Attachment A

GULF POWER
A SOUTHERN COMPANY

Certified Mail
7011 3500 0003 2026 2110

October 18, 2013

Ms. Leigh Ann Pell
Florida Department of Environmental Protection
Division of Air Resources Management
2600 Blair Stone Road
Mail Station #5505
Tallahassee, Florida 32399-2400

Dear Ms. Pell:

RE: LANSING SMITH ELECTRIC GENERATING PLANT
REQUEST FOR PROJECT EXTENSION
AIR PERMIT NO. 0050014-023-AC

Gulf Power hereby requests a revision of the Lansing Smith Air Construction Permit (0050014-023-AC) in order to finalize our compliance plan to meet the BART/MATS air quality reduction goals. Please find enclosed Gulf Power's submission of relevant information including PE and Authorized Representative certifications to support this request. As you are aware, Gulf Power's Phase I testing at Plant Smith was very successful in reducing emissions. Additional testing is requested to further fine-tune our compliance strategy.

We appreciate your efforts to work with us regarding Gulf's selection of pollution control technologies to meet the new BART and MATS air quality requirements. I look forward to working with you regarding our submittal.

Sincerely,

Dwain Waters, Q.E.P.

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

cc: wo/att: Jim Vick, Gulf Power Company
Chris Miller, Gulf Power Company
Marie Largilliere, Gulf Power Company
Greg Terry, Gulf Power Company
Gary Perko, Hopping, Green & Sams
Al Linero, FDEP, Tallahassee, Florida
Carol Melton, FDEP Northwest District Office, Pensacola, Florida
Armando Sarasua, FDEP Northwest District Office, Pensacola, Florida

Attachment A

Request for Extension of the Smith Sorbent Injection Test Burn Air Construction Permit

Background: Gulf Power submitted an air construction permit application on June 10, 2013 to allow testing of several emissions control sorbent additives called ClearChem, Hydrated Lime, Trona and Activated Carbon at Lansing Smith Units 1 and 2. A final permit was issued by FDEP on July 15, 2013 authorizing the use of these additives for testing lasting no longer than 30 days within a ninety day window to determine whether these emission control additives reduce emissions of sulfur dioxide, hydrogen chloride, and mercury from Units 1 and 2.

Proposal: Gulf Power is requesting the air construction permit 0050014-023-AC be revised to extend the testing period from 30 days to 120 days and to modify the sorbent inject rates to be less restrictive, if the sorbent under study shows no adverse air environmental (opacity) impacts.

Discussion: The Smith Phase I sorbent testing conducted between July 29 and August 13 showed no emissions impacts for the additives ClearChem, Hydrated Lime and Trona. Opacity and PM measurements during the sorbent injection tests remained at the baseline levels during all runs. There was a slight increase in opacity and particulate emissions during the cold-side ESP carbon injection studies. The total estimate of the emissions from the Phase I study was 1.5 tons (see attachment A). We believe the Phase I test results supports our request for additional test days and the lifting of the sorbent injection caps for ClearChem, Hydrated Lime and Trona.

Attachment A

Smith 2 Opacity and PM Results for ClearChem, Hydrated Lime and Trona For SO2/HCl Control

Date			Start-End Tiime	Unit 1 Load	Unit 2 Load	Opacity	PM Rate	Comments
High Load							lb/mmbtu	
3/27/2013	High Load	Baseline	0750 - 0857	170	200	9.1 & 6.3	0.0126	Initial Baseline Test
3/27/2013	High Load	Baseline	0912 -1015	170	200	9.5 & 7.2	0.0102	Conducted on Common
3/27/2013	High Load	Baseline	1030 -1132	170	200	9.0 & 7.9	0.0100	Unit 1 & 2 stack
			3 Run Avg				**0.0111**	
8/5/2013	High Load	Hyd Lime	1000 - 1101		195	5.6	**0.0086**	Test on Unit 2
8/6/2013	High Load	ClearChem	1020 - 1120		195	6.5	**0.0115**	Test on Unit 2
8/8/2013	High Load	Trona	1702 - 1732		195	4.6	**0.0116**	Test on Unit 2
8/9/2013	High Load	Trona	0903 - 0933		195	5.0	**0.0087**	Test on Unit 2
Mid Load								
8/2/2013	Mid Load	Baseline	0800 - 1000		135	3.1	**0.0088**	Test on Unit 2
8/9/2013	Mid Load	Trona	1027 - 1057		135	4.0	**0.0050**	Test on Unit 2
8/9/2013	Mid Load	Trona	1135 - 1205		135	5.0	**0.0050**	Test on Unit 2
Low Load								
3/27/2013	Low Load	Baseline	1315 - 1417	75	75	8.1 & 6.5	**0.0076**	Initial Baseline Test
3/27/2013	Low Load	Baseline	1432 - 1535	75	75	7.6 & 5.6	**0.0093**	Conducted on Common
3/27/2013	Low Load	Baseline	1545 - 1648	75	75	8.2 & 5.4	**0.0078**	Unit 1 & 2 stack
			3 Run Avg				**0.0082**	
8/3/2013	Load Load	ClearChem	0800 - 1000		75	3.1	**0.0088**	Test on Unit 2
8/5/2013	Low Load	Hyd Lime	0801 - 0911		75	3.7	**0.0062**	Test on Unit 2
8/8/2013	Low Load	Trona	1015 - 1115		75	4.2	**0.0115**	Test on Unit 2

Attachment A

Smith 2 PM Estimates for Cold-Side ESP Runs with Carbon Injection for Hg Control

Date		Start-End Tiime	Unit 2 Load	Minutes	Opacity	Sanders Method 17 Results		PM Total	Comments
						Rate lb/hr	Rate lb/mmbtu		
8/2/2013	Run 13	0834-1101	135	147	31.3	179.7	0.129	440.3	
	Run 15	1540-1723	195	103	43.4	684.0	Not measured*	1174.2	*Defaulted to Run 18 rate as representative
8/3/2013	Run 17	1049-1249	75	120	21.6	173.5	0.2235	347.0	
	Run 18	1311-1511	75	120	29.4	281.6	0.3359	563.2	
	Run 19	1520-1720	75	120	24.8	156.3	0.1723	312.6	
8/7/2013	Run 32	1035-1135	75	60	16.5	52.9	0.0711	52.9	
	Run 34	1400-1500	135	60	22	179.7	Not measured*	179.7	*Defaulted to Run 13 rate as representative
								3069.9	lbs
							Total PM Estimate=	**1.5**	**tons**

Note: Runs 14 and 26 not included because no carbon injection actually occurred during the runs. No opacity increases were observed.

Note: Runs 43-50 not included because these runs were Hot-Side H-Pac carbon runs. No opacity increases were observed.

Attachment A

GULF POWER COMPANY
LANSING SMITH

PROPOSED PERMIT EXTENSION REQUEST

Professional Engineer Certification

Professional Engineer Statement:

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

(1) To the best of my knowledge, the information presented in the Gulf Power Company submittal to the Department of Environmental Protection regarding a request for an extension of the air construction permit (0050014-023-AC) for Plant Smith are true, accurate, and complete based on my review of material provided by Gulf Power engineering and environmental staff; and

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

GREGORY TERRY LICENSE No. 52786 STATE OF FLORIDA PROFESSIONAL ENGINEER

Signature

10/17/2013
Date

(seal)

Attachment A

LANSING SMITH AIR CONSTRUCTION PERMIT EXTENSION REQUEST (0050014-023-AC) CERTIFICATION BY OWNER/AUTHORIZED REPRESENTATIVE

"I, the undersigned, am the owner/authorized representative, as defined in Air Construction Permit Application 3549-1 (Smith Sorbent Injection Test Burn) for the Title V source for which this request is being submitted. I hereby certify, based on information and belief formed that the statements made and data contained in this request are true, accurate and complete."

Owner/Authorized Representative Official Signature:

James O. Vick

James O. Vick
Environmental Affairs Director

Date: 10/17/13