



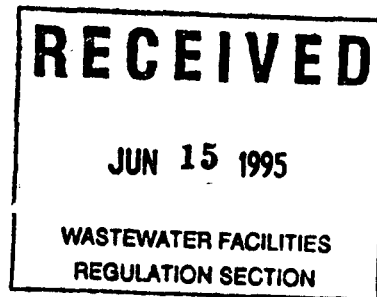
Department of Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

JUN 13 1995



Mr. M. Lane Gilchrist
Manager of Fuel & Environmental Affairs
Gulf Power Company
Post Office Box 1151
Pensacola, Florida 32520-1151

Dear Mr. Gilchrist:

On May 31, a Department representative conducted an inspection of the Gulf Power Scholz wastewater treatment facility.

Please note the "Inspector Comments" outlined on the attached inspection report form. If you have any questions please contact me at (904) 444-8380.

Sincerely,

Bill Chandler
Environmental Specialist
Compliance/Enforcement Section

BC:bcw
Attachment
cc: Mike Tanski, DEP
QA Program

Permit # 2283 File
FLOO 2283 Folder _____ Type _____

Permittee _____

INITIAL & ROUTE	JMP	MT	EKS			
	<i>[Signature]</i>					

District cc: _____

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

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Performance Audit Inspection

Scholz Generating Facility

On May 31, 1995, a Performance Audit Inspection (PAI) of the Gulf Power Scholz facility was made by Bill Chandler of the Florida Department of Environmental Protection. Plant personnel analyze pH, total residual chlorine and temperature on-site. Samples for other parameters are collected and shipped to Savannah Laboratories in Mobile, Alabama, and The Water Spigot Laboratory in Panama City, Florida.

1. Personnel

Information about the facility, on-site testing, and sample collection activities was given by Ray Welden, Mike Wilson and Joe Neese.

2. Facilities and Equipment

Instrument standardization and verification is done in the laboratory, and the actual analyses are carried out at the various outfalls. Laboratory space is adequate, with sufficient bench room and storage space for reagents, preservatives, and standards. All analytical equipment appeared to be well maintained and in good working condition.

3. Sampling and Sample Handling

Samples for pH and total residual chlorine are collected as grab samples and analyzed at the sampling point. Grab samples are collected into containers supplied by the contract laboratories for those parameters analyzed at the laboratories. The exception is that the Scholz facility supplies the glass containers for the oil and grease samples. Composite samples are collected in refrigerated composite samplers. Composite samples so collected are mixed and a suitable portion is transferred to containers supplied by the contract laboratories. All samples requiring preservation are preserved with chemicals supplied by the facility. Samples are stored in a refrigerator until being shipped. Those samples destined for Savannah Laboratories are shipped in iced coolers via United Parcel Service. The samples for Water Spigot are picked up by Water Spigot personnel and transported on ice to that laboratory.

4. Methodology

Table 1 gives the parameters checked during the inspection along with a data quality assessment.

The following observations were made during the evaluation:

A. Total Residual Chlorine

The Hach 2000 spectrophotometer is used with DPD reagents for the analyses. A method of verifying this instrument's internal standard curve has been initiated. This method makes use of commercial standard chlorine solutions to prepare a series of standards to check the curve. This practice should be continued.

The samples are treated to overcome interferences. This treatment is performed by the addition of potassium iodide/sodium arsenite solutions. This treatment minimizes the interference of manganese and/or chromium. The data so obtained are applied as a correction factors to the sample results. Analyses are conducted in the field at the sampling points.

QA Requirement: The stored program curve must be checked before the instrument is used to analyze samples. At a minimum, this check should be carried out on a blank and one standard. The practice that has been implemented should be continued.

B. pH

A Hach One portable pH meter is used for analysis of the samples. This meter is equipped with automatic temperature compensation. The probe's thermocouple is checked at every use with a NIST traceable thermometer. The instrument is normally calibrated with pH 7 and pH 10 buffers. A pH 4 buffer is available for use to standardize the instrument if the sample pH is below 7. Sample measurements are done in the field at the sampling points.

QA Suggestion: Buffers should be purchased in small quantities so as to use them before the expiration date is exceeded. All out of date buffers should be discarded.

C. Sample Collection Activities

For the collection of composite samples, refrigerated composite samplers are used. The temperature in these units are monitored with certified thermometers.

Samples requiring preservation are preserved with chemicals supplied by the facility. No trip blanks are analyzed for any parameters. After collection, the samples destined for the contract laboratories are stored in a refrigerator until being shipped. The temperature in this refrigerator is not monitored.

QA Suggestion: For all samples requiring preservation, a trip blank should be analyzed that has been preserved with the same chemicals used to preserve the samples. Lot numbers for acids and/or other chemicals used in preserving samples should be recorded in the field logsheet or on the chain of custody form. The refrigerator temperature should be monitored on the days it is used for sample storage. All thermometers in refrigerators or in refrigerated samplers should be immersed in a non-freezing liquid such as ethylene glycol or mineral oil.

D. Temperature

Temperature of the effluent is measured with a thermocouple. This thermocouple is not verified against a certified thermometer.

QA Requirement: The thermocouple should be compared against a NIST traceable thermometer on a regular schedule. Until a performance history can be established for the thermocouple, this check should be made at least twice a year. The check needs to be made by a comparison at three or more temperatures that cover the observed temperature range. A suggestion for this range would be ice water, room temperature, and hot water (50-70°C)

6. Other Parameters

A inspection of the Water Spigot Laboratory was made in September 1994. A copy of the findings of this inspection is attached. Savannah Laboratory in Mobile will be inspected at a later date. Gulf Power personnel will be notified of the date so as to permit their attending this inspection.

TABLE 1
METHODS STATUS
Gulf Power
Crist Facility
Pensacola, Florida

Parameter	Deficiency	Data Quality ¹
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TRC	None	S
pH	Minor	S
Temperature	Minor	S

1. S = Satisfactory M = Marginal U = Unsatisfactory

TABLE 1
METHODS STATUS

Gulf Power
Crist Facility
Pensacola, Florida

Parameter	Deficiency	Data Quality ¹
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TRC	None	S
pH	Minor	S
Temperature	Minor	S

1. S = Satisfactory M = Marginal U = Unsatisfactory

Laboratory Evaluation

On September 14, 1994, a Performance Audit Inspection was made at the Water Spigot Laboratory in Panama City, Florida. This inspection was conducted in relation to laboratory analyses performed for Florida Department of Environmental Protection permittees in the Northwest District. The laboratory was previously inspected in November 1993 for certain parameters, so this inspection was a follow-up and an extension of the previous inspection.

The following individuals participated in the inspection:

Candace Burger	FDEP-NW Dist. Tallahassee Office	904-488-3704
Josie Penton	FDEP-NW Dist. Panama City Office	904-872-4375
Bill Chandler	FDEP-NW Dist. Pensacola Office	904-444-8300

1. Personnel

General information about the laboratory was obtained from Diane Wootan, Quality Assurance Officer. Information about specific parameter analyses was given by the technical staff responsible for the analysis. Analysts appeared competent to conduct the analyses.

2. Facilities and Equipment

The Water Spigot Laboratory facility was basically unchanged from the previous visit. Sufficient equipment and bench space were available for processing samples. The analytical equipment appeared to be well maintained and in good working condition. Previous concerns about the use of thermometers with separated mercury threads for reporting temperature had been addressed in all but one instance.

3. Sample Handling and Preservation

The laboratory supplies sampling containers to many of their clients. Preservatives and/or pre-preserved containers are given to some clients. A sample pick-up service is available from the laboratory. Fixed routes have been established in which samples are picked up at the clients facility and delivered to the laboratory. Other samples are shipped to the laboratory via common carrier. A record check showed that samples were nearly always arriving at the laboratory within the specified holding times.

4. Methodology

Table 1 includes parameters and a data quality assessment for each.

The following observations were made during the evaluation:

A. Sample Handling

When the samples arrive at the laboratory, a pH check is made of the preserved samples by insertion of a pH probe directly into the sample containers. Temperature of the samples is measured with the same pH probe's thermometer. No documentation is maintained of samples that arrive improperly preserved. The laboratory policy is to add acid to samples improperly preserved, provided the samples were collected not longer than one day before arrival at the laboratory. During the inspection, a VOC sample was received that had approximately one inch of headspace. Duplicates of the sample were combined to give one vial with no headspace.

Regulatory Requirement: The laboratory quality assurance plan has adopted FDEP's SOP for laboratory operations and sample collection activities DER - QA-001/92. In section 5.4 of this document, the following statements are found.

Sec 5.4.2 - "UNDER NO CONDITIONS SHALL A THERMOMETER OR OTHER TEMPERATURE MEASURING DEVICE BE PLACED INTO A COLLECTED SAMPLE CONTAINER"

Sec 5.4.3.1 - Rejection criteria - samples shall be rejected according to the following criteria.

c. The proper preservation of the container cannot be established;

d. VOC vials contain bubbles of sizes greater than 1% of the vial volume (usually a bubble of sizes greater than 5 mm in diameter). Note: the presence of any bubbles in VOC vials must be documented and reported with the final results.

Sec 5.4.8.3 pH checks of Samples and Subsamples

2. Do not contaminate the sample or Subsamples by contact with pH paper or pH electrode.

B. Oil and Grease

Samples flasks were placed in a shallow pan containing water and heated on a hot plate to evaporate the extraction solvent. The temperature of the water was not monitored.

Regulatory Requirement: The sample must be placed in a water bath at 70° C to evaporate the solvent (1,1,2-trichloro-1,2,2-trifluoroethane). Blanks must be prepared with each set of samples or whenever there is a change in reagents.

C. Biological Oxygen Demand (BOD AND CBOD)

The dissolved oxygen meter is calibrated with water saturated air.

Regulatory Requirement: DER -QA-001/92 section 7.6.3 states:

5. Dissolved Oxygen

A. probe - calibrate against Winkler Titration on an annual basis. Results should agree within 0.2 mg/l.

D. Metals Analysis-Mercury Cold Vapor

Observations

Samples are logged in a general receiving area and then stored in a walk-in refrigerator. A copy of the log is given to personnel for internal tracking purposes. The glassware is cleaned appropriately. Working standards are made from purchased stock standards. No log existed which traced the working standards back to the stock standards. Calibration is performed using multiple standards with an element specific lamp. Lamp integrity is determined by the energy level emitted during warm-up. There was no document which provided verification of the lamp's condition. A blank is analyzed before calibration followed by the working standards, control standard, and samples. A strip chart recorder is used for data collection. The analyses and calculations are performed manually. Manual calculations were not recorded. A linear regression standard criteria has been developed. The sample concentration is calculated by the regression using the integrated peak height. Blanks are subtracted from the sample concentration and a proportion, set up from the measured and calculated amounts of the control standard, is sometimes used as a multiplier. A SOP is provided addressing surface water, groundwater, and wastewater effluent matrices. It did not address other matrices such as sludges, soils, residuals, etc. although the laboratory accepts these matrices.

Corrective Action

Develop a SOP addressing all matrices encountered in laboratory and describing the daily activities involved with mercury/metal analysis. A proportional multiplier developed from the control standards is not appropriate corrective action for a system determined by the control standard to be "out-of-control". Develop appropriate corrective action measures addressing control parameters. Blanks cannot be subtracted from the sample in determining sample concentration (See DER QA -001/92 Sec 10.1.3). All manual calculations should be recorded. A calibration standard log should be developed to track working standards made from stock solutions.

Recommendations

Create a log which documents the lamp integrity check. Check each new batch of reagents for impurities. Run the control standard in the middle or near the end of the batch analysis.

F. Volatile Organic Compounds

Observations

Samples are logged in a general receiving area and then stored in a separate refrigerator in the volatile organics lab. The temperature of the refrigerator was not recorded. A copy of the log is given to personnel for internal tracking purposes. Duplicate samples which were received with headspace were combined to give one VOC vial with no headspace. The glassware is soaked with deionized water before standards are prepared. Working standards are made from purchased, certified primary standard solutions. No log existed which traced the working standards back to the primary standard solutions. Calibration is performed using a mid-level calibration standard. No calibration criteria was established. A blank is analyzed before calibration followed by the calibration standard, samples, and a continuing calibration standard. A personal computer with appropriate software is used for data collection and had data processing capability. The analyses were automated and calculations performed manually. Manual calculations were not recorded. The sample concentration is calculated by linear regression using the integrated peak height. A SOP was not available.

Corrective Action

Develop a SOP describing the daily activities involved with VOC analysis. Develop continuing calibration criteria. All manual calculations should be recorded. A calibration standard log should be developed to track working standards made from primary standard solutions. Samples received with headspace should be flagged for questionable integrity and not be combined. Create a log to record the temperature of the VOC refrigerator.

5. Quality Assurance and Data Documentation

The laboratory has established a formal quality assurance program, and is approved by the Florida Department of Health and Rehabilitative Services. The laboratory quality assurance plan has been approved by the Florida Department of Environmental Protection. This plan has accepted the SOPs from FDEP DER QA-001/92 as part of the SOPs for the laboratory. Precision and accuracy data have been collected, and acceptance limits calculated. Instrument calibrations and maintenance were performed, and temperatures of regulated devices were routinely checked and documented. Data qualifiers are not assigned during the data validation process. These should be assigned and should appear on the final reports. DER QA-001/92 Sec 10.2.2 gives the details for these qualifiers.

6. Laboratory Performance Data

As part of the certification program, Water Spigot Laboratory participates in the Water Pollution Laboratory Performance Evaluation Studies. For WP 031 the following parameters results were not acceptable:

Silver
Beryllium
Aldrin
Benzene
1,2 dichlorobenzene
1,3 dichlorobenzene
1,4 dichlorobenzene

For WP 032 acceptable values were obtained for Silver and Beryllium, the results for the organics were not available.

7. Summary

Based on the overall findings, the Water Spigot laboratory appears to be providing acceptable data for BOD, CBOD, TKN, TN, Phosphorus, TSS, and Fecal Coliforms. The deficiencies found in Oil and Grease, Cold Vapor Mercury, and VOC analyses could have an adverse impact on the data, and corrective actions should be applied to these procedures.

8. Recommendations

It is recommended that a follow-up inspection be made shortly to ensure that corrective actions have been made and to examine additional parameters not covered in other inspections.

TABLE 1
METHODS STATUS

The Water Spigot Laboratory
Panama City, Florida

Parameter	Deficiency	Data Quality ₁
BOD and CBOD	minor	S
Oil&Grease	major	M
Phosphorus	none	S
TSS	none	S
Fecal Coliforms	none	S
Cold Vapor Hg	major	M
VOC	major	M
TKN	none	S*
TN	none	S*

1. S = Satisfactory M = Marginal U = Unsatisfactory

* Checked during previous inspection

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION WASTEWATER COMPLIANCE INSPECTION REPORT

FACILITY AND INSPECTION INFORMATION

Name of Facility	GMS ID:	County	Entry/Exit Date/Time
Gulf Power Scholz	1032P37371	Jackson	5/31/95 1232-1510

Name of Field Representatives	Title	Phone
Ray Welden	Supervisor	904-444-6236
Mike Wilson	Analyst	

Name and Address of Permittee	Title	Phone
Mr. M. L. Gilchrist	MGR.	904-444-6236
Gulf Power Co. P.O. Box 1151 Pensacola, Florida 32520-0328		

Inspection Type: PAI	Samples Taken(Y/N):N	Sample ID#
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DOMESTIC:	INDUSTRIAL:X	Were Photos Taken(Y/N):N
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Name and Signature of Inspectors	Phone Number	Date
W. L. Chandler	904-444-8300	6/12/95

Signature of Reviewer	Phone Number	Date
<i>W. Chandler</i>	904-444-8300	6/12/95

FACILITY COMPLIANCE AREAS EVALUATED

S=Satisfactory; M=Marginal; U=Unsatisfactory; Blank=Not Evaluated

1. Permit # IO32-189371		6. Sampling	S	11. Effluent	
2. Compliance Schedule		7. Self Monitoring	S	12. Groundwater	
3. Pretreatment		8. Site Review		13. Eff. Disposal	
4. Records	S	9. Flow Measurement		14. Residuals	
5. Laboratory	S	10. Operation & Maint.		15. Other	

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Insp	FacType
1 N	2 5	3 F L 0 0 0 2 2 8 3 11	9 5 0 5 3 1	18 A	19 S 20 2

Inspection Type (Field 18): A=PAI, B=CBI, C=CEI, X=XSI, R=RI, I=IBI, W=WQI

Inspector Code (Field 19): S=State, J=Joint EPA/State-EPA Lead, T=Joint State/EPA-State Lead

Facility Type (Field 20): 1=Municipal, 2=Industrial/Private Owned Domestic, 3=Agricultural, 4=Federal