One Energy Place
Pensacola, Florida 32520

Tel 850.444.6111

GULF POWER
A SOUTHERN COMPANY

Certified Mail
7009 0960 0001 2159 6768

October 26, 2009

RECEIVED
OCT 29 2009
BUREAU OF AIR REGULATION

Mr. Jonathan Holtom P.E.
Florida Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Dear Mr. ~~Holtom~~ Jon:

RE: CRIST ELECTRIC GENERATING PLANT
ADDITIONAL INSIGNIFICANT ACTIVITY
AIR PERMIT NO. 0330045-025-AV

Gulf Power hereby requests the Department incorporate the Crist Hydrated Lime Injection Tank for wastewater treatment into the Crist Title V Insignificant Activities List as exempted as outlined under Sections 62-210(300)(b) F.A.C. and 62-213.430(6) F.A.C. In this regard, please find enclosed information on the Crist Hydrated Lime Injection Tank and applicable certifications for the Responsible Official and Professional Engineer for this submittal.

Please call me at (850) 444 – 6527 regarding any questions regarding this request.

Sincerely,

Dwain Waters, D.E.P.

G. Dwain Waters, Q.E.P.
Special Projects and Environmental Assets Coordinator

cc: w/att: Greg Terry, Gulf Power
John Dominey, Gulf Power
Terry Wright, Gulf Power
Attalla Yousry, FDEP - Tallahassee
Rick Bradburn, FDEP Northwest District
Jeff Koerner, FDEP - Tallahassee

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: Theodore J. McCullough

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   [X] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   [ ] The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

3. Application Responsible Official Mailing Address...
   Organization/Firm: Gulf Power Company
   Street Address: One Energy Place
   City: Pensacola State: FL Zip Code: 32520-0100

4. Application Responsible Official Telephone Numbers...
   Telephone: (850) 444 - 6383 ext. Fax: (850) 444 – 4744

5. Application Responsible Official E-mail Address: TJMCCULL@southernco.com

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

   TJ McCullough — Signature

   10/26/09 — Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Gregory N. Terry
   Registration Number: 52786
2. Professional Engineer Mailing Address...
   Organization/Firm: Gulf Power Company
   Street Address: One Energy Place
   City: Pensacola State: FL Zip Code: 32520-0328
3. Professional Engineer Telephone Numbers...
   Telephone: (850) 444 - 6144 ext. Fax: (850) 444 – 6080
4. Professional Engineer E-mail Address: GNTERRY@southernco.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here [X], if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here [ ], if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Gregory N. Terry
Signature

10/19/09
Date

(seal)

* Attach any exception to certification statement.

Crist Units 4—7 FGD
Waste Water Treatment Plant
Lime Silo and Feed System

System and Process Description

The Lime Silo and Feed System is part of the overall Flue Gas Desulfurization Waste Water Treatment Process at the Crist Plant. Scrubber blowdown in the Chiyoda process typically has pH values in the 4.5 - 5.5 range. In order to increase the pH, calcium hydroxide (lime), is added to the wastewater. The elevated pH decreases the solubility of the supersaturated gypsum solution and assists in the formation and removal of insoluble metal hydroxides and oxyhydroxides.

The Lime System consists of:

- One (1) 30 Ton Lime Storage Silo
- One (1) Lime Silo Volumetric Feeder System
- One (1) Lime Silo Loading System
- One (1) Dust Control System
- One (1) Slurry Tank and Mixer
- Two (2) Hydrated Lime Silo Pumps
- Four (4) Control Pinch Valves

The lime slurry is added to the wastewater in the Desaturation Tanks located in the Wastewater Treatment Plant for the purpose of adjusting pH level, Calcium sulfite ($CaSO_4$) Desaturation, and precipitation of heavy metals.

The production of the hydrated lime slurry solution is controlled based on a feedback control loop based on a level set-point in the Lime Slurry Tank. The lime slurry feed rate is controlled by a feedback controller measuring pH of the Desaturation Tank. The lime silo feed system is controlled by the Waste Water Treatment Plant control system.

Lime Usage and Storage Requirements.

Average Lime usage under normal conditions is 1,456 lbs/day. At a peak maximum condition the Lime usage increases to 7,547 lbs/day..

Equipment Specifications

Lime Silo

Size	30 ton (12' diameter x 35' 6 1/4" tall)
Material	A36
Capacity	1,910 ft^3 working capacity 2,117 ft^3 full capacity
Manufacturer	CTT
Model	M-HL-08107-1-(A)-GA, PV

Pulse Jet Style Dust Collector

Size	Square Feet of Cloth: 307 ft^2 Filter Length: 96"
Material	Housing: Carbon Steel Bag: 16 oz. Poly Dacron
Manufacturer	Mac Equipment
Model	72AV725

Emissions Calculation

WWTP Lime Silo Bin Vent Estimated Emissions Calculation

Plant Crist

GIVEN:

Facility:	Truck Unload Into Silo	
Material:	Lime	
Particle Size:	90% <325 Mesh	
Truck Size (Load):	40,000	lbs
Unload Line:	4	in
Estimated Air Flow:	750	SCFM
Instantaneous Unload Rate:	30,000	lbs/hr

	Average Load	**Peak Max Load**	
Plant Lime Consumption:	61	314	lbs/hr
=	1,464	7,536	lbs/day
=	534,360	2,750,640	lbs/yr
Unloading Time	0.0488	0.2512	hrs/day
=	2.928	15.072	min/day
=	17.812	91.688	hrs/year

ASSUME:

The industry standard assumption for effluent "design grain loading" at the filter is 0.017 grains per cubic foot of air. The efficiency, is 99.9% on all particles larger than 2 microns based upon the 0.017 grains per cubic foot.

THEN:	**Average Load**	**Peak Max Load**	
Mulitply Air Flow	750	750	SCFM
***Min/Hr**	60	60	
Hrs/day	0.048800	0.251200	
Days/Wk	7	7	
wks/Yr	52	52	
CF/Year	799,344	4,114,656	CF/yr
***0.017 grains/CF=**	13,588.85	69,949.15	grains/year to collector
***0.999=**	13,575.26	69,879.20	grains/yr captured in collector
-	13.59	69.95	grains/yr passing through collector
/ 7000 grains/lb	0.001941	0.009993	lbs/yr effluent to atmosphere
lbs/day=	0.000005	0.000027	lbs/day total effluent to atmosphere