Part 70 Operating Permit

Permit Number: **4922-051-0003-V-05-0** **Effective Date:**

Facility Name: **Southern LNG Company, LLC-Elba Island LNG Terminal**

Facility Address: Elba Island
Savannah, Georgia 31402, Chatham County

Mailing Address: P.O. Box 18066
Macon, Georgia 31209

Parent/Holding Company: Kinder Morgan, Inc.

Facility AIRS Number: 04-13-051-00003

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a Part 70 Permit for:

The operation of a liquefied natural gas (LNG) terminal.

This Permit is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit. Unless modified or revoked, this Permit expires five years after the effective date indicated above.

This Permit may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above, for any misrepresentation made in Title V Application No. TV-22556 signed on April 17, 2014, any other applications upon which this Permit is based, supporting data entered therein or attached thereto, or any subsequent submittal of supporting data, or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **39** pages.

_____
Director
Environmental Protection Division

Table of Contents

PART 1.0 FACILITY DESCRIPTION

1.1 Site Determination

Southern LNG Company, LLC – Elba Island LNG Terminal (AIRS No. 04-13-051-00003, hereinafter "facility") and Elba Liquefaction Terminal (AIRS No. 04-13-051-00263, hereinafter "LNG export terminal") are considered one site with regard to the Title V Program. The companies are located on contiguous property, operate under common control, and have the same first 2-digit SIC code (49). The facility has been operating under Title V Permit No. 4922-051-0003-V-04-0 and Title V Permit Amendment No. 4922-051-0003-V-04-1. The LNG export terminal is currently being proposed by PSD/Title V Application No. TV-22352, and will be operating under a separate PSD/Title V Permit (No. 4922-051-0263-V-01-0). The combined site is major under both Title V and PSD for nitrogen oxides (NOx), carbon monoxide (CO), and total greenhouse gases (Total GHG). The combined site is minor under Title V for volatile organic compounds (VOC), particulate matter ($PM/PM_{10}/PM_{2.5}$), sulfur dioxide (SO_2), and single/combined hazardous air pollutants (HAPs).

1.2 Previous and/or Other Names

No previous names were identified.

1.3 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.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide Emission Caps and Operating Limits

None applicable.

2.2 Facility Wide Federal Rule Standards

None applicable.

2.3 Facility Wide SIP Rule Standards

None applicable.

2.4 Facility Wide Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None applicable.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1 Emission Units

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
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

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
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.

3.2 Equipment Emission Caps and Operating Limits

3.2.1 The Permittee shall not fire any fuel other than natural gas and shall not combust more than 519.8 million standard cubic feet (MMCF) natural gas during any twelve consecutive month period in the turbine generators (ID Nos. G003 and G004), combined.
[391-3-1-.03(2)(c) and 391-3-1-.02(2)(g)2. (subsumed)]

3.2.2 The Permittee shall not fire any fuel other than natural gas in the LNG vaporizers with ID Nos. V001 through V011.
[40 CFR 52.21(j) and 391-3-1-.02(2)(g)2. (subsumed)]

3.2.3 The Permittee shall not fire any fuel other than natural gas in Heated Vent Stack Heater No. 1 (ID No. B001).
[Avoidance of 40 CFR 63 Subpart JJJJJJ – 40 CFR 63.11195(e), 391-3-1-.03(2)(c), and 391-3-1-.02(2)(g)2. (subsumed)]

3.2.4 The Permittee shall not fire any fuel other than natural gas and shall not combust more than 101.5 MMCF natural gas during any twelve consecutive month period in Heated Vent Stack Heater No. 2 (ID No. B002).
[40 CFR 52.21(j), Avoidance of 40 CFR 63 Subpart JJJJJJ – 40 CFR 63.11195(e), and 391-3-1-.02(2)(g)2. (subsumed)]

3.2.5 The Permittee shall not cause, let, suffer, permit, or allow any gases from LNG Vaporizers Nos. 1 through 5 (ID Nos. V001 through V005) which:
[40 CFR 52.21(j)]

a. Contain nitrogen oxides (NOx) emissions in excess of 0.114 pound per million Btu (lb/MMBtu).

b. Contain carbon monoxide (CO) emissions in excess of 0.164 lb/MMBtu.

3.2.6 The Permittee shall not cause, let, suffer, permit, or allow any gases from LNG Vaporizers Nos. 6 through 8 (ID Nos. V006 through V008) which:
[40 CFR 52.21(j)]

a. Contain NOx emissions in excess of 0.08 lb/MMBtu on a 3-hour rolling average.

b. Contain CO emissions in excess of 0.164 lb/MMBtu on a 3-hour rolling average.

3.2.7 The Permittee shall not cause, let, suffer, permit, or allow any gases from LNG Vaporizers Nos. 9 through 11 (ID Nos. V009 through V011) which:
[40 CFR 52.21(j)]

a. Contain NOx in excess of 0.037 lb/MMBtu on a 3-hour rolling average.

b. Contain CO in excess of 0.030 lb/MMBtu on a 3-hour rolling average.

3.2.8 The Permittee shall not cause, let, suffer, permit, or allow any gases from the turbine generators (ID Nos. G003 and G004) which contain NOx in amount equal to or in excess of 0.53 lb/MMBtu heat input.

This condition applies to each turbine generator after each unit operates more than 500 hours during any twelve consecutive month period. Once a turbine generator exceeds 500 hours of operation during any twelve consecutive month period, the above limits (and related monitoring and record keeping requirements) will apply to that unit from that date forward.
[391-3-1-.03(2)(c)]

3.2.9 In order to ensure compliance with the emission limits specified in Conditions 3.2.6 and 3.2.7, the Permittee shall operate LNG Vaporizers Nos. 6 through 11 (ID Nos. V006 through V011) with the minimum water-to-fuel ratios associated with the loading (fuel flow) tiers that are established, in accordance with Condition 4.2.2, in the most recent performance testing. Before the tested minimum water-to-fuel ratios are established, the facility shall comply with the following minimum water-to-fuel ratios.
[391-3-1-.03(2)(c)]

ID No.	Fuel Flow (MSCFH*)	Minimum Water-to-Fuel** Ratio (gpm/MSCFH)***
V006	FF < 67.85	0.0586
	67.85 ≤ FF < 89.87	0.0562
	FF ≥ 89.87	0.0527
V007	FF < 67.83	0.0774
	67.83 ≤ FF < 93.23	0.0602
	FF ≥ 93.23	0.0570
V008	FF < 67.90	0.0694
	67.90 ≤ FF < 88.98	0.0714
	FF ≥ 88.98	0.0628
V009	FF < 69.45	0.153
	69.45 ≤ FF < 91.77	0.116
	FF ≥ 98.00	0.106
V010	FF < 66.35	0.185
	66.35 ≤ FF < 83.73	0.137
	FF ≥ 83.73	0.112
V011	FF < 70.21	0.163
	70.21 ≤ FF < 97.72	0.137
	FF ≥ 97.72	0.104

* MSCFH = Thousand Standard Cubic Feet per Hour
** Water-to-Fuel Ratio = Water Injection Rate / Fuel Flow Rate
*** gpm = Gallon per Minute

3.3 Equipment Federal Rule Standards

3.3.1 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS), 40 CFR 60 Subpart A – "General Provisions," and Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," for the operation of Heated Vent Stack Heater No. 2 (ID No. B002).
[40 CFR 60 Subpart A and Subpart Dc]

3.4 Equipment SIP Rule Standards

3.4.1 The Permittee shall not cause, let, suffer, permit or allow emissions from the turbine generators (ID Nos. G003 and G004), the opacity of which is equal to or greater than forty (40) percent.
[391-3-1-.02(2)(b)1.]

3.4.2 The Permittee shall not cause, let, suffer, permit, or allow any emissions from the LNG vaporizers (ID Nos. V001 through V011) and the heated vent stack heaters (ID Nos. B001 and B002) which:

a. Contain fly ash and/or other particulate matter in amounts equal to or exceeding the rate derived from $P = 0.5(10/R)^{0.5}$ where R equals heat input rate in million BTU per hour and P equals the allowable emission rate in pounds per million BTU. [391-3-1-.02(2)(d)2.(ii)]

b. Exhibit visible emissions, the opacity of which is equal to or greater than 20 percent except for one six minute period per hour of not more than 27 percent opacity. [391-3-1-.02(2)(d)3.]

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

None applicable.

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

4.1.1 The Permittee shall cause to be conducted a performance test at any specified emission unit when so directed by the Environmental Protection Division ("Division"). The test results shall be submitted to the Division within 60 days of the completion of the testing. Any tests shall be performed and conducted using methods and procedures that have been previously specified or approved by the Division.
[391-3-1-.02(6)(b)1(i)]

4.1.2 The Permittee shall provide the Division thirty (30) days (or sixty (60) days for tests required by 40 CFR Part 63) prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.
[391-3-1-.02(3)(a) and 40 CFR 63.7(b)(1)]

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 are as follows:

a. Method 1 shall be used for the determination of sample point locations.

b. Method 2 shall be used for the determination of stack gas flow rate.

c. Method 3 or 3A shall be used for the determination of stack gas molecular weight.

d. Method 3B shall be used for the determination of the correction factor or excess air. Method 3A may be used as an alternative.

e. Method 4 shall be used for the determination of stack moisture.

f. Method 5 shall be used for the determination of particulate matter emissions.

g. Method 7E shall be used for the determination of NOx emissions.

h. Method 9 and the Procedures of Section 1.3 of the above referenced document shall be used for the determination of the opacity of visible emissions.

i. Method 10 shall be used for the determination of CO emissions.

j. Method 19 shall be used for the conversion of PM, CO, and NOx concentrations (i.e., grains/dscf for PM and ppm for gaseous pollutants), as determined using other methods specified in this section, to emission rates (i.e., lb/MMBtu).

k. ASTM Method D1072, D3246, D4468, or D6667 shall be used for the determination of sulfur content of gaseous fuels. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), ASTM Method D 4084, D5504, D6228, or Gas Processors Association Standard 2377 may also be used for the determination of sulfur content of gaseous fuels.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

4.1.4 The Permittee shall submit performance test results to the US EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with any applicable NSPS or NESHAP standards (40 CFR 60 or 40 CFR 63) that contain Electronic Data Reporting Requirements. This Condition is only applicable if required by an applicable standard and for the pollutant(s) subject to said standard.
[391-3-1-.02(8)(a) and 391-3-1-.02(9)(a)]

4.2 Specific Testing Requirements

4.2.1 The Permittee shall comply with the following testing requirements:
[391-3-1-.02(3) and 391-3-1-.02(6)(b)1.(i)]

a. For any of the LNG vaporizers with ID Nos. V006 through V011 that operates more than 72 hours in a calendar quarter, the Permittee shall conduct a performance testing on the LNG vaporizer(s), within 30 days following that calendar quarter, to demonstrate compliance with the NOx and CO emission limits specified in Conditions 3.2.6 and 3.2.7.

b. The above NOx and CO performance tests shall be conducted at three different loadings (the lowest achievable fuel flow rate, the highest achievable fuel flow rate, and the mid-point of the above two rates). The test at each loading shall be comprised of three 30-minutes test runs.

c. No more than eight successive calendar quarters shall elapse without one performance testing, specified in Paragraph a., on each of V006 through V011 unless the vaporizer(s) do not operate at all during such period.

4.2.2 During the NOx and CO performance testing specified in Condition 4.2.1, the Permittee shall re-establish the minimum water-to-fuel ratio (water injection rate divided by fuel flow rate) and the fuel flow rate for each loading tier for that LNG vaporizer, at which the compliance with NOx and CO emission limits specified in Conditions 3.2.6 and 3.2.7 is demonstrated.
[391-3-1-.02(3) and 391-3-1-.02(6)(b)1.(i)]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.1 General Monitoring Requirements

5.1.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1]

5.2 Specific Monitoring Requirements

5.2.1 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. A flow measuring device to continuously measure and record the water injection rate in each of LNG Vaporizers Nos. 1 through 5 (ID No. V001 through V005). Data shall be recorded hourly.

b. A device to measure the water-to-fuel ratio of each of V001 through V005. Data shall be recorded hourly.

c. A device to continuously measure the primary combustion air valve position for each of V001 through V005. Data shall be recorded hourly.

d. A device to continuously measure the secondary combustion air valve position for each of V001 through V005. Data shall be recorded hourly.

e. A device to continuously measure the fuel control valve position for each of V001 through V005. Data shall be recorded hourly.

f. A device to continuously measure ambient air temperature at the facility, in degrees Fahrenheit. Data shall be recorded hourly on each data log recording device for each of V001 through V005.

g. Natural gas consumption meters to continuously measure the quantity of natural gas, in cubic feet, burned in the turbine generators (ID Nos. G003 and G004), combined. Data shall be recorded monthly.

h. A device to continuously measure the compressor discharge pressure, in psig, on each of G003 and G004. Data shall be recorded hourly beginning on the date that the hours of operation for the turbine exceed 500 hours during any twelve consecutive months.

i. A device to continuously measure the turbine inlet temperature (T5 temperature), in degrees Fahrenheit, on each of G003 and G004. Data shall be recorded hourly beginning on the date that the hours of operation for the turbine exceed 500 hours during any twelve consecutive months.

j. A non-resettable hour meter to record the operating hours of each of G003 and G004. Data shall be recorded monthly.

k. A PLC based hour meter to continuously measure and record the cumulative total hours of operation for each of LNG Vaporizers Nos. 6 through 11 (ID Nos. V006 through V011). Data shall be recorded monthly.

l. A flow measuring device to continuously measure and record the water injection rate, in the unit of gallons per minute, for each of V006 through V011. Data shall be recorded hourly.

m. A flow measuring device to continuously measure and record the fuel flow rate, in the unit of thousand cubic feet per hour, for each of V006 through V011. Data shall be recorded hourly.

n. A natural gas consumption meter to continuously measure and record the quantity of natural gas, in cubic feet, burned in Heated Vent Stack Heater No. 2 (ID No. B002). Data shall be recorded monthly.
[40 CFR 60.48c(g)2.]

5.2.2 The Permittee shall conduct inspections and maintenance on each of LNG Vaporizers Nos. 1 through 5 (ID Nos. V001 through V005) according to the schedule provided in Attachment E of this Permit. The Permittee shall maintain a log of such inspections and maintenance, indicating that each required activity was performed and noting any problems found. The log shall be in a form suitable for inspection and/or submittal to the Division.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

PART 6.0 RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.1 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and to the EPA. The records shall be retained for at least five (5) years following the date of entry.
[391-3-1-.02(6)(b)1(i) and 40 CFR 70.6(a)(3)]

6.1.2 In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emissions control equipment for a period of four hours or more which results in excessive emissions.

The Permittee shall submit a written report that shall contain the probable cause of the deviation(s), duration of the deviation(s), and any corrective actions or preventive measures taken.
[391-3-1-.02(6)(b)1(iv), 391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(3)(iii)(B)]

6.1.3 The Permittee shall submit written reports of any failure to meet an applicable emission limitation or standard contained in this permit and/or any failure to comply with or complete a work practice standard or requirement contained in this permit which are not otherwise reported in accordance with Conditions 6.1.4 or 6.1.2. Such failures shall be determined through observation, data from any monitoring protocol, or by any other monitoring which is required by this permit. The reports shall cover each semiannual period ending June 30 and December 31 of each year, shall be postmarked by August 29 and February 28, respectively following each reporting period, and shall contain the probable cause of the failure(s), duration of the failure(s), and any corrective actions or preventive measures taken.
[391-3-1-.03(10)(d)1.(i) and 40 CFR 70.6(a)(3)(iii)(B)]

6.1.4 The Permittee shall submit a written report containing any excess emissions, exceedances, and/or excursions as described in this permit and any monitor malfunctions for each semiannual period ending June 30 and December 31 of each year. All reports shall be postmarked by August 29 and February 28, respectively following each reporting period. In the event that there have not been any excess emissions, exceedances, excursions or malfunctions during a reporting period, the report should so state. Otherwise, the contents of each report shall be as specified by the Division's Procedures for Testing and Monitoring Sources of Air Pollutants and shall contain the following:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)(A)]

a. A summary report of excess emissions, exceedances and excursions, and monitor downtime, in accordance with Section 1.5(c) and (d) of the above referenced document, including any failure to follow required work practice procedures.

b. Total process operating time during each reporting period.

c. The magnitude of all excess emissions, exceedances and excursions computed in accordance with the applicable definitions as determined by the Director, and any conversion factors used, and the date and time of the commencement and completion of each time period of occurrence.

d. Specific identification of each period of such excess emissions, exceedances, and excursions that occur during startups, shutdowns, or malfunctions of the affected facility. Include the nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

e. The date and time identifying each period during which any required monitoring system or device was inoperative (including periods of malfunction) except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

f. Certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

6.1.5 Where applicable, the Permittee shall keep the following records:
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(3)(ii)(A)]

a. The date, place, and time of sampling or measurement;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

f. The operating conditions as existing at the time of sampling or measurement.

6.1.6 The Permittee shall maintain files of all required measurements, including continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems or devices. These files shall be kept in a permanent form suitable for inspection and shall be maintained for a period of at least five (5) years following the date of such measurements, reports, maintenance and records.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6 (a)(3)(ii)(B)]

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(iii)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any twelve consecutive month period during which the total amount of natural gas fired in the turbine generators (ID Nos. G003 and G004), combined and as determined in accordance with Condition 6.2.3b., exceeds 519.8 MMscf.

ii. Any twelve consecutive month period during which the total amount of natural gas fired in Heated Vent Stack Heater No. 2 (ID No. B002), as determined in accordance with Condition 6.2.3d., exceeds 101.5 million cubic feet.

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. 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 Nos. 1 through 5 (ID Nos. V001 through V005). For the purpose of this Condition, each clock hour begins a new 3-hour period. The Permittee shall include a description of the steps taken to resolve this excursion.

ii. Any three consecutive hourly readings (based on clock hour) 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 (Attachment D of this Permit) is an excursion. This requirement applies to each of V001 through V005. Along with the report of this excursion, the Permittee shall include a description of the steps taken to resolve this excursion.

iii. Any three consecutive hourly readings (based on clock hour) 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 (Attachment D of this Permit) is an excursion. This requirement applies to each of V001 through V005. Along with the report of this excursion, the Permittee shall include a description of the steps taken to resolve this excursion.

iv. Any failure to perform the inspections or maintenance on V001 through V005 as specified in Condition 5.2.2.

v. 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 in Attachment D of this Permit. The Permittee shall include a description of the steps taken to resolve this excursion. This requirement applies to each of the turbine generators (ID Nos. G003 and G004) only after the turbine operates in excess of 500 hours during any twelve consecutive month period.

vi. 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. For the purpose of this condition, each clock hour begins a new 3-hour period. 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.

vii. Any three-hour period during which the average water-to-fuel ratio of any of LNG Vaporizers Nos. 6 through 11 (ID Nos. 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.

viii. Any instance that the Permittee does not meet the testing requirements specified in Condition 4.2.1.

d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:

i. Records of the twelve-month rolling total hours of operation of each turbine generator (ID Nos. G003 and G004) for the semiannual reporting period.

6.2 Specific Record Keeping and Reporting Requirements

6.2.1 The Permittee shall, using the data recorded in accordance with Condition 5.2.1k., calculate and maintain records of the number of hours of operation for each of LNG Vaporizers Nos. 6 through 11 (ID Nos. V006 through V011) during each calendar quarter.

6.2.2 The Permittee shall, using the data recorded in accordance with Conditions 5.2.1l. and m., calculate and maintain records of the hourly and three-hour average water-to-fuel ratio, in the units of gpm per MSCFH. For the purpose of this Condition, each clock hour begins a new 3-hour period. This requirement applies to each of V006 through V011.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

6.2.3 The Permittee shall use the natural gas consumption meters required by Conditions 5.2.1g. and n. of the Permit to determine and record the following:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. The Permittee shall record and maintain records of the amounts of natural gas burned in the turbine generators (ID Nos. G003 and G004), combined, during each calendar month.

b. At the end of each calendar month, the Permittee shall use the monthly natural gas consumption data recorded in accordance with Paragraph a. to determine and record the twelve-month rolling total of natural gas consumption rate by G003 and G004, combined, by adding that month's natural gas consumption rate to the previous eleven month totals.

c. The Permittee shall record and maintain records of the amounts of natural gas burned in Heated Vent Stack Heater No. 2 (ID No. B002) during each calendar month.
[40 CFR 60.48c(g)2.]

d. At the end of each calendar month, the Permittee shall use the monthly natural gas consumption data recorded in accordance with Paragraph c. to determine and record the twelve-month rolling total of natural gas consumption rate by B002, by adding that month's natural gas consumption rate to the previous eleven month totals.

6.2.4 The Permittee shall use the hour meters required by Condition 5.2.1j. of the Permit to comply with the following:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. The Permittee shall determine and record the net operating hours for the turbine generators (ID Nos. G003 and G004), each, during every calendar month.

b. At the end of each calendar month, the Permittee shall use the monthly operating hour records, obtained in accordance with Paragraph a., to determine and record the twelve-month rolling total of the operating hours for G003 and G004, each, by adding that month's hours of operation to the previous eleven months.

c. The Permittee shall notify the Division in writing if the twelve month rolling total hours of operation of any turbine generator exceeds 500 hours. This notification shall be postmarked within 14 days from the date that the twelve month rolling total hours of operation exceeded 500 hours. Upon exceeding 500 hours of operation during any twelve consecutive months, the turbine generators are subject to the emission limits of Condition 3.2.8 from that date forward.

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.1 Operational Flexibility

7.1.1 The Permittee may make Section 502(b)(10) changes as defined in 40 CFR 70.2 without requiring a Permit revision, if the changes are not modifications under any provisions of Title I of the Federal Act and the changes do not exceed the emissions allowable under the Permit (whether expressed therein as a rate of emissions or in terms of total emissions). For each such change, the Permittee shall provide the Division and the EPA with written notification as required below in advance of the proposed changes and shall obtain any Permits required under Rules 391-3-1-.03(1) and (2). The Permittee and the Division shall attach each such notice to their copy of this Permit.
[391-3-1-.03(10)(b)5 and 40 CFR 70.4(b)(12)(i)]

a. For each such change, the Permittee's written notification and application for a construction Permit shall be submitted well in advance of any critical date (typically at least 3 months in advance of any commencement of construction, Permit issuance date, etc.) involved in the change, but no less than seven (7) days in advance of such change and shall include a brief description of the change within the Permitted facility, the date on which the change is proposed to occur, any change in emissions, and any Permit term or condition that is no longer applicable as a result of the change.

b. The Permit shield described in Condition 8.16.1 shall not apply to any change made pursuant to this condition.

7.2 Off-Permit Changes

7.2.1 The Permittee may make changes that are not addressed or prohibited by this Permit, other than those described in Condition 7.2.2 below, without a Permit revision, provided the following requirements are met:
[391-3-1-.03(10)(b)6 and 40 CFR 70.4(b)(14)]

a. Each such change shall meet all applicable requirements and shall not violate any existing Permit term or condition.

b. The Permittee must provide contemporaneous written notice to the Division and to the EPA of each such change, except for changes that qualify as insignificant under Rule 391-3-1-.03(10)(g). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the Permit shield in Condition 8.16.1.

d. The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the Permit, and the emissions resulting from those changes.

7.2.2 The Permittee shall not make, without a Permit revision, any changes that are not addressed or prohibited by this Permit, if such changes are subject to any requirements under Title IV of the Federal Act or are modifications under any provision of Title I of the Federal Act. [Rule 391-3-1-.03(10)(b)7 and 40 CFR 70.4(b)(15)]

7.3 Alternative Requirements
[White Paper #2]

7.3.1 The turbine generators (ID Nos. G003 and G004) are currently operated for emergency/peak-shaving use, less than 500 hours per year, but are permitted to operate full-time. If the hours of operation of any turbine powered generator exceeds 500 hours during any twelve month period, that turbine generator becomes subject to the emission limits in Condition 3.2.8, as well as all associated record keeping and reporting in Conditions 5.2.1h. and i. and 6.1.7.
[391-3-1-.02(6)(b)1]

7.4 Insignificant Activities
(see Attachment B for the list of Insignificant Activities in existence at the facility at the time of permit issuance)

7.5 Temporary Sources
[391-3-1-.03(10)(d)5 and 40 CFR 70.6(e)]

None applicable.

7.6 Short-term Activities
(see Form D5 "Short Term Activities" of the Permit application and White Paper #1)

None applicable.

7.7 Compliance Schedule/Progress Reports
[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(4)]

None applicable.

7.8 Emissions Trading
[391-3-1-.03(10)(d)1(ii) and 40 CFR 70.6(a)(10)]

None applicable.

7.9 Acid Rain Requirements

None applicable.

7.10 Prevention of Accidental Releases (Section 112(r) of the 1990 CAAA)
[391-3-1-.02(10)]

7.10.1 When and if the requirements of 40 CFR Part 68 become applicable, the Permittee shall comply with all applicable requirements of 40 CFR Part 68, including the following.

a. The Permittee shall submit a Risk Management Plan (RMP) as provided in 40 CFR 68.150 through 68.185. The RMP shall include a registration that reflects all covered processes.

b. For processes eligible for Program 1, as provided in 40 CFR 68.10, the Permittee shall comply with 7.10.1.a. and the following additional requirements:

i. Analyze the worst-case release scenario for the process(es), as provided in 40 CFR 68.25; document that the nearest public receptor is beyond the distance to a toxic or flammable endpoint defined in 40 CFR 68.22(a); and submit in the RMP the worst-case release scenario as provided in 40 CFR 68.165.
ii. Complete the five-year accident history for the process as provided in 40 CFR 68.42 and submit in the RMP as provided in 40 CFR 68.168
iii. Ensure that response actions have been coordinated with local emergency planning and response agencies
iv. Include a certification in the RMP as specified in 40 CFR 68.12(b)(4)

c. For processes subject to Program 2, as provided in 40 CFR 68.10, the Permittee shall comply with 7.10.1.a., 7.10.1.b. and the following additional requirements:

i. Develop and implement a management system as provided in 40 CFR 68.15
ii. Conduct a hazard assessment as provided in 40 CFR 68.20 through 68.42
iii. Implement the Program 2 prevention steps provided in 40 CFR 68.48 through 68.60 or implement the Program 3 prevention steps provided in 40 CFR 68.65 through 68.87
iv. Develop and implement an emergency response program as provided in 40 CFR 68.90 through 68.95
v. Submit as part of the RMP the data on prevention program elements for Program 2 processes as provided in 40 CFR 68.170

d. For processes subject to Program 3, as provided in 40 CFR 68.10, the Permittee shall comply with 7.10.1.a., 7.10.1.b. and the following additional requirements:

i. Develop and implement a management system as provided in 40 CFR 68.15
ii. Conduct a hazard assessment as provided in 40 CFR 68.20 through 68.42
iii. Implement the prevention requirements of 40 CFR 68.65 through 68.87
iv. Develop and implement an emergency response program as provided in 40 CFR 68.90 through 68.95
v. Submit as part of the RMP the data on prevention program elements for Program 3 as provided in 40 CFR 68.175

e. All reports and notification required by 40 CFR Part 68 must be submitted electronically using RMP*eSubmit (information for establishing an account can be found at www.epa.gov/emergencies/content/rmp/rmp_esubmit.htm). Electronic Signature Agreements should be mailed to:

MAIL

Risk Management Program (RMP) Reporting Center
P.O. Box 10162
Fairfax, VA 22038

COURIER & FEDEX

Risk Management Program (RMP) Reporting Center
CGI Federal
12601 Fair Lakes Circle
Fairfax, VA 22033

Compliance with all requirements of this condition, including the registration and submission of the RMP, shall be included as part of the compliance certification submitted in accordance with Condition 8.14.1.

7.11 Stratospheric Ozone Protection Requirements (Title VI of the CAAA of 1990)

7.11.1 If the Permittee performs any of the activities described below or as otherwise defined in 40 CFR Part 82, the Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliance must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to 40 CFR 82.166.
[Note: “MVAC-like appliance” is defined in 40 CFR 82.152.]

e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

7.11.2 If the Permittee performs a service on motor (fleet) vehicles and if this service involves an ozone-depleting substance (refrigerant) in the MVAC, the Permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include air-tight sealed refrigeration systems used for refrigerated cargo, or air conditioning systems on passenger buses using HCFC-22 refrigerant.

7.12 Revocation of Existing Permits and Amendments

The following Air Quality Permits, Amendments, and 502(b)10 are subsumed by this permit and are hereby revoked:

Air Quality Permit and Amendment Number(s)	Dates of Original Permit or Amendment Issuance
4922-051-0003-V-04-0	October 22, 2012
4922-051-0003-V-04-1	September 12, 2013

7.13 Pollution Prevention

None applicable.

7.14 Specific Conditions

None applicable.

PART 8.0 GENERAL PROVISIONS

8.1 Terms and References

8.1.1 Terms not otherwise defined in the Permit shall have the meaning assigned to such terms in the referenced regulation.

8.1.2 Where more than one condition in this Permit applies to an emission unit and/or the entire facility, each condition shall apply and the most stringent condition shall take precedence. [391-3-1-.02(2)(a)2]

8.2 EPA Authorities

8.2.1 Except as identified as "State-only enforceable" requirements in this Permit, all terms and conditions contained herein shall be enforceable by the EPA and citizens under the Clean Air Act, as amended, 42 U.S.C. 7401, et seq.
[40 CFR 70.6(b)(1)]

8.2.2 Nothing in this Permit shall alter or affect the authority of the EPA to obtain information pursuant to 42 U.S.C. 7414, "Inspections, Monitoring, and Entry."
[40 CFR 70.6(f)(3)(iv)]

8.2.3 Nothing in this Permit shall alter or affect the authority of the EPA to impose emergency orders pursuant to 42 U.S.C. 7603, "Emergency Powers."
[40 CFR 70.6(f)(3)(i)]

8.3 Duty to Comply

8.3.1 The Permittee shall comply with all conditions of this operating Permit. Any Permit noncompliance constitutes a violation of the Federal Clean Air Act and the Georgia Air Quality Act and/or State rules and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application. Any noncompliance with a Permit condition specifically designated as enforceable only by the State constitutes a violation of the Georgia Air Quality Act and/or State rules only and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a Permit renewal application.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(6)(i)]

8.3.2 The Permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of this Permit.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(6)(ii)]

8.3.3 Nothing in this Permit shall alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of Permit issuance.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(f)(3)(ii)]

8.3.4 Issuance of this Permit does not relieve the Permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Director or any other federal, state, or local agency.
[391-3-1-.03(10)(e)1(iv) and 40 CFR 70.7(a)(6)]

8.4 Fee Assessment and Payment

8.4.1 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Fees."
[391-3-1-.03(9)]

8.5 Permit Renewal and Expiration

8.5.1 This Permit shall remain in effect for five (5) years from the effective date. The Permit shall become null and void after the expiration date unless a timely and complete renewal application has been submitted to the Division at least six (6) months, but no more than eighteen (18) months prior to the expiration date of the Permit.
[391-3-1-.03(10)(d)1(i), (e)2, and (e)3(ii) and 40 CFR 70.5(a)(1)(iii)]

8.5.2 Permits being renewed are subject to the same procedural requirements, including those for public participation and affected State and EPA review, that apply to initial Permit issuance.
[391-3-1-.03(10)(e)3(i)]

8.5.3 Notwithstanding the provisions in 8.5.1 above, if the Division has received a timely and complete application for renewal, deemed it administratively complete, and failed to reissue the Permit for reasons other than cause, authorization to operate shall continue beyond the expiration date to the point of Permit modification, reissuance, or revocation.
[391-3-1-.03(10)(e)3(iii)]

8.6 Transfer of Ownership or Operation

8.6.1 This Permit is not transferable by the Permittee. Future owners and operators shall obtain a new Permit from the Director. The new Permit may be processed as an administrative amendment if no other change in this Permit is necessary, and provided that a written agreement containing a specific date for transfer of Permit responsibility coverage and liability between the current and new Permittee has been submitted to the Division at least thirty (30) days in advance of the transfer.
[391-3-1-.03(4)]

8.7 Property Rights

8.7.1 This Permit shall not convey property rights of any sort, or any exclusive privileges.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(6)(iv)]

8.8 Submissions

8.8.1 Reports, test data, monitoring data, notifications, annual certifications, and requests for revision and renewal shall be submitted to:

Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch
Atlanta Tradeport, Suite 120
4244 International Parkway
Atlanta, Georgia 30354-3908

8.8.2 Any records, compliance certifications, and monitoring data required by the provisions in this Permit to be submitted to the EPA shall be sent to:

Air and EPCRA Enforcement Branch – U. S. EPA Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

8.8.3 Any application form, report, or compliance certification submitted pursuant to this Permit shall contain a certification by a responsible official of its truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
[391-3-1-.03(10)(c)2, 40 CFR 70.5(d) and 40 CFR 70.6(c)(1)]

8.8.4 Unless otherwise specified, all submissions under this permit shall be submitted to the Division only.

8.9 Duty to Provide Information

8.9.1 The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the Permit application, shall promptly submit such supplementary facts or corrected information to the Division.
[391-3-1-.03(10)(c)5]

8.9.2 The Permittee shall furnish to the Division, in writing, information that the Division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the Permit, or to determine compliance with the Permit. Upon request, the Permittee shall also furnish to the Division copies of records that the Permittee is required to keep by this Permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the EPA, if necessary, along with a claim of confidentiality.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(6)(v)]

8.10 Modifications

8.10.1 Prior to any source commencing a modification as defined in 391-3-1-.01(pp) that may result in air pollution and not exempted by 391-3-1-.03(6), the Permittee shall submit a Permit application to the Division. The application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. Such application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity of the plant before and after the change, and the anticipated completion date of the change. The application shall be in the form of a Georgia air quality Permit application to construct or modify (otherwise known as a SIP application) and shall be submitted on forms supplied by the Division, unless otherwise notified by the Division.
[391-3-1-.03(1) through (8)]

8.11 Permit Revision, Revocation, Reopening and Termination

8.11.1 This Permit may be revised, revoked, reopened and reissued, or terminated for cause by the Director. The Permit will be reopened for cause and revised accordingly under the following circumstances:
[391-3-1-.03(10)(d)1(i)]

a. If additional applicable requirements become applicable to the source and the remaining Permit term is three (3) or more years. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if the effective date of the requirement is later than the date on which the Permit is due to expire, unless the original permit or any of its terms and conditions has been extended under Condition 8.5.3;
[391-3-1-.03(10)(e)6(i)(I)]

b. If any additional applicable requirements of the Acid Rain Program become applicable to the source;
[391-3-1-.03(10)(e)6(i)(II)] (Acid Rain sources only)

c. The Director determines that the Permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Permit; or
[391-3-1-.03(10)(e)6(i)(III) and 40 CFR 70.7(f)(1)(iii)]

d. The Director determines that the Permit must be revised or revoked to assure compliance with the applicable requirements.
[391-3-1-.03(10)(e)6(i)(IV) and 40 CFR 70.7(f)(1)(iv)]

8.11.2 Proceedings to reopen and reissue a Permit shall follow the same procedures as applicable to initial Permit issuance and shall affect only those parts of the Permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable.
[391-3-1-.03(10)(e)6(ii)]

8.11.3 Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Director at least thirty (30) days in advance of the date the Permit is to be reopened, except that the Director may provide a shorter time period in the case of an emergency.
[391-3-1-.03(10)(e)6(iii)]

8.11.4 All Permit conditions remain in effect until such time as the Director takes final action. The filing of a request by the Permittee for any Permit revision, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance, shall not stay any Permit condition.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(6)(iii)]

8.11.5 A Permit revision shall not be required for changes that are explicitly authorized by the conditions of this Permit.

8.11.6 A Permit revision shall not be required for changes that are part of an approved economic incentive, marketable Permit, emission trading, or other similar program or process for change which is specifically provided for in this Permit.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(8)]

8.12 Severability

8.12.1 Any condition or portion of this Permit which is challenged, becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this Permit.
[391-3-1-.03(10)(d)1(i) and 40 CFR 70.6(a)(5)]

8.13 Excess Emissions Due to an Emergency

8.13.1 An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the Permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
[391-3-1-.03(10)(d)7 and 40 CFR 70.6(g)(1)]

8.13.2 An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the Permittee demonstrates, through properly signed contemporaneous operating logs or other relevant evidence, that:
[391-3-1-.03(10)(d)7 and 40 CFR 70.6(g)(2) and (3)]

a. An emergency occurred and the Permittee can identify the cause(s) of the emergency;

b. The Permitted facility was at the time of the emergency being properly operated;

c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in the Permit; and

d. The Permittee promptly notified the Division and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

8.13.3 In an enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency shall have the burden of proof.
[391-3-1-.03(10)(d)7 and 40 CFR 70.6(g)(4)]

8.13.4 The emergency conditions listed above are in addition to any emergency or upset provisions contained in any applicable requirement.
[391-3-1-.03(10)(d)7 and 40 CFR 70.6(g)(5)]

8.14 Compliance Requirements

8.14.1 Compliance Certification

The Permittee shall provide written certification to the Division and to the EPA, at least annually, of compliance with the conditions of this Permit. The annual written certification shall be postmarked no later than February 28 of each year and shall be submitted to the Division and to the EPA. The certification shall include, but not be limited to, the following elements:
[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(5)]

a. The identification of each term or condition of the Permit that is the basis of the certification;

b. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent, based on the method or means designated in paragraph c below. The certification shall identify each deviation and take it into account in the compliance certification. The certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred;

c. The identification of the method(s) or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;

d. Any other information that must be included to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information; and

e. Any additional requirements specified by the Division.

8.14.2 Inspection and Entry

a. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of the Division to perform the following:
[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(2)]

i. Enter upon the Permittee's premises where a Part 70 source is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this Permit;
ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this Permit; and
iv. Sample or monitor any substances or parameters at any location during operating hours for the purpose of assuring Permit compliance or compliance with applicable requirements as authorized by the Georgia Air Quality Act.

b. No person shall obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for Permit revocation and assessment of civil penalties.
[391-3-1-.07 and 40 CFR 70.11(a)(3)(i)]

8.14.3 Schedule of Compliance

a. For applicable requirements with which the Permittee is in compliance, the Permittee shall continue to comply with those requirements.
[391-3-1-.03(10)(c)2 and 40 CFR 70.5(c)(8)(iii)(A)]

b. For applicable requirements that become effective during the Permit term, the Permittee shall meet such requirements on a timely basis unless a more detailed schedule is expressly required by the applicable requirement.
[391-3-1-.03(10)(c)2 and 40 CFR 70.5(c)(8)(iii)(B)]

c. Any schedule of compliance for applicable requirements with which the source is not in compliance at the time of Permit issuance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based.
[391-3-1-.03(10)(c)2 and 40 CFR 70.5(c)(8)(iii)(C)]

8.14.4 Excess Emissions

a. Excess emissions resulting from startup, shutdown, or malfunction of any source which occur though ordinary diligence is employed shall be allowed provided that:
[391-3-1-.02(2)(a)7(i)]

i. The best operational practices to minimize emissions are adhered to;

ii. All associated air pollution control equipment is operated in a manner consistent with good air pollution control practice for minimizing emissions; and

iii. The duration of excess emissions is minimized.

b. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction are prohibited and are violations of Chapter 391-3-1 of the Georgia Rules for Air Quality Control.
[391-3-1-.02(2)(a)7(ii)]

c. The provisions of this condition and Georgia Rule 391-3-1-.02(2)(a)7 shall apply only to those sources which are not subject to any requirement under Georgia Rule 391-3-1-.02(8) – New Source Performance Standards or any requirement of 40 CFR, Part 60, as amended concerning New Source Performance Standards.
[391-3-1-.02(2)(a)7(iii)]

8.15 Circumvention

State Only Enforceable Condition.

8.15.1 The Permittee shall not build, erect, install, or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of the pollutants in the gases discharged into the atmosphere.
[391-3-1-.03(2)(c)]

8.16 Permit Shield

8.16.1 Compliance with the terms of this Permit shall be deemed compliance with all applicable requirements as of the date of Permit issuance provided that all applicable requirements are included and specifically identified in the Permit.
[391-3-1-.03(10)(d)6]

8.16.2 Any Permit condition identified as “State only enforceable” does not have a Permit shield.

8.17 Operational Practices

8.17.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate the source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on any information available to the Division that may include, but is not limited to, monitoring results, observations of the opacity or other characteristics of emissions, review of operating and maintenance procedures or records, and inspection or surveillance of the source.
[391-3-1-.02(2)(a)10]

State Only Enforceable Condition.

8.17.2 No person owning, leasing, or controlling, the operation of any air contaminant sources shall willfully, negligently or through failure to provide necessary equipment or facilities or to take necessary precautions, cause, permit, or allow the emission from said air contamination source or sources, of such quantities of air contaminants as will cause, or tend to cause, by themselves, or in conjunction with other air contaminants, a condition of air pollution in quantities or characteristics or of a duration which is injurious or which unreasonably interferes with the enjoyment of life or use of property in such area of the State as is affected thereby. Complying with Georgia's Rules for Air Quality Control Chapter 391-3-1 and Conditions in this Permit, shall in no way exempt a person from this provision.
[391-3-1-.02(2)(a)1]

8.18 Visible Emissions

8.18.1 Except as may be provided in other provisions of this Permit, the Permittee shall not cause, let, suffer, permit or allow emissions from any air contaminant source the opacity of which is equal to or greater than forty (40) percent.
[391-3-1-.02(2)(b)1]

8.19 Fuel-burning Equipment

8.19.1 The Permittee shall not cause, let, suffer, permit, or allow the emission of fly ash and/or other particulate matter from any fuel-burning equipment with rated heat input capacity of less than 10 million Btu per hour, in operation or under construction on or before January 1, 1972 in amounts equal to or exceeding 0.7 pounds per million BTU heat input.
[391-3-1-.02(2)(d)]

8.19.2 The Permittee shall not cause, let, suffer, permit, or allow the emission of fly ash and/or other particulate matter from any fuel-burning equipment with rated heat input capacity of less than 10 million Btu per hour, constructed after January 1, 1972 in amounts equal to or exceeding 0.5 pounds per million BTU heat input.
[391-3-1-.02(2)(d)]

8.19.3 The Permittee shall not cause, let, suffer, permit, or allow the emission from any fuel-burning equipment constructed or extensively modified after January 1, 1972, visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity.
[391-3-1-.02(2)(d)]

8.20 Sulfur Dioxide

8.20.1 Except as may be specified in other provisions of this Permit, the Permittee shall not burn fuel containing more than 2.5 percent sulfur, by weight, in any fuel burning source that has a heat input capacity below 100 million Btu's per hour.
[391-3-1-.02(2)(g)]

8.21 Particulate Emissions

8.21.1 Except as may be specified in other provisions of this Permit, the Permittee shall not cause, let, permit, suffer, or allow the rate of emission from any source, particulate matter in total quantities equal to or exceeding the allowable rates shown below. Equipment in operation, or under construction contract, on or before July 2, 1968, shall be considered existing equipment. All other equipment put in operation or extensively altered after said date is to be considered new equipment.
[391-3-1-.02(2)(e)]

a. The following equations shall be used to calculate the allowable rates of emission from new equipment:

$E = 4.1P^{0.67}$; for process input weight rate up to and including 30 tons per hour.
$E = 55P^{0.11} - 40$; for process input weight rate above 30 tons per hour.

b. The following equation shall be used to calculate the allowable rates of emission from existing equipment:

$E = 4.1P^{0.67}$

In the above equations, E = emission rate in pounds per hour, and
P = process input weight rate in tons per hour.

8.22 Fugitive Dust
[391-3-1-.02(2)(n)]

8.22.1 Except as may be specified in other provisions of this Permit, the Permittee shall take all reasonable precautions to prevent dust from any operation, process, handling, transportation or storage facility from becoming airborne. Reasonable precautions that could be taken to prevent dust from becoming airborne include, but are not limited to, the following:

a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;

d. Covering, at all times when in motion, open bodied trucks transporting materials likely to give rise to airborne dusts; and

e. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

8.22.2 The opacity from any fugitive dust source shall not equal or exceed 20 percent.

8.23 Solvent Metal Cleaning

8.23.1 Except as may be specified in other provisions of this Permit, the Permittee shall not cause, suffer, allow, or permit the operation of a cold cleaner degreaser subject to the requirements of Georgia Rule 391-3-1-.02(2)(ff) "Solvent Metal Cleaning" unless the following requirements for control of emissions of the volatile organic compounds are satisfied: [391-3-1-.02(2)(ff)1]

a. The degreaser shall be equipped with a cover to prevent escape of VOC during periods of non-use,

b. The degreaser shall be equipped with a device to drain cleaned parts before removal from the unit,

c. If the solvent volatility is 0.60 psi or greater measured at 100 ºF, or if the solvent is heated above 120 ºF, then one of the following control devices must be used:

i. The degreaser shall be equipped with a freeboard that gives a freeboard ratio of 0.7 or greater, or

ii. The degreaser shall be equipped with a water cover (solvent must be insoluble in and heavier than water), or

iii. The degreaser shall be equipped with a system of equivalent control, including but not limited to, a refrigerated chiller or carbon adsorption system.

d. Any solvent spray utilized by the degreaser must be in the form of a solid, fluid stream (not a fine, atomized or shower type spray) and at a pressure which will not cause excessive splashing, and

e. All waste solvent from the degreaser shall be stored in covered containers and shall not be disposed of by such a method as to allow excessive evaporation into the atmosphere.

8.24 Incinerators

8.24.1 Except as specified in the section dealing with conical burners, no person shall cause, let, suffer, permit, or allow the emissions of fly ash and/or other particulate matter from any incinerator subject to the requirements of Georgia Rule 391-3-1-.02(2)(c) "Incinerators", in amounts equal to or exceeding the following:
[391-3-1-.02(2)(c)1-4]

a. Units with charging rates of 500 pounds per hour or less of combustible waste, including water, shall not emit fly ash and/or particulate matter in quantities exceeding 1.0 pound per hour.

b. Units with charging rates in excess of 500 pounds per hour of combustible waste, including water, shall not emit fly ash and/or particulate matter in excess of 0.20 pounds per 100 pounds of charge.

8.24.2 No person shall cause, let, suffer, permit, or allow from any incinerator subject to the requirements of Georgia Rule 391-3-1-.02(2)(c) "Incinerators", visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity.

8.24.3 No person shall cause or allow particles to be emitted from an incinerator subject to the requirements of Georgia Rule 391-3-1-.02(2)(c) "Incinerators" which are individually large enough to be visible to the unaided eye.

8.24.4 No person shall operate an existing incinerator subject to the requirements of Georgia Rule 391-3-1-.02(2)(c) "Incinerators" unless:

a. It is a multiple chamber incinerator;

b. It is equipped with an auxiliary burner in the primary chamber for the purpose of creating a pre-ignition temperature of 800^{o}F; and

c. It has a secondary burner to control smoke and/or odors and maintain a temperature of at least 1500^{o}F in the secondary chamber.

8.25 Volatile Organic Liquid Handling and Storage

8.25.1 The Permittee shall ensure that each storage tank subject to the requirements of Georgia Rule 391-3-1-.02(2)(vv) "Volatile Organic Liquid Handling and Storage" is equipped with submerged fill pipes. For the purposes of this condition and the permit, a submerged fill pipe is defined as any fill pipe with a discharge opening which is within six inches of the tank bottom.
[391-3-1-.02(2)(vv)(1)]

8.26 Use of Any Credible Evidence or Information

8.26.1 Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit, for the purpose of submission of compliance certifications or establishing whether or not a person has violated or is in violation of any emissions limitation or standard, nothing in this permit or any Emission Limitation or Standard to which it pertains, shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.
[391-3-1-.02(3)(a)]

8.27 Internal Combustion Engines

8.27.1 For diesel-fired internal combustion engine(s) manufactured after April 1, 2006 or modified/reconstructed after July 11, 2005, the Permittee shall comply with all applicable provisions of New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart IIII – "Standard of Performance for Stationary Compression Ignition Internal Combustion Engines." Such requirements include but are not limited to:
[40 CFR 60.4200, 391-3-1-.02(8)(b)77]

a. Equip all emergency generator engines with non-resettable hour meters in accordance with Subpart IIII.

b. Purchase only diesel fuel with a maximum sulfur content of 15 ppm unless otherwise specified by the Division in accordance with Subpart IIII.

c. Conduct engine maintenance prescribed by the engine manufacturer in accordance with Subpart IIII.

d. Limit non-emergency operation of each emergency generator to 100 hours per year in accordance with Subpart IIII. Non-emergency operation other than maintenance and readiness testing is prohibited for engines qualifying as "emergency generators" for the purposes of Ga Rule 391-3-1-.02(2)(mmm).

e. Maintain any records in accordance with Subpart IIII

f. Maintain a list of engines subject to 40 CFR 60 Subpart IIII, including the date of manufacture.[391-3-1-.02(6)(b)]

8.27.2 The Permittee shall comply with all applicable provisions of New Source Performance Standards (NSPS) as found in 40 CFR 60 Subpart A - "General Provisions" and 40 CFR 60 Subpart JJJJ - "Standard of Performance for Stationary Spark Ignition Internal Combustion Engines," for spark ignition internal combustion engines(s) (gasoline, natural gas, liquefied petroleum gas or propane-fired) manufactured after July 1, 2007 or modified/reconstructed after June 12, 2006.
[40 CFR 60.4230, 391-3-1-.02(8)(b)79]

8.27.3 The Permittee shall comply with all applicable provisions of National Emission Standards for Hazardous Air Pollutants (NESHAP) as found in 40 CFR 63 Subpart A - "General Provisions" and 40 CFR 63 Subpart ZZZZ - "National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

For diesel-fired emergency generator engines defined as "existing" in 40 CFR 63 Subpart ZZZZ (constructed prior to June 12, 2006 for area sources of HAP, constructed prior to June 12, 2006 for <500hp engines at major sources, and constructed prior to December 19, 2002 for >500hp engines at major sources of HAP), such requirements include but are not limited to:
[40 CFR 63.6580, 391-3-1-.02(9)(b)118]

a. Equip all emergency generator engines with non-resettable hour meters in accordance with Subpart ZZZZ.

b. Purchase only diesel fuel with a maximum sulfur content of 15 ppm unless otherwise specified by the Division in accordance with Subpart ZZZZ.

c. Conduct the following in accordance with Subpart ZZZZ.

   i. Change oil and filter every 500 hours of operation or annually, whichever comes first

   ii. Inspect air cleaner every 1000 hours of operation or annually, whichever comes first and replace as necessary

   iii. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first and replace as necessary.

d. Limit non-emergency operation of each emergency generator to 100 hours per year in accordance with Subpart ZZZZ. Non-emergency operation other than maintenance and readiness testing is prohibited for engines qualifying as "emergency generators" for the purposes of Ga Rule 391-3-1-.02(2)(mmm).

e. Maintain any records in accordance with Subpart ZZZZ

f. Maintain a list of engines subject to 40 CFR 63 Subpart ZZZZ, including the date of manufacture.[391-3-1-.02(6)(b)]

8.28 Boilers and Process Heaters

8.28.1 If the facility/site is an area source of Hazardous Air Pollutants, the Permittee shall comply with all applicable provisions of National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart A - "General Provisions" and 40 CFR 63 Subpart JJJJJJ - "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers."
[40 CFR 63.11193]

8.28.2 If the facility/site is a major source of Hazardous Air Pollutants, the Permittee shall comply with all applicable provisions of National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart A - "General Provisions" and 40 CFR 63 Subpart DDDDD - "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters."
[40 CFR 63.7480]

Attachments

A. List of Standard Abbreviations and List of Permit Specific Abbreviations
B. Insignificant Activities Checklist, Insignificant Activities Based on Emission Levels and Generic Emission Groups
C. List of References

ATTACHMENT A

List Of Standard Abbreviations

AIRS	Aerometric Information Retrieval System
APCD	Air Pollution Control Device
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments
CEMS	Continuous Emission Monitoring System
CERMS	Continuous Emission Rate Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System(s)
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf/dscm	Dry Standard Cubic Foot / Dry Standard Cubic Meter
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
gr	Grain(s)
GPM (gpm)	Gallons per minute
H_2O (H2O)	Water
HAP	Hazardous Air Pollutant
HCFC	Hydro-chloro-fluorocarbon
MACT	Maximum Achievable Control Technology
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per hour
MVAC	Motor Vehicle Air Conditioner
MW	Megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x (NOx)	Nitrogen Oxides
NSPS	New Source Performance Standards
OCGA	Official Code of Georgia Annotated

PM	Particulate Matter
PM_{10} (PM10)	Particulate Matter less than 10 micrometers in diameter
PPM (ppm)	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2 (SO2)	Sulfur Dioxide
USC	United States Code
VE	Visible Emissions
VOC	Volatile Organic Compound

List of Permit Specific Abbreviations

ATTACHMENT B

NOTE: Attachment B contains information regarding insignificant emission units/activities and groups of generic emission units/activities in existence at the facility at the time of Permit issuance. Future modifications or additions of insignificant emission units/activities and equipment that are part of generic emissions groups may not necessarily cause this attachment to be updated.

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Mobile Sources	1. Cleaning and sweeping of streets and paved surfaces	1
Combustion Equipment	1. Fire fighting and similar safety equipment used to train fire fighters or other emergency personnel.	2
	2. Small incinerators that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act and are not considered a "designated facility" as specified in 40 CFR 60.32e of the Federal emissions guidelines for Hospital/Medical/Infectious Waste Incinerators, that are operating as follows: i) Less than 8 million BTU/hr heat input, firing types 0, 1, 2, and/or 3 waste.	
	ii) Less than 8 million BTU/hr heat input with no more than 10% pathological (type 4) waste by weight combined with types 0, 1, 2, and/or 3 waste.	
	iii) Less than 4 million BTU/hr heat input firing type 4 waste. (Refer to 391-3-1-.03(10)(g)2.(ii) for descriptions of waste types)	
	3. Open burning in compliance with Georgia Rule 391-3-1-.02 (5).	1
	4. Stationary engines burning: i) Natural gas, LPG, gasoline, dual fuel, or diesel fuel which are used exclusively as emergency generators shall not exceed 500 hours per year or 200 hours per year if subject to Georgia Rule 391-3-1-.02(2)(mmm).7	3
	ii) Natural gas, LPG, and/or diesel fueled generators used for emergency, peaking, and/or standby power generation, where the combined peaking and standby power generation do not exceed 200 hours per year.	
	iii) Natural gas, LPG, and/or diesel fuel used for other purposes, provided that the output of each engine does not exceed 400 horsepower and that no individual engine operates for more than 2,000 hours per year.	
	iv) Gasoline used for other purposes, provided that the output of each engine does not exceed 100 horsepower and that no individual engine operates for more than 500 hours per year.	1
Trade Operations	1. Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities whose emissions of hazardous air pollutants (HAPs) fall below 1,000 pounds per year.	1
Maintenance, Cleaning, and Housekeeping	1. Blast-cleaning equipment using a suspension of abrasive in water and any exhaust system (or collector) serving them exclusively.	
	2. Portable blast-cleaning equipment.	
	3. Non-Perchloroethylene Dry-cleaning equipment with a capacity of 100 pounds per hour or less of clothes.	
	4. Cold cleaners having an air/vapor interface of not more than 10 square feet and that do not use a halogenated solvent.	1
	5. Non-routine clean out of tanks and equipment for the purposes of worker entry or in preparation for maintenance or decommissioning.	
	6. Devices used exclusively for cleaning metal parts or surfaces by burning off residual amounts of paint, varnish, or other foreign material, provided that such devices are equipped with afterburners.	
	7. Cleaning operations: Alkaline phosphate cleaners and associated cleaners and burners.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Laboratories and Testing	1. Laboratory fume hoods and vents associated with bench-scale laboratory equipment used for physical or chemical analysis.	
	2. Research and development facilities, quality control testing facilities and/or small pilot projects, where combined daily emissions from all operations are not individually major or are support facilities not making significant contributions to the product of a collocated major manufacturing facility.	
Pollution Control	1. Sanitary waste water collection and treatment systems, except incineration equipment or equipment subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	2. On site soil or groundwater decontamination units that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	3. Bioremediation operations units that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	4. Landfills that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
Industrial Operations	1. Concrete block and brick plants, concrete products plants, and ready mix concrete plants producing less than 125,000 tons per year.	
	2. Any of the following processes or process equipment which are electrically heated or which fire natural gas, LPG or distillate fuel oil at a maximum total heat input rate of not more than 5 million BTU's per hour: i) Furnaces for heat treating glass or metals, the use of which do not involve molten materials or oil-coated parts.	2
	ii) Porcelain enameling furnaces or porcelain enameling drying ovens.	
	iii) Kilns for firing ceramic ware.	
	iv) Crucible furnaces, pot furnaces, or induction melting and holding furnaces with a capacity of 1,000 pounds or less each, in which sweating or distilling is not conducted and in which fluxing is not conducted utilizing free chlorine, chloride or fluoride derivatives, or ammonium compounds.	
	v) Bakery ovens and confection cookers.	
	vi) Feed mill ovens.	
	vii) Surface coating drying ovens	
	3. Carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, shot blasting, shot peening, or polishing; ceramics, glass, leather, metals, plastics, rubber, concrete, paper stock or wood, also including roll grinding and ground wood pulping stone sharpening, provided that: i) Activity is performed indoors; & ii) No significant fugitive particulate emissions enter the environment; & iii) No visible emissions enter the outdoor atmosphere.	1
	4. Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy (e.g., blueprint activity, photographic developing and microfiche).	
	5. Grain, food, or mineral extrusion processes	
	6. Equipment used exclusively for sintering of glass or metals, but not including equipment used for sintering metal-bearing ores, metal scale, clay, fly ash, or metal compounds.	
	7. Equipment for the mining and screening of uncrushed native sand and gravel.	
	8. Ozonization process or process equipment.	
	9. Electrostatic powder coating booths with an appropriately designed and operated particulate control system.	
	10. Activities involving the application of hot melt adhesives where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
	11. Equipment used exclusively for the mixing and blending water-based adhesives and coatings at ambient temperatures.	
	12. Equipment used for compression, molding and injection of plastics where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	
	13. Ultraviolet curing processes where VOC emissions are less than 5 tons per year and HAP emissions are less than 1,000 pounds per year.	

INSIGNIFICANT ACTIVITIES CHECKLIST

Category	Description of Insignificant Activity/Unit	Quantity
Storage Tanks and Equipment	1. All petroleum liquid storage tanks storing a liquid with a true vapor pressure of equal to or less than 0.50 psia as stored.	
	2. All petroleum liquid storage tanks with a capacity of less than 40,000 gallons storing a liquid with a true vapor pressure of equal to or less than 2.0 psia as stored that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	3. All petroleum liquid storage tanks with a capacity of less than 10,000 gallons storing a petroleum liquid.	3
	4. All pressurized vessels designed to operate in excess of 30 psig storing petroleum fuels that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	5. Gasoline storage and handling equipment at loading facilities handling less than 20,000 gallons per day or at vehicle dispensing facilities that are not subject to any standard, limitation or other requirement under Section 111 or 112 (excluding 112(r)) of the Federal Act.	
	6. Portable drums, barrels, and totes provided that the volume of each container does not exceed 550 gallons.	50
	7. All chemical storage tanks used to store a chemical with a true vapor pressure of less than or equal to 10 millimeters of mercury (0.19 psia).	

INSIGNIFICANT ACTIVITIES BASED ON EMISSION LEVELS

Description of Emission Units / Activities	Quantity
Ship Unloading Operations (L001)	1
Lube Oil Storage Tanks (T001, T002, and T003)	3
LNG Storage Tanks (D-1, D-2, D-3, D-4, D-5 and D-6)	5
Fuel Gas Heater No. 1 (H001)	1
Fuel Gas Heater No. 2 (H002)	1

ATTACHMENT B (continued)

GENERIC EMISSION GROUPS

Emission units/activities appearing in the following table are subject only to one or more of Georgia Rules 391-3-1-.02 (2) (b), (e) &/or (n). Potential emissions of particulate matter, from these sources based on TSP, are less than 25 tons per year per process line or unit in each group. Any emissions unit subject to a NESHAP, NSPS, or any specific Air Quality Permit Condition(s) are not included in this table.

Description of Emissions Units / Activities	Number of Units (if appropriate)	Applicable Rules		
		Opacity Rule (b)	PM from Mfg Process Rule (e)	Fugitive Dust Rule (n)
N/A				

The following table includes groups of fuel burning equipment subject only to Georgia Rules 391-3-1-.02 (2) (b) & (d).Any emissions unit subject to a NESHAP, NSPS, or any specific Air Quality Permit Condition(s) are not included in this table.

Description of Fuel Burning Equipment	Number of Units
Fuel burning equipment with a rated heat input capacity of less than 10 million BTU/hr burning only natural gas and/or LPG.	0
Fuel burning equipment with a rated heat input capacity of less than 5 million BTU/hr, burning only distillate fuel oil, natural gas and/or LPG.	0
Any fuel burning equipment with a rated heat input capacity of 1 million BTU/hr or less.	0

ATTACHMENT C

LIST OF REFERENCES

1. The Georgia Rules for Air Quality Control Chapter 391-3-1. All Rules cited herein which begin with 391-3-1 are State Air Quality Rules.

2. Title 40 of the Code of Federal Regulations; specifically 40 CFR Parts 50, 51, 52, 60, 61, 63, 64, 68, 70, 72, 73, 75, 76 and 82. All rules cited with these parts are Federal Air Quality Rules.

3. ***Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Testing and Monitoring Sources of Air Pollutants.***

4. ***Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, Procedures for Calculating Air Permit Fees***.

5. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources. This information may be obtained from EPA's TTN web site at *www.epa.gov/ttn/chief/ap42/index.html*.

6. The latest properly functioning version of EPA's **TANKS** emission estimation software. The software may be obtained from EPA's TTN web site at *www.epa.gov/ttn/chief/software/tanks/index.html*.

7. The Clean Air Act (42 U.S.C. 7401 et seq).

8. White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995 (White Paper #1).

9. White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program, March 5, 1996 (White Paper #2).

ATTACHMENT D

Control Valve Characterizer Setting and Operating Parameter Curves

MODEL SUB-X 135 LNG Vaporizer ID Nos. V001 through V005

Table D-1.1
Control Valve Characterizer Setting and Operating Parameter Curves
Primary and Secondary Air Valve Position as a Function of Fuel Valve Characterizer and Ambient Air Temperature
Vaporizer Unit F1 (V001)

	"A" TIC Characterizer #1											"B" TIC Characterizer #1										
	Vaporizer F-1 Primary Air											Vaporizer F-1 Secondary Air										
CHAR Axis	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Temperature																						
0	12.5	17.8	21.0	23.0	25.5	28.0	30.0	32.0	38.0	50.0	65.0	75.0	60.0	58.0	57.0	54.5	50.5	45.5	40.0	40.0	40.0	40.0
2	12.5	17.8	21.0	23.0	25.8	28.2	30.2	32.6	40.4	53.0	65.0	75.0	60.0	58.0	57.0	54.1	50.0	45.0	40.0	40.0	40.0	40.0
4	12.5	17.8	21.0	23.3	25.8	28.4	30.4	33.2	41.6	54.5	65.0	75.0	60.0	58.0	56.8	54.1	49.5	44.4	40.0	40.0	40.0	40.0
6	12.5	17.8	21.2	23.3	26.0	28.4	30.6	34.4	42.8	57.5	65.0	75.0	60.0	57.9	56.8	53.7	49.5	43.9	40.0	40.0	40.0	40.0
8	12.5	17.8	21.2	23.5	26.3	28.6	30.8	35.0	45.2	59.0	65.0	75.0	60.0	57.9	56.5	53.3	49.0	43.3	40.0	40.0	40.0	40.0
10	12.5	17.8	21.2	23.5	26.3	28.8	31.0	35.6	46.4	62.0	65.0	75.0	60.0	57.9	56.5	53.3	48.5	42.8	40.0	40.0	40.0	40.0
12	12.5	18.1	21.4	23.8	26.5	29.0	31.2	36.2	47.6	63.5	65.0	75.0	59.8	57.8	56.3	52.9	48.0	42.2	40.0	40.0	40.0	40.0
14	12.5	18.1	21.4	23.8	26.5	29.2	31.4	36.8	48.8	65.0	65.0	75.0	59.8	57.8	56.3	52.9	47.5	41.7	40.0	40.0	40.0	40.0
16	12.5	18.1	21.4	24.0	26.8	29.4	31.6	37.4	51.5	65.0	65.0	75.0	59.8	57.8	56.0	52.5	47.0	41.1	40.0	40.0	40.0	40.0
18	12.5	18.1	21.6	24.0	27.0	29.4	31.8	39.2	53.0	65.0	65.0	75.0	59.8	57.7	56.0	52.1	47.0	40.6	40.0	40.0	40.0	40.0
20	12.5	18.1	21.6	24.3	27.0	29.6	32.0	40.4	54.5	65.0	65.0	75.0	59.8	57.7	55.8	52.1	46.5	40.0	40.0	40.0	40.0	40.0
22	12.5	18.1	21.6	24.3	27.3	29.8	32.6	41.6	57.5	65.0	65.0	75.0	59.8	57.7	55.8	51.7	46.0	40.0	40.0	40.0	40.0	40.0
24	12.5	18.4	21.8	24.5	27.5	30.0	33.2	42.8	59.0	65.0	65.0	75.0	59.6	57.6	55.5	51.3	45.5	40.0	40.0	40.0	40.0	40.0
26	12.5	18.4	21.8	24.5	27.5	30.2	33.8	44.0	60.5	65.0	65.0	75.0	59.6	57.6	55.5	51.3	45.0	40.0	40.0	40.0	40.0	40.0
28	12.5	18.4	21.8	24.8	27.8	30.4	34.4	45.2	63.5	65.0	65.0	75.0	59.6	57.6	55.3	50.9	44.4	40.0	40.0	40.0	40.0	40.0
30	12.5	18.4	22.0	24.8	28.0	30.4	35.0	46.4	65.0	65.0	65.0	75.0	59.6	57.5	55.3	50.5	44.4	40.0	40.0	40.0	40.0	40.0
32	12.5	18.4	22.0	25.0	28.0	30.6	35.6	48.8	65.0	65.0	65.0	75.0	59.6	57.5	55.0	50.5	43.9	40.0	40.0	40.0	40.0	40.0
34	12.5	18.4	22.0	25.0	28.2	30.8	36.2	50.0	65.0	65.0	65.0	75.0	59.6	57.5	55.0	50.0	43.3	40.0	40.0	40.0	40.0	40.0
36	12.5	18.8	22.2	25.3	28.4	31.0	36.8	51.5	65.0	65.0	65.0	75.0	59.4	57.4	54.8	49.5	42.8	40.0	40.0	40.0	40.0	40.0
38	12.5	18.8	22.2	25.3	28.4	31.2	37.4	53.0	65.0	65.0	65.0	75.0	59.4	57.4	54.8	49.5	42.2	40.0	40.0	40.0	40.0	40.0
40	12.5	18.8	22.2	25.5	28.6	31.2	38.0	54.5	65.0	65.0	65.0	75.0	59.4	57.4	54.5	49.0	42.2	40.0	40.0	40.0	40.0	40.0
42	12.5	18.8	22.4	25.5	28.8	31.4	39.2	56.0	65.0	65.0	65.0	75.0	59.4	57.3	54.5	48.5	41.7	40.0	40.0	40.0	40.0	40.0
44	12.5	18.8	22.4	25.8	28.8	31.6	40.4	59.0	65.0	65.0	65.0	75.0	59.4	57.3	54.1	48.5	41.1	40.0	40.0	40.0	40.0	40.0
46	12.5	18.8	22.4	25.8	29.0	31.8	41.6	60.5	65.0	65.0	65.0	75.0	59.4	57.3	54.1	48.0	40.6	40.0	40.0	40.0	40.0	40.0
48	12.5	19.1	22.6	26.0	29.2	32.0	42.8	62.0	65.0	65.0	65.0	75.0	59.2	57.2	53.7	47.5	40.0	40.0	40.0	40.0	40.0	40.0
50	12.5	19.1	22.6	26.0	29.2	32.6	44.0	63.5	65.0	65.0	65.0	75.0	59.2	57.2	53.7	47.5	40.0	40.0	40.0	40.0	40.0	40.0
52	12.5	19.1	22.6	26.3	29.4	32.6	45.2	65.0	65.0	65.0	65.0	75.0	59.2	57.2	53.3	47.0	40.0	40.0	40.0	40.0	40.0	40.0
54	12.5	19.1	22.8	26.3	29.6	33.2	46.4	65.0	65.0	65.0	65.0	75.0	59.2	57.1	53.3	46.5	40.0	40.0	40.0	40.0	40.0	40.0
56	12.5	19.1	22.8	26.5	29.6	33.8	47.6	65.0	65.0	65.0	65.0	75.0	59.2	57.1	52.9	46.5	40.0	40.0	40.0	40.0	40.0	40.0
58	12.5	19.1	22.8	26.5	29.8	34.4	48.8	65.0	65.0	65.0	65.0	75.0	59.2	57.1	52.9	46.0	40.0	40.0	40.0	40.0	40.0	40.0
60	12.5	19.4	23.0	26.8	30.0	35.0	50.0	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.5	45.5	40.0	40.0	40.0	40.0	40.0	40.0
62	12.5	19.4	23.0	26.8	30.0	35.6	51.5	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.5	45.5	40.0	40.0	40.0	40.0	40.0	40.0
64	12.5	19.4	23.0	27.0	30.2	35.6	53.0	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.1	45.0	40.0	40.0	40.0	40.0	40.0	40.0
66	12.5	19.4	23.3	27.0	30.4	36.2	54.5	65.0	65.0	65.0	65.0	75.0	59.0	56.8	52.1	44.4	40.0	40.0	40.0	40.0	40.0	40.0
68	12.5	19.4	23.3	27.3	30.4	36.8	56.0	65.0	65.0	65.0	65.0	75.0	59.0	56.8	51.7	44.4	40.0	40.0	40.0	40.0	40.0	40.0
70	12.5	19.4	23.3	27.3	30.6	37.4	57.5	65.0	65.0	65.0	65.0	75.0	59.0	56.8	51.7	43.9	40.0	40.0	40.0	40.0	40.0	40.0
72	12.5	19.7	23.5	27.5	30.8	38.0	59.0	65.0	65.0	65.0	65.0	75.0	58.8	56.5	51.3	43.3	40.0	40.0	40.0	40.0	40.0	40.0
74	12.5	19.7	23.5	27.5	30.8	38.0	60.5	65.0	65.0	65.0	65.0	75.0	58.8	56.5	51.3	43.3	40.0	40.0	40.0	40.0	40.0	40.0
76	12.5	19.7	23.5	27.8	31.0	39.2	62.0	65.0	65.0	65.0	65.0	75.0	58.8	56.5	50.9	42.8	40.0	40.0	40.0	40.0	40.0	40.0
78	12.5	19.7	23.8	27.8	31.2	40.4	63.5	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.9	42.2	40.0	40.0	40.0	40.0	40.0	40.0
80	12.5	19.7	23.8	28.0	31.2	41.6	65.0	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.5	42.2	40.0	40.0	40.0	40.0	40.0	40.0
82	12.5	19.7	23.8	28.0	31.4	42.8	65.0	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.5	41.7	40.0	40.0	40.0	40.0	40.0	40.0
84	12.5	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	50.0	41.1	40.0	40.0	40.0	40.0	40.0	40.0
86	12.5	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	50.0	41.1	40.0	40.0	40.0	40.0	40.0	40.0
88	12.5	20.0	24.0	28.4	31.8	45.2	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	49.5	40.6	40.0	40.0	40.0	40.0	40.0	40.0
90	12.5	20.0	24.3	28.4	32.0	46.4	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
92	12.5	20.0	24.3	28.6	32.0	47.6	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
94	12.5	20.0	24.3	28.6	32.6	48.8	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
96	12.5	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
98	12.5	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
100	12.5	20.4	24.5	29.0	33.8	51.5	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
102	12.5	20.4	24.8	29.0	34.4	53.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	48.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
104	12.5	20.4	24.8	29.2	34.4	54.5	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
106	12.5	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
108	12.5	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	40.0	40.0	40.0	40.0	40.0	40.0	40.0
110	12.5	20.7	25.0	29.4	35.6	57.5	65.0	65.0	65.0	65.0	65.0	75.0	58.2	55.0	47.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

Note:
- Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #1 is the descriptor for Unit F1 Primary Air Valve Position; "B" TIC CHAR #1 is the descriptor for Unit F1 Secondary Air Valve Position, etc.
- Temperature is ambient air temperature in degrees Fahrenheit.

Table D-1.2
Control Valve Characterizer Setting and Operating Parameter Curves
Primary and Secondary Air Valve Position as a Function of Fuel Valve Characterizer and Ambient Air Temperature
Vaporizer Unit F2 (V002)

	"A" TIC Characterizer #1											"B" TIC Characterizer #1										
	Vaporizer F-2 Primary Air											Vaporizer F-2 Secondary Air										
CHAR Axis	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Temperature																						
0	16.7	17.8	21.0	23.0	25.5	28.0	30.0	32.0	38.0	50.0	65.0	85.0	60.0	58.0	57.0	54.5	50.5	45.5	39.0	35.0	35.0	35.0
2	16.7	17.8	21.0	23.0	25.8	28.2	30.2	32.6	40.4	53.0	65.0	85.0	60.0	58.0	57.0	54.1	50.0	44.9	38.6	35.0	35.0	35.0
4	16.7	17.8	21.0	23.3	25.8	28.4	30.4	33.2	41.6	54.5	65.0	85.0	60.0	58.0	56.8	54.1	49.5	44.2	38.2	35.0	35.0	35.0
6	16.7	17.8	21.2	23.3	26.0	28.4	30.6	34.4	42.8	57.5	65.0	85.0	60.0	57.9	56.8	53.7	49.5	43.6	37.4	35.0	35.0	35.0
8	16.7	17.8	21.2	23.5	26.3	28.6	30.8	35.0	45.2	59.0	65.0	85.0	60.0	57.9	56.5	53.3	49.0	42.9	37.0	35.0	35.0	35.0
10	16.7	17.8	21.2	23.5	26.3	28.8	31.0	35.6	46.4	62.0	65.0	85.0	60.0	57.9	56.5	53.3	48.5	42.3	36.6	35.0	35.0	35.0
12	16.7	18.1	21.4	23.8	26.5	29.0	31.2	36.2	47.6	63.5	65.0	85.0	59.8	57.8	56.3	52.9	48.0	41.6	36.2	35.0	35.0	35.0
14	16.7	18.1	21.4	23.8	26.5	29.2	31.4	36.8	48.8	65.0	65.0	85.0	59.8	57.8	56.3	52.9	47.5	41.0	35.8	35.0	35.0	35.0
16	16.7	18.1	21.4	24.0	26.8	29.4	31.6	37.4	51.5	65.0	65.0	85.0	59.8	57.8	56.0	52.5	47.0	40.3	35.4	35.0	35.0	35.0
18	16.7	18.1	21.6	24.0	27.0	29.4	31.8	39.2	53.0	65.0	65.0	85.0	59.8	57.7	56.0	52.1	47.0	39.7	35.0	35.0	35.0	35.0
20	16.7	18.1	21.6	24.3	27.0	29.6	32.0	40.4	54.5	65.0	65.0	85.0	59.8	57.7	55.8	52.1	46.5	39.0	35.0	35.0	35.0	35.0
22	16.7	18.1	21.6	24.3	27.3	29.8	32.6	41.6	57.5	65.0	65.0	85.0	59.8	57.7	55.8	51.7	46.0	38.6	35.0	35.0	35.0	35.0
24	16.7	18.4	21.8	24.5	27.5	30.0	33.2	42.8	59.0	65.0	65.0	85.0	59.6	57.6	55.5	51.3	45.5	38.2	35.0	35.0	35.0	35.0
26	16.7	18.4	21.8	24.5	27.5	30.2	33.8	44.0	60.5	65.0	65.0	85.0	59.6	57.6	55.5	51.3	44.9	37.8	35.0	35.0	35.0	35.0
28	16.7	18.4	21.8	24.8	27.8	30.4	34.4	45.2	63.5	65.0	65.0	85.0	59.6	57.6	55.3	50.9	44.2	37.4	35.0	35.0	35.0	35.0
30	16.7	18.4	22.0	24.8	28.0	30.4	35.0	46.4	65.0	65.0	65.0	85.0	59.6	57.5	55.3	50.5	44.2	37.0	35.0	35.0	35.0	35.0
32	16.7	18.4	22.0	25.0	28.0	30.6	35.6	48.8	65.0	65.0	65.0	85.0	59.6	57.5	55.0	50.5	43.6	36.6	35.0	35.0	35.0	35.0
34	16.7	18.4	22.0	25.0	28.2	30.8	36.2	50.0	65.0	65.0	65.0	85.0	59.6	57.5	55.0	50.0	42.9	36.2	35.0	35.0	35.0	35.0
36	16.7	18.8	22.2	25.3	28.4	31.0	36.8	51.5	65.0	65.0	65.0	85.0	59.4	57.4	54.8	49.5	42.3	35.8	35.0	35.0	35.0	35.0
38	16.7	18.8	22.2	25.3	28.4	31.2	37.4	53.0	65.0	65.0	65.0	85.0	59.4	57.4	54.8	49.5	41.6	35.4	35.0	35.0	35.0	35.0
40	16.7	18.8	22.2	25.5	28.6	31.2	38.0	54.5	65.0	65.0	65.0	85.0	59.4	57.4	54.5	49.0	41.6	35.0	35.0	35.0	35.0	35.0
42	16.7	18.8	22.4	25.5	28.8	31.4	39.2	56.0	65.0	65.0	65.0	85.0	59.4	57.3	54.5	48.5	41.0	35.0	35.0	35.0	35.0	35.0
44	16.7	18.8	22.4	25.8	28.8	31.6	40.4	59.0	65.0	65.0	65.0	85.0	59.4	57.3	54.1	48.5	40.3	35.0	35.0	35.0	35.0	35.0
46	16.7	18.8	22.4	25.8	29.0	31.8	41.6	60.5	65.0	65.0	65.0	85.0	59.4	57.3	54.1	48.0	39.7	35.0	35.0	35.0	35.0	35.0
48	16.7	19.1	22.6	26.0	29.2	32.0	42.8	62.0	65.0	65.0	65.0	85.0	59.2	57.2	53.7	47.5	39.0	35.0	35.0	35.0	35.0	35.0
50	16.7	19.1	22.6	26.0	29.2	32.6	44.0	63.5	65.0	65.0	65.0	85.0	59.2	57.2	53.7	47.5	38.6	35.0	35.0	35.0	35.0	35.0
52	16.7	19.1	22.6	26.3	29.4	32.6	45.2	65.0	65.0	65.0	65.0	85.0	59.2	57.2	53.3	47.0	38.6	35.0	35.0	35.0	35.0	35.0
54	16.7	19.1	22.8	26.3	29.6	33.2	46.4	65.0	65.0	65.0	65.0	85.0	59.2	57.1	53.3	46.5	38.2	35.0	35.0	35.0	35.0	35.0
56	16.7	19.1	22.8	26.5	29.6	33.8	47.6	65.0	65.0	65.0	65.0	85.0	59.2	57.1	52.9	46.5	37.8	35.0	35.0	35.0	35.0	35.0
58	16.7	19.1	22.8	26.5	29.8	34.4	48.8	65.0	65.0	65.0	65.0	85.0	59.2	57.1	52.9	46.0	37.4	35.0	35.0	35.0	35.0	35.0
60	16.7	19.4	23.0	26.8	30.0	35.0	50.0	65.0	65.0	65.0	65.0	85.0	59.0	57.0	52.5	45.5	37.0	35.0	35.0	35.0	35.0	35.0
62	16.7	19.4	23.0	26.8	30.0	35.6	51.5	65.0	65.0	65.0	65.0	85.0	59.0	57.0	52.5	45.5	36.6	35.0	35.0	35.0	35.0	35.0
64	16.7	19.4	23.0	27.0	30.2	35.6	53.0	65.0	65.0	65.0	65.0	85.0	59.0	57.0	52.1	44.9	36.6	35.0	35.0	35.0	35.0	35.0
66	16.7	19.4	23.3	27.0	30.4	36.2	54.5	65.0	65.0	65.0	65.0	85.0	59.0	56.8	52.1	44.2	36.2	35.0	35.0	35.0	35.0	35.0
68	16.7	19.4	23.3	27.3	30.4	36.8	56.0	65.0	65.0	65.0	65.0	85.0	59.0	56.8	51.7	44.2	35.8	35.0	35.0	35.0	35.0	35.0
70	16.7	19.4	23.3	27.3	30.6	37.4	57.5	65.0	65.0	65.0	65.0	85.0	59.0	56.8	51.7	43.6	35.4	35.0	35.0	35.0	35.0	35.0
72	16.7	19.7	23.5	27.5	30.8	38.0	59.0	65.0	65.0	65.0	65.0	85.0	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
74	16.7	19.7	23.5	27.5	30.8	38.0	60.5	65.0	65.0	65.0	65.0	85.0	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
76	16.7	19.7	23.5	27.8	31.0	39.2	62.0	65.0	65.0	65.0	65.0	85.0	58.8	56.5	50.9	42.3	35.0	35.0	35.0	35.0	35.0	35.0
78	16.7	19.7	23.8	27.8	31.2	40.4	63.5	65.0	65.0	65.0	65.0	85.0	58.8	56.3	50.9	41.6	35.0	35.0	35.0	35.0	35.0	35.0
80	16.7	19.7	23.8	28.0	31.2	41.6	65.0	65.0	65.0	65.0	65.0	85.0	58.8	56.3	50.5	41.6	35.0	35.0	35.0	35.0	35.0	35.0
82	16.7	19.7	23.8	28.0	31.4	42.8	65.0	65.0	65.0	65.0	65.0	85.0	58.8	56.3	50.5	41.0	35.0	35.0	35.0	35.0	35.0	35.0
84	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	85.0	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
86	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	85.0	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
88	16.7	20.0	24.0	28.4	31.8	45.2	65.0	65.0	65.0	65.0	65.0	85.0	58.6	56.0	49.5	39.7	35.0	35.0	35.0	35.0	35.0	35.0
90	16.7	20.0	24.3	28.4	32.0	46.4	65.0	65.0	65.0	65.0	65.0	85.0	58.6	55.8	49.5	39.0	35.0	35.0	35.0	35.0	35.0	35.0
92	16.7	20.0	24.3	28.6	32.0	47.6	65.0	65.0	65.0	65.0	65.0	85.0	58.6	55.8	49.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0
94	16.7	20.0	24.3	28.6	32.6	48.8	65.0	65.0	65.0	65.0	65.0	85.0	58.6	55.8	49.0	38.6	35.0	35.0	35.0	35.0	35.0	35.0
96	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
98	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
100	16.7	20.4	24.5	29.0	33.8	51.5	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.5	48.0	37.8	35.0	35.0	35.0	35.0	35.0	35.0
102	16.7	20.4	24.8	29.0	34.4	53.0	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.3	48.0	37.4	35.0	35.0	35.0	35.0	35.0	35.0
104	16.7	20.4	24.8	29.2	34.4	54.5	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.3	47.5	37.4	35.0	35.0	35.0	35.0	35.0	35.0
106	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
108	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	85.0	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
110	16.7	20.7	25.0	29.4	35.6	57.5	65.0	65.0	65.0	65.0	65.0	85.0	58.2	55.0	47.0	36.6	35.0	35.0	35.0	35.0	35.0	35.0

Note:
- Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #1 is the descriptor for Unit F2 Primary Air Valve Position, "B" TIC CHAR #1 is the descriptor for Unit F2 Secondary Air Valve Position, etc.
- Temperature is ambient air temperature in degrees Fahrenheit.

Table D-1.3
Control Valve Characterizer Setting and Operating Parameter Curves
Primary and Secondary Air Valve Position as a Function of Fuel Valve Characterizer and Ambient Air Temperature
Vaporizer Unit F3 (V003)

	"A" TIC Characterizer #1											"B" TIC Characterizer #1										
	Vaporizer F-3 Primary Air											Vaporizer F-3 Secondary Air										
CHAR Axis	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Temperature																						
0	16.7	17.8	21.0	23.0	25.5	28.0	30.0	32.0	38.0	50.0	65.0	72.5	60.0	58.0	57.0	54.5	50.5	45.5	39.0	35.0	35.0	35.0
2	16.7	17.8	21.0	23.0	25.8	28.2	30.2	32.6	40.4	53.0	65.0	72.5	60.0	58.0	57.0	54.1	50.0	44.9	38.6	35.0	35.0	35.0
4	16.7	17.8	21.0	23.3	25.8	28.4	30.4	33.2	41.6	54.5	65.0	72.5	60.0	58.0	56.8	54.1	49.5	44.2	38.2	35.0	35.0	35.0
6	16.7	17.8	21.2	23.3	26.0	28.4	30.6	34.4	42.8	57.5	65.0	72.5	60.0	57.9	56.8	53.7	49.5	43.6	37.4	35.0	35.0	35.0
8	16.7	17.8	21.2	23.5	26.3	28.6	30.8	35.0	45.2	59.0	65.0	72.5	60.0	57.9	56.5	53.3	49.0	42.9	37.0	35.0	35.0	35.0
10	16.7	17.8	21.2	23.5	26.3	28.8	31.0	35.6	46.4	62.0	65.0	72.5	60.0	57.9	56.5	53.3	48.5	42.3	36.6	35.0	35.0	35.0
12	16.7	18.1	21.4	23.8	26.5	29.0	31.2	36.2	47.6	63.5	65.0	72.5	59.8	57.8	56.3	52.9	48.0	41.6	36.2	35.0	35.0	35.0
14	16.7	18.1	21.4	23.8	26.5	29.2	31.4	36.8	48.8	65.0	65.0	72.5	59.8	57.8	56.3	52.9	47.5	41.0	35.8	35.0	35.0	35.0
16	16.7	18.1	21.4	24.0	26.8	29.4	31.6	37.4	51.5	65.0	65.0	72.5	59.8	57.8	56.0	52.5	47.0	40.3	35.4	35.0	35.0	35.0
18	16.7	18.1	21.6	24.0	27.0	29.4	31.8	39.2	53.0	65.0	65.0	72.5	59.8	57.7	56.0	52.1	47.0	39.7	35.0	35.0	35.0	35.0
20	16.7	18.1	21.6	24.3	27.0	29.6	32.0	40.4	54.5	65.0	65.0	72.5	59.8	57.7	55.8	52.1	46.5	39.0	35.0	35.0	35.0	35.0
22	16.7	18.1	21.6	24.3	27.3	29.8	32.6	41.6	57.5	65.0	65.0	72.5	59.8	57.7	55.8	51.7	46.0	38.6	35.0	35.0	35.0	35.0
24	16.7	18.4	21.8	24.5	27.5	30.0	33.2	42.8	59.0	65.0	65.0	72.5	59.6	57.6	55.5	51.3	45.5	38.2	35.0	35.0	35.0	35.0
26	16.7	18.4	21.8	24.5	27.5	30.2	33.8	44.0	60.5	65.0	65.0	72.5	59.6	57.6	55.5	51.3	44.9	37.8	35.0	35.0	35.0	35.0
28	16.7	18.4	21.8	24.8	27.8	30.4	34.4	45.2	63.5	65.0	65.0	72.5	59.6	57.6	55.3	50.9	44.2	37.4	35.0	35.0	35.0	35.0
30	16.7	18.4	22.0	24.8	28.0	30.4	35.0	46.4	65.0	65.0	65.0	72.5	59.6	57.5	55.3	50.5	44.2	37.0	35.0	35.0	35.0	35.0
32	16.7	18.4	22.0	25.0	28.0	30.6	35.6	48.8	65.0	65.0	65.0	72.5	59.6	57.5	55.0	50.5	43.6	36.6	35.0	35.0	35.0	35.0
34	16.7	18.4	22.0	25.0	28.2	30.8	36.2	50.0	65.0	65.0	65.0	72.5	59.6	57.5	55.0	50.0	42.9	36.2	35.0	35.0	35.0	35.0
36	16.7	18.8	22.2	25.3	28.4	31.0	36.8	51.5	65.0	65.0	65.0	72.5	59.4	57.4	54.8	49.5	42.3	35.8	35.0	35.0	35.0	35.0
38	16.7	18.8	22.2	25.3	28.4	31.2	37.4	53.0	65.0	65.0	65.0	72.5	59.4	57.4	54.8	49.5	41.6	35.4	35.0	35.0	35.0	35.0
40	16.7	18.8	22.2	25.5	28.6	31.2	38.0	54.5	65.0	65.0	65.0	72.5	59.4	57.4	54.5	49.0	41.6	35.0	35.0	35.0	35.0	35.0
42	16.7	18.8	22.4	25.5	28.8	31.4	39.2	56.0	65.0	65.0	65.0	72.5	59.4	57.3	54.5	48.5	41.0	35.0	35.0	35.0	35.0	35.0
44	16.7	18.8	22.4	25.8	28.8	31.6	40.4	59.0	65.0	65.0	65.0	72.5	59.4	57.3	54.1	48.5	40.3	35.0	35.0	35.0	35.0	35.0
46	16.7	18.8	22.4	25.8	29.0	31.8	41.6	60.5	65.0	65.0	65.0	72.5	59.4	57.3	54.1	48.0	39.7	35.0	35.0	35.0	35.0	35.0
48	16.7	19.1	22.6	26.0	29.2	32.0	42.8	62.0	65.0	65.0	65.0	72.5	59.2	57.2	53.7	47.5	39.0	35.0	35.0	35.0	35.0	35.0
50	16.7	19.1	22.6	26.0	29.2	32.6	44.0	63.5	65.0	65.0	65.0	72.5	59.2	57.2	53.7	47.5	38.6	35.0	35.0	35.0	35.0	35.0
52	16.7	19.1	22.6	26.3	29.4	32.6	45.2	65.0	65.0	65.0	65.0	72.5	59.2	57.2	53.3	47.0	38.6	35.0	35.0	35.0	35.0	35.0
54	16.7	19.1	22.8	26.3	29.6	33.2	46.4	65.0	65.0	65.0	65.0	72.5	59.2	57.1	53.3	46.5	38.2	35.0	35.0	35.0	35.0	35.0
56	16.7	19.1	22.8	26.5	29.6	33.8	47.6	65.0	65.0	65.0	65.0	72.5	59.2	57.1	52.9	46.5	37.8	35.0	35.0	35.0	35.0	35.0
58	16.7	19.1	22.8	26.5	29.8	34.4	48.8	65.0	65.0	65.0	65.0	72.5	59.2	57.1	52.9	46.0	37.4	35.0	35.0	35.0	35.0	35.0
60	16.7	19.4	23.0	26.8	30.0	35.0	50.0	65.0	65.0	65.0	65.0	72.5	59.0	57.0	52.5	45.5	37.0	35.0	35.0	35.0	35.0	35.0
62	16.7	19.4	23.0	26.8	30.0	35.6	51.5	65.0	65.0	65.0	65.0	72.5	59.0	57.0	52.5	45.5	36.6	35.0	35.0	35.0	35.0	35.0
64	16.7	19.4	23.0	27.0	30.2	35.6	53.0	65.0	65.0	65.0	65.0	72.5	59.0	57.0	52.1	44.9	36.6	35.0	35.0	35.0	35.0	35.0
66	16.7	19.4	23.3	27.0	30.4	36.2	54.5	65.0	65.0	65.0	65.0	72.5	59.0	56.8	52.1	44.2	36.2	35.0	35.0	35.0	35.0	35.0
68	16.7	19.4	23.3	27.3	30.4	36.8	56.0	65.0	65.0	65.0	65.0	72.5	59.0	56.8	51.7	44.2	35.8	35.0	35.0	35.0	35.0	35.0
70	16.7	19.4	23.3	27.3	30.6	37.4	57.5	65.0	65.0	65.0	65.0	72.5	59.0	56.8	51.7	43.6	35.4	35.0	35.0	35.0	35.0	35.0
72	16.7	19.7	23.5	27.5	30.8	38.0	59.0	65.0	65.0	65.0	65.0	72.5	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
74	16.7	19.7	23.5	27.5	30.8	38.0	60.5	65.0	65.0	65.0	65.0	72.5	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
76	16.7	19.7	23.5	27.8	31.0	39.2	62.0	65.0	65.0	65.0	65.0	72.5	58.8	56.5	50.9	42.3	35.0	35.0	35.0	35.0	35.0	35.0
78	16.7	19.7	23.8	27.8	31.2	40.4	63.5	65.0	65.0	65.0	65.0	72.5	58.8	56.3	50.9	41.6	35.0	35.0	35.0	35.0	35.0	35.0
80	16.7	19.7	23.8	28.0	31.2	41.6	65.0	65.0	65.0	65.0	65.0	72.5	58.8	56.3	50.5	41.6	35.0	35.0	35.0	35.0	35.0	35.0
82	16.7	19.7	23.8	28.0	31.4	42.8	65.0	65.0	65.0	65.0	65.0	72.5	58.8	56.3	50.5	41.0	35.0	35.0	35.0	35.0	35.0	35.0
84	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	72.5	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
86	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	72.5	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
88	16.7	20.0	24.0	28.4	31.8	45.2	65.0	65.0	65.0	65.0	65.0	72.5	58.6	56.0	49.5	39.7	35.0	35.0	35.0	35.0	35.0	35.0
90	16.7	20.0	24.3	28.4	32.0	46.4	65.0	65.0	65.0	65.0	65.0	72.5	58.6	55.8	49.5	39.0	35.0	35.0	35.0	35.0	35.0	35.0
92	16.7	20.0	24.3	28.6	32.0	47.6	65.0	65.0	65.0	65.0	65.0	72.5	58.6	55.8	49.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0
94	16.7	20.0	24.3	28.6	32.6	48.8	65.0	65.0	65.0	65.0	65.0	72.5	58.6	55.8	49.0	38.6	35.0	35.0	35.0	35.0	35.0	35.0
96	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
98	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
100	16.7	20.4	24.5	29.0	33.8	51.5	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.5	48.0	37.8	35.0	35.0	35.0	35.0	35.0	35.0
102	16.7	20.4	24.8	29.0	34.4	53.0	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.3	48.0	37.4	35.0	35.0	35.0	35.0	35.0	35.0
104	16.7	20.4	24.8	29.2	34.4	54.5	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.3	47.5	37.4	35.0	35.0	35.0	35.0	35.0	35.0
106	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
108	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	72.5	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
110	16.7	20.7	25.0	29.4	35.6	57.5	65.0	65.0	65.0	65.0	65.0	72.5	58.2	55.0	47.0	36.6	35.0	35.0	35.0	35.0	35.0	35.0

Note:
- Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #1 is the descriptor for Unit F3 Primary Air Valve Position, "B" TIC CHAR #1 is the descriptor for Unit F3 Secondary Air Valve Position, etc.
- Temperature is ambient air temperature in degrees Fahrenheit.

Table D-1.4
Control Valve Characterizer Setting and Operating Parameter Curves
Primary and Secondary Air Valve Position as a Function of Fuel Valve Characterizer and Ambient Air Temperature
Vaporizer Unit F4 (V004)

	"A" TIC Characterizer #1											"B" TIC Characterizer #1										
	Vaporizer F-4 Primary Air											Vaporizer F-4 Secondary Air										
CHAR Axis	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Temperature																						
0	16.7	17.8	21.0	23.0	25.5	28.0	30.0	32.0	38.0	50.0	65.0	80.0	70.0	65.0	60.0	55.0	50.5	45.5	39.0	35.0	35.0	35.0
2	16.7	17.8	21.0	23.0	25.8	28.2	30.2	32.6	40.4	53.0	65.0	80.0	70.0	65.0	60.0	54.6	50.0	44.9	38.6	35.0	35.0	35.0
4	16.7	17.8	21.0	23.3	25.8	28.4	30.4	33.2	41.6	54.5	65.0	80.0	70.0	65.0	59.5	54.6	49.5	44.2	38.2	35.0	35.0	35.0
6	16.7	17.8	21.2	23.3	26.0	28.4	30.6	34.4	42.8	57.5	65.0	80.0	70.0	64.5	59.5	54.1	49.5	43.6	37.4	35.0	35.0	35.0
8	16.7	17.8	21.2	23.5	26.3	28.6	30.8	35.0	45.2	59.0	65.0	80.0	70.0	64.5	59.0	53.7	49.0	42.9	37.0	35.0	35.0	35.0
10	16.7	17.8	21.2	23.5	26.3	28.8	31.0	35.6	46.4	62.0	65.0	80.0	70.0	64.5	59.0	53.7	48.5	42.3	36.6	35.0	35.0	35.0
12	16.7	18.1	21.4	23.8	26.5	29.0	31.2	36.2	47.6	63.5	65.0	80.0	69.5	64.0	58.5	53.2	48.0	41.6	36.2	35.0	35.0	35.0
14	16.7	18.1	21.4	23.8	26.5	29.2	31.4	36.8	48.8	65.0	65.0	80.0	69.5	64.0	58.5	53.2	47.5	41.0	35.8	35.0	35.0	35.0
16	16.7	18.1	21.4	24.0	26.8	29.4	31.6	37.4	51.5	65.0	65.0	80.0	69.5	64.0	58.0	52.8	47.0	40.3	35.4	35.0	35.0	35.0
18	16.7	18.1	21.6	24.0	27.0	29.4	31.8	39.2	53.0	65.0	65.0	80.0	69.5	63.5	58.0	52.3	47.0	39.7	35.0	35.0	35.0	35.0
20	16.7	18.1	21.6	24.3	27.0	29.6	32.0	40.4	54.5	65.0	65.0	80.0	69.5	63.5	57.5	52.3	46.5	39.0	35.0	35.0	35.0	35.0
22	16.7	18.1	21.6	24.3	27.3	29.8	32.6	41.6	57.5	65.0	65.0	80.0	69.5	63.5	57.5	51.9	46.0	38.6	35.0	35.0	35.0	35.0
24	16.7	18.4	21.8	24.5	27.5	30.0	33.2	42.8	59.0	65.0	65.0	80.0	69.0	63.0	57.0	51.4	45.5	38.2	35.0	35.0	35.0	35.0
26	16.7	18.4	21.8	24.5	27.5	30.2	33.8	44.0	60.5	65.0	65.0	80.0	69.0	63.0	57.0	51.4	44.9	37.8	35.0	35.0	35.0	35.0
28	16.7	18.4	21.8	24.8	27.8	30.4	34.4	45.2	63.5	65.0	65.0	80.0	69.0	63.0	56.5	51.0	44.2	37.4	35.0	35.0	35.0	35.0
30	16.7	18.4	22.0	24.8	28.0	30.4	35.0	46.4	65.0	65.0	65.0	80.0	69.0	62.5	56.5	50.5	44.2	37.0	35.0	35.0	35.0	35.0
32	16.7	18.4	22.0	25.0	28.0	30.6	35.6	48.8	65.0	65.0	65.0	80.0	69.0	62.5	56.0	50.5	43.6	36.6	35.0	35.0	35.0	35.0
34	16.7	18.4	22.0	25.0	28.2	30.8	36.2	50.0	65.0	65.0	65.0	80.0	69.0	62.5	56.0	50.0	42.9	36.2	35.0	35.0	35.0	35.0
36	16.7	18.8	22.2	25.3	28.4	31.0	36.8	51.5	65.0	65.0	65.0	80.0	68.5	62.0	55.5	49.5	42.3	35.8	35.0	35.0	35.0	35.0
38	16.7	18.8	22.2	25.3	28.4	31.2	37.4	53.0	65.0	65.0	65.0	80.0	68.5	62.0	55.5	49.5	41.6	35.4	35.0	35.0	35.0	35.0
40	16.7	18.8	22.2	25.5	28.6	31.2	38.0	54.5	65.0	65.0	65.0	80.0	68.5	62.0	55.0	49.0	41.6	35.0	35.0	35.0	35.0	35.0
42	16.7	18.8	22.4	25.5	28.8	31.4	39.2	56.0	65.0	65.0	65.0	80.0	68.5	61.5	55.0	48.5	41.0	35.0	35.0	35.0	35.0	35.0
44	16.7	18.8	22.4	25.8	28.8	31.6	40.4	59.0	65.0	65.0	65.0	80.0	68.5	61.5	54.6	48.5	40.3	35.0	35.0	35.0	35.0	35.0
46	16.7	18.8	22.4	25.8	29.0	31.8	41.6	60.5	65.0	65.0	65.0	80.0	68.5	61.5	54.6	48.0	39.7	35.0	35.0	35.0	35.0	35.0
48	16.7	19.1	22.6	26.0	29.2	32.0	42.8	62.0	65.0	65.0	65.0	80.0	68.0	61.0	54.1	47.5	39.0	35.0	35.0	35.0	35.0	35.0
50	16.7	19.1	22.6	26.0	29.2	32.6	44.0	63.5	65.0	65.0	65.0	80.0	68.0	61.0	54.1	47.5	38.6	35.0	35.0	35.0	35.0	35.0
52	16.7	19.1	22.6	26.3	29.4	32.6	45.2	65.0	65.0	65.0	65.0	80.0	68.0	61.0	53.7	47.0	38.6	35.0	35.0	35.0	35.0	35.0
54	16.7	19.1	22.8	26.3	29.6	33.2	46.4	65.0	65.0	65.0	65.0	80.0	68.0	60.5	53.7	46.5	38.2	35.0	35.0	35.0	35.0	35.0
56	16.7	19.1	22.8	26.5	29.6	33.8	47.6	65.0	65.0	65.0	65.0	80.0	68.0	60.5	53.2	46.5	37.8	35.0	35.0	35.0	35.0	35.0
58	16.7	19.1	22.8	26.5	29.8	34.4	48.8	65.0	65.0	65.0	65.0	80.0	68.0	60.5	53.2	46.0	37.4	35.0	35.0	35.0	35.0	35.0
60	16.7	19.4	23.0	26.8	30.0	35.0	50.0	65.0	65.0	65.0	65.0	80.0	67.5	60.0	52.8	45.5	37.0	35.0	35.0	35.0	35.0	35.0
62	16.7	19.4	23.0	26.8	30.0	35.6	51.5	65.0	65.0	65.0	65.0	80.0	67.5	60.0	52.8	45.5	36.6	35.0	35.0	35.0	35.0	35.0
64	16.7	19.4	23.0	27.0	30.2	35.6	53.0	65.0	65.0	65.0	65.0	80.0	67.5	60.0	52.3	44.9	36.6	35.0	35.0	35.0	35.0	35.0
66	16.7	19.4	23.3	27.0	30.4	36.2	54.5	65.0	65.0	65.0	65.0	80.0	67.5	59.5	52.3	44.2	36.2	35.0	35.0	35.0	35.0	35.0
68	16.7	19.4	23.3	27.3	30.4	36.8	56.0	65.0	65.0	65.0	65.0	80.0	67.5	59.5	51.9	44.2	35.8	35.0	35.0	35.0	35.0	35.0
70	16.7	19.4	23.3	27.3	30.6	37.4	57.5	65.0	65.0	65.0	65.0	80.0	67.5	59.5	51.9	43.6	35.4	35.0	35.0	35.0	35.0	35.0
72	16.7	19.7	23.5	27.5	30.8	38.0	59.0	65.0	65.0	65.0	65.0	80.0	67.0	59.0	51.4	42.9	35.0	35.0	35.0	35.0	35.0	35.0
74	16.7	19.7	23.5	27.5	30.8	38.0	60.5	65.0	65.0	65.0	65.0	80.0	67.0	59.0	51.4	42.9	35.0	35.0	35.0	35.0	35.0	35.0
76	16.7	19.7	23.5	27.8	31.0	39.2	62.0	65.0	65.0	65.0	65.0	80.0	67.0	59.0	51.0	42.3	35.0	35.0	35.0	35.0	35.0	35.0
78	16.7	19.7	23.8	27.8	31.2	40.4	63.5	65.0	65.0	65.0	65.0	80.0	67.0	58.5	51.0	41.6	35.0	35.0	35.0	35.0	35.0	35.0
80	16.7	19.7	23.8	28.0	31.2	41.6	65.0	65.0	65.0	65.0	65.0	80.0	67.0	58.5	50.5	41.6	35.0	35.0	35.0	35.0	35.0	35.0
82	16.7	19.7	23.8	28.0	31.4	42.8	65.0	65.0	65.0	65.0	65.0	80.0	67.0	58.5	50.5	41.0	35.0	35.0	35.0	35.0	35.0	35.0
84	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	80.0	66.5	58.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
86	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	80.0	66.5	58.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
88	16.7	20.0	24.0	28.4	31.8	45.2	65.0	65.0	65.0	65.0	65.0	80.0	66.5	58.0	49.5	39.7	35.0	35.0	35.0	35.0	35.0	35.0
90	16.7	20.0	24.3	28.4	32.0	46.4	65.0	65.0	65.0	65.0	65.0	80.0	66.5	57.5	49.5	39.0	35.0	35.0	35.0	35.0	35.0	35.0
92	16.7	20.0	24.3	28.6	32.0	47.6	65.0	65.0	65.0	65.0	65.0	80.0	66.5	57.5	49.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0
94	16.7	20.0	24.3	28.6	32.6	48.8	65.0	65.0	65.0	65.0	65.0	80.0	66.5	57.5	49.0	38.6	35.0	35.0	35.0	35.0	35.0	35.0
96	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	80.0	66.0	57.0	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
98	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	80.0	66.0	57.0	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
100	16.7	20.4	24.5	29.0	33.8	51.5	65.0	65.0	65.0	65.0	65.0	80.0	66.0	57.0	48.0	37.8	35.0	35.0	35.0	35.0	35.0	35.0
102	16.7	20.4	24.8	29.0	34.4	53.0	65.0	65.0	65.0	65.0	65.0	80.0	66.0	56.5	48.0	37.4	35.0	35.0	35.0	35.0	35.0	35.0
104	16.7	20.4	24.8	29.2	34.4	54.5	65.0	65.0	65.0	65.0	65.0	80.0	66.0	56.5	47.5	37.4	35.0	35.0	35.0	35.0	35.0	35.0
106	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	80.0	66.0	56.5	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
108	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	80.0	66.0	56.5	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
110	16.7	20.7	25.0	29.4	35.6	57.5	65.0	65.0	65.0	65.0	65.0	80.0	65.5	56.0	47.0	36.6	35.0	35.0	35.0	35.0	35.0	35.0

Note:
- Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #1 is the descriptor for Unit F4 Primary Air Valve Position, "B" TIC CHAR #1 is the descriptor for Unit F4 Secondary Air Valve Position, etc.
- Temperature is ambient air temperature in degrees Fahrenheit.

Table D-1.5
Control Valve Characterizer Setting and Operating Parameter Curves
Primary and Secondary Air Valve Position as a Function of Fuel Valve Characterizer and Ambient Air Temperature
Vaporizer Unit F5 (V005)

	"A" TIC Characterizer #1											"B" TIC Characterizer #1										
	Vaporizer F-5 Primary Air											Vaporizer F-5 Secondary Air										
CHAR Axis	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Temperature																						
0	16.7	17.8	21.0	23.0	25.5	28.0	30.0	32.0	38.0	50.0	65.0	75.0	60.0	58.0	57.0	54.5	50.5	45.5	39.0	35.0	35.0	35.0
2	16.7	17.8	21.0	23.0	25.8	28.2	30.2	32.6	40.4	53.0	65.0	75.0	60.0	58.0	57.0	54.1	50.0	44.9	38.6	35.0	35.0	35.0
4	16.7	17.8	21.0	23.3	25.8	28.4	30.4	33.2	41.6	54.5	65.0	75.0	60.0	58.0	56.8	54.1	49.5	44.2	38.2	35.0	35.0	35.0
6	16.7	17.8	21.2	23.3	26.0	28.4	30.6	34.4	42.8	57.5	65.0	75.0	60.0	57.9	56.8	53.7	49.5	43.6	37.4	35.0	35.0	35.0
8	16.7	17.8	21.2	23.5	26.3	28.6	30.8	35.0	45.2	59.0	65.0	75.0	60.0	57.9	56.5	53.3	49.0	42.9	37.0	35.0	35.0	35.0
10	16.7	17.8	21.2	23.5	26.3	28.8	31.0	35.6	46.4	62.0	65.0	75.0	60.0	57.9	56.5	53.3	48.5	42.3	36.6	35.0	35.0	35.0
12	16.7	18.1	21.4	23.8	26.5	29.0	31.2	36.2	47.6	63.5	65.0	75.0	59.8	57.8	56.3	52.9	48.0	41.6	36.2	35.0	35.0	35.0
14	16.7	18.1	21.4	23.8	26.5	29.2	31.4	36.8	48.8	65.0	65.0	75.0	59.8	57.8	56.3	52.9	47.5	41.0	35.8	35.0	35.0	35.0
16	16.7	18.1	21.4	24.0	26.8	29.4	31.6	37.4	51.5	65.0	65.0	75.0	59.8	57.8	56.0	52.5	47.0	40.3	35.4	35.0	35.0	35.0
18	16.7	18.1	21.6	24.0	27.0	29.4	31.8	39.2	53.0	65.0	65.0	75.0	59.8	57.7	56.0	52.1	47.0	39.7	35.0	35.0	35.0	35.0
20	16.7	18.1	21.6	24.3	27.0	29.6	32.0	40.4	54.5	65.0	65.0	75.0	59.8	57.7	55.8	52.1	46.5	39.0	35.0	35.0	35.0	35.0
22	16.7	18.1	21.6	24.3	27.3	29.8	32.6	41.6	57.5	65.0	65.0	75.0	59.8	57.7	55.8	51.7	46.0	38.6	35.0	35.0	35.0	35.0
24	16.7	18.4	21.8	24.5	27.5	30.0	33.2	42.8	59.0	65.0	65.0	75.0	59.6	57.6	55.5	51.3	45.5	38.2	35.0	35.0	35.0	35.0
26	16.7	18.4	21.8	24.5	27.5	30.2	33.8	44.0	60.5	65.0	65.0	75.0	59.6	57.6	55.5	51.3	44.9	37.8	35.0	35.0	35.0	35.0
28	16.7	18.4	21.8	24.8	27.8	30.4	34.4	45.2	63.5	65.0	65.0	75.0	59.6	57.6	55.3	50.9	44.2	37.4	35.0	35.0	35.0	35.0
30	16.7	18.4	22.0	24.8	28.0	30.4	35.0	46.4	65.0	65.0	65.0	75.0	59.6	57.5	55.3	50.5	44.2	37.0	35.0	35.0	35.0	35.0
32	16.7	18.4	22.0	25.0	28.0	30.6	35.6	48.8	65.0	65.0	65.0	75.0	59.6	57.5	55.0	50.5	43.6	36.6	35.0	35.0	35.0	35.0
34	16.7	18.4	22.0	25.0	28.2	30.8	36.2	50.0	65.0	65.0	65.0	75.0	59.6	57.5	55.0	50.0	42.9	36.2	35.0	35.0	35.0	35.0
36	16.7	18.8	22.2	25.3	28.4	31.0	36.8	51.5	65.0	65.0	65.0	75.0	59.4	57.4	54.8	49.5	42.3	35.8	35.0	35.0	35.0	35.0
38	16.7	18.8	22.2	25.3	28.4	31.2	37.4	53.0	65.0	65.0	65.0	75.0	59.4	57.4	54.8	49.5	41.6	35.4	35.0	35.0	35.0	35.0
40	16.7	18.8	22.2	25.5	28.6	31.2	38.0	54.5	65.0	65.0	65.0	75.0	59.4	57.4	54.5	49.0	41.6	35.0	35.0	35.0	35.0	35.0
42	16.7	18.8	22.4	25.5	28.8	31.4	39.2	56.0	65.0	65.0	65.0	75.0	59.4	57.3	54.5	48.5	41.0	35.0	35.0	35.0	35.0	35.0
44	16.7	18.8	22.4	25.8	28.8	31.6	40.4	59.0	65.0	65.0	65.0	75.0	59.4	57.3	54.1	48.5	40.3	35.0	35.0	35.0	35.0	35.0
46	16.7	18.8	22.4	25.8	29.0	31.8	41.6	60.5	65.0	65.0	65.0	75.0	59.4	57.3	54.1	48.0	39.7	35.0	35.0	35.0	35.0	35.0
48	16.7	19.1	22.6	26.0	29.2	32.0	42.8	62.0	65.0	65.0	65.0	75.0	59.2	57.2	53.7	47.5	39.0	35.0	35.0	35.0	35.0	35.0
50	16.7	19.1	22.6	26.0	29.2	32.6	44.0	63.5	65.0	65.0	65.0	75.0	59.2	57.2	53.7	47.5	38.6	35.0	35.0	35.0	35.0	35.0
52	16.7	19.1	22.6	26.3	29.4	32.6	45.2	65.0	65.0	65.0	65.0	75.0	59.2	57.2	53.3	47.0	38.6	35.0	35.0	35.0	35.0	35.0
54	16.7	19.1	22.8	26.3	29.6	33.2	46.4	65.0	65.0	65.0	65.0	75.0	59.2	57.1	53.3	46.5	38.2	35.0	35.0	35.0	35.0	35.0
56	16.7	19.1	22.8	26.5	29.6	33.8	47.6	65.0	65.0	65.0	65.0	75.0	59.2	57.1	52.9	46.5	37.8	35.0	35.0	35.0	35.0	35.0
58	16.7	19.1	22.8	26.5	29.8	34.4	48.8	65.0	65.0	65.0	65.0	75.0	59.2	57.1	52.9	46.0	37.4	35.0	35.0	35.0	35.0	35.0
60	16.7	19.4	23.0	26.8	30.0	35.0	50.0	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.5	45.5	37.0	35.0	35.0	35.0	35.0	35.0
62	16.7	19.4	23.0	26.8	30.0	35.6	51.5	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.5	45.5	36.6	35.0	35.0	35.0	35.0	35.0
64	16.7	19.4	23.0	27.0	30.2	35.6	53.0	65.0	65.0	65.0	65.0	75.0	59.0	57.0	52.1	44.9	36.6	35.0	35.0	35.0	35.0	35.0
66	16.7	19.4	23.3	27.0	30.4	36.2	54.5	65.0	65.0	65.0	65.0	75.0	59.0	56.8	52.1	44.2	36.2	35.0	35.0	35.0	35.0	35.0
68	16.7	19.4	23.3	27.3	30.4	36.8	56.0	65.0	65.0	65.0	65.0	75.0	59.0	56.8	51.7	44.2	35.8	35.0	35.0	35.0	35.0	35.0
70	16.7	19.4	23.3	27.3	30.6	37.4	57.5	65.0	65.0	65.0	65.0	75.0	59.0	56.8	51.7	43.6	35.4	35.0	35.0	35.0	35.0	35.0
72	16.7	19.7	23.5	27.5	30.8	38.0	59.0	65.0	65.0	65.0	65.0	75.0	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
74	16.7	19.7	23.5	27.5	30.8	38.0	60.5	65.0	65.0	65.0	65.0	75.0	58.8	56.5	51.3	42.9	35.0	35.0	35.0	35.0	35.0	35.0
76	16.7	19.7	23.5	27.8	31.0	39.2	62.0	65.0	65.0	65.0	65.0	75.0	58.8	56.5	50.9	42.3	35.0	35.0	35.0	35.0	35.0	35.0
78	16.7	19.7	23.8	27.8	31.2	40.4	63.5	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.9	41.6	35.0	35.0	35.0	35.0	35.0	35.0
80	16.7	19.7	23.8	28.0	31.2	41.6	65.0	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.5	41.6	35.0	35.0	35.0	35.0	35.0	35.0
82	16.7	19.7	23.8	28.0	31.4	42.8	65.0	65.0	65.0	65.0	65.0	75.0	58.8	56.3	50.5	41.0	35.0	35.0	35.0	35.0	35.0	35.0
84	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
86	16.7	20.0	24.0	28.2	31.6	44.0	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	50.0	40.3	35.0	35.0	35.0	35.0	35.0	35.0
88	16.7	20.0	24.0	28.4	31.8	45.2	65.0	65.0	65.0	65.0	65.0	75.0	58.6	56.0	49.5	39.7	35.0	35.0	35.0	35.0	35.0	35.0
90	16.7	20.0	24.3	28.4	32.0	46.4	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.5	39.0	35.0	35.0	35.0	35.0	35.0	35.0
92	16.7	20.0	24.3	28.6	32.0	47.6	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.0	39.0	35.0	35.0	35.0	35.0	35.0	35.0
94	16.7	20.0	24.3	28.6	32.6	48.8	65.0	65.0	65.0	65.0	65.0	75.0	58.6	55.8	49.0	38.6	35.0	35.0	35.0	35.0	35.0	35.0
96	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
98	16.7	20.4	24.5	28.8	33.2	50.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.5	38.2	35.0	35.0	35.0	35.0	35.0	35.0
100	16.7	20.4	24.5	29.0	33.8	51.5	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.5	48.0	37.8	35.0	35.0	35.0	35.0	35.0	35.0
102	16.7	20.4	24.8	29.0	34.4	53.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	48.0	37.4	35.0	35.0	35.0	35.0	35.0	35.0
104	16.7	20.4	24.8	29.2	34.4	54.5	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	37.4	35.0	35.0	35.0	35.0	35.0	35.0
106	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
108	16.7	20.4	24.8	29.2	35.0	56.0	65.0	65.0	65.0	65.0	65.0	75.0	58.4	55.3	47.5	37.0	35.0	35.0	35.0	35.0	35.0	35.0
110	16.7	20.7	25.0	29.4	35.6	57.5	65.0	65.0	65.0	65.0	65.0	75.0	58.2	55.0	47.0	36.6	35.0	35.0	35.0	35.0	35.0	35.0

Note:
- Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #1 is the descriptor for Unit F5 Primary Air Valve Position, "B" TIC CHAR #5 is the descriptor for Unit F1 Secondary Air Valve Position, etc.
- Temperature is ambient air temperature in degrees Fahrenheit.

Attachment D

Table D-2

Control Valve Characterizer Setting and Operating Parameter Curves
Fuel Valve Position with Firing Demand Axis

CHAR Axis		Unit F1 Fuel Gas		Unit F2 Fuel Gas		Unit F3 Fuel Gas		Unit F4 Fuel Gas		Unit F5 Fuel Gas
		"A" TIC CHAR #2		"A" TIC CHAR #2		"A" TIC CHAR #2		"A" TIC CHAR #2		"A" TIC CHAR #2
Y0		35.0		35.0		30.0		30.0		40.0
Y1		37.5		37.5		35.0		35.0		42.5
Y2		40.0		40.0		37.5		40.0		45.0
Y3		42.5		42.5		40.0		47.5		47.5
Y4		45.0		45.0		47.5		50.0		50.0
Y5		50.0		50.0		52.5		52.5		52.5
Y6		55.0		55.0		55.0		55.0		55.0
Y7		57.5		57.5		57.5		57.5		57.5
Y8		60.0		60.0		60.0		60.0		60.0
Y9		62.5		62.5		62.5		62.5		65.0
Y10		67.0		70.0		70.0		66.0		70.0

Note: - Y0, Y1, Y2, etc. are Characterizer axis descriptors for different firing demands.
- "A" TIC CHAR #2 is the descriptor for Unit F1 Primary Fuel Valve Position, etc.

Table D-3 Turbine Fuel/Pressure Curve

Fuel Flow (mcf/h)	High Compressor Pressure (psig)	Low Compressor Pressure (psig)
12	97	87
13	98	88
14	99	89
15	100	90
16	101	91
17	102	92
18	103	93
19	104	94
20	105	95
21	106	96
22	107	97
23	108	98
24	109	99
25	111	101
26	112	102
27	113	103
28	114	104
29	115	105
30	116	106
31	117	107
32	118	108
33	119	109
34	120	110
35	121	111
36	122	112
37	123	113
38	124	114
39	125	115
40	126	116
41	127	117
42	128	118
Values are rounded to closest whole number		

ATTACHMENT E

Inspection/Maintenance Schedule for LNG Vaporizers V001 through V005

The following items shall be inspected at a frequency not to exceed 120 operating hours. Each inspection record shall include the inspection time and date, as well as the number of operating hours since the previous inspection.

1. Check burner flare through sight port on top of burner end cover. Flame should be clear and stable. If not, check fuel gas and combustion air pressures against the expected burner range curve. Make necessary adjustments.

2. Visually inspect NOx water injection, fuel and combustion air systems for signs of leakage, wear, overheating or general damage.

The following items shall be inspected once per calendar month, not to exceed 35 calendar days between inspections. If the vaporizer has not operated since the prior inspection, that information shall be recorded, but no inspection need be performed. Each inspection record shall include the inspection time and date.

1. Remove and inspect the igniter, especially for the spark plug for ceramic cracks, deposits and gap settling. Replace or clean and re-gap as required.

2. If the actual valve positions are outside of Tables D-1 and D-2 valve characterizer settings (including +/- 10 percent variance), an alarm will notify the operator and this event will be recorded. The primary and secondary air valves will be visually inspected and a post inspection run test will be performed.

The following items shall be carried out once per calendar year. Each inspection record shall include the inspection time and date.

1. Remove burner top volute and inspect thoroughly for damage to interior parts, including the cooling coil and gas nozzle at the burner bottom.

2. Clean and recalibrate all gauges and metering devices.