423709/1-A	Method Blank	Total Recoverable	Water	6010C	423709
LCS 400-423690/2-A	Lab Control Sample	Total/NA	Water	6010C	423690
LCS 400-423709/2-A	Lab Control Sample	Total Recoverable	Water	6010C	423709
400-163543-C-1-B MS	Matrix Spike	Dissolved	Water	6010C	423709
400-163543-C-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	6010C	423709

General Chemistry

Analysis Batch: 423683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	SM 4500 Cl- E	
MB 400-423683/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-423683/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-423683/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163122-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163122-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

Analysis Batch: 423740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	SM 4500 NO2 B	
MB 400-423740/6	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 400-423740/7	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MRL 400-423740/3	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO2 B	
400-163502-G-8 DU	Duplicate	Total/NA	Water	SM 4500 NO2 B	

Analysis Batch: 423756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	SM 4500 SO4 E	
MB 400-423756/17	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-423756/18	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-423756/14	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	

General Chemistry (Continued)

Analysis Batch: 423756 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163093-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-163093-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 423783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	SM 4500 NO3 F	
MB 400-423783/7	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 400-423783/32	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MRL 400-423783/6	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
240-105563-H-4 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
240-105563-H-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	
400-163626-E-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-163626-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 423796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	4500 NO3 F	

Analysis Batch: 424051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-2	MWI-2	Total/NA	Water	SM 2320B	
MB 400-424051/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-424051/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-163543-2 DU	MWI-2	Total/NA	Water	SM 2320B	

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423690/1-A
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 423690

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:13	1
Potassium	0.100	U	1.00	0.100	mg/L		12/18/18 13:03	12/19/18 02:13	1
Magnesium	0.0300	U	0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:13	1
Sodium	0.500	U	1.00	0.500	mg/L		12/18/18 13:03	12/19/18 02:13	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/18/18 13:03	12/19/18 02:13	1

Lab Sample ID: LCS 400-423690/2-A
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 423690

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	9.715		mg/L		97	80 - 120
Potassium	10.0	10.04		mg/L		100	80 - 120
Magnesium	10.0	10.16		mg/L		102	80 - 120
Sodium	10.0	10.67		mg/L		107	80 - 120
Molybdenum	1.00	1.056		mg/L		106	80 - 120

Lab Sample ID: MB 400-423709/1-A
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 423709

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/18/18 13:29	12/19/18 01:35	1

Lab Sample ID: LCS 400-423709/2-A
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 423709

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.028		mg/L		103	80 - 120

Lab Sample ID: 400-163543-C-1-B MS
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 423709

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00200	U	1.00	1.085		mg/L		108	75 - 125

Lab Sample ID: 400-163543-C-1-C MSD
Matrix: Water
Analysis Batch: 423822

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 423709

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00200	U	1.00	1.049		mg/L		105	75 - 125	3	20

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-424051/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1

Lab Sample ID: LCS 400-424051/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	102.2		mg/L		102	80 - 120

Lab Sample ID: 400-163543-2 DU — **Client Sample ID: MWI-2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	91.9		92.04		mg/L		0.1	20
Bicarbonate Alkalinity as CaCO3	91.9		92.04		mg/L		0.1	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-423683/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423683

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/18/18 10:41	1

Lab Sample ID: LCS 400-423683/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423683

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.97		mg/L		107	90 - 110

Lab Sample ID: MRL 400-423683/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423683

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.464	I	mg/L		73	50 - 150

Lab Sample ID: 400-163122-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423683

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	334		10.0	330.7	J3	mg/L		-37	73 - 120

Method: SM 4500 Cl- E - Chloride, Total (Continued)

Lab Sample ID: 400-163122-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423683

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	334		10.0	330.0	J3	mg/L		-44	73 - 120	0	8

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 400-423740/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1

Lab Sample ID: LCS 400-423740/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.300	0.2711		mg/L		90	90 - 110

Lab Sample ID: MRL 400-423740/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.200	0.1961		mg/L		98	50 - 150

Lab Sample ID: 400-163469-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.0180	U	0.200	0.1985		mg/L		99	80 - 118

Lab Sample ID: 400-163469-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.0180	U	0.200	0.1918		mg/L		96	80 - 118	3	9

Lab Sample ID: 400-163502-G-8 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	0.0180	U	0.0180	U	mg/L		NC	9

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-423783/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/18/18 17:06	1

Lab Sample ID: LCS 400-423783/32 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.500	0.5360		mg/L		107	90 - 110		

Lab Sample ID: MRL 400-423783/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.0500	0.05600		mg/L		112	50 - 150		

Lab Sample ID: 240-105563-H-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.0880		1.00	1.098		mg/L		101	90 - 110		

Lab Sample ID: 240-105563-H-4 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.0880		1.00	1.105		mg/L		102	90 - 110	1	4

Lab Sample ID: 400-163626-E-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.0180	U	1.00	1.043		mg/L		104	90 - 110		

Lab Sample ID: 400-163626-E-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423783

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.0180	U	1.00	1.032		mg/L		103	90 - 110	1	4

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-423756/17
Matrix: Water
Analysis Batch: 423756

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/18/18 13:54	1

Lab Sample ID: LCS 400-423756/18
Matrix: Water
Analysis Batch: 423756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	15.0	13.92		mg/L		93	90 - 110

Lab Sample ID: MRL 400-423756/14
Matrix: Water
Analysis Batch: 423756

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5.00	4.307	I	mg/L		86	50 - 150

Lab Sample ID: 400-163093-G-1 MS
Matrix: Water
Analysis Batch: 423756

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	44.5		10.0	44.84	J3	mg/L		3	77 - 128

Lab Sample ID: 400-163093-G-1 MSD
Matrix: Water
Analysis Batch: 423756

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	44.5		10.0	51.57	J3	mg/L		71	77 - 128	14	5

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

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Client Information	Sampler: M. Taylor	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.6
Client Contact: Kristi Mitchell	Phone:	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 6 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hr TAT			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

400-163543 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_SO4_E, NO2B	Nitrate_Calc, NO3	Molybdenum 6010C	Field Filtered Mo 6010C							Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	S	A	D								
MWP-10 ★ HOLD further inst	12.14.18	1100	G	Water			1	1	1	1	1	1								(HOLD) Sample Until further instruction MWP-10 Only
MWT-2	12.14.18	1339	G	Water			1	1	1	1	1	1								
~~MWP-2~~	~~12.14.18~~		G	Water			1	1	1	1	1	1								
				Water																
				Water																
				Water																

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12.14.2018/1705	OTCSynlab		12/14/18 1705	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.0°C IR#7

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163543-1
SDG Number: Molybdenum

Login Number: 163543
List Number: 1
Creator: Brown, Nathan

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-1
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-163543-2
TestAmerica Sample Delivery Group: Molybdenum
Client Project/Site: Plant Crist

For:
Gulf Power Company
BIN 731
One Energy Place
Pensacola, Florida 32520

Attn: Kristi Mitchell

Authorized for release by:
12/21/2018 6:01:28 PM

Cheyenne Whitmire, Project Manager II
(850)471-6222
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL PEN
4500 NO3 F	Nitrogen, Nitrate	SM	TAL PEN
SM 2320B	Alkalinity	SM	TAL PEN
SM 4500 Cl- E	Chloride, Total	SM	TAL PEN
SM 4500 NO2 B	Nitrogen, Nitrite	SM	TAL PEN
SM 4500 NO3 F	Nitrogen, Nitrate-Nitrite	SM	TAL PEN
SM 4500 SO4 E	Sulfate, Total	SM	TAL PEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PEN
3010A	Preparation, Total Metals	SW846	TAL PEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-163543-1	MWP-10	Water	12/14/18 16:06	12/14/18 17:05

Client Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Client Sample ID: MWP-10

Date Collected: 12/14/18 16:06
Date Received: 12/14/18 17:05

Lab Sample ID: 400-163543-1

Matrix: Water

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**0.977**		0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:20	1
Potassium	**0.305**	**I**	1.00	0.100	mg/L		12/18/18 13:03	12/19/18 02:20	1
Magnesium	**0.780**		0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:20	1
Sodium	**4.45**		1.00	0.500	mg/L		12/18/18 13:03	12/19/18 02:20	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/18/18 10:45	12/18/18 22:17	1

Method: 6010C - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/18/18 13:29	12/19/18 01:42	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.0180	U	0.0500	0.0180	mg/L			12/14/18 18:53	1
Alkalinity, Total	**8.99**		1.00	0.980	mg/L			12/20/18 09:16	1
Bicarbonate Alkalinity as CaCO3	**8.99**		1.00	0.980	mg/L			12/20/18 09:16	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 09:16	1
Chloride	**8.27**		2.00	1.40	mg/L			12/21/18 16:36	1
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 18:53	1
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/19/18 14:11	1
Sulfate	1.40	U	5.00	1.40	mg/L			12/20/18 18:20	1

Definitions/Glossary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

General Chemistry

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

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
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Client Sample ID: MWP-10

Date Collected: 12/14/18 16:06
Date Received: 12/14/18 17:05

Lab Sample ID: 400-163543-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			423709	12/18/18 13:29	KWN	TAL PEN
Dissolved	Analysis	6010C		1	423822	12/19/18 01:42	GESP	TAL PEN
Total/NA	Prep	3010A			423656	12/18/18 10:45	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/18/18 22:17	GESP	TAL PEN
Total/NA	Prep	3010A			423690	12/18/18 13:03	KWN	TAL PEN
Total/NA	Analysis	6010C		1	423822	12/19/18 02:20	GESP	TAL PEN
Total/NA	Analysis	4500 NO3 F		1	423796	12/14/18 18:53	RRC	TAL PEN
Total/NA	Analysis	SM 2320B		1	424051	12/20/18 09:16	BAB	TAL PEN
Total/NA	Analysis	SM 4500 Cl- E		1	424299	12/21/18 16:36	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO2 B		1	423740	12/14/18 18:53	RRC	TAL PEN
Total/NA	Analysis	SM 4500 NO3 F		1	423901	12/19/18 14:11	KJR	TAL PEN
Total/NA	Analysis	SM 4500 SO4 E		1	424143	12/20/18 18:20	RRC	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Metals

Prep Batch: 423656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	3010A	
MB 400-423656/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423656/2-A	Lab Control Sample	Total/NA	Water	3010A	
400-163543-1 MS	MWP-10	Total/NA	Water	3010A	
400-163543-1 MSD	MWP-10	Total/NA	Water	3010A	

Prep Batch: 423690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	3010A	
MB 400-423690/1-A	Method Blank	Total/NA	Water	3010A	
LCS 400-423690/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 423709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Dissolved	Water	3005A	
MB 400-423709/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 400-423709/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
400-163543-1 MS	MWP-10	Dissolved	Water	3005A	
400-163543-1 MSD	MWP-10	Dissolved	Water	3005A	

Analysis Batch: 423822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Dissolved	Water	6010C	423709
400-163543-1	MWP-10	Total/NA	Water	6010C	423656
400-163543-1	MWP-10	Total/NA	Water	6010C	423690
MB 400-423656/1-A	Method Blank	Total/NA	Water	6010C	423656
MB 400-423690/1-A	Method Blank	Total/NA	Water	6010C	423690
MB 400-423709/1-A	Method Blank	Total Recoverable	Water	6010C	423709
LCS 400-423656/2-A	Lab Control Sample	Total/NA	Water	6010C	423656
LCS 400-423690/2-A	Lab Control Sample	Total/NA	Water	6010C	423690
LCS 400-423709/2-A	Lab Control Sample	Total Recoverable	Water	6010C	423709
400-163543-1 MS	MWP-10	Dissolved	Water	6010C	423709
400-163543-1 MS	MWP-10	Total/NA	Water	6010C	423656
400-163543-1 MSD	MWP-10	Dissolved	Water	6010C	423709
400-163543-1 MSD	MWP-10	Total/NA	Water	6010C	423656

General Chemistry

Analysis Batch: 423740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	SM 4500 NO2 B	
MB 400-423740/6	Method Blank	Total/NA	Water	SM 4500 NO2 B	
LCS 400-423740/7	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
MRL 400-423740/3	Lab Control Sample	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 NO2 B	
400-163469-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO2 B	
400-163502-G-8 DU	Duplicate	Total/NA	Water	SM 4500 NO2 B	

QC Association Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

General Chemistry (Continued)

Analysis Batch: 423796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	4500 NO3 F	

Analysis Batch: 423901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	SM 4500 NO3 F	
MB 400-423901/7	Method Blank	Total/NA	Water	SM 4500 NO3 F	
LCS 400-423901/8	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
MRL 400-423901/6	Lab Control Sample	Total/NA	Water	SM 4500 NO3 F	
400-163502-I-7 MS	Matrix Spike	Total/NA	Water	SM 4500 NO3 F	
400-163502-I-7 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NO3 F	

Analysis Batch: 424051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	SM 2320B	
MB 400-424051/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 400-424051/5	Lab Control Sample	Total/NA	Water	SM 2320B	
400-163543-A-2 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 424143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	SM 4500 SO4 E	
MB 400-424143/6	Method Blank	Total/NA	Water	SM 4500 SO4 E	
LCS 400-424143/7	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
MRL 400-424143/3	Lab Control Sample	Total/NA	Water	SM 4500 SO4 E	
400-163441-B-21 MS	Matrix Spike	Total/NA	Water	SM 4500 SO4 E	
400-163441-B-21 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 SO4 E	

Analysis Batch: 424299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-163543-1	MWP-10	Total/NA	Water	SM 4500 Cl- E	
MB 400-424299/6	Method Blank	Total/NA	Water	SM 4500 Cl- E	
LCS 400-424299/7	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
MRL 400-424299/3	Lab Control Sample	Total/NA	Water	SM 4500 Cl- E	
400-163441-B-21 MS	Matrix Spike	Total/NA	Water	SM 4500 Cl- E	
400-163441-B-21 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 Cl- E	

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 400-423656/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423656**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/18/18 10:45	12/18/18 22:00	1

Lab Sample ID: LCS 400-423656/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423656**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	1.00	1.015		mg/L		102	80 - 120

Lab Sample ID: 400-163543-1 MS — **Client Sample ID: MWP-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423656**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum	0.00200	U	1.00	1.044		mg/L		104	75 - 125

Lab Sample ID: 400-163543-1 MSD — **Client Sample ID: MWP-10**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423656**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum	0.00200	U	1.00	1.055		mg/L		106	75 - 125	1	20

Lab Sample ID: MB 400-423690/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423690**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.0300	U	0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:13	1
Potassium	0.100	U	1.00	0.100	mg/L		12/18/18 13:03	12/19/18 02:13	1
Magnesium	0.0300	U	0.500	0.0300	mg/L		12/18/18 13:03	12/19/18 02:13	1
Sodium	0.500	U	1.00	0.500	mg/L		12/18/18 13:03	12/19/18 02:13	1
Molybdenum	0.00200	U	0.0100	0.00200	mg/L		12/18/18 13:03	12/19/18 02:13	1

Lab Sample ID: LCS 400-423690/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423822 — **Prep Batch: 423690**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10.0	9.715		mg/L		97	80 - 120
Potassium	10.0	10.04		mg/L		100	80 - 120
Magnesium	10.0	10.16		mg/L		102	80 - 120
Sodium	10.0	10.67		mg/L		107	80 - 120
Molybdenum	1.00	1.056		mg/L		106	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 400-423709/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 423822 — **Prep Batch: 423709**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum, Dissolved	0.00200	U	0.0100	0.00200	mg/L		12/18/18 13:29	12/19/18 01:35	1

Lab Sample ID: LCS 400-423709/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 423822 — **Prep Batch: 423709**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	1.00	1.028		mg/L		103	80 - 120

Lab Sample ID: 400-163543-1 MS — **Client Sample ID: MWP-10**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423822 — **Prep Batch: 423709**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Molybdenum, Dissolved	0.00200	U	1.00	1.085		mg/L		108	75 - 125

Lab Sample ID: 400-163543-1 MSD — **Client Sample ID: MWP-10**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 423822 — **Prep Batch: 423709**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Molybdenum, Dissolved	0.00200	U	1.00	1.049		mg/L		105	75 - 125	3	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 400-424051/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1
Bicarbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1
Carbonate Alkalinity as CaCO3	0.980	U	1.00	0.980	mg/L			12/20/18 08:43	1

Lab Sample ID: LCS 400-424051/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	102.2		mg/L		102	80 - 120

Lab Sample ID: 400-163543-A-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424051

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	91.9		92.04		mg/L		0.1	20
Bicarbonate Alkalinity as CaCO3	91.9		92.04		mg/L		0.1	20
Carbonate Alkalinity as CaCO3	0.980	U	0.980	U	mg/L		NC	20

QC Sample Results

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Method: SM 4500 Cl- E - Chloride, Total

Lab Sample ID: MB 400-424299/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424299

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.40	U	2.00	1.40	mg/L			12/21/18 16:36	1

Lab Sample ID: LCS 400-424299/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424299

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	30.0	31.45		mg/L		105	90 - 110

Lab Sample ID: MRL 400-424299/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424299

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.00	1.013	I	mg/L		51	50 - 150

Lab Sample ID: 400-163441-B-21 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424299

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11.0		10.0	21.93		mg/L		110	73 - 120

Lab Sample ID: 400-163441-B-21 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424299

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11.0		10.0	21.90		mg/L		109	73 - 120	0	8

Method: SM 4500 NO2 B - Nitrogen, Nitrite

Lab Sample ID: MB 400-423740/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.0180	U	0.100	0.0180	mg/L			12/14/18 07:59	1

Lab Sample ID: LCS 400-423740/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.300	0.2711		mg/L		90	90 - 110

Method: SM 4500 NO2 B - Nitrogen, Nitrite (Continued)

Lab Sample ID: MRL 400-423740/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			0.200	0.1961		mg/L		98	50 - 150		

Lab Sample ID: 400-163469-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N	0.0180	U	0.200	0.1985		mg/L		99	80 - 118		

Lab Sample ID: 400-163469-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.0180	U	0.200	0.1918		mg/L		96	80 - 118	3	9

Lab Sample ID: 400-163502-G-8 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423740

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrite as N	0.0180	U		0.0180	U	mg/L				NC	9

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 400-423901/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423901

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0180	U	0.0500	0.0180	mg/L			12/19/18 14:00	1

Lab Sample ID: LCS 400-423901/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423901

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.500	0.5400		mg/L		108	90 - 110		

Lab Sample ID: MRL 400-423901/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423901

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N			0.0500	0.04600	I	mg/L		92	50 - 150		

Method: SM 4500 NO3 F - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 400-163502-I-7 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423901

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate Nitrite as N	0.0180	U	1.00	1.010		mg/L		101	90 - 110		

Lab Sample ID: 400-163502-I-7 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 423901

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.0180	U	1.00	0.9920		mg/L		99	90 - 110	2	4

Method: SM 4500 SO4 E - Sulfate, Total

Lab Sample ID: MB 400-424143/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424143

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.40	U	5.00	1.40	mg/L			12/20/18 18:20	1

Lab Sample ID: LCS 400-424143/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424143

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			15.0	14.39		mg/L		96	90 - 110		

Lab Sample ID: MRL 400-424143/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424143

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			5.00	4.533	I	mg/L		91	50 - 150		

Lab Sample ID: 400-163441-B-21 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424143

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	1.40	U	10.0	13.99	J3	mg/L		140	77 - 128		

Lab Sample ID: 400-163441-B-21 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 424143

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	1.40	U	10.0	14.08	J3	mg/L		141	77 - 128	1	5

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: M. Taylor	Lab PM: Whitmire, Cheyenne R	Carrier Tracking No(s):	COC No: 400-79002-29937.6
Client Contact: Kristi Mitchell	Phone:	E-Mail: cheyenne.whitmire@testamericainc.com		Page: Page 6 of 6
Company: Gulf Power Company				Job #:
Address: BIN 731 One Energy Place	Due Date Requested:			
City: Pensacola	TAT Requested (days): 24 hr TAT			
State, Zip: FL, 32520				
Phone: 850-444-6427(Tel)	PO #: Purchase Order not required			
Email: krmitche@southernco.com	WO #:			
Project Name: Molybdenum	Project #: 40000612			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

400-163543 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C - Ca,Mg,Na,K	2320B - Alkalinity, Total, Bicarb & Carb	SM4500_Cl_E, SM4500_SO4_E, NO2B	Nitrate_Calc, NO3	Molybdenum 6010C	Field Filtered Mo 6010C							Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	S	A	D								
MWP-10 ☆ HOLD further inst	12.14.18	1100	G	Water			1	1	1	1	1	1								(HOLD) Sample Until further Instruction MWP-10 Only
MWT-2	12.14.18	1339	G	Water			1	1	1	1	1	1								
~~MWP-2~~	~~12.14.18~~		G	Water			1	1	1	1	1	1								
				Water																
				Water																
				Water																

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Mollie A Taylor	12.14.2018/1705	Oceanspike		12/14/18 1705	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.0°C IR#7

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Gulf Power Company

Job Number: 400-163543-2
SDG Number: Molybdenum

Login Number: 163543
List Number: 1
Creator: Brown, Nathan

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR7
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 containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Accreditation/Certification Summary

Client: Gulf Power Company
Project/Site: Plant Crist

TestAmerica Job ID: 400-163543-2
SDG: Molybdenum

Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alabama	State Program	4	40150	06-30-19
ANAB	ISO/IEC 17025		L2471	02-22-20
Arizona	State Program	9	AZ0710	01-12-20
Arkansas DEQ	State Program	6	88-0689	09-01-19
California	State Program	9	2510	06-30-19
Florida	NELAP	4	E81010	06-30-19
Georgia	State Program	4	E81010 (FL)	06-30-19
Illinois	NELAP	5	200041	10-09-19
Iowa	State Program	7	367	08-01-20
Kansas	NELAP	7	E-10253	12-31-18
Kentucky (UST)	State Program	4	53	06-30-19
Kentucky (WW)	State Program	4	98030	12-31-18
Louisiana	NELAP	6	30976	06-30-19
Louisiana (DW)	NELAP	6	LA017	12-31-19
Maryland	State Program	3	233	09-30-19
Massachusetts	State Program	1	M-FL094	06-30-19
Michigan	State Program	5	9912	06-30-19
New Jersey	NELAP	2	FL006	06-30-19
North Carolina (WW/SW)	State Program	4	314	12-31-19
Oklahoma	State Program	6	9810	08-31-19
Pennsylvania	NELAP	3	68-00467	01-31-19
Rhode Island	State Program	1	LAO00307	12-30-18
South Carolina	State Program	4	96026	06-30-19
Tennessee	State Program	4	TN02907	06-30-19
Texas	NELAP	6	T104704286-18-15	09-30-19
US Fish & Wildlife	Federal		LE058448-0	07-31-19
USDA	Federal		P330-18-00148	05-17-21
Virginia	NELAP	3	460166	06-14-19
Washington	State Program	10	C915	05-15-19
West Virginia DEP	State Program	3	136	06-30-19

APPENDIX B

Field Sample Sheets

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MW304	SAMPLE ID: MW304		DATE: 12.13.2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 42.8 feet to 52.8 feet	STATIC DEPTH TO WATER (feet): 33.17	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.25 gallons + (0.0006 gallons/foot X 52 feet) + 0.25 gallons = 0.81 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 47	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 47	PURGING INITIATED AT: 1134	PURGING ENDED AT: 1154	TOTAL VOLUME PURGED (gallons): 2.89 3.40

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1137	0.85	0.85	0.17								
1145	1.02	1.87	0.17	33.19	5.40	22.61	1.250	0.62	5.68	196.8	none
1148	0.51	2.36	0.17	33.19	5.38	22.80	1.243	0.31	4.37	196.2	none
1151	0.51	2.89	0.17	33.19	5.38	22.81	1.241	0.25	4.50	196.8	none
~~1154~~	0.51	3.40	0.17	33.19	5.38	22.75	1.241	0.20	3.75	197.5	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1154	SAMPLING ENDED AT: 1200
PUMP OR TUBING DEPTH IN WELL (feet): 47	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: QFC45	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW304	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	ESP	150
MW304	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_2	ESP	150
MW304	1	PE	250mL	H_2SO_4	–	–	NO_3, NO_2-NO_3	ESP	150
MW304	1	PE	250mL	HNO_3	–	–	Field Filtered Mo	ESP	150
MW304	1	PE	250mL	HNO_3	–	–	Mo	ESP	150

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MW308	SAMPLE ID: MW308		DATE: 12.13.2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 52.7 feet to 62.7 feet	STATIC DEPTH TO WATER (feet): 32.60	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.25 gallons + (0.006 gallons/foot X 60 feet) + 0.75 gallons = 0.86 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 55	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 55	PURGING INITIATED AT: 1244	PURGING ENDED AT: 1303	TOTAL VOLUME PURGED (gallons): 4.94

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1257	3.38	3.38	0.26	32.14	5.83	21.94	0.576	1.83	1.35	191.1	none
1300	0.78	4.16	0.26	32.14	5.85	22.05	0.575	1.75	0.19	194.4	none
1303	0.78	4.94	0.26	32.14	5.88	22.91	0.577	1.67	0.14	195.8	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): MT	SAMPLING INITIATED AT: 1303	SAMPLING ENDED AT: 1310
PUMP OR TUBING DEPTH IN WELL (feet): 55	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type:	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW308	1	PE	250mL	HNO_3	–	–	Field Filtered MO	ESP	1000
MW308	1	PE	250mL	HNO_3	–	–	MO	ESP	1000
MW308	1	PE	1L	Ice			Alk, Cl, SO_4, NO_2	ESP	1000
MW308	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	ESP	1000
MW308	1	PE	250mL	H_2SO_4	–	–	NO_3, NO_2-NO_3	ESP	1000

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MW303	SAMPLE ID: MW303		DATE: 12·13·2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 53 feet to 63 feet	STATIC DEPTH TO WATER (feet): 33.61	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.25 gallons + (0.0006 gallons/foot X 60 feet) + 0.25 gallons = 0.86 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 57	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 57	PURGING INITIATED AT: 1340	PURGING ENDED AT: 1359	TOTAL VOLUME PURGED (gallons) 4.94

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1353	3.38	3.38	0.26	33.66	6.34	22.51	0.731	3.28	11.2	190.8	none
1356	0.78	4.16	0.26	33.66	6.27	22.49	0.736	3.11	5.84	194.2	none
1359	0.78	4.94	0.26	33.66	6.24	22.52	0.736	3.09	3.72	196.4	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): MT	SAMPLING INITIATED AT: 1359	SAMPLING ENDED AT: 1410
PUMP OR TUBING DEPTH IN WELL (feet): 57	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type:	FILTER SIZE: 0.45 µm

FIELD DECONTAMINATION: PUMP (Y) N TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW303	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_2	ESP	1000
MW303	1	PE	250mL	H_2SO_4	–	–	NO_3, NH_3-NO_3	ESP	1000
MW303	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	ESP	1000
MW303	1	PE	250mL	HNO_3	–	–	Mo	ESP	1000
MW303	1	PE	250mL	HNO_3	–	–	Total Filtered Mo	ESP	1000

REMARKS: Started very orange and turbid

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MW302	SAMPLE ID: MW302		DATE: 12.13.2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/8	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 45.15	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.25 gallons + (0.006 gallons/foot X 73 feet) + 0.25 gallons = 0.94 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 67	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 67	PURGING INITIATED AT: 1441	PURGING ENDED AT: 1456	TOTAL VOLUME PURGED (gallons): 4.80

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1447	1.92	1.92	0.32	45.29	6.54	24.03	0.714	2.62	5.03	197.7	none
1450	0.96	2.88	0.32	45.29	6.46	24.09	0.728	2.26	3.47	199.9	none
1453	0.96	3.84	0.32	45.29	6.44	24.15	0.732	2.12	3.40	201.0	none
1456	0.96	4.80	0.32	45.29	6.43	23.99	0.744	2.07	2.38	202.6	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): MT	SAMPLING INITIATED AT: 1456	SAMPLING ENDED AT: 1505
PUMP OR TUBING DEPTH IN WELL (feet): 67	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: 45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MW302	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_2	ESP	1200
MW302	1	PE	250mL	H_2SO_4	–	–	NO_2, NO_2-NO_3	ESP	1200
MW302	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	ESP	1200
MW302	1	PE	250mL	HNO_3	–	–	Mo	ESP	1200
MW302	1	PE	250mL	HNO_3	–	–	Field Filtered Mo	ESP	1200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MWI-2	SAMPLE ID: MWI-2		DATE: 12.14.2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 25 feet to 40 feet	STATIC DEPTH TO WATER (feet): 9.24	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ~~0.~~ gallons + (0.0026 gallons/foot X 37 feet) + 0.25 gallons = 0.35 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32	PURGING INITIATED AT: 1325	PURGING ENDED AT: 1339	TOTAL VOLUME PURGED (gallons): 3.64

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1333	2.08	2.08	0.26	9.40	6.55	22.32	1.356	0.43	0.61	179.9	none
1336	0.78	~~1.02~~ 2.86	0.26	9.40	6.49	22.27	1.374	0.31	0.21	177.7	none
1339	0.78	3.64	0.26	9.40	6.47	22.30	1.377	0.28	0.19	177.2	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): MT	SAMPLING INITIATED AT: 1339	SAMPLING ENDED AT: 1345
PUMP OR TUBING DEPTH IN WELL (feet): 32	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED (Y) N Filtration Equipment Type:	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MWI-2	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_2	APP	1000
MWI-2	1	PE	250mL	H_2SO_4	–	–	NO_2, NO_2-NO_3	APP	1000
MWI-2	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	APP	1000
MWI-2	1	PE	250mL	HNO_3	–	–	Mo	APP	1000
MWI-2	1	PE	250mL	HNO_3	–	–	FF Mo	APP	1000

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MWP-2	SAMPLE ID: MWP-2		DATE: 12.14.2018

PURGING DATA

WELL DIAMETER (inches): 1 2in	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 4.8 feet to 8.8 feet	STATIC DEPTH TO WATER (feet): 8.52	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X 10 feet) + 0.25 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
1400	MJ – Not enough water in the well to get stabilization criteria and retrieve a sample										

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): MJ	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type:	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MWP-2	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_2	APP	
MWP-2	1	PE	250mL	H_2SO_4	–	–	NO_3, NO_2-NO_3	APP	
MWP-2	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	APP	
MWP-2	1	PE	250mL	HNO_3	–	–	Mo	APP	
MWP-2	1	PE	250mL	HNO_3	–	–	FF Mo	APP	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Plant Crist	
WELL NO: MWP-10	SAMPLE ID: MWP-10		DATE: 12.14.2018

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): ~~1/4~~ 3/8	WELL SCREEN INTERVAL DEPTH 67.55 feet to 82.55 feet	STATIC DEPTH TO WATER (feet): 57.24	PURGE PUMP TYPE OR BAILER: ~~ESP~~ PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0.25 gallons + (0.006 gallons/foot X 80 feet) + 0.25 gallons = 0.98 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 75	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 75	PURGING INITIATED AT: ~~1500~~ 1550	PURGING ENDED AT: 1606	TOTAL VOLUME PURGED (gallons): 2.56

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
No Sample with ESP											
Switched to peristaltic pump with a check valve to get past obstruction											
1600	1.60	1.60	0.16	~~57.60~~	4.79	19.09	0.043	6.88	1605	203.4	orange
1603	0.48	2.08	0.16	57.60	4.69	19.13	0.043	6.67	1609	213.9	orange
1606	0.48	2.56	0.16	57.60	4.32	19.02	0.041	6.60	178	230.3	orange

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: M. Taylor /Geosyntec	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1606	SAMPLING ENDED AT: 1610
PUMP OR TUBING DEPTH IN WELL (feet): 75	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED (Y) N Filtration Equipment Type:	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP (Y) N	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
MWP-10	1	PE	1L	Ice	–	–	Alk, Cl, SO_4, NO_3	ESP	600
MWP-10	1	PE	250mL	H_2SO_4	–	–	NO_3, NO_2-NO_3	ESP	600
MWP-10	1	PE	250mL	HNO_3	–	–	Ca, Mg, Na, K	ESP	600
MWP-10	1	PE	250mL	HNO_3	–	–	Mo	ESP	600
MWP-10	1	PE	250mL	HNO_3	–	–	Field Filtered MO	ESP	600

REMARKS: Approximately 5 ft into the well the PVC is bent into the well casing. The ESP will not fit into the casing to collect a sample

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DPT GEOCHEMICAL DATA FORM

Project/Project Number: Molybdenum TXR0943

Date: 12/13/18

Time	DPT Location	Screened Interval (ft BLS)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	Color / Notes
7:55	DPT-W-4	35.5-31.5	6.50	0.363	7999	3.62	20.35	N/A	-260.0	reddish brown
8:00	DPT-W-4	35.5-31.5	6.49	0.370	>999	3.75	20.61	"	-207.0	"
8:05	DPT-W-4	35.5-31.5	6.50	0.370	>999	4.46	20.60	"	-195.4	"
	SAMPLED @ 810									
8:45	DPT-W-4	47.5-43.5	6.97	0.434	>999	2.72	23.28	N/A	-20.5	Tan
8:50	DPT-W-4	47.5'-43.5'	6.98	0.439	>999	3.13	23.45	"	4.6	Tan
8:55	DPT-W-4	47.5'-43.5'	6.99	0.441	>999	3.59	23.53	"	24.7	Tan
	SAMPLED @ 9:00									
9:30	DPT-W-4	58'-54'	6.57	1.134	>999	1.12	22.74	N/A	-308.6	Dark Red
9:35	DPT-W-4	58'-54'	6.61	1.137	>999	1.20	22.71	"	-315.2	"
9:40	DPT-W-4	58-54'	6.60	1.137	>999	1.28	22.81	"	-299.6	"
	SAMPLED @ 9:45									
10:20	DPT-W-4	67.5'-63.5'	6.04	1.105	>999	0.59	22.48	N/A	-456.0	Brown
10:25	DPT-W-4	67.5-63.5'	6.09	1.111	>999	0.90	22.26	"	-474.0	"
10:30	DPT-W-4	67.5-63.5'	6.10	1.112	>999	0.87	22.08	"	-474.2	"
	SAMPLED @ 10:35									
13:05	DPT-W-2	38'-34'	4.86	0.629	>999	3.19	22.40	N/A	-40.8	Brown
13:10	DPT-W-2	38'-34'	4.88	0.608	>999	3.46	22.41	"	-62.2	"
13:15	DPT-W-2	38-34'	4.95	0.584	>999	3.71	22.42	"	-46.6	"
	SAMPLED @ 13:20									
13:40	DPT-W-2	47.5'-43.5'	7.03	0.591	>999	1.85	21.43	N/A	-195.5	Tan
13:45	DPT-W-2	47.5'-43.5'	7.03	0.594	>999	1.86	21.59	"	-178.3	"
13:50	DPT-W-2	47.5'-43.5'	7.01	0.596	>999	2.04	21.68	"	-175.8	"
	Sampled @ 13:55									
14:30	DPT-W-2	58'-54'	6.54	0.824	>999	0.63	22.06	N/A	-474.9	Brown
14:35	DPT-W-2	58'-54'	6.50	0.819	>999	0.58	22.09	N/A	-482.6	"
14:40	DPT-W-2	58'-54'	6.46	0.812	>999	0.58	22.09	N/A	-489.9	"
	Sampled @ 14:45									

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

DPT GEOCHEMICAL DATA FORM

Project/Project Number: Molybdenum TXR0943

Date: 12/13/18 - 12/14/18

Time	DPT Location	Screened Interval (ft BLS)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	Color / Notes
15:15	DPT-W-2	67.5-63.5	5.56	0.995	>999	0.48	21.87	N/A	-427.0	Brown
15:20	DPT-W-2	67.5-63.5	5.54	0.998	>999	0.49	21.99	"	-428.9	"
15:25	DPT-W-2	67.5-63.5	5.55	0.999	>999	0.49	21.94	"	-421.1	"
	Sampled at 15:30									
12/14/18 8:25	DPT-W-3	35.5-31.5	*4.50	0.628	>999	3.17	22.93	N/A	-79.6	Tan
8:30	DPT-W-3	35.5-31.5	*4.16	0.620	>999	3.46	22.95	"	-82.0	"
8:35	DPT-W-3	35.5-31.5	*3.94	0.617	>999	3.65	22.93	"	-60.3	"
	Sampled at 9:40									
9:15	DPT-W-3	47.5-43.5	7.93	0.805	>999	1.71	22.56	N/A	-261.2	Brown
9:20	"	"	7.76	0.806	>999	1.59	22.56	"	-252	"
9:25	"	"	7.65	0.808	>999	1.56	22.57	"	-259.9	"
	Sampled @ 9:30									
9:55	DPT-W-3	58'-54'	5.59	0.866	>999	0.60	22.62	N/A	-492.2	Brown
10:00	"	"	5.52	0.861	>999	0.61	22.64	N/A	-469.7	"
10:05	"	"	5.48	0.858	>999	0.68	22.63	N/A	-464.9	"
	Sampled @ 10:10									
10:35	DPT-W-3	67.5'-63.5'	5.25	1.132	>999	1.08	23.45	N/A	-366.7	Tan
10:40	"	"	5.22	1.133	>999	0.87	23.43	"	-365.8	"
10:45	"	"	5.15	1.133	>999	0.86	23.41	"	-395.8	"
	Sampled @ 10:50									
12:50	DPT-W-1	35.5-31.5	1.58	0.301	>999	2.93	23.81	N/A	8.0	Tan
12:55	"	"	2.26	0.299	>999	3.16	23.71	"	16.0	"
13:00	"	"	2.49	0.295	>999	3.20	23.67	"	36.7	"
	Sampled at 13:05									
13:15	DPT-W-1	47.5-43.5	4.20	0.654	>999	2.59	22.35	N/A	-51.2	Tan
13:20	"	"	4.17	0.616	>999	3.09	22.48	"	17.1	"
13:25	"	"	4.02	0.604	>999	3.50	22.67	"	37.5	"
	Sampled at 13:30									

PH on 12/14/18 would not calibrate, PH is off TW

PH is potentially off

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

DPT GEOCHEMICAL DATA FORM

Project/Project Number: Molybdenum/TXR0913

Date: 12/14/18

Time	DPT Location	Screened Interval (ft BLS)	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)	Color / Notes
14:05 ~~2:05~~	DPT-W-1	58'-54'	1.53	0.818	>999	2.05	21.72	N/A	-28.8	Tan
14:10 ~~2:10~~	"	58'-54'	1.66	0.821	>999	1.87	21.74	"	-58.8	"
14:15 ~~2:15~~	"	98'-54'	1.71	0.821	>999	1.77	21.99	"	-72.9	"
		Sampled @ ~~2:20~~ 14:20								
↑	DPT-W-1	67.5-65'	0.17	0.997	7999	0.89	21.66	N/A	-300.4	reddish brown
14:40	"	"	1.09	1.002	7999	1.06	21.77	"	-181.7	"
14:45	"	"	1.09	1.008	7999	1.29	21.68	"	-120.7	"
14:50	Sampled @		14:55							

Notes:

DPT = Direct Push Technology

ft BLS = feet below land surface

mS/cm = milliSiemens per centimeter (or millimhos per centimeter)

NTU = Nephelometric Turbidity Units

DO (mg/L) = Dissolved Oxygen (milligrams per liter)

Temp (°C) = Temperature (degrees Celsius)

TDS (g/L) = Total Dissolved Solids (grams per liter)

ORP (mV) = Oxidation Reduction Potential (milliVolts)

Geosyntec consultants

Soil Sampling Log

Site: Plant Crist **Project No.: TXR0943**

Sampling Personnel: Ted Wilson and Mollie Taylor

Weather/ Field Conditions: Sunny 43°

Sampling Method: DPT

Date/Time	Sample ID	Sample Description	Depth (ft)	Field Observations
1/1/2012 14:28	*20120101-SB01*	*Silty sand with clay*	*0 BGS*	*Example text*
12/11/2018 09:13	DPT-S-1 20'	Silty SAND	20'	
" 9:52	DPT-S-1 34'	Clayey SAND	34'	
" 10:40	DPT-S-1 48'	SAND with Gravel	48'	
" 11:45	DPT-S-1 58'	SAND with Gravel	58'	
" 16:10	DPT-S-2 14'	CLAY	14'	
" 16:30	DPT-S-2 28'	SAND	28'	
" 16:40	DPT-S-2 38'	CLAY with SAND	38'	
12/12/18 9:05	DPT-S-2 60'	SAND with Gravel	60'	
" 10:00	DPT-S-3 14.5'	Silty SAND	14.5'	
" 10:10	DPT-S-3 31'	SAND	31'	
" 10:30	DPT-S-3 46'	SAND	46'	
" 13:30	DPT-S-4 14'	Silty SAND	14'	
" 13:50	DPT-S-4 31'	SAND	31'	
" 14:40	DPT-S-4-47'	SAND	47'	
" 15:30	DPT-S-4-56'	Clayey SAND	56'	
" 16:10	DPT-S-4 63'	Clayey SAND	63'	
" 11:00	DPT-S-3 63'	SAND with Gravel	63'	

Additional Notes:

Sampler's Signature: [signature] Date: 12-12-18

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Pensacola, FL	
WELL NO:	SAMPLE ID: DPSW-1		DATE: 11/29/18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO ~~WATER~~ Product	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
15:30	—	—	—	1.75	4.70	13.7	1218	10.99	1.4	+239	Clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ted Wilson / Geosyntec	SAMPLER(S) SIGNATURE(S): Ted Wilson	SAMPLING INITIATED AT: 15:37	SAMPLING ENDED AT: 15:41
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: PES membrane	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y N	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
DPSW-1	1	PE	1 liter	None	—	—	Anions	APP	~~Grab~~ 800
"	1	PE	250mL	H_2SO_4	—	—	Nitrates	"	800 mL/min
"	1	PE	250mL	HNO_3	—	—	Cations	"	800
"	1	PE	250mL	"	—	—	Field Filt. Mo	"	800
"	1	PE	250mL	"	—	—	Total Mo	"	800

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Pensacola, FL	
WELL NO:	SAMPLE ID: DPS W-2		DATE: ~~PP~~ TW 11/29/18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO ~~WATER~~ Bottom (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
15:05	—	—	—	1.5	8.60	13.5	603	13.35	2.5	+139	~~Be~~ Clear

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ted Wilson / Geosyntec	SAMPLER(S) SIGNATURE(S): Ted Wilson	SAMPLING INITIATED AT: 15:10	SAMPLING ENDED AT: 15:14
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: PES Membrane	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
DPSW2	1	PE	1 L	None	—	—	Anions	APP	800
"	1	"	250 mL	H_2SO_4	—	—	Nitrates	"	"
"	1	"	"	HNO_3	—	—	Cations	"	"
"	1	"	"	"	—	—	Field Filt. Mo	"	"
"	1	"	"	"	—	—	Total Mo.	"	"

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DPSED-1 sampled at 15:16

DEP Form FD 9000-24: GROUNDWATER SAMPLING LOG

SITE NAME: Plant Crist		SITE LOCATION: Pensacola, FL	
WELL NO:	SAMPLE ID: DPSW-3		DATE: 11/29/18

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO ~~WATER~~ Bottom (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	ORP (mV)	COLOR/ ODOR (describe)
14:28	—	—	—	3'	8.22	14.7	877	13.24	35.5	142.4	brown/n

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Ted Wilson Geosyntec	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 14:24	SAMPLING ENDED AT: 14:31
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: (Y) N Filtration Equipment Type: PES Membrane	FILTER SIZE: 0.45 µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION (including wet ice)			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
~~HNO~~ DPSW-3	1	PE	1 L	None	—	—	Anions	APP	800
DPSW-3	1	"	250mL	H_2SO_4	—	—	Nitrates	—	—
"	1	"	"	HNO_3	—	—	Cations	—	—
"	1	"	"	"	—	—	Field Filtered Mo	—	—
"	1	"	"	"	—	—	Total Mo	—	—

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **HDPE** = High Density Polyethylene; **LDPE** = Low Density Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After (Through) Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DPSED-2 Sampled at 14:18