

21 West Church Street
Jacksonville, Florida 32202-3139

August 26, 2009

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SEP 02 2009

BUREAU OF AIR REGULATION



Ms. Trina L. Vielhauer, Chief
Bureau of Air Regulation
Division of Air Resource Management
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

RE: JEA Greenland Energy Center – Air Construction Permit PSD-FL-401
Notification of Minor Changes to Facility Layout

E L E C T R I C

Dear Ms. Vielhauer:

W A T E R

S E W E R

The purpose of this letter is to notify the Florida Department of Environmental Protection (FDEP) of planned changes to the facility layout for the Greenland Energy Center. As will be demonstrated later in this letter, the proposed changes to the facility layout will not affect the conditions of the Air Construction Permit PSD-FL-401.

As you may recollect, the Air Construction Permit PSD-FL-401 authorized the construction of two General Electric PG7241FA simple cycle combustion turbine (SCCT) electrical generators with a nominal output of 352 megawatts (MW) on natural gas and 380 MW on ultra low sulfur fuel oil at the new Greenland Energy Center (GEC) located at 12121 Phillips Road, Jacksonville, in Duval County. As part of the final design update to GEC's facility layout, the following is being proposed:

- Relocating the warehouse building (item no. 4 on the original layout drawing 160167-CMA-S1000) closer to the SCCTs.
- Eliminating the administration/control/maintenance building (item no. 16 on the original layout drawing 160167-CMA-S1000)
- Relocating the fuel gas heater (item no. 12 on the original layout drawing 160167-CMA-S1000) from the southern part of the facility to a location just north of the SCCT No. 2.
- Adjusting the facility fence line to match the latest survey and engineering design.

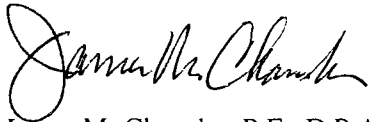
The changes highlighted above will not cause any change in the permitted emission rates at GEC. Additionally, JEA has remodeled (using AERMOD) the entire facility with the updated layout. As shown in Table 1 attached, the Class II ambient air quality impacts continue to remain below the Significant Impact Levels (SILs). A CD-ROM that contains all the relevant air dispersion modeling files, and the updated facility layout drawing are attached. Please note that the changes in the facility layout do not affect the location of the combustion turbines or the combustion turbine stack parameters. Consequently, the Class I Area visibility impacts are unaffected by these minor revisions to the facility layout.

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JEA is requesting FDEP's concurrence that no changes/amendments to the Air Construction Permit PSD-FL-401 will be required as a result of the updated facility layout.

If you have any questions, please contact Bert Gianazza at 904-665-6247.

Sincerely,



James M. Chansler, P.E., D.P.A.
Chief Operating Officer
Responsible Official



Attachments: As Noted.

Cc: Syed Arif, P.E., FDEP

giannb@jea.com

Table 1
AERMOD Model-Predicted Class II SCCT Impacts
Comparison of April 2008 PSD Air Permit Application and Revised August 2009 Modeling

Pollutant	Fuel	Averaging Period	April 2008 Model-Predicted Impact ^(a) ($\mu\text{g}/\text{m}^3$) Ref: Table 4-2 of PSD Permit Application			Updated August 2009 Model-Predicted Impact ^{(a)(b)} ($\mu\text{g}/\text{m}^3$)			PSD Class II SIL ^(c) ($\mu\text{g}/\text{m}^3$)	August 2009 Modeling Exceed SILs?
			100%	75%	50%	100%	75%	50%		
NO _x	NG/ULSFO ^(d)	Annual	0.73	0.73	0.73	0.84	0.84	0.84	1	NO
SO ₂	NG/ULSFO ^(d)	Annual	0.01	0.01	0.01	0.01	0.01	0.01	1	NO
	NG	24 Hour	0.22	0.20	0.18	0.22	0.20	0.18	5	NO
	ULSFO	24 Hour	0.11	0.11	0.11	0.09	0.09	0.09	5	NO
	NG	3 Hour	0.62	0.57	0.52	0.62	0.57	0.52	25	NO
	ULSFO	3 Hour	0.18	0.17	0.15	0.18	0.17	0.16	25	NO
PM/PM ₁₀ ^(e)	NG/ULSFO ^(d)	Annual	0.06	0.06	0.06	0.06	0.07	0.07	1	NO
	NG	24 Hour	4.02	4.02	4.02	3.61	3.61	3.62	5	NO
	ULSFO	24 Hour	4.03	4.03	4.03	3.44	3.44	3.45	5	NO
CO	NG	8 Hour	16.92	16.93	16.93	22.12	22.13	22.12	500	NO
	ULSFO	8 Hour	16.92	16.93	16.93	19.64	19.64	19.64	500	NO
	NG	1 Hour	27.56	27.56	27.56	32.25	32.25	32.25	2,000	NO
	ULSFO	1 Hour	26.53	26.53	26.53	27.25	27.26	27.25	2,000	NO

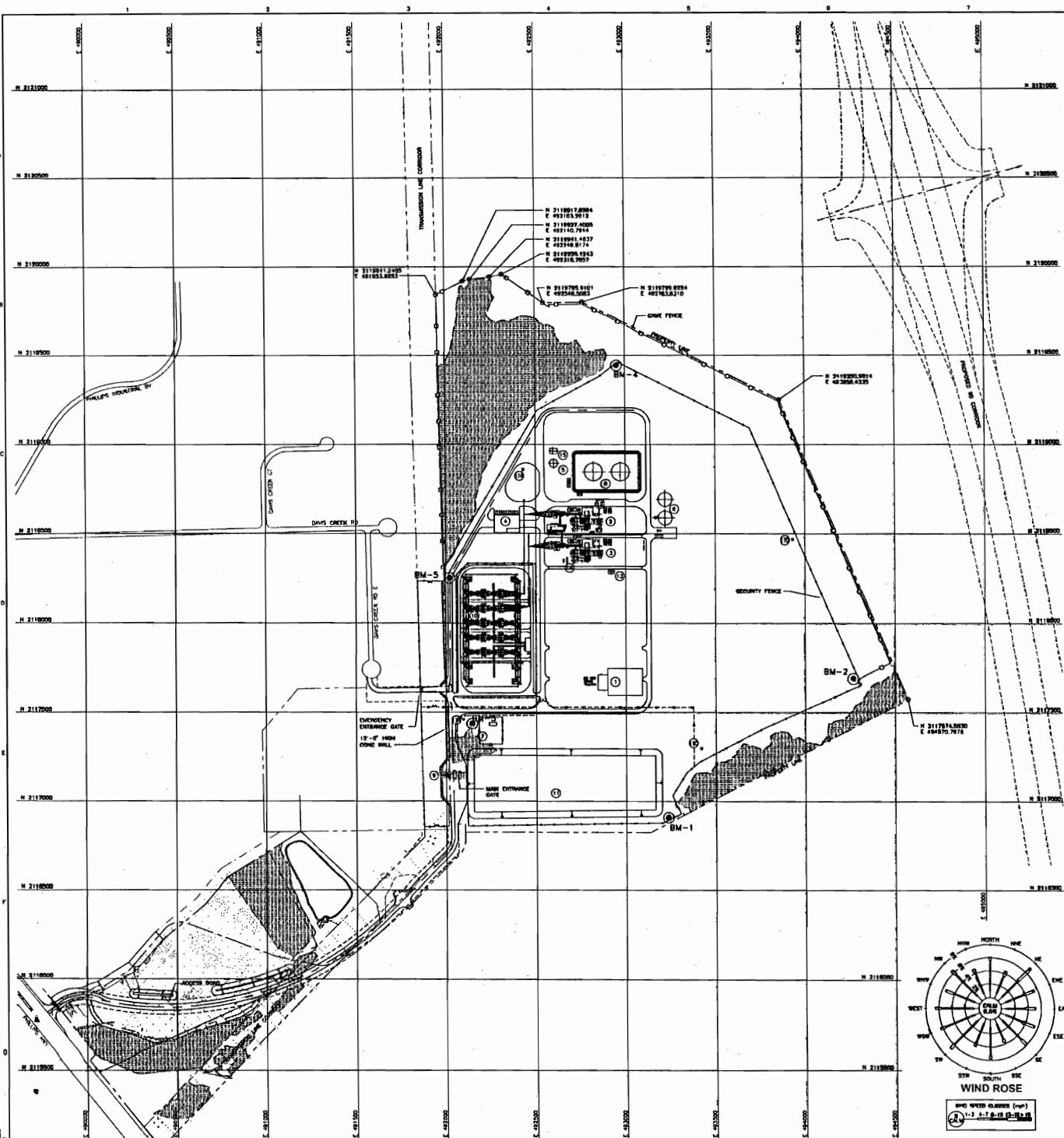
^(a)Impacts represent the highest first high model-predicted concentration from all 5 years of meteorological data: 2001, 2002, 2003, 2004, and 2005 modeled at each corresponding load and include operation of the two CTGs, emergency diesel engine generator, fire pump, and natural gas heater.

^(b)Model predicted impacts reflect the updated fence line as well as the new location of the fuel gas heater.

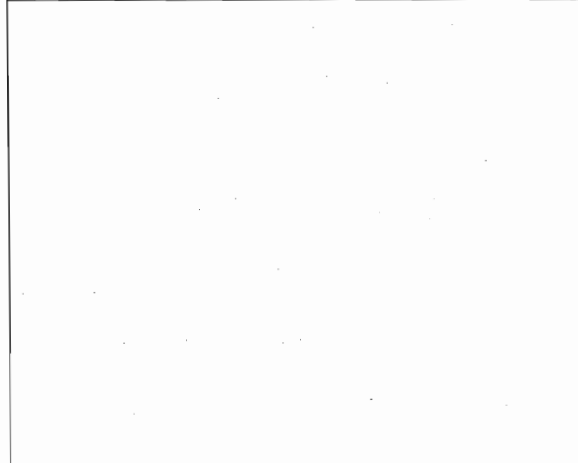
^(c)Predicted impacts that are below the specified level indicate that the proposed project will not have predicted significant impacts for that pollutant and further modeling is not necessary for that pollutant.

^(d)Impacts are from one of the following annual modeling scenarios: 1) 3,500 hours of operation on natural gas; 2) 3,000 hours per year of operation on natural gas with an additional 500 hours per year of operation on ULSFO; or 3) 1,000 hours of operation on ULSFO; whichever scenario produced the higher emissions profile.

^(e)Note that the PM₁₀ impacts are below the PM₁₀ PSD Class II SILs and that the AAQS for PM_{2.5} are significantly greater than the PM₁₀ SILs. Therefore, if one were to conservatively assume that PM_{2.5} impacts would be the same as the PM₁₀ impacts (in accordance with the USEPA's guidance memorandum related to the interim implementation of NSR for PM 2.5), then the impacts would be significantly below the PM_{2.5} AAQS.



FACILITIES LEGEND				
ITEM NO	DESCRIPTION	LOCATION COORDINATES		REFERENCE LOCATION
		NORTH	EAST	
1	(1) WIDE OFFICE TRAILER			
2	COMBUSTION TURBINE NO 1	2118548	492893	CL. STATION
3	COMBUSTION TURBINE NO 2	2118583	492893	CL. STATION
4	WINDHOUSE (14,000 SF)			
5	FIRE WATER TANK			
6	COOL WATER TANKS & TRAILERS			
7	GAS METERING STATION			
8	FUEL OIL TANKS WITH CONCREMENT			
9	GRAND STAGE			
10	230 KV SUBSTATION			
11	PICTURE PLANT			
12	FUEL GAS HEATER			
13	DIESEL GENERATOR			
14	OIL/WATER SEPARATOR			
15	FIRE PUMP BUILDING			
16				
17A	ABOVE-GROUND MONITORING WELLS (SEE DWG 180187-DS-0095)	2118840	493170	
17B	ABOVE-GROUND MONITORING WELLS (SEE DWG 180187-DS-0095)	2117497	493094	
17C	ABOVE-GROUND MONITORING WELLS (SEE DWG 180187-DS-0095)	2117997	493110	
17D	ABOVE-GROUND MONITORING WELLS (SEE DWG 180187-DS-0095)	2118463	493030	
18				
19				
20				

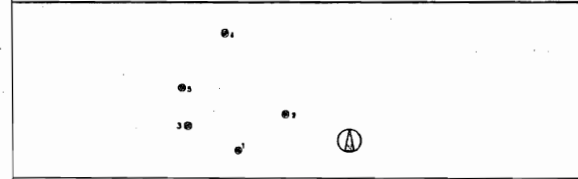


GENERAL LEGEND	
	FUTURE FACILITY
	7' HIGH CHAIN LINK SECURITY FENCE
	6' HIGH CHAIN FENCE
	PROPERTY LINE

PROJECT SURVEY CONTROL
CONTROL MONUMENT LOCATIONS

MONUMENT NO.	PLANT COORDINATES		MONUMENT NO.	STATE PLANE COORDINATES		ELEVATION
	NORTHING	EASTING		NORTHING	EASTING	
SM-1	-	-	SM-1	2,118,905.13	492,233.89	82.85
SM-2	-	-	SM-2	2,118,368.88	482,878.33	34.00
SM-3	-	-	SM-3	2,118,306.87	499,225.28	89.43
SM-4	-	-	SM-4	2,118,447.89	472,855.59	20.33
SM-5	-	-	SM-5	2,118,582.89	492,018.31	84.20

NOTE: MONUMENTS ARE SET BY A CIVIL ENGINEER. MONUMENTS CONTROL IS BASED ON THE PLANNED STATE PLANE COORDINATE SYSTEM. MONUMENTS ARE NOT TO BE USED FOR REFERENCE PURPOSES ONLY.



NOTES

NOT TO BE USED FOR CONSTRUCTION

ASCS 18.16.16 (Last Year)