Facility Name: **Southern LNG Company, LLC – Elba Island LNG Terminal**
City: Savannah
County: Chatham
AIRS #: 04-13-051-00003

Application #: TV-22556
Date Application Received: April 21, 2014
Permit No: 4922-051-0003-V-05-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Southern LNG Company, LLC – Elba Island LNG Terminal** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name:

   Southern LNG Company, LLC – Elba Island LNG Terminal

2. Parent/Holding Company Name

   Kinder Morgan, Inc.

3. Previous and/or Other Name(s)

   No previous names or other names have been identified.

4. Facility Location

   Elba Island, Savannah, Georgia 31402

5. Attainment, Non-attainment Area Location, or Contributing Area

   Southern LNG Company, LLC – Elba Island LNG Terminal (hereinafter "facility" or "LNG import terminal") is located in Chatham County, which is in attainment for all criteria pollutants.

B. Site Determination

Kinder Morgan, Inc. proposed to construct Elba Liquefaction Terminal, a liquefied natural gas (LNG) export terminal, in Title V/PSD Application No. TV-22352 dated May 20, 2014. The LNG import terminal (AIRS No. 04-13-051-00003) and Elba Liquefaction Terminal (hereinafter "LNG export terminal", AIRS No. 04-14-051-00263) are part of the same Title V site because they are located on contiguous property, operate under common control, and have the same first 2-digit SIC code (49).

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
4922-051-0003-V-04-0	October 22, 2012	Title V Permit for the ownership change from El Paso Corporation to Kinder Morgan, Inc. and the facility name change from Southern LNG Inc.- Elba Island LNG Terminal to Southern LNG Company, L.L.C.- Elba Island LNG Terminal.
4922-051-0003-V-04-1	September 12, 2013	For exempting the LNG vaporizers from NSPS rules, removing references to LNG Vaporizers V012 through V014, and replacing the PEMS requirements with periodic testing and monitoring requirements.

D. Process Description

1. SIC Codes(s)

4922

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

This facility receives liquefied natural gas (LNG) from ocean going vessels and stores it for distribution via pipeline.

3. Overall Facility Process Description

The facility receives and stores liquefied natural gas (LNG) for distribution via pipeline. LNG is unloaded from cryogenic tanker ships into large on-shore LNG storage tanks. All unloading pumps are maintained on the tanker and powered by the tanker's power source. Within the LNG tanks, the boil-off of LNG vapors provides refrigeration and the tanks are insulated to maintain LNG temperature at –260 °F. LNG vapors that boil-off and gather in the vapor space of the tank are removed and delivered by boil-off gas compressor(s) to downstream pipelines, or are reliquefied and put back in the system to be vaporized and sent out. During upset conditions, these vapors may be vented to the atmosphere from the tank.

To deliver natural gas into the interstate pipeline system, the LNG must be quickly vaporized at pipeline operating temperature and pressure. Electric motor driven pumps are used to move LNG from the tanks to the eleven natural gas-fired vaporizers (ID Nos. V001 through V011). In an LNG vaporizer, the combustion gases transfer the heat to the water bath through direct contact or vigorous intermixing of the gases and water; then the water bath heats the LNG being piped through it. Natural gas exits the vaporizers as a gas and is delivered to downstream pipelines at normal pipeline operating conditions. The facility's maximum sendout capacity is approximately 1.76 billion cubic feet per day (Bcdf).

Primary electrical power is provided by the local utility. The auxiliary electrical system consists of four 2,800-kW generators located in the generator and switchgear building. The generator sets are driven by two 3,920-horsepower internal combustion engines (ID Nos. G001 and G002) and two 3,800-horsepower stationary gas turbines (ID Nos. G003 and G004). The engine powered generators are used for emergency purposes only.

Additional auxiliary equipment operated at the facility includes two 1.25-MMBtu/hr natural gas fired fuel gas heaters (ID Nos. H001 and H002) and two natural gas fired heaters (ID Nos. B001 and B002) used to heat gases that are occasionally vented from an LNG storage tank. Also, two diesel fired water pumps (ID Nos. X001 and X002) are used for fire suppression. A 15-Hp gasoline-fired air compressor (ID No. A001) is used for utility purposes and is expected to operate no more than 100 hours per year.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

The facility is located in Chatham County, an attainment area for all criteria pollutants. During the review of Application No. TV-21629 (which resulted in the issuance of Title V Permit Amendment No. 4922-051-0003-V-04-1), the facility was no longer determined as one of the 28 named source categories under PSD regulations because the LNG vaporizers (ID Nos. V001 through V011) were determined not steam generating units under 40 CFR 60 Subpart Db and Subpart Dc; thus, the facility's combined boiler capacity (31.74 MMBtu/hr at the LNG import terminal and 196.2 MMBtu/hr at the LNG export terminal) is no longer over 250 MMBtu/hr. Note that, after this change, the facility is still a major source under PSD regulations because its potential-to-emit (PTE) for nitrogen oxides (NOx) and carbon monoxide (CO), is greater than 250 tpy, each, and its PTE for total greenhouse gases (Total GHG) is greater than 100,000 tpy.

The facility has gone through three PSD permit reviews. The first PSD permit, issued on January 24, 2001, reactivated the facility and increased its send-out capacity by allowing the installation of five replacement LNG vaporizers (ID Nos. V001 through V005). The second PSD permit, issued on February 17, 2003, was for the expansion of the facility, including the installation of three more LNG vaporizers (ID Nos. V006 through V008). The third PSD

permit, issued on May 15, 2007, was also for the expansion of the facility, including the installation of six LNG vaporizers (ID Nos. V009 through V0014) and a heated vent stack heater (ID No. B002). Best available control technology (BACT) limits for NOx and CO emissions were established for the LNG vaporizers in each PSD permit. No BACT limit was set for B002 because its NOx and CO PTEs are little and any add-on control for the emissions would have been cost prohibitive. BACT does not apply to the other emission units because they were installed prior to the PSD applicability date.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes			✓
PM_{10}	Yes			✓
$PM_{2.5}$	Yes			✓
SO_2	Yes			✓
VOC	Yes			✓
NO_x	Yes	✓		
CO	Yes	✓		
TRS	Yes			✓
H_2S	Yes			✓
Individual HAP	Yes			✓
Total HAPs	Yes			✓
Total GHGs	Yes	✓		

The Division re-evaluates the site-wide PTE for each criteria pollutant, Total GHG, and hazardous air pollutants (HAPs) during the review of the Title V permit renewal application. The Division first calculates the emissions from the facility using the following operating restrictions and emission factors. Note that the engine type (2-SLB, 4-SLB, or 4-SRB) for Emergency Generators G001 and G002 are unknown; the Division would apply the highest emission factor among the three engine types for each pollutant. Then, the Division calculates the site-wide emissions by adding the facility's emissions to the emissions from the LNG export terminal that were calculated in the preliminary determination for Title V/PSD Permit No. 4922-051-0263-V-01-0.

Table 3: Background Information for All Emission Units at the Facility			
Emission Unit	Manufactured Date/ Installation Date	Capacity	Operating Restriction
Emergency Generator G001	1975/1979	3,920 Hp	500 hrs/yr
Emergency Generator G002	1975/1979	3,920 Hp	500 hrs/yr
Turbine Generator G003	1975/1975	40.07 MMBtu/hr	519.8 MMscf NG/yr
Turbine Generator G004	1975/1975	40.07 MMBtu/hr	
LNG Vaporizer V001	2001/2001	88.1 MMBtu/hr	None
LNG Vaporizer V002	2001/2001	88.1 MMBtu/hr	None
LNG Vaporizer V003	2001/2001	88.1 MMBtu/hr	None
LNG Vaporizer V004	2001/2001	88.1 MMBtu/hr	None
LNG Vaporizer V005	2001/2001	88.1 MMBtu/hr	None
LNG Vaporizer V006	2005/2005	121.4 MMBtu/hr	None
LNG Vaporizer V007	2005/2005	121.4 MMBtu/hr	None
LNG Vaporizer V008	2005/2005	121.4 MMBtu/hr	None
LNG Vaporizer V009	2009/2009	121.4 MMBtu/hr	None
LNG Vaporizer V010	2009/2009	121.4 MMBtu/hr	None
LNG Vaporizer V011	2009/2009	121.4 MMBtu/hr	None
Fuel Gas Heater H001	Unknown	1.25 MMBtu/hr	None
Fuel Gas Heater H002	Unknown	1.25 MMBtu/hr	None
Heated Vent Stack Heater B001	1975/1975	11.74 MMBtu/hr	None
Heated Vent Stack Heater B002	2007/2008	30 MMBtu/hr	101.5 MMscf NG/yr
Fire Pump Engine X001	1975/1979	215 Hp	500 hrs/yr
Fire Pump Engine X002	1975/1979	700 Hp	500 hrs/yr
Air Compressor A001	Unknown	15 Hp	100 hrs/yr

Table 4: Emission Factors (Part I)				
ID No.	NOx E.F.	Source	CO E.F.	Source
G001/G002	3 g/Hp-hr	Manufacturer	3.72 lb/MMBtu	AP-42 Table 3.2-3
G003/G004	0.53 lb/MMBtu	Condition 3.2.8	0.082 lb/MMBtu	AP-42 Table 3.1-1
V001 – V005	0.114 lb/MMBtu	Condition 3.2.5a.	0.164 lb/MMBtu	Condition 3.2.5b.
V006 – V008	0.08 lb/MMBtu	Condition 3.2.6a.	0.164 lb/MMBtu	Condition 3.2.6b.
V009 – V011	0.037 lb/MMBtu	Condition 3.2.7a.	0.030 lb/MMBtu	Condition 3.2.7b.
H001/H002/ B001/B002	0.0980 lb/MMBtu	AP-42 Table 1.4-1	0.0824 lb/MMBtu	AP-42 Table 1.4-1
X001	0.031 lb/Hp-hr	AP-42 Table 3.3-1	0.00668 lb/Hp-hr	AP-42 Table 3.3-1
X002	3 g/Hp-hr	40 CFR 60 Subpart IIII	2.6 g/Hp-hr	40 CFR 60 Subpart IIII
A001	0.011 lb/Hp-hr	AP42 Table 3.3-1	0.00696 lb/Hp-hr	AP42 Table 3.3-1

Table 5: Emission Factors (Part II)				
ID No.	$PM/PM_{10}/PM_{2.5}$ E.F.	Source	VOC E.F.	Source
G001/G002	0.4831 lb/MMBtu	AP-42 Table 3.2-1	3.72 lb/MMBtu	AP-42 Table 3.2-3
G003/G004	0.0066 lb/MMBtu	AP-42 Table 3.1-2a.	0.0021 lb/MMBtu	AP-42 Table 3.1-2a.
V001 – V011/ H001/H002/ B001/B002	0.0745 lb/MMBtu	AP-42 Table 1.4-2	0.00539 lb/MMBtu	AP-42 Table 1.4-1
X001	0.00220 lb/Hp-hr	AP-42 Table 3.3-1	0.00251 lb/Hp-hr	AP-42 Table 3.3-1
X002	0.15 g/Hp-hr	40 CFR 60 Subpart IIII	0.000705 lb/Hp-hr	AP-42 Table 3.4-1
A001	0.000721 lb/Hp-hr	AP42 Table 3.3-1	0.0216 lb/Hp-hr	AP42 Table 3.3-1

Table 6: Emission Factors (Part III)				
ID No.	SO_2 E.F.	Source	Total GHG E.F.	Source
G001/G002	0.000588 lb/MMBtu	AP-42 Table 3.2-1	116.9 lb CO_2e/MMBtu	40 CFR 98 Subpart C
G003/G004	0.0034 lb/MMBtu	AP-42 Table 3.1-2a.		
V001 – V011/ H001/H002/ B001/B002	0.000588 lb/MMBtu	AP-42 Table 1.4-2		
X001	0.00205 lb/Hp-hr	AP-42 Table 3.3-1	163.3 lb CO_2e/MMBtu	40 CFR 98 Subpart C
X002	0.00405 lb/Hp-hr	AP-42 Table 3.4-1		
A001	0.000591 lb/Hp-hr	AP42 Table 3.3-1	155.0 lb CO_2e/MMBtu	40 CFR 98 Subpart C

Table 7: Emission Factors (Part IV)			
ID No.	Hexane E.F.	Combined HAP E.F.	Source
G001/G002	No Data	0.0712 lb/MMBtu	AP-42 Table 3.2-2
G003/G004	No Data	0.00103 lb/MMBtu	AP-42 Table 3.1-3
V001 – V011/ H001/H002/ B001/B002	1.80 lb/MMBtu	1.89 lb/MMBtu	AP-42 Table 1.4-3
X001	No Data	0.00387 lb/MMBtu	AP-42 Table 3.3-2
X002	No Data	0.00157 lb/MMBtu	AP-42 Tables 3.4-3 and 3.4-4
A001	No Data	0.00387 lb/MMBtu	AP42 Table 3.3-2

Table 8: Site-wide PTE (tpy)			
Pollutant	LNG Import Terminal	LNG Export Terminal	Site-wide
NOx	574	39.5	614
CO	677	150	827
$PM/PM_{10}/PM_{2.5}$	41.2	9.35	50.6
VOC	29.6	34.9	64.5
SO_2	4.80	25.2	30.0
Total GHG	661,000	379,000	1,040,000
Single HAP (Hexane)	7.69	2.18	9.87
Combined HAP	11.0	2.30	13.3

According to the above tables, the combined site is major under Title V of 1990 CAAA and PSD regulations for NOx and CO because the PTE is each above 100 tpy and 250 tpy, respectively. The combined site is also major under Title V of 1990 CAAA and PSD regulations for Total GHG because the PTE is above 100,000 tpy. The Combined site is minor under Title V for single/combined HAP because the PTE is below 10/25 tpy.

Please also note that the PTE in Table 8 is very conservative. Due to increased domestic shale gas production (hydraulic fracturing) and decreased demand of imported LNG, the facility rarely receives LNG from vessels and is rarely operating. The LNG Import Terminal would emit much less than the emissions presented in Table 8.

3. MACT Standards

According to Table 8 of the narrative, the combined site is minor for HAP emissions because its PTEs for single and combined HAPs are lower than 10 tpy and 25 tpy, respectively. The facility is not subject to any MACT standards in 40 CFR 61. The only applicable rule in 40 CFR 63 is Subpart ZZZZ "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)," which applies to the emergency generators (ID Nos. G001 and G002) and the fire pump engines (ID Nos. X001 and X002).

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	Yes
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	Yes
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

The Title V renewal application submitted by this facility contains a compliance certification, which was signed by the company's responsible official, certifying that "this facility is in compliance with all applicable requirements effective as of the date of this certification and will continue to comply with such requirements." The Title V permit application contained no indication of any non-compliance known by the company.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None applicable.

III. Regulated Equipment Requirements

A. Brief Process Description

The facility receives and stores liquefied natural gas (LNG) for distribution via pipeline. LNG is unloaded from cryogenic tanker ships into large on-shore LNG storage tanks. LNG vapors that boil-off and gather in the vapor space of the tank are removed and delivered by boil-off gas compressor(s) to downstream pipelines, or are reliquefied and put back in the system to be vaporized and sent out. The facility uses eleven LNG vaporizers (ID Nos. V001 through V011) to vaporize LNG; natural gas exits the vaporizers as a gas and is delivered to downstream pipelines at normal pipeline operating conditions.

Primary electrical power is provided by the local utility. Two turbine generators (ID Nos. G003 and G004) provides auxiliary power, while two engine generators (ID Nos. G001 and G002) provides power during emergency situations. The facility uses Heaters H001, H002, B001, and B002 to heat gases that are occasionally vented from an LNG storage tank. An air compressor (ID No. A001) is used for utility purposes and is expected to operate no more than 100 hours per year.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
G003	Turbine Generator No. 1 (Facility ID#P5-A) Solar Centaur T-4000 40.1 MMBtu/hr Installed in 1975	391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	3.2.1, 3.2.8, 3.4.1, 5.2.1, 6.1.7, 6.2.3, 6.2.4	N/A	None
G004	Turbine Generator No. 2 (Facility ID#P5-B) Solar Centaur T-4000 40.1 MMBtu/hr Installed in 1975	391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	3.2.1, 3.2.8, 3.4.1, 5.2.1, 6.1.7, 6.2.3, 6.2.4	N/A	None
V001	LNG Vaporizer No. 1 T-Thermal Sub X90-135 88.1 MMBtu/hr Installed in 2001	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.5, 3.4.2, 5.2.1, 5.2.2, 6.1.7	N/A	None
V002	LNG Vaporizer No. 2, T-Thermal Sub X90-135 88.1 MMBtu/hr Installed in 2001	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.5, 3.4.2, 5.2.1, 5.2.2, 6.1.7	N/A	None
V003	LNG Vaporizer No. 3, T-Thermal Sub X90-135 88.1 MMBtu/hr Installed in 2001	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.5, 3.4.2, 5.2.1, 5.2.2, 6.1.7	N/A	None
V004	LNG Vaporizer No. 4, T-Thermal Sub X90-135 88.1 MMBtu/hr Installed in 2001	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.5, 3.4.2, 5.2.1, 5.2.2, 6.1.7	N/A	None

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
V005	LNG Vaporizer No. 5, T-Thermal Sub X90-135 88.1 MMBtu/hr Installed in 2001	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.5, 3.4.2, 5.2.1, 5.2.2, 6.1.7	N/A	None
V006	LNG Vaporizer No. 6, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2005	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.6, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
V007	LNG Vaporizer No. 7, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2005	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.6, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
V008	LNG Vaporizer No. 8, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2005	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.6, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
V009	LNG Vaporizer No. 9, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2009	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.7, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
V010	LNG Vaporizer No. 10, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2009	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.7, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
V011	LNG Vaporizer No. 11, T-Thermal Sub X120-180 121.4 MMBtu/hr Installed in 2009	40 CFR 52.21(j) 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.2, 3.2.7, 3.2.9, 3.4.2, 4.2.1, 4.2.2, 5.2.1, 6.1.7, 6.2.1, 6.2.2	N/A	None
B001	Heated Vent Stack Heater No. 1 Johnston 11.74 MMBtu/hr Installed in 1975	391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.3, 3.4.2	N/A	None
B002	Heated Vent Stack Heater No. 2 Johnston 30 MMBtu/hr Installed in 2008	40 CFR 52.21(j) 40 CFR 60 Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	3.2.4, 3.3.1, 3.4.2, 5.2.1, 6.1.7, 6.2.3	N/A	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards and corresponding permit conditions are intended as a compliance tool and may not be definitive.

C. Equipment & Rule Applicability

Emission and Operating Caps:

Existing Conditions 3.2.1 and 3.2.2 of Title V Permit No. 4922-051-0003-V-04-0 included a NOx emission limit (0.53 lb/MMBtu) and a combined annual natural gas consumption limit (519.8 MMscf/yr) for the turbine generators (ID Nos. G003 and G004) and cited 40 CFR 52.21 as if they were the BACT limits for G003 and G004. The NOx emission limit was originally 0.40 lb/MMBtu in Permit Amendment No. 4922-051-0003-P-01-1, in order to ensure compliance with NAAQS when the facility wanted to be able to operate the generators continuously (8760 hours per year). [Note: BACT is not applicable to G003 and G004 because they were installed in 1975, prior to the PSD applicability date.] The NOx emission limit was raised to 0.53 lb/MMBtu after performance test results exceeded the 0.4 lb/MMBtu allowable. To compensate for the increase in allowable NOx emission rate from 0.4 to 0.53 lb/MMBtu (to maintain the combined NOx emission rate from G003 and G004 at 141 tpy), Permit Amendment No. 4922-051-0003-P-01-2 includes the combined annual natural gas consumption limit for the turbine generators. Therefore, they are not BACT emission limits; instead, they are included in Conditions 3.2.1 and 3.2.8 of the proposed Title V renewal permit as state-only requirements.

Conditions 3.2.2 through 3.2.4 limit the facility to burn natural gas only in the LNG vaporizers (ID Nos. V001 through V011), and heated vent stack heaters (ID Nos. B001 and B002) and include different citations for the following reasons:

- V001 through V011 underwent PSD reviews with the assumptions that they fire natural gas only. Burning any fuel other than natural gas in any LNG vaporizers will trigger a retroactive PSD review. The requirement also subsumes the GA Rule (g) 2.5-percent sulfur content limit because natural gas contains minimal amount of sulfur. Note that the LNG vaporizers do not meet the definition of a boiler under 40 CFR 63 Subpart JJJJJJ because they operate under ambient pressure condition and do not produce hot water; therefore, the fuel requirement is not for avoiding 40 CFR 63 Subpart JJJJJJ.

- B001 was installed in 1975, prior to the PSD applicability date. Therefore, the citation block does not reference 40 CFR 52.21. Burning natural gas only exempts B001 from 40 CFR 63 Subpart JJJJJJ, so Condition 3.2.3 is also for avoiding 40 CFR 63 Subpart JJJJJJ. Likewise, the fuel requirement subsumes the GA Rule (g) 2.5-percent sulfur content limit.

- B002 underwent a PSD review assuming that it fires natural gas only. Burning any fuel other than natural gas in B002 will trigger a retroactive PSD review. Like B001, Condition 3.2.4 is also for avoiding 40 CFR 63 Subpart JJJJJJ and subsumes the GA Rule (g) 2.5-percent sulfur content limit.

Conditions 3.2.5 through 3.2.7 contains the NOx and CO BACT emission limits for LNG Vaporizers V001 through V011. These are the products of the following three PSD reviews:

- First PSD review for the reactivation of the LNG import terminal (Elba I Terminal Reactivation) on January 24, 2001 that involves the installation of the five replacement LNG vaporizers (ID Nos. V001 through V005).

- Second PSD review for "Elba II Terminal Expansion" on February 17, 2003 that involves the installation of three additional LNG vaporizers (ID Nos. V006 through V008).

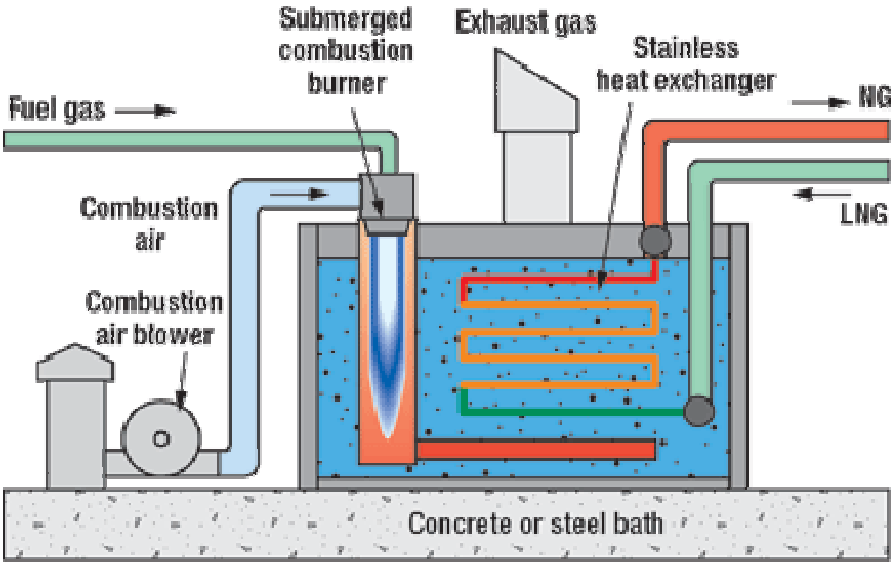
- Third PSD review for "Elba III Terminal Expansion" on May 15, 2007 that involves the installation of six additional LNG vaporizers (ID Nos. V009 through V014) and a heated vent stack heater (ID No. B002). V012 through V014 were never built.

Title V Permit Amendment No. 4922-051-0003-V-04-1 replaced the existing predictive emission monitoring system (PEMS) requirements for LNG Vaporizers V006 through V011 with quarterly testing and water injection rate/fuel flow rate monitoring requirements. Existing Condition 3.2.7 of that permit amendment includes the initial minimum water-to-fuel ratio for each loading tier of each LNG vaporizer. Since the facility has not operated any LNG vaporizer more than 72 hours during any calendar quarter that would trigger the quarterly testing requirement, the initial minimum water-to-fuel ratios are included in Condition 3.2.9 of the proposed Title V renewal permit.

Rules and Regulations Assessment:

40 CFR 60 Subpart Db – "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units"

During the review of Application No. TV-21629, the Division determined that none of the LNG vaporizers (ID Nos. V006 through V011) was subject to 40 CFR 60 Subpart Db. As shown in the figure below, the combustion gases in an LNG vaporizer transfer the heat to the water bath through direct contact or vigorous intermixing of the gases and water. There is not a physical barrier between the combustion air and water. According to a U.S. EPA application determination memo (Index Control No. PS36) dated November 17, 1992, V006 through V011 are not considered steam generating units and are therefore not subject to 40 CFR 60 Subpart Db.



Source: Sumitomo Precision Products.

40 CFR 60 Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units"

The definition of a steam generating unit specified in 40 CFR 60.41c is very similar to that specified in 40 CFR 60.41b. The above U.S. EPA application determination memo also applies to 40 CFR 60 Subpart Dc. Therefore, the LNG vaporizers (ID Nos. V001 through V005) are not considered steam generating units and are therefore not subject to 40 CFR 60 Subpart Dc.

Heated Vent Stack Heater B001 was installed in 1975, prior to the applicable date of 40 CFR 60 Subpart Dc, June 9, 1989. Therefore, it is not subject to 40 CFR 60 Subpart Dc.

Heated Vent Stack Heater B002 meets the definition of a steam generating unit, has a capacity between 10 and 100 MMBtu/hr, and was constructed after June 9, 1989; according to 40 CFR 60.40c(a), it is subject to 40 CFR 60 Subpart Dc. The only applicable requirement, per 40 CFR 60.48c(g)(2), is to record and maintain records of the amount of each fuel combusted during each calendar month.

40 CFR 60 Subpart Kb – "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984"

The LNG storage tanks onsite are not subject to 40 CFR 60 Subpart Kb because the true vapor pressure of LNG is less than 3.5 kPa, per 40 CFR 60.110b(b).

40 CFR 60 Subpart GG – "Standards of Performance for Stationary Gas Turbines"
40 CFR 60 Subpart KKKK – "Standards of Performance for Stationary Combustion Turbines"

The turbine generators (ID Nos. G003 and G004) were both installed in 1975, before the applicable dates specified in 40 CFR 60.330(b) and 40 CFR 60.4305(a); therefore, they are not subject to 40 CFR 60 Subpart GG and Subpart KKKK.

40 CFR 60 Subpart IIII – "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"

Fire Pump Engine X001 was manufactured in 1975 and was installed in 1979. Since its commence construction date and manufacturing date are before the dates specified in 40 CFR 60.4200(a)(2)(ii), it is not subject to 40 CFR 60 Subpart IIII.

Fire Pump Engine X002 was manufactured and installed in 2009. According to 40 CFR 60.4200(a)(2)(ii), it is subject to 40 CFR 60 Subpart IIII.

Note that all emergency engines are included in the Insignificant Activity Checklist in Attachment B of the Title V permit and are subject to all applicable 40 CFR 60 Subpart IIII requirements per Condition 8.27.1. In particular, X002 is subject to the following emission standards specified in 40 CFR 60.4205(c) and Table 4 to 40 CFR 60 Subpart IIII.

Table 9: 40 CFR 60 Subpart IIII Emission Standards for X002				
ID No.	Capacity	Model Year	Pollutant	Emission Standard
X002	600≤Hp≤750	2009+	NMHC+NOx	3.0 g/Hp-hr
			CO	2.6 g/Hp-hr
			PM	0.15 g/Hp-hr

In addition to the above emission standards, X002 may also be subject to the requirements specified in 40 CFR 60.4206, 4207(b), 4209(a), 4211(a), 4211(c), 4211(f), 4211(g), 4212, and 4214(b).

40 CFR 60 Subpart JJJJ – "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines"

Emergency Generators G001 and G002 were manufactured in 1975 and were installed in 1979. Since their commence construction date and manufacturing date are before the dates specified in 40 CFR 4230(a)(4)(iv), they are not subject to 40 CFR 60 Subpart JJJJ.

40 CFR 63 Subpart YYYY – "National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines"

40 CFR 63 Subpart YYYY applies to stationary combustion turbines located at a major source of HAP emissions. According to Table 8 of this narrative, the combined site is minor for single and combined HAP emissions. Therefore, Turbine Generators G003 and G004 are not subject to 40 CFR 63 Subpart YYYY.

40 CFR 63 Subpart ZZZZ – "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"

40 CFR 63 Subpart ZZZZ applies to stationary reciprocating internal combustion engines (RICE) at both major and area sources of HAP emissions. Emergency Generators G001 and G002 and Fire Pump Engines X001 and X002 are subject to this subpart. Note that all of the above engines are included in the Insignificant Activity Checklist in Attachment B of the Title V permit and are subject to all applicable 40 CFR 63 Subpart ZZZZ requirements per Condition 8.27.3.

According to 40 CFR 63.6590(a)(2)(iii), X002 is a new stationary RICE at an area source of HAP emissions. Per 40 CFR 63.6590(c)(1), X002 meets the requirements of 40 CFR 63 Subpart ZZZZ by meeting all applicable requirements of 40 CFR 60 Subpart IIII. X002 is not subject to any other requirements of 40 CFR 63 Subpart ZZZZ.

According to 40 CFR 63.6590(a)(1)(iii), G001, G002, and X001 are all existing stationary RICE at an area source of HAP emissions. According to 40 CFR 63.6595(a), the compliance dates for the engines already passed; the engines must comply with all applicable 40 CFR 63 Subpart ZZZZ requirements now. The engines are not subject to any emission standards, but they are subject to the management practice standards specified in 40 CFR 63.6603 and Items 4 and 5 in Table 2d to 40 CFR 63 Subpart ZZZZ. The other applicable requirements are included in 40 CFR 63.6595(c), 6604(b), 6605(a), 6605(b), 6625(e)(3), 6625(f), 6625(i), 6625(j), 6635, 6640(a),

6640(b), 6640(f), 6645(a)(2), 6650(a), 6650(b)(5), 6650(c), 6650(d), 6650(f), 6650(h), 6655(a), 6655(d), 6655(e)(2), 6655(f)(2), and 6660.

40 CFR 63 Subpart JJJJJJ – "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources"

Since the facility is an area source of HAP emissions, LNG Vaporizers V001 through V011 and Heated Vent Stack Heaters B001 and B002 are potentially subject to 40 CFR 63 Subpart JJJJJJ. According to 40 CFR 63.11237, a boiler is defined as follows,

> *Boiler* means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in § 241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers, process heaters, and autoclaves are excluded from the definition of Boiler.

Clearly, B001 and B002 meet the boiler definition. However, according to 40 CFR 63.11195(e), a gas-fired boiler as defined in Subpart JJJJJJ is not subject to this Subpart. Since B001 and B002 fire exclusively on natural gas, they are not subject to this subpart. Conditions 3.2.3 and 3.2.4 of the proposed Title V renewal permit, which require that B001 and B002 fire only natural gas, are the 40 CFR 63 Subpart JJJJJJ avoidance limits.

In an email dated March 12, 2013, the facility's principal engineer, Mr. Girish Misra, stated that the LNG Vaporizers V001 through V011 should not be considered boilers. According to Mr. Misra, an LNG vaporizer is an enclosed device that operates under ambient pressure condition, while a boiler is pressurized. None of the LNG vaporizers produces hot water. The heat from the combustion of natural gas is used to maintain the temperature of the water bath so that the LNG flowing through the bath can be vaporized. The Division agrees with the facility that V001 through V011 are not boilers defined in 40 CFR 63.11237, and are therefore not subject to 40 CFR 63 Subpart JJJJJJ.

Applicable Georgia State Rules

Among the emission units in Table 3.1 of the proposed Title V renewal permit, Turbine Generators G003 and G004 are subject to the visible emission limit (40 percent opacity) specified in Georgia Air Quality Control Rule 391-3-1-.02(2)(b) "Visible Emissions." Since G003 and G004 fire exclusively on natural gas, and natural gas is a clean fuel, compliance with the visible emission limit is expected.

LNG Vaporizers V001 through V011 and Heated Vent Stack Heaters B001 and B002 are subject to Georgia Rule 391-3-1-.02(2)(d), "Fuel Burning Equipment." Since the emission units were constructed after 1972, Georgia Rule 391-3-1-.02(2)(d)3. limits the opacity of the emissions from them to twenty (20) percent. Also, the allowable PM emission rates from the emission units are specified by Georgia Rule 391-3-1-.02(2)(d)2.(ii), as follows:

$P = 0.5 * (10 / R)^{0.5}$

Where P equals the allowable PM emission rate in pounds per million BTU and R equals the heat input in million BTUs per hour.

Since the emission units fire exclusively on natural gas, and natural gas is a clean fuel, compliance with the PM and visible emission limits is expected.

All of the emission units in Table 3.1 are subject to the 2.5-percent fuel sulfur content limit specified in Georgia Rule 391-3-1-.02(2)(g)(2). Since they all burn natural gas only, and natural gas contains much less than 2.5 percent sulfur, compliance with the GA Rule (g) limit is expected.

D. Compliance Status

None applicable.

E. Operational Flexibility

None applicable.

F. Permit Conditions

The conditions in Section 3 of Title V Permit No. 4922-051-0003-V-04-0 and its amendment have been re-organized and included in the proposed Title V renewal permit. These conditions have been re-numbered more logically. The following table illustrates the relationship between conditions of Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the proposed Title V renewal permit.

Table 10: Condition (in Section 3) Comparison between Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the Proposed Title V Renewal Permit

Old Condition No.	Title V Permit/Amendment No. That Included such Condition	New Condition No.
3.2.1	4922-051-0003-V-04-0	3.2.8
3.2.2	4922-051-0003-V-04-0	3.2.1
3.2.3	4922-051-0003-V-04-0 4922-051-0003-V-04-1	3.2.2
3.2.4	4922-051-0003-V-04-0	3.2.4
3.2.5	4922-051-0003-V-04-1	3.2.3 and 3.2.4
3.2.6	4922-051-0003-V-04-1	Not Included in This Permit
3.2.7	4922-051-0003-V-04-1	3.2.9
3.3.1	4922-051-0003-V-04-0 4922-051-0003-V-04-1	3.3.1
3.3.2	4922-051-0003-V-04-0	Removed by V-04-1 and Included in 3.3.1 of This Permit
3.3.3	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit

Table 10: Condition (in Section 3) Comparison between Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the Proposed Title V Renewal Permit		
Old Condition No.	**Title V Permit/Amendment No. That Included such Condition**	**New Condition No.**
3.3.4	4922-051-0003-V-04-0	3.2.5
3.3.5	4922-051-0003-V-04-0	3.2.6
3.3.6	4922-051-0003-V-04-0	3.2.7
3.3.7	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
3.4.1	4922-051-0003-V-04-0 4922-051-0003-V-04-1	3.4.2
3.4.2	4922-051-0003-V-04-0	3.4.1
3.4.3	4922-051-0003-V-04-0	Subsumed in 3.2.1 through 3.2.4

The requirements specified in existing Condition 3.2.6 are not included in the proposed Title V renewal permit because the water injection nozzles have already been replaced accordingly. The facility notified the Division the completion of the replacement on November 6, 2013.

As discussed previously, LNG Vaporizers V006 through V011 are not subject to 40 CFR 60 Subpart Db. Therefore, the proposed Title V renewal permit does not contain the associate 40 CFR 60 Subpart Db requirements specified in existing Condition 3.3.3.

The proposed Title V renewal permit does not contain the requirements of existing Condition 3.3.7. LNG Vaporizers V009 through V011 are already in operation. The facility notified the Division in Application No. TV-21629 that they canceled the construction of LNG Vaporizers V012 through V014.

Condition 3.2.1 includes the requirements of existing Condition 3.2.2. As explained in Section III.C. of this narrative, this is not a BACT limit. This is a state-only requirement that subsumes the GA Rule (g) fuel sulfur content limit.

Condition 3.2.2 includes the requirements of existing Condition 3.2.3 and requires that LNG Vaporizers V001 through V011 burn natural gas only. Burning any other fuel may trigger a retroactive PSD review for these emission units. The requirements also subsume the GA Rule (g) fuel sulfur content limit.

Condition 3.2.3 includes the requirement of existing Condition 3.2.5 and requires that Heated Vent Stack Heater B001 burn natural gas only. Burning natural gas only will exempt B001 from 40 CFR 63 Subpart JJJJJJ. This also subsumes the GA Rule (g) fuel sulfur content limit.

Condition 3.2.4 includes the requirements of existing Conditions 3.2.4 and 3.2.5 and requires that Heated Vent Stack Heater B002 burn natural gas only. B002 is allowed to burn up to 101.5 MMcf natural gas during any twelve consecutive calendar months. Burning any other fuel or burning more than 101.5 MMcf natural gas in a year may trigger a retroactive PSD review. Burning natural gas only will also exempt B002 from 40 CFR 63 Subpart JJJJJJ. This also subsumes the GA Rule (g) fuel sulfur content limit.

Condition 3.2.5 includes the NOx and CO BACT limits for LNG Vaporizers V001 through V005, which were included in existing Condition 3.3.4.

Condition 3.2.6 includes the NOx and CO BACT limits for LNG Vaporizers V006 through V008, which were included in existing Condition 3.3.5.

Condition 3.2.7 includes the NOx and CO BACT limits for LNG Vaporizers V009 through V011, which were included in existing Condition 3.3.6.

Condition 3.2.8 includes the requirements of existing Condition 3.2.1. As explained in Section III.C. of this narrative, this is not a BACT limit. This is a state-only requirement that ensures compliance with NAAQS.

Condition 3.2.9 includes the requirements of existing Condition 3.2.7. As explained in Section III.C. of this narrative, this is part of the testing/monitoring plan that replaced the PEMS requirements of existing Condition 5.2.1. The facility must comply with the minimum water-to-fuel ratios included in the table before a performance test that establishes the minimum set point is conducted. Once a test is conducted, the facility must follow the minimum water-to-fuel ratios established in the most recent testing.

Condition 3.3.1 includes the requirements of existing Conditions 3.3.1 and 3.3.2. It subject Heated Vent Stack Heater B002 to 40 CFR 60 Subpart A and Subpart Dc.

Condition 3.4.1 includes the GA Rule (b) visible emission limit, which was included in existing Condition 3.4.2, for Turbine Generators G003 and G004.

Condition 3.4.2 includes the GA Rule (d) PM and visible emission limits, which were included in existing Condition 3.4.1, for LNG Vaporizers V001 through V011 and Heated Vent Stack Heaters B001 and B002.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

1. Individual Equipment

None applicable.

2. Equipment Groups (all subject to the same test requirements):

The requirements of existing Conditions 4.2.1 and 4.2.2 were satisfied on March 4, 2010, and are no longer included in the proposed Title V renewal permit.

Since LNG Vaporizers V006 through V011 are not subject to 40 CFR 60 Subpart Db, the associated testing requirements in existing Conditions 4.2.3 and 4.2.4 are not included in the Title V renewal permit.

Conditions 4.2.1 and 4.2.2 includes the requirements in existing Conditions 4.2.5 and 4.2.6. As discussed in Section III.C. of the narrative, Title V Permit Amendment No. 4922-051-0003-V-04-1 replaced the existing predictive emission monitoring system (PEMS) requirements for LNG Vaporizers V006 through V011 with quarterly testing and water injection rate/fuel flow rate monitoring requirements. If any LNG vaporizer operates more than 72 hours during a calendar quarter, the facility must conduct a NOx and CO performance test to demonstrate compliance with the associate NOx and CO BACT emission limits. If each LNG vaporizer operates less than 72 hours every calendar quarter, the facility must conduct the NOx and CO performance test every 8 calendar quarters. During the performance tests, the facility must establish the minimum water-to-fuel ratio for each loading tier of each LNG vaporizer, at which compliance with the associate NOx and CO BACT emission limits is demonstrated.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

The conditions in Section 5 of Title V Permit No. 4922-051-0003-V-04-0 and its amendment have been re-organized and included in the proposed Title V renewal permit. These conditions have been re-numbered more logically. The following table illustrates the relationship between conditions of Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the proposed Title V renewal permit.

Table 11: Condition (in Section 5) Comparison between Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the Proposed Title V Renewal Permit

Old Condition No.	Title V Permit/Amendment No. That Included such Condition	New Condition No.
5.2.1	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
5.2.2a. through f.	4922-051-0003-V-04-1 (5.2.2b. through g. of V-04-0)	5.2.1a. through f.
5.2.3a. through d.	4922-051-0003-V-04-1 (5.2.3b. of V-04-0)	5.2.1n., k., l., and m.
5.2.4a., b., d. and e.	4922-051-0003-V-04-0	5.2.1g., i., h., and j.
5.2.4c.	4922-051-0003-V-04-0	Not Included in This Permit
5.2.5	4922-051-0003-V-04-1	5.2.2

As discussed in Section III.C. of the narrative, the PEMS monitoring requirements specified in existing Condition 5.2.1 were replaced with quarterly testing and water injection rate/fuel flow rate monitoring requirements. Therefore, the PEMS monitoring requirements are not included in the proposed Title V renewal permit.

The monitoring requirements in existing Condition 5.2.4c. is redundant since they were included in existing Condition 5.2.4a. already. The same monitoring requirements are included in Condition 5.2.1g. of the proposed Title V renewal permit.

1. Individual Equipment:

   Condition 5.2.1n. includes the monitoring requirement in existing Condition 5.2.3a. The facility is required by 40 CFR 60.48c(g)2. to record monthly fuel consumption.

2. Equipment Groups (all subject to the same monitoring requirements):

Conditions 5.2.1a. through f. includes the monitoring requirements in existing Conditions 5.2.1a. through f. The monitoring requirements are used to ensure compliance with the NOx and CO BACT emission limits for LNG Vaporizers V001 through V005. The facility must operate the LNG vaporizers at a water-to-fuel (water injection rate versus fuel flow rate) rate at or above 2.5 gallons water per 1,000 standard cubic foot of natural gas burned. The primary and secondary air valve position must follow the values coinciding with the ambient air temperature in Tables D-1.1 through D-1.5 while the fuel gas valve position must follow the values in Table D-2 in Attachment D of the proposed Title V renewal permit.

Conditions 5.2.1g. through j. include the monitoring requirements in existing Conditions 5.2.4a., b., d., and e. for Turbine Generators G003 and G004 as follows:

- Condition 5.2.1g. includes the monitoring requirements in existing Condition 5.2.4a. In order to demonstrate compliance with the annual natural gas consumption limit specified in Condition 3.2.1, the facility must monitor the natural gas consumption rates of G003 and G004.

- Condition 5.2.1h. includes the monitoring requirements in existing Condition 5.2.4d. The NOx emission limit specified in Condition 3.2.8 for each turbine generator is applicable when the associate turbine generator operates more than 500 hours during any twelve consecutive month period. In order to ensure compliance with the NOx emission limit, the compressor discharge pressure must be maintained within the ranges coinciding with the natural gas fuel flow rate in Table D-3 in Attachment D of the proposed Title V renewal permit.

- Condition 5.2.1i. includes the monitoring requirements in existing Condition 5.2.4b. In order to ensure compliance with the NOx emission limit in Condition 3.2.8, the 3-hour turbine inlet temperature (T5 temperature) must stay below 1,200ºF.

- Condition 5.2.1j. includes the monitoring requirements in existing Condition 5.2.4e. The facility must record the operating time of each of G003 and G004 in order to determine when the NOx emission limit in Condition 3.2.8 is applicable.

Conditions 5.2.1k. through m. include the monitoring requirements in existing Conditions 5.2.3b. through d. for LNG Vaporizers V006 through V011 as follows:

- Condition 5.2.1k. includes the monitoring requirements in existing Condition 5.2.3b. The facility must monitor the operating time of each of V006 through V011 during each calendar quarter. If any LNG vaporizer operates more than 72 hours during a calendar quarter, the testing requirements in Conditions 4.2.1 and 4.2.2 are triggered.

- Conditions 5.2.1l. and m. include the monitoring requirements in existing Conditions 5.2.3c. and d. The facility must monitor the water injection rate and fuel flow rate for each LNG vaporizer. The records are used to determine the water-to-fuel ratios, which are compared to the minimum water-to-fuel ratios in Condition 3.2.9 and are used to ensure compliance with the NOx and CO BACT emission limits in Conditions 3.2.6 and 3.2.7.

Condition 5.2.2 includes the monitoring requirements in existing Condition 5.2.5. The facility must follow the inspection and maintenance schedule in Attachment E of the proposed Title V renewal permit. This is part of the monitoring plan to ensure compliance with the NOx and CO BACT emission limits in Condition 3.2.5.

C. Compliance Assurance Monitoring (CAM)

An emission unit is subject to the provisions of 40 CFR 64, "Compliance Assurance Monitoring" because:

- It is located at a major source that is required to obtain a Title V Permit. [§64.2(a)]
- It is subject to an emission limitation or standard for the applicable pollutant (PM). [§64.2(a)(1)]
- The facility uses a control device to achieve compliance. [§64.2(a)(2)]
- Potential pre-controlled emissions of the applicable pollutant (particulate matter) from such emission unit are at least 100 percent of major source threshold. [§64.2(a)(3)]

None of the emission units at the facility utilizes a control device. Therefore, CAM is not applicable to the facility.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a [quarterly or semiannual] basis.

Template Conditions 6.1.3 and 6.1.4 were updated in September 2011 to allow ~60 days to submit periodic reports. Alternative reporting deadlines are allowed per 40 CFR 70.6, 40 CFR 60.19(f) and 40 CFR 63.10(a).

B. Specific Record Keeping and Reporting Requirements

The conditions in Section 6 of Title V Permit No. 4922-051-0003-V-04-0 and its amendment have been re-organized and included in the proposed Title V renewal permit. These conditions have been re-numbered more logically. The following table illustrates the relationship between conditions of Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the proposed Title V renewal permit.

Table 12: Condition (in Section 6) Comparison between Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the Proposed Title V Renewal Permit

Old Condition No.	Title V Permit/Amendment No. That Included such Condition	New Condition No.
6.1.7a.i.	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.1.7b.i.	4922-051-0003-V-04-1 4922-051-0003-V-04-0	6.1.7b.i.
6.1.7bii. through b.v.	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.1.7b.vi.	4922-051-0003-V-04-0 4922-051-0003-V-04-1	6.1.7b.ii.
6.1.7c.i. through vi.	4922-051-0003-V-04-0 4922-051-0003-V-04-1	6.1.7c.i. through vi.
6.1.7c.vii. and c.viii.	4922-051-0003-V-04-1	6.1.7c.vii. and c.viii.
6.1.7d.i.	4922-051-0003-V-04-0 4922-051-0003-V-04-1	6.1.7d.i.
6.2.1	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.2.2	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.2.3a.	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit

Table 12: Condition (in Section 6) Comparison between Title V Permit No. 4922-051-0003-V-04-0/Title V Permit Amendment No. 4922-051-0003-V-04-1 and the Proposed Title V Renewal Permit		
Old Condition No.	**Title V Permit/Amendment No. That Included such Condition**	**New Condition No.**
6.2.3a.	4922-051-0003-V-04-1 (6.2.3b. of V-04-0)	6.2.3c.
6.2.4	4922-051-0003-V-04-0	6.2.3a. and b.
6.2.5	4922-051-0003-V-04-0	6.2.4a. through c.
6.2.6 and 6.2.7	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.2.8 and 6.2.9	4922-051-0003-V-04-0	Removed by V-04-1 and Not Included in This Permit
6.2.10	4922-051-0003-V-04-0	6.2.3d.
6.2.11	4922-051-0003-V-04-1	6.2.1
6.2.12	4922-051-0003-V-04-1	6.2.2
6.2.13	4922-051-0003-V-04-1	Not Included in This Permit

Since LNG Vaporizers V006 through V011 are not subject 40 CFR 60 Subpart Db, the associate record keeping and reporting requirements in existing Conditions 6.1.7a.i., 6.2.2, 6.2.8, and 6.2.9 are not included in the proposed Title V renewal permit.

Since the PEMS monitoring requirements in existing Condition 5.2.1 were replaced with quarterly testing and water injection rate/fuel flow rate monitoring requirements, the associate record keeping and reporting requirements in existing Conditions 6.1.7c.ii. through v., 6.2.6 and 6.2.7 are not included in the proposed Title V renewal permit.

The initial startup notification requirements specified in existing Condition 6.2.1 have been satisfied for LNG Vaporizers V009 through V011 and Heated Vent Stack Heater B002. Also, V012 through V014 are not to be built. Therefore, the notification requirements are not included in the proposed Title V renewal permit.

Since LNG Vaporizers V001 through V005 are not subject 40 CFR 60 Subpart Dc, the associate record keeping requirements in existing Condition 6.2.3a. are not included in the proposed Title V renewal permit.

The notification requirements specified in existing Condition 6.2.13 were satisfied on November 13, 2013. Therefore, they are not included in the proposed Title V renewal permit.

Condition 6.1.7 of the proposed Title V renewal permit includes the following definitions of exceedances and excursions and a reporting requirement:

- Paragraph b.i. defines as an exceedance any twelve consecutive month period during which the total amount of natural gas fired in Turbine Generators G003 and G004, combined and as determined in accordance with Condition 6.2.3b., exceeds 519.8 MMscf. This is a violation to the annual natural gas consumption limit in Condition 3.2.1.

- Paragraph b.ii. defines as an exceedance any twelve consecutive month period during which the total amount of natural gas fired in Heated Vent Stack Heater B002, as determined in accordance with Condition 6.2.3d., exceeds 101.5 million cubic feet. This is a violation to the annual natural gas consumption limit in Condition 3.2.4.

- Paragraph c.i. defines as an excursion any 3-hour period during which the average water-to-fuel ratio, measured and recorded in accordance with Condition 5.2.1b., falls below 2.50 gallons water per 1,000 standard cubic foot of natural gas burned in any of LNG Vaporizers V001 through V005. The Permittee shall include a description of the steps taken to resolve this excursion. This is a violation that may indicate noncompliance with the NOx and CO BACT emission limits in Condition 3.2.5.

- Paragraph c.ii. defines as an excursion any three consecutive hourly readings of the primary air valve positions, measured and recorded in accordance with Condition 5.2.1c., that differ by more than 10% of the primary air valve position settings coinciding with the ambient air temperature specified in Table D-1.1 through D-1.5 and with the fuel gas valve position settings specified in Table D-2 under the characterizer axis Y0 to Y10 and fuel gas valve position settings interpolated between each axis point is an excursion. Along with the report of this excursion, the Permittee shall include a description of the steps taken to resolve this excursion. This is a violation that may indicate noncompliance with the NOx and CO BACT emission limits in Condition 3.2.5.

- Paragraph c.iii. defines as an excursion any three consecutive hourly readings of the secondary air valve positions, measured and recorded in accordance with Condition 5.2.1d., that differ by more than 10% of the secondary air valve position settings coinciding with the ambient air temperature specified in Table D-1.1 through D-1.5 and with the fuel gas valve position settings specified in Table D-2 under the characterizer axis Y0 to Y10 and fuel gas valve position settings interpolated between each axis point is an excursion. Along with the report of this excursion, the Permittee shall include a description of the steps taken to resolve this excursion. This is a violation that may indicate noncompliance with the NOx and CO BACT emission limits in Condition 3.2.5.

- Paragraph c.iv. defines as an excursion any failure to perform the inspections or maintenance on V001 through V005 as specified in Condition 5.2.5. This is to ensure proper operation and maintenance of the LNG vaporizers.

- Paragraph c.v. defines as an excursion any three consecutive recordings of the turbine generator compressor discharge pressure, measured and recorded in accordance with Condition 5.2.1h., that fall outside of the range that coincides with the natural gas fuel flow rate as specified in Table D-3. The Permittee shall include a description of the steps taken to resolve this excursion. This requirement applies to each of Turbine Generators G003 and G004 only after the turbine operates in excess of 500 hours during any twelve consecutive month period. This is a violation that may indicate noncompliance with the NOx emission limit in Condition 3.2.8.

- Paragraph c.vi. defines as an excursion any 3-hour period during which the average turbine inlet temperature (T5 temperature), measured and recorded in accordance with Condition 5.2.1i., exceeds 1,200 °F in either G003 or G004. The Permittee shall include a description of the steps taken to resolve this excursion. This requirement only applies after the turbine operates in excess of 500 hours during any twelve consecutive month period. This is a violation that may indicate noncompliance with the NOx emission limit in Condition 3.2.8.

- Paragraph c.vii. defines as an excursion any three-hour period during which the average water-to-fuel ratio of any of LNG Vaporizers V006 through V011, measured and recorded in accordance with Conditions 5.2.1l. and m. and 6.2.2, falls below the minimum water-to-fuel ratio specified in Condition 3.2.9. The Permittee shall include a description of the steps taken to resolve this excursion. This is a violation that may indicate noncompliance with the NOx and CO BACT emission limits in Conditions 3.2.6 and 3.2.7.

- Paragraph c.viii. defines as an excursion any instance that the Permittee does not meet the testing requirements specified in Condition 4.2.1.

- Paragraph d.i. requires that the facility submit records of the twelve-month rolling total hours of operation of each turbine generator for the semiannual reporting period.

Condition 6.2.1 includes the record keeping requirements in existing Condition 6.2.11. The facility must record the hours of operation of each of LNG Vaporizers V006 through V011.

Condition 6.2.2 includes the record keeping requirements in existing Condition 6.2.12. The facility must maintain records of the hourly and three-hour average water-to-fuel ratio, in the units of gpm per MSCFH.

Condition 6.2.3 includes the record keeping requirements in existing Conditions 6.2.3, 6.2.4, and 6.2.10. The facility must follow the requirements in Condition 6.2.3c. to meet the requirements in 40 CFR 60.48c(g)2. The facility must calculate the twelve consecutive month total natural gas consumptions for Turbine Generators G003 and G004, combined, and for Heated Vent Stack Heater B002. These records are used to ensure compliance with the requirements in Conditions 3.2.1 and 3.2.4.

Condition 6.2.4 includes the record keeping and notification requirements in existing Condition 6.2.5. The facility must calculate the twelve consecutive month total hours of operation for each of Turbine Generators G003 and G004. If any twelve month total is greater than 500 hours, the facility must notify the Division of such event.

VII. Specific Requirements

A. Operational Flexibility

None applicable.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

Refer to http://airpermit.dnr.state.ga.us/GATV/default.asp for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

D. Temporary Sources

None applicable.

E. Short-Term Activities

None applicable.

F. Compliance Schedule/Progress Reports

None applicable.

G. Emissions Trading

None applicable.

H. Acid Rain Requirements

None applicable.

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V permit. According to Application No. TV-22556, the facility operates equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

J. Pollution Prevention

None applicable.

K. Specific Conditions

Condition 7.3.1 addresses an alternative operating scenario for the turbine generators (ID Nos. G003 and G004). This condition had specified that these units are only operated as emergency/peak-shaving generators; they are permitted for full-time use.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.