

**CLARK COUNTY**  
**DEPARTMENT OF AIR QUALITY**  
**AND ENVIRONMENTAL MANAGEMENT**  
*500 South Grand Central Parkway, Las Vegas, Nevada 89155*  
**Part 70 Operating Permit**  
**Source: 825**  
Issued in accordance with the  
Clark County Air Quality Regulations (AQR)

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**ISSUED TO: MGM RESORTS INTERNATIONAL**

**SOURCE LOCATIONS:**

**MGM Grand**, 3799 Las Vegas Blvd South  
**New York-New York**, 3790 Las Vegas Blvd South  
**Monte Carlo**, 3770 Las Vegas Blvd South  
**The Signature at MGM Grand**, 3799 Las Vegas Blvd South  
**Mandalay Bay**, 3950 Las Vegas Blvd South  
**The Four Seasons**, 3960 Las Vegas Blvd South  
**Luxor**, 3900 Las Vegas Blvd South  
**Excalibur and Tram**, 3850 Las Vegas Blvd South  
**Bellagio**, 3600 Las Vegas Blvd South

**COMPANY ADDRESS:**

3260 Industrial Road  
Las Vegas, NV 89109

T21S, R61E, Sections 20 and 21  
Hydrographic Basin Number: 212

**NATURE OF BUSINESS:**

SIC Code: 7011 – Hotels and Motels  
NAICS Code: 721120 – Hotels, Resort, with Casinos

**RESPONSIBLE OFFICIAL:**

Name: Cindy Ortega  
Title: Senior Vice President, Energy and Environmental Services – MGM  
RESORTS INTERNATIONAL  
Phone: (702) 590-5532

**Initial Permit Issuance: December 30, 2010**

**Expiration Date: December 29, 2015**

**ISSUED BY: CLARK COUNTY DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL  
MANAGEMENT**



Tina Gingras  
Assistant Director, DAQEM

## EXECUTIVE SUMMARY

MGM RESORTS INTERNATIONAL (MGM) is located in Clark County, Nevada, on the Las Vegas Strip. The Permittee is a major source located in Hydrographic Area (HA) 212 (Las Vegas Valley). The Las Vegas Valley is nonattainment for PM<sub>10</sub> and ozone. MGM has been permitted under NSR as a major source of PM<sub>10</sub>, NO<sub>x</sub>, and CO and minor for SO<sub>x</sub>, VOC, and HAP. All of the activities and emission units at MGM are classified as Standard Industrial Code (SIC) 7011 (Hotels and Motels) and North American Industry Classification System (NAICS) Code 721120 (Hotels, Resort, with Casinos). The emission units and activities at the MGM properties are divided among ten hotels and a tram. Emission units present at this source include natural gas boilers and water heaters, diesel-powered emergency generators and fire pumps, woodworking and surface coating operations, gasoline storage and dispensing, and two natural gas turbines.

MGM submitted its initial Title V operating permit application in December 2006. Since that time, MGM has updated its Title V application numerous times; the last request for update was received by DAQEM on May 21, 2008. ATC Modification 13 for the source was issued on December 31, 2009, in an effort to consolidate all previously issued authority to construct permits.

The following table identifies the source status based on the PTE of each regulated air pollutant. These PTE values are not intended to be enforced as emission limits by direct measurement unless otherwise noted in Section III of this permit.

### Source-Wide PTE in Tons per Year

Pollutant	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
Source Total	77.47	153.73	201.52	4.42	49.06	21.13

The issuance of the Part 70 OP to MGM is based on the information submitted by the applicant and a technical review performed by the DAQEM staff.

Pursuant to AQR 12.5 (AQR 19.4), all terms and conditions in Sections I through VII and the attachments in this OP are federally enforceable unless explicitly denoted otherwise.

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## I. ACRONYMS

**Table I-1: Acronyms**

<b>Acronym</b>	<b>Term</b>
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct Certificate or Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
CAO	Field Corrective Action Order
CARB	California Air Resources Board
CE	Control Efficiency
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CPI	Urban Consumer Price Index
DAQEM	Clark County Department of Air Quality & Environmental Management
EF	Emission Factor
EO	Executive Order
EPA	United States Environmental Protection Agency
EU	Emission Unit
GDO	Gasoline Dispensing Operation
HAP	Hazardous Air Pollutant
HP	Horse Power
HVLP	High Volume, Low Pressure
kW	kiloWatt
MMBtu	Millions of British Thermal Units
NAICS	North American Industry Classification System
NEI	Net Emission Increase
NO <sub>x</sub>	Nitrogen Oxides
NOV	Notice of Violation
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
PM <sub>10</sub>	Particulate Matter less than 10 microns
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
scf	Standard Cubic Feet
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
TDS	Total Dissolved Solids
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

## II. GENERAL CONDITIONS

### A. General Requirements

1. The Permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act (Act) and is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application. *[AQR 12.5.2.6(g)/AQR 19.4.1.6.a]*
2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid. *[AQR 12.5.2.6(f)/AQR 19.4.1.5]*
3. The Permittee shall pay all permit fees pursuant to AQR Section 18. Failure to pay Part 70 permit fees may result in citations or suspensions or revocation of the Part 70 Permit. *[AQR 12.5.2.6(h)/AQR 19.4.1.7]*
4. The permit does not convey any property rights of any sort, or any exclusive privilege. *[AQR 12.5.2.6(g)(4)/AQR 19.4.1.6.d]*
5. The Permittee shall not hinder, obstruct, delay, resist, interfere with, or attempt to interfere with the Control Officer, or any individual to whom authority has been duly delegated for the performance of any duty by the AQR. *[AQR 5.1]*
6. The Permittee owning, operating, or in control of any equipment or property who shall cause, permit, or participate in any violation of the AQR shall be individually and collectively liable to any penalty or punishment imposed by and under the AQR. *[AQR 8.1]*
7. Any Permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. *[AQR 12.5.2.2/AQR 19.3.2]*
8. The Permittee may request confidential treatment of any records in accordance with AQR. Emission data, standards or limitations [all terms as defined in 40 CFR 2.301(a)] or other information as specified in 40 CFR 2.301 shall not be considered eligible for confidential treatment. The Administrator and the Control Officer shall each retain the authority to determine whether information is eligible for confidential treatment on a case-by-case basis. *[AQR 12.5.2.6(g)(5)/AQR 19.3.1.3 and 40 CFR 2.301]*
9. Pursuant to AQR Sections 40 and 43, no person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. *[AQR 40 and AQR 43]*

### B. Modification, Revision, Renewal Requirements

1. The Permittee shall not make a modification, as defined in AQR Section 0, to the existing source prior to receiving an ATC from the Control Officer. *[AQR 12.4]*

2. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the Permittee for the permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [AQR 12.5.2.6(g)(3)/AQR 19.4.1.6.c]
3. Any request for a permit revision must comply with the requirements of AQR Section 12.5. [AQR 12.5.2]
4. 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 requirement. [AQR 80.1 and 40 CFR 60.12]
5. No permit revisions shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. [AQR 12.5.2.6(i)/AQR 19.4.1.11]
6. For purposes of permit renewal, the Permittee shall submit a timely and complete application. A timely application is one submitted between six (6) months and 18 months prior to the date of permit expiration. [AQR 12.5.2.1/AQR 19.3.1.1.c]
7. Permit expiration terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with AQR in which case the permit shall not expire and all terms and conditions of the permit shall remain in effect until the renewal permit has been issued or denied. [AQR 12.5.2.11/AQR 19.5.3.2]

**C. Notifications/Providing Information Requirements**

1. The Permittee shall comply with all notification, record keeping and reporting requirements of 40 CFR 60 Subpart KKKK and 40 CFR 63 Subpart ZZZZ, [AQR 12.5.2.6/AQR 19.4.1.3]
2. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing 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 Control Officer copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the Control Officer along with a claim of confidentiality. [AQR 12.5.2.6(g)(5)/AQR 19.4.1.6]
3. The Permittee shall allow the Control Officer or an authorized representative, upon presentation of credentials:
  - a. entry upon the Permittee's premises where the source is located, or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;

- b. access to inspect and copy, at reasonable times, any records that must be kept under conditions of the permit;
  - c. access to inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
  - d. access to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [AQR 4.3. AQR 12.5.2.8(b)/AQR 19.4.3.2]
4. Upon request of the Control Officer, the Permittee shall provide such information or analyses as will disclose the nature, extent, quantity or degree of air contaminants which are or may be discharged by such source, and type or nature of control equipment in use, and the Control Officer may require such disclosures be certified by a professional engineer registered in the state. In addition to such report, the Control Officer may designate an authorized agent to make an independent study and report as to the nature, extent, quantity or degree of any air contaminants which are or may be discharged from source. An authorized agent so designated is authorized to inspect any article, machine, equipment, or other contrivance necessary to make the inspection and report. [AQR 4.4]

#### **D. Compliance Requirements**

1. Any person who violates any provision of this Operating Permit, including, but not limited to, any application requirement; any permit condition; any fee or filing requirement; any duty to allow or carry out inspection, entry or monitoring activities or any requirements by DAQEM is guilty of a civil offense and shall pay civil penalty levied by the Air Pollution Control Hearing Board/Hearing Officer of not more than \$10,000. Each day of violation constitutes a separate offense. [AQR 9.1]
2. Any person aggrieved by an order issued pursuant to AQR 9.1 is entitled to review as provided in Chapter 233B of NRS. [AQR 9.12]
3. The Permittee of any stationary source or emission unit that fails to demonstrate compliance with the emissions standards or limitations shall submit a compliance plan to the Control Officer pursuant to AQR Section 10. [AQR 10.1]
4. The Permittee shall comply with the requirements of 40 CFR 61, Subpart M, of the National Emission Standard for Asbestos for all demolition and renovation projects. [AQR 13.1.7]

## **E. Reporting Requirements**

1. Requirements for the Annual Compliance Certification with terms and conditions contained in the Operating Permit, including emission limitations, standards, or work practices, are as follows:
  - a. the Permittee shall submit compliance certifications annually in writing to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) and the Administrator at USEPA Region IX (Director, Air and Toxics Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each calendar year will be due on January 30 of the following year;
  - b. compliance shall be determined in accordance with the requirements detailed in AQR 12.5.2.6/AQR 19.4.3.1, record of periodic monitoring, or any credible evidence; and
  - c. the compliance certification shall include:
    - i. identification of each term or condition of the permit that is the basis of the certification;
    - ii. the Permittee's compliance status and whether compliance was continuous or intermittent;
    - iii. methods used in determining the compliance status of the source currently and over the reporting period consistent with Subsection 19.4.1.3; and
    - iv. other specific information required by the Control Officer to determine the compliance status of the source. *[AQR 12.5.2.8(e)(3)/AQR 19.4.3.5]*
2. The Permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1]*
  - a. The annual emissions inventory shall be submitted to DAQEM no later than March 31 after the reporting year.
  - b. The report shall include the emission factors and calculations used to determine the emissions from each permitted emission unit, even when an emission unit is not operated.
3. The Permittee shall submit semi-annual monitoring reports to DAQEM based on the following requirements. *[AQR 12.5.2.6(d)/AQR 12.5.2.6/AQR 19.4.3.1(c)]*
  - a. The report shall include a semi-annual summary of each items listed in Recordkeeping Section of each hotel facility.
  - b. The report shall be based on six calendar months, which includes partial calendar months.
  - c. The report shall be received by DAQEM within 30 calendar days after the reporting period.
4. The Permittee shall report to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) any upset, breakdown, malfunction,

emergency or deviation which cause emissions of regulated air pollutants in excess of any limits set by regulation or by this permit. The report shall be in two parts as specified below: [AQR 25.6.1]

- a. within twenty-four (24) hours of the time the Permittee first learns of the excess emissions, the report shall be communicated by phone (702) 455-5942, fax (702) 383-9994, or email.
  - b. within seventy-two (72) hours of the notification required by paragraph (a) above, the detailed written report containing the information required by AQR Section 25.6.3 shall be submitted.
5. The Permittee shall report to the Control Officer deviations that do not result in excess emission, with the semi-annual reports. Such reports shall include the probable cause of deviations and any corrective actions or preventative measures taken. [AQR 12.5.2.6(d)(4)(B)/AQR 19.4.1.3]
  6. The Permittee shall include a certification of truth, accuracy, and completeness by a responsible official when submitting any application form, report, or compliance certification pursuant to this Operating Permit. This certification and any other certification required shall state, "Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." This statement shall be followed by the signature and printed name of the responsible official certifying compliance and the date of signature. [AQR 12.5.2.6(l)/19.3.4]
  7. All records and logs, or a copy thereof, shall be kept on-site for a minimum of five (5) years from the date the measurement was taken or data was entered and shall be made available to DAQEM upon request. [AQR 12.5.2.6/AQR 19.4.3.1(b)]
  8. The Control Officer reserves the right to require additional reports and reporting to verify compliance with permit conditions, permit requirements, and requirements of applicable federal regulations. [AQR 4.4 and AQR 12.5.2.6(d)/AQR 19.4.3.1(c)]

**Table II-1: Summary of Required Submission Dates for Various Reports**

Required Report	Applicable Period	Due Date <sup>1</sup>
Semi-annual Report for 1st Six-Month Period	January, February, March, April, May, June	July 30 each year
Semi-annual Report for 2 <sup>nd</sup> Six-Month Period, Any additional annual records required.	July, August, September, October, November, December	January 30 each year
Annual Compliance Certification Report	Calendar Year	January 30 each year
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within 24 hours of the time the Permittee first learns of the excess emissions

Required Report	Applicable Period	Due Date <sup>1</sup>
Excess Emission Report	As Required	Within 72 hours of the notification
Deviation Report	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test.

<sup>1</sup>If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.

**F. Performance Testing Requirements**

1. Upon request of the Control Officer, the Permittee shall test or have tests performed to determine the emissions of air contaminants from any source whenever the Control Officer has reason to believe that an emission in excess of that allowed by the DAQEM regulations is occurring. The Control Officer may specify testing methods to be used in accordance with good professional practice. The Control Officer may observe the testing. All tests shall be conducted by reputable, qualified personnel. *[AQR 4.5]*
2. Upon request of the Control Officer, the Permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants. *[AQR 4.6]*
3. The Permittee shall submit for approval a performance testing protocol which contains testing, reporting, and notification schedules, test protocols, and anticipated test dates to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) not less than 45 nor more than 90 days prior to the anticipated date of the performance test. *[AQR 14.10]*
4. The Permittee shall submit to EPA for approval any alternative test methods that are not already approved by EPA. *[AQR 14.1 and 40 CFR 60.8(b)]*
5. The Permittee shall submit a report describing the results of each performance test to the Control Officer within 60 days from the end of the performance test. *[AQR 14.12 and AQR 12.5.2.8]*
6. The Control Officer may require additional or more frequent performance testing. *[AQR 4.5]*

### III. EMISSION UNITS AND APPLICABLE REQUIREMENTS

[Authority for all values, limits, and conditions in this section, unless otherwise noted: NSR ATC/OP 825, Modification 6 through Modification 13, Revision 1, (12/31/09); NSR ATC/OP 369, Modification 1, (09/11/02); NSR ATC/OP 74, Modification 1, (11/15/04); NSR ATC/OP 15615, Modification 0, (08/15/05); NSR ATC/OP 737, Modification 4, (04/29/04); NSR ATC/OP 805, Modification 0, (11/22/99); NSR ATC/OP 609, Modification 1, (03/03/02); and NSR ATC/OP 756, Modification 1, (01/07/05)]

#### A. MGM GRAND

##### 1. Emission Units

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.A.1.a.

**Table III.A.1.a: Summary of Emission Units – MGM Grand**

EU	Description
MG01	Envirotech Natural Gas Boiler, M/N: N/A, S/N: 1109, 2.0 MMBtu/hour
MG02	Envirotech Natural Gas Boiler, M/N: N/A, S/N: 1110, 2.0 MMBtu/hour
MG03	Envirotech Natural Gas Boiler, M/N: N/A, S/N: 1107, 2.0 MMBtu/hour
MG04	Unilux Boiler, M/N: ZF400, S/N: 1999, 4.0 MMBtu/hour
MG05	Unilux Boiler, M/N: ZF400, S/N: 2000, 4.0 MMBtu/hour
MG06	Unilux Boiler, M/N: ZF400, S/N: 2013, 4.0 MMBtu/hour
MG09	PVI Industries Boiler, M/N: 400 WBHE 1500A-TP, S/N: 119585930, 16.8 MMBtu/hour
MG12	PVI Industries Boiler, M/N: 400 WBHE 1500A-TP, S/N: 119585933, 16.8 MMBtu/hour
MG13	Cleaver Brooks Boiler, M/N: CBLE700-800-200, S/N: OL097510, 33.6 MMBtu/hour
MG14	Cleaver Brooks Boiler, M/N: CBLE700-800-200, S/N: OL096895, 33.6 MMBtu/hour
MG15	Cleaver Brooks Boiler, M/N: CBLE700-800-200, S/N: OL096896, 33.6 MMBtu/hour
MG16	Cleaver Brooks Boiler, M/N: CBLE700-800-200, S/N: OL096897, 16.8 MMBtu/hour
MG17	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02910, 1,865 kW, 2,500 hp
MG18	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02931, 1,865 kW, 2,500 hp
MG19	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02927, 1,865 kW, 2,500 hp
MG20	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02913, 1,865 kW, 2,500 hp
MG21	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02929, 1,865 kW, 2,500 hp
MG22	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02932, 1,865 kW, 2,500 hp
MG23	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N: 25Z02916, 1,865 kW, 2,500 hp
MG24	Cummins Diesel Fire Pump, M/N: 6BTA5.9-F1, S/N: 44802838, 208 hp
MG25	Clark Detroit Allison Fire Pump, M/N: DDFP-L8FA8176V, S/N: 8VF-155265, 515 hp
MG26	Detroit Allison Fire Pump, M/N: DDFP-06FA-8175, S/N: 6VF-1995092, 412 hp
MG27	Caterpillar Diesel Fire Pump/Generator, M/N: 3208DIT, S/N: 03216779, 146 kW, 196 hp
MG28	Detroit Allison Fire Pump, M/N: PDFP-06YR2531F, S/N: U719491F, 183 hp
MG29	Goldwest Spray Paint Booth, M/N: 2450, S/N: 1568, 15'x25'
MG30	Baltimore Aircoil Cooling Tower, M/N: 4469-20-3W, S/N: 92-4G-6184, 3-Cell, 3,000 ppm TDS, 0.013 percent drift, 18,000 gpm
MG31	Baltimore Aircoil Cooling Tower, M/N: 4469-20-3W, S/N: 92-4G-6184, 3-Cell, 3,000 ppm TDS, 0.013 percent drift, 18,000 gpm
MG32	Baltimore Aircoil Cooling Tower, M/N: 4469-20-3, S/N: 92-46-6193, 3,000 ppm TDS, 0.002 percent drift, 18,000 gpm
MG33	Solvent Degreasing Operations

EU	Description
MG34	Patterson-Kelley Boiler, M/N NM-2000, S/N CR46-05-28834, 2.0 MMBtu/hr
MG35	Patterson-Kelley Boiler, M/N NM-2000, S/N CR46-05-28833, 2.0 MMBtu/hr
MG36	Patterson-Kelley Boiler, M/N D-1200, S/N BJ16-98-8881, 1.2 MMBtu/hr
MG37	Patterson-Kelley Boiler, M/N D-1200, S/N BJ16-98-8882, 1.2 MMBtu/hr
MG38	Patterson-Kelley Boiler, M/N D-1900-2, S/N CJ10-98-8703, 1.9 MMBtu/hr
MG39	McMaster-Carr Spray Paint Booth, M/N: 7899T96, 98" x 120" x 110"
MG40	McMaster-Carr Spray Booth, M/N: 7866T83, 74" x 41" x 38"
MG43	Pyrotechnics
MG44	Donaldson Torit Cyclone Dust Collector, M/N: 30 CYC, S/N: IG903561
MG45	Dust Hog Dust Collector M/N: C200 1D, S/N: 60031958
MG46	ACE Tank & Equipment, M/N: TBD, S/N: TBD, 3,000 gallons
MG47	Patterson-Kelley Water Heater, M/N: N-700, S/N: AK47-97-8484, 0.70 MMBtu/hr
MG48	Patterson-Kelley Water Heater, M/N: N-700, S/N: AK47-97-8483, 0.70 MMBtu/hr
MG49	Raypack Boiler, M/N: WH1-0401, S/N: 0602247052, 0.399 MMBtu/hr
MG50	Raypack Boiler, M/N: WH1-0401, S/N: 0602247051, 0.399 MMBtu/hr
MB046	Unilux Boiler, M/N: ZF2000W, S/N: 2811, 20.0 MMBtu/hr
MB047	Unilux Boiler, M/N: ZF2000W, S/N: 2810, 20.0 MMBtu/hr

## 2. Emission Limitations and Standards

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed in Table III.A.2.a, on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.A.2.a: PTE (tons per year) – MGM Grand**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MG01	2.0 MMBtu/hr		0.07	0.43	0.72	0.01	0.05	0.02
MG02	2.0 MMBtu/hr		0.07	0.43	0.72	0.01	0.05	0.02
MG03	2.0 MMBtu/hr		0.07	0.86	1.44	0.01	0.05	0.02
MG04	4.0 MMBtu/hr		0.13	0.86	1.44	0.01	0.09	0.03
MG05	4.0 MMBtu/hr		0.13	0.86	1.44	0.01	0.09	0.03
MG06	4.0 MMBtu/hr		0.13	0.86	1.44	0.01	0.09	0.03
MG09	16.8 MMBtu/hr		0.55	3.61	6.06	0.04	0.4	0.14
MG12	16.8 MMBtu/hr		0.55	3.61	6.06	0.04	0.4	0.14
MG13	33.6 MMBtu/hr		1.10	7.21	12.12	0.09	0.79	0.27
MG14	33.6 MMBtu/hr		1.10	7.21	12.12	0.09	0.79	0.27
MG15	33.6 MMBtu/hr		1.10	7.21	12.12	0.09	0.79	0.27
MG16	16.8 MMBtu/hr		0.55	3.61	6.06	0.04	0.4	0.14
MG17	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG18	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG19	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG20	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG21	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG22	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG23	2,500 hp	30 hr/yr	0.03	0.90	0.21	0.02	0.02	0.01
MG24	208 hp	30 hr/yr	0.01	0.10	0.02	0.01	0.01	0.01
MG25	515 hp	30 hr/yr	0.02	0.24	0.05	0.01	0.02	0.01
MG26	412 hp	30 hr/yr	0.01	0.19	0.04	0.01	0.02	0.01
MG27	196 hp	30 hr/yr	0.01	0.09	0.02	0.01	0.01	0.01
MG28	183 hp	30 hr/yr	0.01	0.02	0.01	0.01	0.01	0.01

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MG29	5.00 lb/gal	480 gal/yr	0.01	0.00	0.00	0.00	1.20	0.56
MG30	18,000 gpm		7.28					
MG31	18,000 gpm		7.28					
MG32	18,000 gpm		1.12					
MG33	6.80 lbs/gal VOC	660 gal/year	0.00	0.00	0.00	0.00	2.24	2.24
MG34	2.0 MMBtu/hr		0.07	0.32	0.65	0.01	0.05	0.02
MG35	2.0 MMBtu/hr		0.07	0.32	0.65	0.01	0.05	0.02
MG36	1.2 MMBtu/hr		0.04	0.19	0.39	0.01	0.03	0.01
MG37	1.2 MMBtu/hr		0.04	0.19	0.39	0.01	0.03	0.01
MG38	1.9 MMBtu/hr		0.06	0.30	0.62	0.01	0.04	0.02
MG39	6.84 lb/gal	2,000 gal/yr	0.00	0.00	0.00	0.00	6.84	3.21
MG40	6.84 lb/gal	600 gal/yr	0.00	0.00	0.00	0.00	2.05	0.96
MG43	6.70 lb/show	476 shows/yr	0.18	0.00	0.14	0.00	0.00	0.02
MG44	2 lb/hr	1,200 hrs/yr	0.01	0.00	0.00	0.00	0.00	0.00
MG45	2 lb/hr	1,200 hrs/yr	0.01	0.00	0.00	0.00	0.00	0.00
MG46	3,000 gal	99,000 gal/yr	0.00	0.00	0.00	0.00	1.55	0.01
MG47	0.70 MMBtu/hr		0.02	0.11	0.23	0.01	0.02	0.01
MG48	0.70 MMBtu/hr		0.02	0.11	0.23	0.01	0.02	0.01
MG49	0.399 MMBtu/hr		0.01	0.12	0.14	0.01	0.01	0.01
MG50	0.399 MMBtu/hr		0.01	0.12	0.14	0.01	0.01	0.01
MB046 <sup>1</sup>	20.0 MMBtu/hr	12,600 hrs/yr	0.78	3.85	3.90	0.06	0.57	0.19
MB047 <sup>1</sup>	20.0 MMBtu/hr							

<sup>1</sup>MB046 and MB047 along with MB048 through MB051 have an operational cap of 12,600 hours per year and the listed PTE is the combined PTE of all six boilers.

- c. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed in Table III.A.2.b [AQR 12.5.2.3/AQR 19.2.1]

**Table III.A.2.b: PTE (pounds per hour) – MGM**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MG09	16.8 MMBtu/hr	0.13	0.82	1.38	0.01	0.09	0.03
MG12	16.8 MMBtu/hr	0.13	0.82	1.38	0.01	0.09	0.03
MG13	33.6 MMBtu/hr	0.25	1.65	2.77	0.02	0.18	0.06
MG14	33.6 MMBtu/hr	0.25	1.65	2.77	0.02	0.18	0.06
MG15	33.6 MMBtu/hr	0.25	1.65	2.77	0.02	0.18	0.06
MG16	16.8 MMBtu/hr	0.13	0.82	1.38	0.01	0.09	0.03
MB46	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03
MB47	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03

- d. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of each of the 12 diesel emergency generators and fire pumps to 30 hours per year for testing and maintenance purposes (EUs: MG17 through MG28).
- b. The Permittee shall limit the consumption of VOC and HAP containing paint strippers, paints, basecoats, primers, reducers, thinners, solvents, etc., to 480 gallons per rolling 12-months, based on a weighted average VOC content of 5.00 pounds per gallon and a HAP content that is based on 47 percent of the VOC content in the Goldwest booth (EU: MG29).
- c. The Permittee shall limit the consumption of solvent in the degreasing operations to 660 gallons per rolling 12-months (EU: MG33).
- d. The Permittee shall limit the consumption of VOC and HAP containing paint strippers, paints, basecoats, primers, reducers, thinners, solvents, etc., to 2,000 gallons per rolling 12-months, based on a weighted average VOC content of 6.84 pounds per gallon and a HAP content that is based on 47 percent of the VOC content in the first McMaster-Carr booth (EU: MG39).
- e. The Permittee shall limit the consumption of VOC and HAP containing paint strippers, paints, basecoats, primers, reducers, thinners, solvents, etc., to 600 gallons per rolling 12-months, based on a weighted average VOC content of 6.84 pounds per gallon and a HAP content that is based on 47 percent of the VOC content in the second McMaster-Carr booth (EU: MG40).
- f. The Permittee shall limit the use of pyrotechnics to 3,191.3 pounds per year (EU: MG43).
- g. The Permittee shall operate the two dust collectors at all times PM<sub>10</sub> is emitted during the use of the respective shop and shall be limited to 1,200 hours per year for each dust collector (EUs: MG44 and MG45).
- h. The Permittee shall limit the amount of throughput (aggregate of all gasoline products) to 99,000 gallons per rolling 12-months (EU: MG46).
- i. The Permittee shall limit the combined operation of the Unilux boilers (EUs: MB046 and MB047) along with the Unilux boilers at New York – New York (EU: MB048) and Mandalay Bay (EUs: MB049 through MB051) to 12,600 hours per year.

### 4. Emission Controls

#### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.

- c. The Permittee shall operate the two Envirotech boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MG01 and MG02).
- d. The Permittee shall operate the Envirotech boiler with burners rated for an emission rate of 80 ppm NO<sub>x</sub> and 222 ppm CO (EU: MG03).
- e. The Permittee shall operate each of the three Unilux boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MG04 through MG06).
- f. The Permittee shall operate each of the two PVI Industries boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EU: MG09 and MG12).
- g. The Permittee shall operate each of the four Cleaver Brooks boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MG13 through MG16).
- h. The Permittee shall operate each of the seven Patterson Kelley boilers with burners rated for an emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EUs: MG34 through MG38, MG47, and MG48).
- i. The Permittee shall operate each of the two Raypak boilers with burners rated for an emission rate of 55 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MG49 and MG50).
- j. The Permittee shall operate each of the Unilux boilers with burners rated for an emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO (EUs: MB046 and MB047).

#### Diesel Generators/Fire Pumps

- k. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- l. The Permittee shall operate all diesel emergency generators and fire pumps with turbochargers and aftercoolers (EUs: MG17 through MG28).

#### Cooling Towers

- m. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- n. The Permittee shall operate each of the two of the Baltimore Aircoil cooling towers with drift eliminators with a manufacturer's drift rate of 0.013 percent (EUs: MG30 and MG31).
- o. The Permittee shall operate the Baltimore Aircoil cooling towers with drift eliminators with a manufacturer's drift rate of 0.002 percent (EU: MG32).
- p. The Permittee shall maintain the cooling water to limit the TDS content to 3,000 ppm for each of the Baltimore Aircoil cooling towers (EUs: MG30 through MG32).

### Surface Coating

- a. The Permittee shall not operate spray booths unless all exhaust air passes through appropriate filter media having a particulate capture efficiency of at least 99.0 percent. This is accomplished with tacky filter material that is at least 2 inches thick. The dry filter media must cover all openings in the spray booth.
- b. The Permittee shall use only closed containers for storage or disposal of VOC or HAP-containing cloth or paper (excluding masking tape) used for surface preparation and cleanup.
- c. All filters or other control equipment associated with surface coating operations shall follow manufacturer's specifications for use and operation. Dry filters must be changed at sufficient intervals to prevent a decrease in their effectiveness and prevent them from clogging.
- d. The Permittee shall use a manometer (or equivalent) to monitor the pressure drop across the spray booth filters. The filters should be replaced when the pressure drop exceeds 0.25 inches of water (6.35 millimeters of water), unless the manufacturer's specifications indicate a different pressure drop value.
- e. The Permittee shall clean surface coating application equipment in an enclosed container to minimize VOC volatilization into the ambient air.
- f. All containers with VOC and HAP-containing products shall remain securely closed, except during product transfer. Containers shall be inspected regularly for leakage and the contents of any leaking container must be immediately transferred to an appropriately labeled container that has been specifically designed for storage of the compound.
- g. The Permittee shall employ good housekeeping practices to prevent the accumulation and/or dispersal of particulate matter from sanding, blasting, surface preparation, etc. carried out in conjunction with surface coating operations. No more than 0.25 inches of particulate matter shall accumulate on surrounding surfaces at any time.

### Woodworking

- q. The Permittee shall operate the Donaldson Torit Cyclone and the Dust Hog baghouse dust collectors at all times, during all cutting, sanding, blasting, and surface preparation, to maintain 99% control efficiency for PM<sub>10</sub> emissions (EUs: MG44 and MG45).

### Gasoline Storage/Dispensing

- r. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116]:
  - a. minimize gasoline spills;

- b. clean up spills as expeditiously as practicable;
  - c. cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
  - d. minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators;
  - e. the Permittee shall have records documenting gasoline throughput within 24 hours of a request of the Control Officer; and
  - f. the Permittee must comply with the requirements of the 40 CFR 63, Subpart CCCCCC by January 10, 2011.
- s. Gasoline storage tank (EU: MG46) shall be equipped with CARB certified Phase I vapor recovery controls.
  - t. The Phase I Vapor Recovery System shall be constructed in accordance with the "Two-Point Phase I Vapor Recovery System" drawing, and shall use components specified in the current CARB EO G-70-102 series.
  - u. Phase I Vapor Recovery. The following control requirements apply to the ACE aboveground storage tank (EU: MG46):
    - i. The highest point of discharge from a submerged fill-pipe shall be no more than 6.0 inches from the tank bottom.
    - ii. Pursuant to AQR Section 12, all Phase I vapor recovery equipment shall be installed and operated in accordance with the manufacturer's specifications and certification requirements.
    - iii. All Phase I vapor recovery equipment shall be maintained to be leak free, vapor tight, and in good working order.
    - iv. All Phase I vapor recovery equipment shall have a CARB-certified device, which prevents loosening or over tightening of the Phase I product adaptor.
    - v. Each system that has a pressure/vacuum vent valve installed must also meet the standards as outlined in the current CARB EO G-70-102 series.

## 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters such that the monthly consumption of natural gas can be established for each applicable boiler (EUs: MG09, MG12 through MG16, MB046, and MB047). *[AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]*
- b. The Permittee shall monitor operating hours monthly for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: MG17 through MG28). *[AQR 12.5.2.6/AQR 19.4.3.1]*

- c. The Permittee shall inspect spray paint booth and all ancillary equipment for leaks, malfunctions, proper operation of gauges and pressure drops, each day the booth is operated, and perform appropriate maintenance as needed. A log must be kept of all inspections as well as any corrective actions taken to repair the equipment. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. The Permittee shall conduct daily inspections for requirements listed in AQR Subsection 52.4 that are associated with the Phase I vapor recovery system to determine if components of the system are defective. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- e. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions that appear to exceed the opacity limit(s) are observed, corrective actions shall be taken to minimize the emissions and, if practicable, the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. *[AQR 12.1.4.1(d), AQR 12.5.2.6/AQR 19.4.3.1]*
- f. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. *[AQR 12.5.2.6/AQR 19.4.3.1]*

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr but less than 10.0 MMBtu/hr shall perform a burner efficiency test at least once each calendar year. Burner efficiency tests shall be conducted in accordance with the manufacturer's specifications and specifications for good combustion practices (EUs: MG04 through MG06). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- b. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: MG09, MG12 through MG16, MB046, and MB047). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. *[AQR 12.5.2.6/AQR 19.4.3.1]*

- d. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- e. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

**Boiler/ Water Heater Performance Tests**

- f. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: MG09, MG12 through MG16, MB046, and MB047). [AQR 12.5.2.6/AQR 19.4.3.1]
- g. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units MG09, MG12 through MG16, MB046, and MB047. [AQR 12.5.2.6/AQR 19.4.3.1]
- h. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.A.6.a:

**Table III.A.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

**Diesel Generators/Fire Pumps**

- i. Testing of diesel emergency generators shall not take place during CO advisories.
- j. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

**Gasoline Storage/Dispensing**

- k. The Permittee shall conduct performance testing on the Vapor Control Systems associated with EU: MG46, listed in Table III.A.6.b. [AQR 4.5]

- i. Each performance test shall be conducted in accordance with the applicable CARB Test Procedure that is required by the CARB EO.
  - ii. The source shall give a 7-day written prior notice of the date of the test to the Control Officer, Compliance Division.
  - iii. Any prior approved scheduled performance test cannot be canceled and/or rescheduled except with the prior approval of the Control Officer, Compliance Division.
  - iv. Within 7 days from the end of an initial or annual performance test, source shall submit a report containing the results of such test to the Control Officer, Compliance Division.
  - v. The report shall have, as the first page of text, a signed Certification of Performance Test Results (see Attached).
- l. Each performance test shall be conducted by a DAQEM approved Certified Phase II Vapor Recovery Tester, as defined in AQR Subsection 52.2.
  - m. If any performance test fails, then the affected portion of the GDO will be tagged "Out of Order" until corrective action has been taken and the retest passed.
  - n. If the source fails a performance test, the Control Officer, Compliance Division, shall be notified within 24 hours or by 12:00 p.m. (Noon) of DAQEM's next business day, whichever is soonest. Repairs to correct the defects shall be made and a retest scheduled with the Control Officer. The retest shall be scheduled within 10 calendar days of the failed test. If the repairs and retest cannot be accomplished within 10 calendar days, the source must submit the reasons and a proposed date for retesting in writing to the Control Officer for approval.
  - o. The source shall conduct performance tests listed in Table III.A.6.b on the Phase II system (EU: MG46):

**Table III.A.6.b: Required Performance Test Criterion: Balance System**

Description	CARB Test Procedure	Standard
Determination of Static Pressure of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks	TP-201.3B	Initial: 2.0" wc Final: Referenced Value
Dynamic Back Pressure	TP-201.4	0.45" wc @ 60 SCFH, N <sub>2</sub> <sup>2</sup>
Dispensing nozzle flow rate <sup>1</sup>	As Specified in EO	10 gpm (max.)

<sup>1</sup>If the source fails the Dynamic Back Pressure performance test, the source shall be required to comply with additional performance testing requirements in accordance with the applicable EO for this equipment.

- p. Initial Performance Test [AQR 12.5.2.6/AQR 19.4.3.1]:
  - i. The source shall conduct and pass an initial performance test within 30 days of the source commencing operations.

- ii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of new emission units that require performance testing.
  - iii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of modified emission units that require performance testing.
  - iv. The initial performance test must be witnessed by an inspector from the DAQEM.
- q. Annual Performance Test, Vapor Recovery System:
- i. Annual performance testing shall be accomplished prior to the anniversary date of the previous performance test that the source passed.
  - ii. Pursuant to AQR Section 4, the Control Officer may require additional testing.
- r. The source shall implement changes to the existing vapor recovery system if any performance test results indicate such changes are necessary to maintain compliance with this permit.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
- i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: MG17 through MG28);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: MG30 through MG32);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. MSDS or records demonstrating the VOC and HAP content for each compound used for surface coating activities;
  - vi. a log book of all inspections, maintenance, and repairs as specified in this document;
  - vii. records of burner efficiency testing as specified in this Operating Permit;
  - viii. results of performance testing as specified in this Operating Permit; and
  - ix. GDO records shall contain, at minimum, the following information (EU: MG46) [AQR 12.5.2.6/AQR 19.4.3.1]:
    - (i) a record of any maintenance on any part of the Phase I equipment, including a general description of the maintenance;
    - (ii) the date and time the equipment was taken out-of-service;

- (iii) the date of repair or replacement;
  - (iv) a general description of the part location (e.g., pump, tank, nozzle number, etc.);
  - (v) a description of the problem; and
  - (vi) the results of the daily inspections.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. monthly amount of natural gas consumed (in MMBtu, scf, or therms) for each boiler (EUs: MG09, MG12 through MG16, MB046, and MB047);
  - i. monthly total of operating hours to demonstrate compliance with 12-month rolling hour limits for each diesel generator and fire pump (EUs: MG17 through MG28);
  - ii. monthly and rolling 12-month total consumption (in gallons) of each VOC-containing compound related to surface coating activities (paints, basecoats, primers, reducers, thinners, solvents, etc.);
  - iii. monthly and 12-month rolling total of gasoline throughput [40 CFR 63.11116(b)]; and
  - iv. monthly and rolling 12-month total hours of woodworking operations (EUs: MG44 and MG45).
- c. For all Inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). [AQR 12.5.2.6/AQR 19.4.3.1]
- d. All records, i.e., daily self-inspection records, daily logs, etc., or a copy thereof, for Phase I and Phase II (EU: MG46), shall contain, at minimum, the following information:
  - i. a record of any maintenance on any part of the Phase I and Phase II equipment, including a general description of the maintenance;
  - ii. the date and time the equipment was taken out-of-service;
  - iii. the date of repair or replacement;
  - iv. a general description of the part location (e.g., pump, tank, nozzle number, etc.);
  - v. a description of the problem; and
  - vi. the results of the daily inspections.
- e. The Control Officer or the DAQEM-approved Certified Phase II Vapor Recovery Tester shall use an approved Audit Form to record the type of performance tests conducted, as well as, the results of the tests. An approved form may be obtained from DAQEM or a DAQEM approved Certified Phase II Vapor

Recovery Tester. The source shall retain the completed Audit Form for each test performed.

- f. Records and data required by this permit and maintained by the source and may be audited, at the source's expense, at any time by a third party selected by the Control Officer.

**B. NEW YORK – NEW YORK**

**1. Emission Units**

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.B.1.a following table summarizes the emission units emitted for this facility.

**Table III.B.1.a: Summary of Emission Units – New York – New York**

EU	Description
NY01	IBW/Universal Energy Boiler, M/N: BF300L-PF8; S/N:276EG; 14.215 MMBtu/hr
NY02	IBW/Universal Energy Boiler, M/N: BF300L-PF8; S/N:277EG; 14.215 MMBtu/hr
NY27	Caterpillar 3512TA, S/N: 24Z06937; 1,250 kW or 1,676 hp
NY28	Caterpillar 3512TA, S/N: 24Z06932; 1,250 kW or 1,676 hp
NY29	Caterpillar 3512TA, S/N: 24Z06931; 1,250 kW or 1,676 hp
NY33	Baltimore Air Coil Cooling Tower, M/N: 31055-PX; S/N: 95201375, 3,600 gpm, 0.005 percent drift
NY34	Baltimore Air Coil Cooling Tower, M/N: 31055-PX; S/N: 95201376, 3,600 gpm, 0.005 percent drift
NY35	Baltimore Air Coil Cooling Tower, M/N: 31055-PX; S/N: 95201377, 3,600 gpm, 0.005 percent drift
NY36	Baltimore Air Coil Cooling Tower, M/N: 31055; S/N: 00-10899, 3,600 gpm, 0.005 percent drift
NY37	RBI Boiler, M/N: Futera III, MB200, S/N 110540862, 1.999 MMBtu/hr
NY38	RBI Boiler, M/N: Futera III, MB200, S/N 110540863, 1.999 MMBtu/hr
NY39	Gasmaster Boiler, M/N: GMI 2M, S/N: 235.04, 1.96 MMBtu/hr
NY40	Carpentry Shop with a Murphy Rodgers Dust Collector, M/N: MRSE-13-4D, S/N: 1003
NY41	Carpentry Shop with a Dayton Dust Collector, M/N: 5E818A
NY42	RBI Boiler, M/N: Futera III, M/N: MB2000, S/N: 020952475, 1.999 MMBtu/hr
NY43	RBI Boiler, M/N: Futera III, M/N: MB2000, S/N: 010952259, 1.999 MMBtu/hr
NY44	RBI Boiler, M/N: Futera III, M/N: MB2000, S/N: 010952225, 1.999 MMBtu/hr
MB048	Unilux Boiler, M/N: ZF2000W, S/N: 2809, 20.0 MMBtu/hr

**2. Emission Limitations and Standards**

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.B.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.B.2.a: PTE (tons per year) – New York – New York**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
NY01	14.215 MMBtu/hr		0.46	1.95	5.13	0.04	0.34	0.11
NY02	14.215 MMBtu/hr		0.46	1.95	5.13	0.04	0.34	0.11

NY27	1,676 hp	26 hrs/yr	0.02	0.52	0.12	0.01	0.01	0.01
NY28	1,676 hp	26 hrs/yr	0.02	0.52	0.12	0.01	0.01	0.01
NY29	1,676 hp	26 hrs/yr	0.02	0.52	0.12	0.01	0.01	0.01
NY33	3,600 gpm		0.56					
NY34	3,600 gpm		0.56					
NY35	3,600 gpm		0.56					
NY36	3,600 gpm		0.56					
NY37	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
NY38	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
NY39	1.96 MMBtu/hr		0.06	0.42	0.71	0.01	0.05	0.02
NY40	N/A	3,640 hrs/yr	0.04	0.00	0.00	0.00	0.00	0.00
NY41	N/A	1,200 hrs/yr	0.01	0.00	0.00	0.00	0.00	0.00
NY42	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
NY43	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
NY44	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
MB048 <sup>1</sup>	20.0 MMBtu/hr	12,600 hrs/yr	0.78	3.85	3.90	0.06	0.57	0.19

<sup>1</sup>MB048 along with MB046, MB047, and MB049 through MB051 have an operational cap of 12,600 hours per year and the listed PTE is the combined PTE of all six boilers.

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.B.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.B.2.b: PTE (pounds per hour) – New York – New York**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
NY01	14.215 MMBtu/hr	0.11	0.45	1.17	0.01	0.08	0.03
NY02	14.215 MMBtu/hr	0.11	0.45	1.17	0.01	0.08	0.03
MB048	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of the diesel emergency generators to 26 hours per rolling 12-months for testing and maintenance purposes (EUs: NY27 through NY29).
- b. The Murphy Rodgers dust collector shall be operating at all times PM<sub>10</sub> is emitted during the use of the shop and shall be limited to 3,640 hours per rolling 12-months (EU: NY40).
- c. The Permittee shall operate the Dayton dust collector at all times PM<sub>10</sub> is emitted during the use of the shop and shall be limited to 1,200 hours per rolling 12-months (EU: NY41).
- d. The Permittee shall limit the combined operation of the Unilux boiler (EU: MB048) along with the Unilux boilers at MGM Grand (EUs: MB046 and MB047)

and Mandalay Bay (EUs: MB049 through MB051) to 12,600 hours per rolling 12-months.

#### 4. Emission Controls

##### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each of the IBW boilers with flue gas recirculation and burners rated for an emission rate of 26 ppm NO<sub>x</sub> and 111 ppm CO (EUs: NY01 and NY02).
- d. The Permittee shall operate each of the RBI boilers with burners rated for an emission rate of 20 ppm NO<sub>x</sub> and 50 ppm CO (EUs: NY37 and NY38).
- e. The Permittee shall operate the Gasmaster boiler with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EU: NY39).
- f. The Permittee shall operate the RBI boilers with burners rated for an emission rate of 20 ppm NO<sub>x</sub> and 50 ppm CO (EUs: NY42 through NY44).
- g. The Permittee shall operate the Unilux boiler with burners rated for an emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO (EUs: MB048).

##### Diesel Generators/Fire Pumps

- h. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- i. The Permittee shall operate each of the diesel emergency generators with turbochargers (EUs: NY27 through NY29).

##### Cooling Towers

- j. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- k. The Permittee shall operate each of the 3,600 gpm Baltimore Aircoil cooling towers with drift eliminators with a manufacturer's rated drift efficiency of 0.005 percent (EUs: NY33 through NY36).
- l. The TDS content of the cooling tower circulation water shall not exceed 3,600 ppm.

##### Woodworking

- m. The Permittee shall operate the Murphy Rodgers and Dayton baghouse dust collectors during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions (EUs: NY40 and NY41).

## 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters such that the monthly consumption of natural gas can be established for each applicable boiler (EUs: NY01, NY02, and MB048). [AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]
- b. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: NY27 through NY29). [AQR 12.5.2.6/AQR 19.4.3.1]
- c. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. [AQR 12.5.2.6/AQR 19.4.3.1]
- d. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: NY01, NY02, and MB048). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. [AQR 12.5.2.6/AQR 19.4.3.1]
- b. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]

- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- d. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

Boiler/ Water Heater Performance Tests

- e. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: NY01, NY02, and MB048). [AQR 12.5.2.6/AQR 19.4.3.1]
- f. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units NY01, NY02, and MB048. [AQR 12.5.2.6/AQR 19.4.3.1]
- g. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.B.6.a:

**Table III.B.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

Diesel Generators/Fire Pumps

- h. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

**7. Record Keeping**

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:

- i. monthly hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: NY27 through NY29);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: NY33 through NY36);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. records of burner efficiency testing; and
  - vi. results of performance testing.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
- i. monthly and rolling 12-month total amount of natural gas consumed (in MMBtu, scf, or therms) for each boiler (EUs: NY01, NY02, and MB048);
  - ii. monthly total of operating hours for each diesel generator and fire pump (EUs: NY33 through NY36); and
  - iii. monthly and rolling 12-month total hours of woodworking operations (EUs: NY40 and NY41).

**C. MONTE CARLO**

**1. Emission Units**

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.C.1.a following table summarizes the emission units emitted for this facility.

**Table III.C.1.a : Summary of Emission Units – Monte Carlo**

<b>EU</b>	<b>Description</b>
MC001	Universal Energy Boiler, M/N: BF300L, S/N: 248-EG, 12.6 MMBtu/hr
MC002	Universal Energy Boiler, M/N: BF300L, S/N: 249-EG, 12.6 MMBtu/hr
MC003	Universal Energy Boiler, M/N: BF300L, S/N: 250-EG, 12.6 MMBtu/hr
MC004	Universal Energy Boiler, M/N: BF300L, S/N: 251-EG, 12.6 MMBtu/hr
MC014	Baltimore Air Coil Cooling Tower, M/N: 31213A-RM, S/N: U053137701MAD, 3,393 gpm, 3,000 ppm TDS, 0.005% Drift Loss
MC015	Baltimore Air Coil Cooling Tower, M/N: 31213A-RM, S/N: U053137702MAD, 3,393 gpm, 3,000 ppm TDS, 0.005% Drift Loss
MC016	Baltimore Air Coil Cooling Tower, M/N: 31213A-RM, S/N: U053137703MAD, 3,393 gpm, 3,000 ppm TDS, 0.005% Drift Loss
MC017	Baltimore Air Coil Cooling Tower, M/N: 31213A-RM, S/N: U053137704MAD, 3,393 gpm, 3,000 ppm TDS, 0.005% Drift Loss
MC018	Baltimore Air Coil Cooling Tower, M/N: 31213A-RM, S/N: U053137705MAD, 3,393 gpm, 3,000 ppm TDS, 0.005% Drift Loss
MC019	Caterpillar 3512, 2,172 hp (1,500 kW) Emergency Generator, S/N: 6WN00081
MC020	Caterpillar 2,172 hp (1,500 kW) Emergency Generator, M/N: 3512, S/N: 6WN00082

EU	Description
MC021	Clarke-Detroit 348 hp (260 kW) Emergency Generator, M/N: DDFPT6FA 840IV, S/N: 6VF213751
MC022	Caterpillar 308 hp (230 kW) Emergency Generator, M/N: 3306, S/N: 9NR02273
MC023	General Corp. 107 hp (80 kW) Emergency Generator, M/N: 95A05447-S, S/N: 2024967

## 2. Emission Limitations and Standards

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.C.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.C.2.a: PTE (tons per year) – Monte Carlo**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MC001	12.6 MMBtu/hr		0.41	1.35	2.05	0.03	0.30	0.10
MC002	12.6 MMBtu/hr		0.41	1.35	2.05	0.03	0.30	0.10
MC003	12.6 MMBtu/hr		0.41	1.35	2.05	0.03	0.30	0.10
MC004	12.6 MMBtu/hr		0.41	1.35	2.05	0.03	0.30	0.10
MC014	3,393 gpm		0.53					
MC015	3,393 gpm		0.53					
MC016	3,393 gpm		0.53					
MC017	3,393 gpm		0.53					
MC018	3,393 gpm		0.53					
MC019	2,172 hp	52 hrs/yr	0.04	1.36	0.31	0.02	0.04	0.01
MC020	2,172 hp	52 hrs/yr	0.04	1.36	0.31	0.02	0.04	0.01
MC021	348 hp	52 hrs/yr	0.02	0.28	0.06	0.02	0.02	0.01
MC022	343 hp	52 hrs/yr	0.02	0.28	0.06	0.02	0.02	0.01
MC023	107 hp	52 hrs/yr	0.01	0.09	0.02	0.01	0.01	0.01

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.C.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.C.2.b: PTE (pounds per hour) – Monte Carlo**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MC001	12.6 MMBtu/hr	0.09	0.31	2.05	0.01	0.07	0.02
MC002	12.6 MMBtu/hr	0.09	0.31	2.05	0.01	0.07	0.02
MC003	12.6 MMBtu/hr	0.09	0.31	2.05	0.01	0.07	0.02
MC004	12.6 MMBtu/hr	0.09	0.31	2.05	0.01	0.07	0.02

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of each of the diesel emergency generators to 52 hours per rolling 12-months for testing and maintenance purposes (EUs: MC019 through MC023).

### 4. Emission Controls

#### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each of the Universal Energy boilers with flue gas recirculation and burners rated for an emission rate of 20 ppm NO<sub>x</sub> and 50 ppm CO burners (EUs: MC001 through MC004).

#### Diesel Generators/Fire Pumps

- d. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- e. The Permittee shall operate the diesel emergency generators with turbochargers and aftercoolers (EUs: MC019, MC020, and MC022).
- f. The Permittee shall operate the diesel emergency generators with turbochargers (EU: MC021).

#### Cooling Towers

- h. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- g. The Permittee shall operate each of the Baltimore Aircoil cooling towers with drift eliminators with a manufacturer's drift rate of 0.005 percent (EUs: MC014 through MC018).
- h. The Permittee shall maintain each of the cooling tower such that the TDS content of the cooling tower circulation water not exceed 3,000 ppm (EU: MC014 through MC018).

### 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters such that the monthly consumption of natural gas can be established for each applicable boiler (EUs: MC001 through MC004). *[AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]*

- b. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: MC019 through MC023). [AQR 12.5.2.6/AQR 19.4.3.1]
- c. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. [AQR 12.5.2.6/AQR 19.4.3.1]
- d. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: MC001 through MC004). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. [AQR 12.5.2.6/AQR 19.4.3.1]
- b. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]

- d. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. *[AQR 12.5.2.6/AQR 19.4.3.1]*

Boiler/ Water Heater Performance Tests

- e. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: MC001 through MC004). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- f. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units MC001 through MC004. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- g. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.C.6.a:

**Table III.C.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

Diesel Generators/Fire Pumps

- h. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

**7. Record Keeping**

- a. The Permittee shall maintain records on site that include, at minimum, the following information *[AQR 12.5.2.6/AQR 19.4.3.1(b)]*:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: MC019 through MC023);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: MC014 through MC018);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. records of burner efficiency testing; and
  - vi. results of performance testing.

- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. monthly and 12-month rolling total amount of natural gas consumed (in MMBtu, scf, or therms) for each boiler (EUs: MC001 through MC004); and
  - ii. monthly total of operating hours to demonstrate compliance with 12-month rolling hour limits for each diesel generator and fire pump (EUs: MC019 through MC023).

**D. THE SIGNATURE AT MGM GRAND**

**1. Emission Units**

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.D.1.a following table summarizes the emission units emitted for this facility.

**Table III.D.1.a: Summary of Emission Units – Signature**

<b>EU</b>	<b>Description</b>
TBA01	Lochinvar Boiler, M/N: PBN-1000, S/N: K04H00170956, 1.0 MMBtu/hr
TBA02	Lochinvar Boiler, M/N: PBN-1000, S/N: K04H00170957, 1.0 MMBtu/hr
TBA03	Lochinvar Boiler, M/N: PBN-0500, S/N: K04H00170954, 0.50 MMBtu/hr
TBA04	Lochinvar Boiler, M/N: PBN-0500, S/N: K04H00170955, 0.50 MMBtu/hr
TBA05	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171227, 0.75 MMBtu/hr
TBA06	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171228, 0.75 MMBtu/hr
TBA07	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171229, 0.75 MMBtu/hr
TBA08	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171230, 0.75 MMBtu/hr
TBA09	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171231, 0.75 MMBtu/hr
TBA10	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171232, 0.75 MMBtu/hr
TBA11	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171233, 0.75 MMBtu/hr
TBA12	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171234, 0.75 MMBtu/hr
TBA13	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171235, 0.75 MMBtu/hr
TBA14	Lochinvar Boiler, M/N: PFN-0750, S/N: K04H00171236, 0.75 MMBtu/hr
TBA15	Caterpillar Diesel Generator, 1,072 hp, M/N: 3412CTA, S/N: TBD
TBB01	Lochinvar Boiler, M/N: PBN-1001, S/N: H0500178777, 1.0 MMBtu/hr
TBB02	Lochinvar Boiler, M/N: PFN-1001, S/N: H0500178778, 1.0 MMBtu/hr
TBB03	Lochinvar Boiler, M/N: PBN-0500, S/N: L05H00182363, 0.50 MMBtu/hr
TBB04	Lochinvar Boiler, M/N: PBN-0500, S/N: L05H00182364, 0.50 MMBtu/hr
TBB05	Lochinvar Boiler, M/N: PBN-0501, S/N: A06H00183059, 0.50 MMBtu/hr
TBB06	Lochinvar Boiler, M/N: PBN-0501, S/N: A06H00183060, 0.50 MMBtu/hr
TBB07	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182643, 0.75 MMBtu/hr
TBB08	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182644, 0.75 MMBtu/hr
TBB09	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182645, 0.75 MMBtu/hr
TBB10	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182646, 0.75 MMBtu/hr
TBB11	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182655, 0.75 MMBtu/hr
TBB12	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182656, 0.75 MMBtu/hr
TBB13	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182657, 0.75 MMBtu/hr
TBB14	Lochinvar Boiler, M/N: PFN-0751, S/N: L05H00182658, 0.75 MMBtu/hr
TBB15	Caterpillar Diesel Generator, 2,345 hp, M/N: 3516 BTA, S/N: TBD
TBB16	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N: J053430901VAD, 3,600 gpm, 3,000

EU	Description
	ppm TDS, 0.001% Drift Loss
TBB17	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N: J053430902VAD, 3,600 gpm, 3,000 ppm TDS, 0.001% Drift Loss
TBB18	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N: J053430903VAD, 3,600 gpm, 3,000 ppm TDS, 0.001% Drift Loss
TBB19	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N: J053430904VAD, 3,600 gpm, 3,000 ppm TDS, 0.001% Drift Loss
TBC01	Lochinvar Boiler, M/N: PFN-1000, S/N: B06H00184073, 1.0 MMBtu/hr
TBC02	Lochinvar Boiler, M/N: PFN-1000, S/N: BH6H00184074, 1.0 MMBtu/hr
TBC03	Lochinvar Boiler, M/N: PFN-0500, S/N: E06H00186881, 0.50 MMBtu/hr
TBC04	Lochinvar Boiler, M/N: PFN-0500, S/N: E06H00186895, 0.50 MMBtu/hr
TBC05	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186899, 0.75 MMBtu/hr
TBC06	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186900, 0.75 MMBtu/hr
TBC07	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186898, 0.75 MMBtu/hr
TBC08	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186880, 0.75 MMBtu/hr
TBC09	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186897, 0.75 MMBtu/hr
TBC10	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186596, 0.75 MMBtu/hr
TBC11	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186547, 0.75 MMBtu/hr
TBC12	Lochinvar Boiler, M/N: PFN-0750, S/N: E06H00186548, 0.75 MMBtu/hr
TBC13	Lochinvar Boiler, M/N: PFN-0500, S/N: E06H00187161, 0.50 MMBtu/hr
TBC14	Lochinvar Boiler, M/N: PFN-0500, S/N: E06H00187162, 0.50 MMBtu/hr

## 2. Emission Limitations and Standards

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.D.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.D.2.a: PTE (tons per year) – Signature**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
TBA01	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBA02	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBA03	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBA04	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBA05	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA06	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA07	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA08	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA09	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA10	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA11	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA12	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA13	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA14	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBA15	1,072 hp	26.0 hrs/yr	0.01	0.33	0.08	0.01	0.01	0.01
TBB01	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBB02	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBB03	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBB04	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBB05	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
TBB06	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBB07	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB08	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB09	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB10	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB11	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB12	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB13	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB14	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBB15	2,345 hp	26.0 hrs/yr	0.01	0.54	0.01	0.01	0.02	0.01
TBB16	3,600 gpm, 0.001% Drift Loss		0.11					
TBB17	3,600 gpm, 0.001% Drift Loss		0.11					
TBB18	3,600 gpm, 0.001% Drift Loss		0.11					
TBB19	3,600 gpm, 0.001% Drift Loss		0.11					
TBC01	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBC02	1.0 MMBtu/hr	7,000 hrs/yr	0.03	0.13	0.26	0.01	0.02	0.01
TBC03	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBC04	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBC05	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC06	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC07	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC08	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC09	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC10	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC11	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC12	0.75 MMBtu/hr	7,000 hrs/yr	0.02	0.10	0.19	0.01	0.01	0.01
TBC13	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01
TBC14	0.50 MMBtu/hr	7,000 hrs/yr	0.01	0.06	0.13	0.01	0.01	0.01

- b. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of each boiler to 7,000 hours per rolling 12-months (EUs: TBA01 through TBA014, TBB01 through TBB14, and TBC01 through TBC14).
- b. The Permittee shall limit the operation of each of the diesel emergency generators to 26 hours per rolling 12-months for testing and maintenance purposes (EUs: TBA15 and TBB15).

## 4. Emission Controls

### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each boilers with burners rated for an emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EUs: TBA01 through TBA14, TBB01 through TBB14, and TBC01 through TBC14).

### Diesel Generators/Fire Pumps

- d. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- e. The Permittee shall operate each of the diesel emergency generators with turbochargers and aftercoolers (EUs: TBA15 and TBB15).

### Cooling Towers

- f. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- g. The Permittee shall operate each of the Baltimore Aircoil cooling towers with drift eliminators with a manufacturer's drift rate of 0.001 percent (EUs: TBB16 through TBB19).
- h. The Permittee shall maintain the cooling water such that the TDS content does not exceed 3,000 ppm for each of the Baltimore Aircoil cooling towers (EUs: TBB16 through TBB19).

## 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters to demonstrate compliance with the 12-month rolling hour limits for each boiler/water heater (EUs: TBA01 through TBA14, TBB01 through TBB14, and TBC01 through TBC14). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- b. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: TBA15 and TBB15). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-

fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

- a. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee's responsibility to satisfy all federal requirements to which this facility is subject.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: TBA15 and TBB15);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: TBB16 through TBB19); and
  - iv. monthly TDS content of cooling tower circulation water.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. monthly total of operating hours to demonstrate compliance with the 12-month rolling hour limits for each boiler/water heater (EUs: TBA01 through TBA14, TBB01 through TBB14, and TBC01 through TBC14); and
  - ii. monthly total of operating hours to demonstrate compliance with 12-month rolling hour limits for each diesel generator and fire pump (EUs: TBA15 and TBB15).

## E. MANDALAY BAY

### 1. Emission Units

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.E.1.a following table summarizes the emission units emitted for this facility.

**Table III.E.1.a: Summary of Emission Units – Mandalay Bay**

<b>EU</b>	<b>Description</b>
MB001	Unilux Manufacturing Heating Boiler, M/N: ZF2000W, S/N: 2218, 20.0 MMBtu/hr
MB002	Unilux Manufacturing Heating Boiler, M/N: ZF2000W, S/N: 2217, 20.0 MMBtu/hr
MB003	Unilux Manufacturing Heating Boiler, M/N: ZF2000W, S/N: 2216, 20.0 MMBtu/hr
MB004	Unilux Manufacturing Heating Boiler, M/N: ZF2000W, S/N: 2215, 20.0 MMBtu/hr
MB009	Bryan Boiler, M/N: RV500, S/N: 81771, 5.0 MMBtu/hr
MB010	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8358, 1.90 MMBtu/hr
MB011	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8359, 1.90 MMBtu/hr
MB012	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8360, 1.90 MMBtu/hr
MB013	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8357, 1.90 MMBtu/hr
MB014	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8356, 1.90 MMBtu/hr
MB015	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8355, 1.90 MMBtu/hr
MB016	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8350, 1.90 MMBtu/hr
MB017	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8349, 1.90 MMBtu/hr
MB018	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8348, 1.90 MMBtu/hr
MB019	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8239, 1.90 MMBtu/hr
MB020	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8366, 1.90 MMBtu/hr
MB021	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8367, 1.90 MMBtu/hr
MB022	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8413, 1.90 MMBtu/hr
MB023	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8361, 1.90 MMBtu/hr
MB024	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8362, 1.90 MMBtu/hr
MB025	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8363, 1.90 MMBtu/hr
MB026	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8364, 1.90 MMBtu/hr
MB027	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8351, 1.90 MMBtu/hr
MB028	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8352, 1.90 MMBtu/hr
MB029	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8353, 1.90 MMBtu/hr
MB030	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8354, 1.90 MMBtu/hr
MB031	Patterson-Kelley Boiler, M/N: D1900-2, S/N: CJ-43-97-8396, 1.90 MMBtu/hr
MB032	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-43-97-8395, 1.90 MMBtu/hr
MB033	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-37-98-9504, 1.90 MMBtu/hr
MB034	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-39-98-9612, 1.90 MMBtu/hr
MB035	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-39-98-9613, 1.90 MMBtu/hr
MB036	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-08-98-8615, 1.90 MMBtu/hr
MB037	Patterson-Kelley Water Boiler, M/N: D1900-2, S/N: CJ-08-98-8613, 1.90 MMBtu/hr
MB039	RBI Water Heater, M/N: FH 19505, S/N: 109918042, 1.75 MMBtu/hr
MB040	RBI Water Heater, M/N: FH 19505, S/N: 109918043, 1.75 MMBtu/hr
MB041	RBI Water Heater, M/N: FH 19505, S/N: 109918044, 1.75 MMBtu/hr
MB042	Lochinvar Water Heater, M/N: CFN-1800, S/N: D028018, 1.8 MMBtu/hr
MB043	Lochinvar Water Heater, M/N: CFN-1800, S/N: D028019, 1.8 MMBtu/hr
MB044	Unilux Boiler, M/N: ZF250HS, S/N: 2804, 2.75 MMBtu/hr
MB045	Unilux Boiler, M/N: ZF250HS, S/N: 2805, 2.75 MMBtu/hr
MB049	Unilux Boiler, M/N: ZF2000W, S/N: 2808, 20.0 MMBtu/hr
MB050	Unilux Boiler, M/N: ZF2000W, S/N: 2806, 20.0 MMBtu/hr
MB051	Unilux Boiler, M/N: ZF2000W, S/N: 2807, 20.0 MMBtu/hr
MB055	Raypak Water Heater, M/N: WH9-1802, S/N: 303206420, 1.8 MMBtu/hr
MB056	Raypak Water Heater, M/N: WH9-1802, S/N: 303206419, 1.8 MMBtu/hr
MB057	Raypak Water Heater, M/N: WH9- 1802, S/N: N/A, 1.8 MMBtu/hr
MB058	Raypak Water Heater, M/N: WH9- 1802, S/N: 303206421, 1.8 MMBtu/hr
MB059	Raypak Water Heater, M/N: WH9- 1802, S/N: 303206422, 1.8 MMBtu/hr
MB060	Raypak Water Heater, M/N: WH9- 1802, S/N: 303206423, 1.8 MMBtu/hr
MB061	Caterpillar Emergency Generator, M/N: 3516 DITA, S/N: 25706027, 1,618 kW, 2,168 hp

EU	Description
MB062	Caterpillar Emergency Generator, M/N: 3516 DITA, S/N: 25702994, 1,618 kW, 2,168 hp
MB063	Caterpillar Emergency Generator, M/N: 3516 DITA, S/N: 25703002, 1,618 kW, 2,168 hp
MB064	Cummins Diesel Fire Pump, M/N: 413, S/N: 45574278, 179 kW, 240 hp
MB065	Cummins Diesel Fire Pump, M/N: 403, S/N: 45593028, 155 kW, 208 hp
MB066	Caterpillar Emergency Generator, M/N: 3516 DITA, S/N: 3NS00234, 1,925 kW, 2,518 hp
MB067	Cummins Emergency Generator, M/N: KT50-G9, S/N: 33146939, 2,220 hp
MB068	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-001, 3,200 gpm, 3,600 ppm TDS
MB069	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-002, 3,200 gpm, 3,600 ppm TDS
MB070	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-003, 3,200 gpm, 3,600 ppm TDS
MB071	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-004, 3,200 gpm, 3,600 ppm TDS
MB072	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-005, 3,200 gpm, 3,600 ppm TDS
MB073	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-006, 3,200 gpm, 3,600 ppm TDS
MB074	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-007, 3,200 gpm, 3,600 ppm TDS
MB075	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-008, 3,200 gpm, 3,600 ppm TDS
MB076	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-009, 3,200 gpm, 3,600 ppm TDS
MB077	Marley Cooling Tower, M/N: NCC262CS-97, S/N: 122096-010, 3,200 gpm, 3,600 ppm TDS
MB078	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-A1, 3,200 gpm, 3,600 ppm TDS
MB079	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-B2, 3,200 gpm, 3,600 ppm TDS
MB080	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-B1, 3,200 gpm, 3,600 ppm TDS
MB081	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-A2, 3,200 gpm, 3,600 ppm TDS
MB082	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-C1, 3,200 gpm, 3,600 ppm TDS
MB083	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-D2, 3,200 gpm, 3,600 ppm TDS
MB084	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-D1: N/A, 3,200 gpm, 3,600 ppm TDS
MB085	Marley Cooling Tower, M/N: NC8311G-2, S/N: 216412-C2, 3,200 gpm, 3,600 ppm TDS
MB086	Baltimore Aircoil Cooling Tower, M/N: T.B.D, S/N: T.B.D, 600 gpm, 3,000 ppm TDS
MB087	Binks Spray Paint Booth, Semi-Custom, 27'x21'x10'
MB088	Murphy-Rogers Dust Collector, M/N: MRSE-16-4-D, S/N 1039
MB089	Convault Aboveground Storage Tank, M/N: RNE1000 3SF, S/N: M734031, 1,000 Gallons
MB090	Unilux Boiler, M/N: ZF500HS, S/N: 3140, 5.4 MMBtu/hr
MB091	Futera II Water Heater, M/N: FB1950NE2ACSS, S/N: 030331380, 1.95 MMBtu/hr
MB092	Futera II Water Heater, M/N: FB1950NE2ACSS, S/N: 030331381, 1.95 MMBtu/hr
MB093	Caterpillar Diesel Emergency Generator, M/N: 3512, S/N: 1G201339, 1,500 kW, 1,620 hp
MB094	Hurst Scotch Marine "Wetback 400 Series" Boiler, S/N: S500-150-77M, M/N: S4-X-100-150, 4.3 MMBtu/hr, Natural Gas (Burner Make: American Combustion Technologies, M/N: ACT04G-SLE)
MB095	A.O. Smith Hot Water Heater, M/N: BTH 199-970, S/N: H04M009597, 0.199 MMBtu/hr
MB096	A.O. Smith Hot Water heater, M/N: BTH 199-970, S/N: MF040008283, 0.199 MMBtu/hr
MB097	Raypak Boiler, M/N: CR406A-EN-C ASME, S/N: N/A, 0.399 MMBtu/hr
MB098	Raypak Boiler, M/N: CR406A-EN-C ASME, S/N: N/A, 0.399 MMBtu/hr
MB099	Raypak Boiler, M/N: CR406A-EN-X ASME, S/N: N/A, 0.399 MMBtu/hr

**2. Emission Limitations and Standards**

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.E.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.E.2.a: PTE (tons per year) – Mandalay Bay**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MB001	20.0 MMBtu/hr	18,000 hrs/yr	1.34	6.30	2.70	0.11	0.97	0.33

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MB002	20.0 MMBtu/hr							
MB003	20.0 MMBtu/hr							
MB004	20.0 MMBtu/hr							
MB009	5.00 MMBtu/hr		0.16	0.77	2.96	0.01	0.12	0.04
MB010	1.90 MMBtu/hr	3,150 hrs/yr	0.03	0.15	0.24	0.01	0.03	0.01
MB011	1.90 MMBtu/hr							
MB012	1.90 MMBtu/hr							
MB013	1.90 MMBtu/hr	4,500 hrs/yr	0.03	0.21	0.33	0.01	0.03	0.01
MB014	1.90 MMBtu/hr							
MB015	1.90 MMBtu/hr							
MB016	1.90 MMBtu/hr	12,800 hrs/yr	0.08	0.60	0.92	0.01	0.04	0.04
MB017	1.90 MMBtu/hr							
MB018	1.90 MMBtu/hr							
MB019	1.90 MMBtu/hr							
MB020	1.90 MMBtu/hr	20,700 hrs/yr	0.15	0.96	1.47	0.01	0.09	0.06
MB021	1.90 MMBtu/hr							
MB022	1.90 MMBtu/hr							
MB023	1.90 MMBtu/hr	8,400 hrs/yr	0.04	0.40	0.60	0.01	0.04	0.01
MB024	1.90 MMBtu/hr							
MB025	1.90 MMBtu/hr							
MB026	1.90 MMBtu/hr							
MB027	1.90 MMBtu/hr	12,400 hrs/yr	0.08	0.56	0.88	0.01	0.04	0.01
MB028	1.90 MMBtu/hr							
MB029	1.90 MMBtu/hr							
MB030	1.90 MMBtu/hr							
MB031	1.90 MMBtu/hr	6,200 hrs/yr	0.04	0.28	0.44	0.01	0.02	0.01
MB032	1.90 MMBtu/hr							
MB033	1.90 MMBtu/hr	600 hrs/yr	0.01	0.03	0.03	0.01	0.01	0.01
MB034	1.90 MMBtu/hr							
MB035	1.90 MMBtu/hr							
MB036	1.90 MMBtu/hr	2,400 hrs/yr	0.02	0.10	0.18	0.01	0.01	0.01
MB037	1.90 MMBtu/hr							
MB039	1.75 MMBtu/hr	13,200 hrs/yr	0.09	0.56	0.87	0.01	0.06	0.02
MB040	1.75 MMBtu/hr							
MB041	1.75 MMBtu/hr							
MB042	1.80 MMBtu/hr	6,000 hrs/yr	0.04	0.26	0.44	0.01	0.03	0.01
MB043	1.80 MMBtu/hr							
MB044	2.75 MMBtu/hr	8,000 hrs/yr	0.08	0.40	0.41	0.01	0.06	0.02
MB045	2.75 MMBtu/hr							
MB049 <sup>1</sup>	20.0 MMBtu/hr							
MB050 <sup>1</sup>	20.0 MMBtu/hr	12,600 hrs/yr	0.78	3.85	3.90	0.06	0.57	0.19
MB051 <sup>1</sup>	20.0 MMBtu/hr							
MB055	1.80 MMBtu/hr	19,500 hrs/yr	0.13	0.64	0.65	0.01	0.09	0.03
MB056	1.80 MMBtu/hr							
MB057	1.80 MMBtu/hr							
MB058	1.80 MMBtu/hr	19,500 hrs/yr	0.13	0.64	0.65	0.01	0.09	0.03
MB059	1.80 MMBtu/hr							
MB060	1.80 MMBtu/hr							
MB061	2,168 bhp	15 hrs/yr	0.02	0.39	0.09	0.01	0.01	0.01
MB062	2,168 bhp	15 hrs/yr	0.02	0.39	0.09	0.01	0.01	0.01
MB063	2,168 bhp	15 hrs/yr	0.02	0.39	0.09	0.01	0.01	0.01

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MB064	240 bhp	26 hrs/yr	0.01	0.10	0.02	0.01	0.01	0.01
MB065	208 bhp	26 hrs/yr	0.01	0.08	0.02	0.01	0.01	0.01
MB066	2,518 bhp	26 hrs/yr	0.02	0.80	0.18	0.01	0.02	0.01
MB067	2,220 bhp	26 hrs/yr	0.02	0.69	0.16	0.01	0.02	0.01
MB068	3,200 gpm		0.60					
MB069	3,200 gpm		0.60					
MB070	3,200 gpm		0.60					
MB071	3,200 gpm		0.60					
MB072	3,200 gpm		0.60					
MB073	3,200 gpm		0.60					
MB074	3,200 gpm		0.60					
MB075	3,200 gpm		0.60					
MB076	3,200 gpm		0.60					
MB077	3,200 gpm		0.60					
MB078	3,200 gpm	7,200 hrs/yr	0.49					
MB079	3,200 gpm	7,200 hrs/yr	0.49					
MB080	3,200 gpm	7,200 hrs/yr	0.49					
MB081	3,200 gpm	7,200 hrs/yr	0.49					
MB082	3,200 gpm	7,200 hrs/yr	0.49					
MB083	3,200 gpm	7,200 hrs/yr	0.49					
MB084	3,200 gpm	7,200 hrs/yr	0.49					
MB085	3,200 gpm	7,200 hrs/yr	0.49					
MB086	600 gpm	500 hrs/yr	0.01					
MB087	N/A	3,839 gallons/yr	0.00	0.00	0.00	0.00	4.97	0.99
MB088	N/A	1,200 hrs/yr	0.01	0.00	0.00	0.00	0.00	0.00
MB089	1,000 Gal	20,000 gal/yr	0.00	0.00	0.00	0.00	0.84	0.01
MB090	5.4 MMBtu/hr		0.18	1.16	1.56	0.01	0.13	0.04
MB091	1.95 MMBtu/hr		0.03	0.2	0.34	0.01	0.02	0.01
MB092	1.95 MMBtu/hr		0.03	0.2	0.34	0.01	0.02	0.01
MB093	1,620 bhp	26 hrs/yr	0.02	0.56	0.13	0.01	0.02	0.01
MB094	4.3 MMBtu/hr		0.14	0.28	0.70	0.01	0.10	0.03
MB095	0.199 MMBtu/hr		0.01	0.06	0.03	0.01	0.01	0.01
MB096	0.199 MMBtu/hr		0.01	0.06	0.03	0.01	0.01	0.01
MB097	0.399 MMBtu/hr		0.01	0.12	0.14	0.01	0.01	0.01
MB098	0.399 MMBtu/hr		0.01	0.12	0.14	0.01	0.01	0.01
MB099	0.399 MMBtu/hr		0.01	0.12	0.14	0.01	0.01	0.01

<sup>1</sup>MB049 through MB051 along with MB046 through MB048 have an operational cap of 12,600 hours per year and the listed PTE is the combined PTE of all six boilers.

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.E.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.E.2.b: PTE (pounds per hour) – Mandalay Bay**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MB001	20.0 MMBtu/hr	0.15	0.70	0.30	0.01	0.11	0.04
MB002	20.0 MMBtu/hr	0.15	0.70	0.30	0.01	0.11	0.04
MB003	20.0 MMBtu/hr	0.15	0.70	0.30	0.01	0.11	0.04
MB004	20.0 MMBtu/hr	0.15	0.70	0.30	0.01	0.11	0.04

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
MB049	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03
MB050	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03
MB051	20.0 MMBtu/hr	0.12	0.75	0.50	0.01	0.09	0.03

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of the boilers rated at 20.0 MMBtu/hr to 18,000 hours per rolling 12-months as a group (EUs: MB001 through MB004).
- b. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 3,150 hours per rolling 12-months as a group (EUs: MB010 through MB012).
- c. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 4,500 hours per rolling 12-months as a group (EUs: MB013 through MB015).
- d. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 12,800 hours per rolling 12-months as a group (EUs: MB016 through MB019).
- e. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 20,700 hours per rolling 12-months as a group (EUs: MB020 through MB022).
- f. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 8,400 hours per rolling 12-months as a group (EUs: MB023 through MB026).
- g. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 12,400 hours per rolling 12-months as a group (EUs: MB027 through MB030).
- h. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 6,200 hours per rolling 12-months as a group (EUs: MB031 and MB032).
- i. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 600 hours per rolling 12-months as a group (EUs: MB033 through MB035).
- j. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 2,400 hours per rolling 12-months as a group (EUs: MB036 and MB037).
- k. The Permittee shall limit the operation of the boilers rated at 1.75 MMBtu/hr to 13,200 hours per rolling 12-months as a group (EUs: MB039 through MB041).
- l. The Permittee shall limit the operation of the boilers rated at 1.80 MMBtu/hr to 6,000 hours per rolling 12-months as a group (EUs: MB042 and MB043).
- m. The Permittee shall limit the operation of the boilers rated at 2.75 MMBtu/hr to 8,000 hours per rolling 12-months as a group (EUs: MB044 and MB045).
- n. The Permittee shall limit the combined operation of the Unilux boilers (EUs: MB049 through MB051) along with the Unilux boilers at MGM Grand (EUs:

MB046 and MB047) and New York – New York (EU: MB048) to 12,600 hours per rolling 12-months.

- o. The Permittee shall limit the operation of the water heaters rated at 1.80 MMBtu/hr to 19,500 hours per rolling 12-months as a group (EUs: MB055 through MB057).
- p. The Permittee shall limit the operation of the water heaters rated at 1.80 MMBtu/hr to 19,500 hours per rolling 12-months as a group (EUs: MB058 through MB060).
- q. The Permittee shall limit the operation of each diesel emergency generator (EUs: MB061 through MB063) to 15 hours per rolling 12-months for testing and maintenance purposes.
- r. The Permittee shall limit the operation of each diesel fire pump (EUs: MB064 and MB065) to 26 hours per rolling 12-months for testing and maintenance purposes.
- s. The Permittee shall limit the operation of each diesel emergency generator (EUs: MB066, MB067, and MB093) to 26 hours per rolling 12-months for testing and maintenance purposes.
- t. The Permittee shall limit the operation of each of the cooling towers with a circulation rate of 3,200 gallons per minute (EUs: MB078 through MB085) to 7,200 hours per rolling 12-months.
- u. The Permittee shall limit the operation of the cooling tower with a circulation rate of 600 gpm to 500 hours per rolling 12-months (EU: MB086).
- v. The Permittee shall limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, inks, thinners, solvents, etc. from the Binks spray booth (EU: MB087) to 3,839 gallons per rolling 12-months, based on an average VOC content of 2.59 pounds per gallon and 20 percent HAP content.
- w. The Permittee shall operate the Murphy Rodgers dust collector at all times PM<sub>10</sub> is emitted during the use of the shop and shall be limited to 1,200 hours per rolling 12-months (EU: MB088).
- x. The Permittee shall limit the throughput (aggregate of all gasoline products) to 20,000 gallons per rolling 12-months (EU: MB089).

#### **4. Emission Controls**

##### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each of the Unilux 20 MMBtu/hr boilers with burners rated for an emission rate of 29 ppm NO<sub>x</sub> and 20 ppm CO (EUs: MB001 through MB004).

- d. The Permittee shall operate the Bryan 5 MMBtu/hr boiler with burners rated for an emission rate of 29 ppm NO<sub>x</sub> and 182 ppm (EU: MB009).
- e. The Permittee shall operate each of the Patterson Kelley 1.9 MMBtu/hr boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MB010 through MB037).
- f. The Permittee shall operate each of the RBI 1.75 MMBtu/hr boilers with burners rated for an emission rate of 40 ppm NO<sub>x</sub> and 102 ppm CO (EUs: MB039 through MB041).
- g. The Permittee shall operate each of the Lochinvar 1.8 MMBtu/hr boilers with burners rated for a maximum emission rate of 40 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MB042 through MB043).
- h. The Permittee shall operate each of the Unilux 2.75 MMBtu/hr boilers with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO (EUs: MB044 through MB045).
- i. The Permittee shall operate each of the Unilux 20.0 MMBtu/hr boilers with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO burners EUs: MB049 through MB051).
- j. The Permittee shall operate each of the Raypak 1.8 MMBtu/hr water heaters with burners rated for a maximum emission rate of 28 ppm NO<sub>x</sub> and 48 ppm CO (EUs: MB055 through MM060).
- k. The Permittee shall operate the Unilux 5.4 MMBtu/hr boiler with burners rated for a maximum emission rate of 40 ppm NO<sub>x</sub> and 89 ppm CO (EU: MB090).
- l. The Permittee shall operate each of the RBI 1.95 MMBtu/hr boilers with burners rated for a maximum emission rate of 19 ppm NO<sub>x</sub> and 53 ppm CO (EUs: MB091 through MB092).
- m. The Permittee shall operate the Hurst Scotch Marine 4.3 MMBtu/hr boiler with burners rated for a maximum emission rate of 12 ppm NO<sub>x</sub> and 50 ppm CO (EU: MB094).
- n. The Permittee shall operate each of the A.O. Smith hot water heaters with burners rated for a maximum emission rate of 55 ppm NO<sub>x</sub> and 53 ppm CO (EUs: MB095 and MB096).
- o. The Permittee shall operate each of the Raypak boilers with burners rated for a maximum emission rate of 55 ppm NO<sub>x</sub> and 111 ppm CO (EUs: MB097 through MB099).

#### Diesel Generators/Fire Pumps

- p. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- q. The Permittee shall operate each of the diesel emergency generators with turbochargers (EUs: MB061 through MB067 and MB093).

### Cooling Towers

- r. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. [40 CFR 63, Subpart Q]
- s. The Marley cooling towers shall each be equipped with drift eliminators with a manufacturer's drift rate of 0.005 percent (EUs: MB068 through MB085).
- t. The TDS content of each of the Marley cooling tower circulation water shall not exceed 3,600 ppm (EUs: MB068 through MB085).
- u. The Baltimore Aircoil cooling tower shall be equipped with drift eliminators with a manufacturer's maximum drift rate of 0.002 percent (EU: MB086).
- v. The TDS content of the Baltimore Aircoil cooling tower circulation water shall not exceed 3,000 ppm (EU: MB086).

### Surface Coating

- w. The Permittee shall not operate the spray booth (EU: MB087) unless all exhaust air passes through appropriate filter media having a particulate capture efficiency of at least 99.0 percent. (This is usually accomplished with tacky filter material that is at least 2 inches thick.) The dry filter media must cover all openings in the spray booth.
- x. The Permittee shall use covered containers for storage or disposal of VOC or HAP-containing cloth or paper (excluding masking tape) used for surface preparation and cleanup.
- y. All filters or other control equipment associated with surface coating operations shall follow manufacturer's specifications for use and operation. Dry filters must be changed at sufficient intervals to prevent a decrease in their effectiveness and prevent them from clogging.
- z. The Permittee shall use a manometer (or equivalent) to monitor the pressure drop across the spray booth filters. The filters should be replaced when the pressure drop exceeds 0.25 inches of water (6.35 millimeters of water), unless the manufacturer's specifications for use indicate a different pressure drop value.
- aa. The Permittee shall clean surface coating application equipment in an enclosed container to minimize VOC volatilization into the ambient air.
- bb. All containers with VOC and HAP-containing products shall remain securely closed, except during product transfer. Containers shall be inspected regularly for leakage and the contents of any leaking container must be immediately transferred to an appropriately labeled container that has been specifically designed for storage of the compound.
- cc. The Permittee shall employ good housekeeping practices to prevent the accumulation and/or dispersal of particulate matter from sanding, blasting, surface preparation, etc. carried out in conjunction with surface coating

operations. No more than 0.25 inches of particulate matter shall accumulate on surrounding surfaces at any time.

Woodworking

- dd. The Permittee shall operate the Murphy-Rogers dust collector during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions (EUs: MB088).

Gasoline Storage/Dispensing

- ee. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116]:
- a. minimize gasoline spills;
  - b. clean up spills as expeditiously as practicable;
  - c. cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
  - d. minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators;
  - e. the Permittee shall have records documenting gasoline throughput within 24 hours of a request of the Control Officer; and
  - f. the Permittee must comply with the requirements of the 40 CFR 63, Subpart CCCCCC by January 10, 2011.
- ff. The gasoline storage tank (EU: MB089) shall be equipped with CARB certified Phase I vapor recovery controls.
- gg. The Phase I Vapor Recovery System shall be constructed in accordance with the "Two-Point Phase I Vapor Recovery System" drawing, and shall use components specified in the current CARB EO G-70-116 series.
- hh. Phase I Vapor Recovery. The following control requirements apply to the Convault aboveground storage tank (EU: MB089):
- i. The highest point of discharge from a submerged fill-pipe shall be no more than 12.0 inches from the tank bottom.
  - ii. Pursuant to AQR Section 12, all Phase I vapor recovery equipment shall be installed and operated in accordance with the manufacturer's specifications and certification requirements.
  - iii. All Phase I vapor recovery equipment shall be maintained to be leak free, vapor tight, and in good working order.
  - iv. All Phase I vapor recovery equipment shall have a CARB-certified device, which prevents loosening or over tightening of the Phase I product adaptor.

- v. Each system that has a pressure/vacuum vent valve installed must also meet the standards as outlined in the current CARB EO G-70-116 series.

## 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters such that the monthly consumption of natural gas can be established for each applicable boiler (EUs: MB001 through MB004 and MB049 through MB051). *[AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]*
- b. The Permittee shall install and utilize non-resettable hour meters so that the rolling 12-month operating hours can be established for each applicable boiler (EUs: MB010 through MB037, MB039 through MB045, and MB055 through MB060). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: MB061 through MB067 and MB093). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. The Permittee shall inspect spray paint booths and all ancillary equipment for leaks, malfunctions, proper operation of gauges and pressure drops, each day the booth is operated. A log must be kept of such inspections as well as any corrective actions taken to repair the equipment. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- e. The Permittee shall conduct daily inspections for requirements listed in AQR Subsection 52.4 that are associated with the Phase I vapor recovery system to determine if components of the system are defective. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- f. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- g. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. *[AQR 12.5.2.6/AQR 19.4.3.1]*

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr but less than 10.0 MMBtu/hr shall perform a burner efficiency test at least once each calendar year. Burner efficiency tests shall be conducted in accordance with the manufacturer's specifications and specifications for good combustion practices (EUs: MB009, MB090, and MB094). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- b. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: MB001 through MB004 and MB049 through MB051). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- e. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. *[AQR 12.5.2.6/AQR 19.4.3.1]*

**Boiler/ Water Heater Performance Tests**

- f. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: MB001 through MB004 and MB049 through MB051). [AQR 12.5.2.6/AQR 19.4.3.1]
- g. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units MB001 through MB004 and MB046 through MB051. [AQR 12.5.2.6/AQR 19.4.3.1]
- h. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.E.6.a:

**Table III.E.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

**Diesel Generators/Fire Pumps**

- i. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee's responsibility to satisfy all federal requirements to which this facility is subject.

**Gasoline Storage/Dispensing**

- j. The Permittee shall conduct performance testing on the Vapor Control Systems associated with EU: MB089, listed in Table III.E.6.b. [AQR 4.5]
  - i. Each performance tests shall be conducted in accordance with the applicable CARB Test Procedure that is required by the CARB EO.
  - ii. The source shall give a 7-day written prior notice of the date of the test to the Control Officer, Compliance Division.
  - iii. Any prior approved scheduled performance test cannot be canceled and/or rescheduled except with the prior approval of the Control Officer, Compliance Division.
  - iv. Within 7 days from the end of an initial or annual performance test, source shall submit a report containing the results of such test to the Control Officer, Compliance Division.
  - v. The report shall have, as the first page of text, a signed Certification of Performance Test Results.

- k. Each performance test shall be conducted by a DAQEM approved Certified Phase II Vapor Recovery Tester, as defined in AQR Subsection 52.2.
- l. If any performance test fails, then the affected portion of the GDO will be tagged “Out of Order” until corrective action has been taken and the retest passed.
- m. If the source fails a performance test, the Control Officer, Compliance Division, shall be notified within 24 hours or by 12:00 p.m. (Noon) of DAQEM's next business day, whichever is soonest. Repairs to correct the defects shall be made and a retest scheduled with the Control Officer. The retest shall be scheduled within 10 calendar days of the failed test. If the repairs and retest cannot be accomplished within 10 calendar days, the source must submit the reasons and a proposed date for retesting in writing to the Control Officer for approval.
- n. The source shall conduct performance tests listed in Table III.E.6.b on the Phase II system (EU: MB089):

**Table III.E.6.b: Required Performance Test Criterion: Balance System**

Description	CARB Test Procedure	Standard
Determination of Static Pressure of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks	TP-201.3B	Initial: 2.0" wc Final: Referenced Value
Dynamic Back Pressure	TP-201.4	0.45" wc @ 60 SCFH, N <sub>2</sub> <sup>2</sup>
Dispensing nozzle flow rate <sup>1</sup>	As Specified in EO	10 gpm (max.)

<sup>1</sup>If the source fails the Dynamic Back Pressure performance test, the source shall be required to comply with additional performance testing requirements in accordance with the applicable EO for this equipment.

- o. Initial Performance Test [AQR 12.5.2.6/AQR 19.4.3.1]:
  - i. The source shall conduct and pass an initial performance test within 30 days of the source commencing operations.
  - ii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of new emission units that require performance testing.
  - iii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of modified emission units that require performance testing.
  - iv. The initial performance test must be witnessed by an inspector from the DAQEM.
- p. Annual Performance Test, Vapor Recovery System:
  - i. Annual performance testing shall be accomplished prior to the anniversary date of the previous performance test that the source passed.

- ii. Pursuant to AQR Section 4, the Control Officer may require additional testing.
- q. The source shall implement changes to the existing vapor recovery system if any performance test results indicate such changes are necessary to maintain compliance with this permit.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: MB061 through MB067 and MB093);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: MB068 through MB086);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. MSDS or records demonstrating the VOC and HAP content for each compound used for surface coating activities;
  - vi. a log book of all inspections, maintenance, and repairs as specified in this document;
  - vii. records of burner efficiency testing;
  - viii. results of performance testing as; and
  - ix. GDO records shall contain, at minimum, the following information (EU: MB089) [AQR 12.5.2.6/AQR 19.4.3.1]:
    - (i) a record of any maintenance on any part of the Phase I equipment, including a general description of the maintenance;
    - (ii) the date and time the equipment was taken out-of-service;
    - (iii) the date of repair or replacement;
    - (iv) a general description of the part location (e.g., pump, tank, nozzle number, etc.);
    - (v) a description of the problem; and
    - (vi) the results of the daily inspections.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:

- i. monthly total of operating hours for each boiler/water heater (EUs: MB001 through MB004, MB010 through MB037, MB039 through MB045, MB049 through MB051, and MB055 through MB060);
  - ii. monthly total of operating hours for each diesel generator and fire pump (EUs: MB061 through MB067 and MB093);
  - iii. monthly and rolling 12-month total consumption (in gallons) of each VOC-containing compound related to surface coating activities (paints, basecoats, primers, reducers, thinners, solvents, etc.);
  - iv. monthly and 12-month rolling total of gasoline throughput [40 CFR 63.11116(b)]; and
  - v. monthly and rolling 12-month total hours of woodworking operations (EU: MB088).
- c. For all Inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). [AQR 12.5.2.6/AQR 19.4.3.1]
- d. All records, i.e., daily self-inspection records, daily logs, etc., or a copy thereof, for Phase I and Phase II (EU: MB089), shall contain, at minimum, the following information:
- i. a record of any maintenance on any part of the Phase I and Phase II equipment, including a general description of the maintenance;
  - ii. the date and time the equipment was taken out-of-service;
  - iii. the date of repair or replacement;
  - iv. a general description of the part location (e.g., pump, tank, nozzle number, etc.);
  - v. a description of the problem; and
  - vi. the results of the daily inspections.
- e. The Control Officer or the DAQEM-approved Certified Phase II Vapor Recovery Tester shall use an approved Audit Form to record the type of performance tests conducted, as well as, the results of the tests. An approved form may be obtained from DAQEM or a DAQEM approved Certified Phase II Vapor Recovery Tester. The source shall retain the completed Audit Form for each test performed.
- f. Records and data required by this permit and maintained by the source and may be audited, at the source's expense, at any time by a third party selected by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

**F. THE FOUR SEASONS**

**1. Emission Units**

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.F.1.a following table summarizes the emission units emitted for this facility.

**Table III.F.1.a: Summary of Emission Units – The Four Seasons**

EU	Description
FS001	Patterson-Kelley Boiler, M/N: SD-1900-2, S/N: CJ2098-8888, 1.9 MMBtu/hr
FS002	Patterson Kelley Boiler, M/N: SD-1900-2, S/N: CJ20-98-8889, 1.9 MMBtu/hr
FS003	Patterson-Kelley Boiler, M/N: SD-1900-2, S/N CJ20-98-8891, 1.9 MMBtu/hr
FS004	Multimatic Corp. Dry Cleaning Machine, M/N: S/S 305, S/N: 445-1298-6629, Dry-to-Dry, 50 lb

**2. Emission Limitations and Standards**

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.F.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.F.2.a: PTE (tons per year) – The Four Seasons**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
FS001	1.9 MMBtu/hr	7,500hrs/yr	0.06	0.27	0.45	0.01	0.06	0.03
FS002	1.9 MMBtu/hr							
FS003	1.9 MMBtu/hr							
FS004	50 lb.	120 gal/yr Perc.	0.00	0.00	0.00	0.00	0.00	0.57

- b. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

**3. Production Limitations**

- a. The Permittee shall limit the operation of the boilers rated at 1.90 MMBtu/hr to 7,500 hours per rolling 12-months as a group (EUs: FS001 through FS003).
- b. The Permittee shall limit the addition of PCE to make up for lost solvent to 120 gallons in any 12-month period.

**4. Emission Controls**

Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.

- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each of the Patterson Kelly 1.9 MMBtu/hr boilers with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 85 ppm CO (EUs: FS001 through FS003).

#### Dry Cleaning

- d. The air-PCE gas-vapor stream contained within the dry cleaning machine (EU: FS004) shall pass through a refrigerated condenser solvent recovery system.
- e. The door of each dry cleaning machine shall be closed immediately after transferring articles to or from the machine and shall be kept closed at all other times.
- f. Each dry cleaning machine shall be operated and maintained according to manufacturer's specifications.
- g. The Permittee shall prevent release of the air-PCE gas-vapor stream from the dry cleaning machine to the atmosphere while the dry cleaning machine drum is rotating.
- h. The Permittee shall monitor and record either (a) or (b) of the following on a weekly basis:
  - i. The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions.
  - ii. The temperature of the air-PCE gas-vapor stream on the outlet side of the refrigerated condenser shall be monitored with a temperature sensor to determine if it is equal to or less than 7.2 °C (45 °F) before the end of the cool-down or drying cycle while the gas-vapor stream is flowing through the condenser. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ± 1.1 °C (± 2 °F).
- i. The Permittee shall prevent air drawn into the dry cleaning machine when the door to the machine is open from passing through the refrigerated condenser.
- j. The Permittee shall insure that all cartridge filters be drained in their housings, or in another sealed container, for a minimum of 24 hours, before removal from the dry cleaning facility to minimize emissions of PCE.
- k. The Permittee shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks.
- l. The Permittee shall inspect the following dry cleaning machine components weekly for perceptible leaks while the dry cleaning system is operating:
  - i. hose and pipe connections, fittings, couplings, and valves;
  - ii. door gaskets and seatings;

- iii. filter gaskets and seatings;
  - iv. pumps;
  - v. solvent tanks and containers;
  - vi. water separators;
  - vii. muck cookers;
  - viii. stills;
  - ix. exhaust dampers;
  - x. diverter valves; and
  - xi. all filter housings.
- m. The Permittee shall inspect the dry cleaning machine components described in condition III.F.4.l monthly for vapor leaks using a halogenated hydrocarbon detector or PCE gas analyzer while the dry cleaning system is operating.
- n. The Permittee shall insure that all perceptible leaks and vapor leaks detected under condition III.F.4.l and condition III.R.4.m shall be repaired within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt.
- o. If the parameter values monitored under Section III.F.4.h do not meet the values in the manufacturer's specification, the Permittee shall make appropriate adjustments or repair to the dry cleaning system or control device to meet those values.

## 5. Monitoring

- a. The Permittee shall install and utilize non-resettable hour meters for each of the boilers (EUs: FS001 through FS003). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- b. The Permittee shall monitor and record weekly the refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions.
- c. Compliance with the perceptible leaks monitoring requirement under condition III.F.4.l shall be demonstrated by weekly monitoring and recording.
- d. Compliance with the vapor leaks monitoring requirement under condition III.F.4.m shall be demonstrated by monthly monitoring and recording.
- e. If the dry cleaning machine is not equipped with refrigeration system pressure gauges, the temperature of the air-PCE gas-vapor stream on the outlet side of the refrigerated condenser shall be monitored with a temperature sensor to determine if it is equal to or less than 7.2 °C (45 °F) before the end of the cool-down or drying cycle while the gas-vapor stream is flowing through the condenser. The temperature sensor shall be used according to the

manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of  $\pm 1.1$  °C ( $\pm 2$  °F).

## 6. Testing

There are no performance testing requirements for the emission units at the Four Seasons.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. monthly hour meter readings of each of the boilers (EUs: FS001 through FS003);
  - ii. the volume of PCE purchased each month, as recorded from PCE purchases. If no PCE is purchased during a given month then the Permittee shall enter 0.0 gallons into the log;
  - iii. the calculation and result of the 12-month rolling total of PCE consumption determined on the first day of each month;
  - iv. the dates and records of refrigeration system high pressure and low-pressure or refrigerated condenser outlet temperature weekly monitoring;
  - v. the dates when the dry cleaning systems components are inspected for perceptible and vapor leaks and the name or location of dry cleaning components where leaks are detected; and
  - vi. the dates of repair and records of repair services.
- b. A copy of the design specifications and the operating manuals for each dry cleaning system and each emission control device shall be maintained on site.
- c. Records and data required by this permit and maintained by Permittee may be audited, at the Permittee's expense, at any time by a third party selected by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

## G. LUXOR

### 1. Emission Units

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.G.1.a following table summarizes the emission units emitted for this facility.

**Table III.G.1.a: Summary of Emission Units – Luxor**

EU	Description
LX001	Bryan Boiler, M/N: RW 2100-W-FDG-WLX, S/N: 73476, 21.0 MMBtu/hr
LX002	Bryan Boiler, M/N: RW 2100-W-FDG-WLX, S/N: 73501, 21.0 MMBtu/hr
LX003	Bryan Boiler, M/N: RW 2100-W-FDG-WLX, S/N: 73505, 21.0 MMBtu/hr
LX004	Bryan Boiler, M/N: RW 2100-W-FDG-WLX, S/N: 73518, 21.0 MMBtu/hr
LX005	Bryan Boiler, M/N: RW 850-S-150-FDG-WLX, S/N: 79526, 8.5 MMBtu/hr
LX006	Bryan Boiler, M/N: RW 850-S-150-FDG-WLX, S/N: 79543, 8.5 MMBtu/hr
LX008	Teledyne Pool Heater, M/N: PNCP2000NACC2BJN, S/N: C04106373, 1.99 MMBtu/hr
LX009	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N:25Z03005, 2,168 hp
LX010	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N:25Z02998, 2,168 hp
LX011	Caterpillar Diesel Emergency Generator, M/N: 3516TA, S/N:25Z02999, 2,168 hp
LX012	Detroit Diesel Emergency Fire Pump, M/N: DDFP-L8FA 8176, S/N 8VF-155634, 500 hp
LX013	Detroit Diesel Emergency Fire Pump, M/N: DDFP8FH8178V, S/N 8VF-155357, 708 hp
LX014	Baltimore Aircoil Cooling Tower, M/N: 31055X, S/N: 92201395, 3,600 gpm
LX015	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N U040981802MAD, 3,600 gpm
LX016	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N U040981803MAD, 3,600 gpm
LX017	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N U040981801MAD, 3,600 gpm
LX018	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N U040981804MAD, 3,600 gpm
LX019	Baltimore Aircoil Cooling Tower, M/N: 31213A, S/N U040981805MAD, 3,750 gpm
LX020	Baltimore Aircoil Cooling Tower, M/N: 31055X, S/N: 96201167, 3,750 gpm
LX021	Baltimore Aircoil Cooling Tower, M/N: 31055X, S/N: 96201168, 3,750 gpm
LX022	Binks Spray Paint Booth, M/N: N/A, S/N: N/A, (26'6"x19'6"x9')
LX023	American Cyclone Dust Collector, M/N: ACH-BF-24, S/N: 138169
LX024	Caterpillar Diesel Generator, M/N: 3512C, 1,500 kW (Electrical Rating), 2,206 hp (Engine Rating), S/N: TBD
LX025	Caterpillar Diesel Generator, M/N: 3512C, 1,500 kW (Electrical Rating), 2,206 hp (Engine Rating), S/N: TBD
LX026	Teledyne Pool Heater, M/N: ESC400N, S/N: F93PG1206, 0.40 MMBtu/hr
LX027	Teledyne Pool Heater, M/N: ESC400N, S/N: F93PG1209, 0.40 MMBtu/hr
LX028	Teledyne Pool Heater, M/N: ESC400NX, S/N: F96PA0140, 0.399 MMBtu/hr
LX029	Teledyne Pool Heater, M/N: ESC400NX, S/N: F96PA0146, 0.399 MMBtu/hr
LX030	"Believe" Show Natural Gas Burner Ring, M/N: N/A, S/N: N/A, Approximately 0.4896 MMBtu/hr

**2. Emission Limitations and Standards**

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.G.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.G.2.a: PTE (tons per year) – Luxor**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
LX001	21.0 MMBtu/hr	27,000 hrs/yr	2.11	8.78	18.7	0.17	1.53	0.52
LX002	21.0 MMBtu/hr							
LX003	21.0 MMBtu/hr							
LX004	21.0 MMBtu/hr							
LX005	8.50 MMBtu/hr	12,000 hrs/yr	0.38	1.60	4.20	0.03	0.28	0.09
LX006	8.50 MMBtu/hr							
LX008	1.99 MMBtu/hr	5,000 hrs/yr	0.04	0.18	0.18	0.01	0.03	0.01
LX009	2,168 bhp	26 hrs/yr	0.03	1.04	0.24	0.02	0.03	0.01

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
LX010	2,168 bhp	26 hrs/yr	0.03	1.04	0.24	0.02	0.03	0.01
LX011	2,268 bhp	26 hrs/yr	0.03	1.04	0.24	0.02	0.03	0.01
LX012	500 hp	26 hrs/yr	0.01	0.22	0.04	0.01	0.02	0.01
LX013	708 bhp	26 hrs/yr	0.02	0.22	0.05	0.01	0.02	0.01
LX014	3,600 gpm	37,000 hrs/yr	2.35					
LX015	3,600 gpm							
LX016	3,600 gpm							
LX017	3,600 gpm							
LX018	3,600 gpm							
LX019	3,750 gpm	22,000 hrs/yr	1.47					
LX020	3,750 gpm							
LX021	3,750 gpm							
LX022	N/A	240 gal/yr	0.00	0.00	0.00	0.00	0.82	0.45
LX023	N/A	3,640 hrs/yr	0.04	0.00	0.00	0.00	0.00	0.00
LX024	2,206 hp	52 hrs/yr	0.01	0.75	0.10	0.01	0.02	0.01
LX025	2,206 hp	52 hrs/yr	0.01	0.75	0.10	0.01	0.02	0.01
LX026	0.40 MMBtu/hr		0.01	0.17	0.14	0.01	0.01	0.01
LX027	0.40 MMBtu/hr		0.01	0.17	0.14	0.01	0.01	0.01
LX028	0.399 MMBtu/hr		0.01	0.17	0.14	0.01	0.01	0.01
LX029	0.399 MMBtu/hr		0.01	0.17	0.14	0.01	0.01	0.01
LX030	Custom Design (approximately 0.4896 MMBtu/hr)	2,682,000 scf/yr	0.01	0.13	0.11	0.01	0.01	0.01

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.G.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.G.2.b: PTE (pounds per hour) – Luxor**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
LX001	21.0 MMBtu/hr	0.16	0.66	1.39	0.01	0.11	0.04
LX002	21.0 MMBtu/hr	0.16	0.66	1.39	0.01	0.11	0.04
LX003	21.0 MMBtu/hr	0.16	0.66	1.39	0.01	0.11	0.04
LX004	21.0 MMBtu/hr	0.16	0.66	1.39	0.01	0.11	0.04

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of the four boilers rated at 21.0 MMBtu/hr to 27,000 hours per rolling 12-months as a group (EUs: LX001 through LX004).
- b. The Permittee shall limit the operation of the two boilers rated at 8.5 MMBtu/hr to 12,000 hours per rolling 12-months as a group (EUs: LX005 and LX006).

- c. The Permittee shall limit the operation of the Teledyne pool heater to 5,000 hours per rolling 12-months (EU: LX008).
- d. The Permittee shall limit the operation of the “Believe” Show Natural Gas Burner Ring to 2,682,000 standard cubic feet of natural gas per rolling 12-months (EU: LX030).
- e. The Permittee shall limit the operation of the three Caterpillar diesel fueled emergency generator to 0.5 hours per day and 26 hours per rolling 12-months for testing and maintenance purposes (EUs: LX009 through LX011).
- f. The Permittee shall limit the operation of each individual Detroit diesel fueled fire pump to 1.0 hour per day and 26 hours per rolling 12-months for testing and maintenance purposes (EUs: LX012 and LX013).
- g. The Permittee shall limit the operation of two of the Caterpillar diesel fueled emergency generators to 2 hours per day and 52 hours per rolling 12-months for testing and maintenance purposes (EUs: LX024 through LX025).
- h. The Permittee shall limit the operation of the five cooling towers with a circulation rate of 3,600 gallons per minute to 37,000 hours per rolling 12-months as a group (EUs: LX014 through LX018).
- i. The Permittee shall limit the operation of the three cooling towers with a circulation rate of 3,750 gallons per minute to 22,000 hours per rolling 12-months as a group (EUs: LX019 through LX021).
- j. The Permittee shall limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, inks, thinners, solvents, etc. in the spray booth (EU: LX022) to 240 gallons per rolling 12-months, based on an average VOC content of 6.84 pounds per gallon and 55 percent HAP content.
- k. The Permittee shall limit the activities for the shop to 1,200 hours per rolling 12-months (EU: LX023).
- l. The Permittee shall limit the throughput of natural gas through the “Believe” show natural gas burner (EU: LX030) to 2,620,800 standard cubic feet per rolling 12-months.

#### **4. Emission Controls**

##### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer’s specifications.
- c. The Permittee shall operate each of the 21 MMBtu/hr boilers with burners rated for a maximum emission rate of 25 ppm NO<sub>x</sub> and 89 ppm CO (EUs: LX001 through LX004).

- d. The Permittee shall operate each of the 8.5 MMBtu/hr boilers with burners rated for a maximum emission rate of 25 ppm NO<sub>x</sub> and 47 ppm CO (EUs: LX005 and LX006).
- e. The Permittee shall operate the 1.99 MMBtu/hr pool heater with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 48 ppm CO (EU: LX008).
- f. The Permittee shall operate each of the two 0.40 MMBtu/hr and the two 0.399 MMBtu/hr Teledyne pool heaters with burners rated for a maximum emission rate of 80 ppm NO<sub>x</sub> and 111 ppm CO (EUs: LX026 through LX029).

#### Diesel Generators/Fire Pumps

- i. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- j. The Permittee shall operate all diesel emergency generators and fire pumps with turbochargers and aftercoolers (EUs: LX009 through LX013, LX024, and LX025).

#### Cooling Towers

- k. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- g. The Permittee shall operate each of the cooling towers with drift eliminators with a manufacturer's maximum drift rate of 0.005 percent (EUs: LX014 through LX021).
- h. The Permittee shall maintain the cooling water in each of the cooling towers such that the TDS content is limited to 3,000 ppm (EUs: LX014 through LX021).

#### Surface Coating

- i. The Permittee shall not operate spray booths unless all exhaust air passes through appropriate filter media having a particulate capture efficiency of at least 99.0 percent. (This is usually accomplished with tacky filter material that is at least 2 inches thick.) The dry filter media must cover all openings in the spray booth.
- j. The Permittee shall not use open containers for storage or disposal of VOC or HAP-containing cloth or paper (excluding masking tape) used for surface preparation and cleanup.
- k. All filters or other control equipment associated with surface coating operations shall follow manufacturer's specifications for use and operation. Dry filters must be changed at sufficient intervals to prevent a decrease in their effectiveness and prevent them from clogging.
- l. The Permittee shall use a manometer (or equivalent) to monitor the pressure drop across the spray booth filters. The filters should be replaced when the pressure drop exceeds 0.25 inches of water (6.35 millimeters of water), unless

the manufacturer's specifications for use indicate a different pressure drop value.

- m. The Permittee shall clean surface coating application equipment in an enclosed container to minimize VOC volatilization into the ambient air.
- n. All containers with VOC and HAP-containing products shall remain securely closed, except during product transfer. Containers shall be inspected regularly for leakage and the contents of any leaking container must be immediately transferred to an appropriately labeled container that has been specifically designed for storage of the compound.
- o. The Permittee shall employ good housekeeping practices to prevent the accumulation and/or dispersal of particulate matter from sanding, blasting, surface preparation, etc. carried out in conjunction with surface coating operations. No more than 0.25 inches of particulate matter shall accumulate on surrounding surfaces at any time.

#### Woodworking

- p. The Permittee shall operate the American Cyclone dust collector during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions (EU: LX023).

### **5. Monitoring**

- a. The Permittee shall install and utilize non-resettable hour meters on each boiler (EUs: LX001 through LX004). *[AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]*
- b. The Permittee shall install and utilize a non-resettable fuel meter on the for the Believe Show Natural Gas Burner Ring (EU: LX030). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. The Permittee shall install and utilize non-resettable hour meter on each boiler (EUs: LX005, LX006, and LX008). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: LX009 through LX013, LX024, and LX025). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- e. The Permittee shall inspect spray paint booth and all ancillary equipment for leaks, malfunctions, proper operation of gauges and pressure drops, each day the booth is operated. A log must be kept of such inspections as well as any corrective actions taken to repair the equipment. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- f. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-

fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]

- g. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr but less than 10.0 MMBtu/hr shall perform a burner efficiency test at least once each calendar year. Burner efficiency tests shall be conducted in accordance with the manufacturer's specifications and specifications for good combustion practices (EUs: LX005 and LX006). [AQR 12.5.2.6/AQR 19.4.3.1]
- b. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: LX001 through LX004). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. [AQR 12.5.2.6/AQR 19.4.3.1]
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- d. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]

- e. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

**Boiler/ Water Heater Performance Tests**

- f. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: LX001 through LX004). [AQR 12.5.2.6/AQR 19.4.3.1]
- g. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units LX001 through LX004. [AQR 12.5.2.6/AQR 19.4.3.1]
- h. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.G.6.a:

**Table III.G.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

**Diesel Generators/Fire Pumps**

- i. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

**7. Record Keeping**

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: LX009 through LX013, LX024, and LX025);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: LX014 through LX021);
  - iv. monthly TDS content of cooling tower circulation water;

- v. MSDS or records demonstrating the VOC and HAP content for each compound used for surface coating activities;
  - vi. a log book of all inspections, maintenance, and repairs as specified in this document;
  - vii. records of burner efficiency testing; and
  - viii. results of performance testing.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
- i. monthly total of operating hours to demonstrate compliance with the 12-month rolling hour limits for each boiler/water heater (EUs: LX001 through LX006, LX008, and LX030);
  - ii. monthly total natural gas consumption for the Believe show (EU: LX030);
  - iii. monthly total of operating hours for each diesel generator and fire pump (EUs: LX009 through LX013, LX024, and LX025);
  - iv. monthly and rolling 12-month total consumption (in gallons) of each VOC-containing compound related to surface coating activities (paints, basecoats, primers, reducers, thinners, solvents, etc.);
  - v. monthly and rolling 12-month total hours of woodworking operations (EUs: LX023).
- c. For all Inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). [AQR 12.5.2.6/AQR 19.4.3.1]

## H. EXCALIBUR and TRAM

### 1. Emission Units

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.H.1.a following table summarizes the emission units emitted for this facility.

**Table III.H.1.a: Summary of Emission Units – Excalibur and Tram**

EU	Description
EX001	Superior Boiler, M/N: 700 W, S/N: 2380, 29.3 MMBtu/hr
EX002	Superior Boiler, M/N: 700 W, S/N: 2381, 29.3 MMBtu/hr
EX003	Superior Boiler, M/N: 700 W, S/N: 2382, 29.3 MMBtu/hr
EX004	Lochinvar Water Heater, M/N: CSN2065, S/N: C014610, 2.1 MMBtu/hr
EX005	Lochinvar Water Heater, M/N: CPN2070, S/N: L02H00149907, 2.1 MMBtu/hr
EX006	Teledyne Water Heater, M/N: AP2200EN18CC, S/N: C93C01615, 2.2 MMBtu/hr
EX007	Caterpillar Diesel Emergency Generator, M/N: 3512, S/N: 24Z02774, 1,200 kW, 1,592 hp
EX008	Caterpillar Diesel Emergency Generator, M/N: 3512, S/N: 24Z02784, 1,200 kW, 1,592 hp

EU	Description
EX009	Caterpillar Diesel Emergency Generator, M/N: 3512, S/N: 24Z02770, 1,200 kW, 1,592 hp
EX010	Caterpillar Diesel Emergency Generator, M/N: 3512, S/N: 24Z02753, 1,200 kW, 1,592 hp
EX011	Caterpillar Fire Pump, M/N: PL927-89, S/N: 03Z8914, 270 hp
EX012	Caterpillar Fire Pump, M/N: 3406B, S/N: 6TB05883 350 hp
EX013	Baltimore Aircoil Cooling Tower, M/N: 33424-2X, S/N: 97222481, 3,000 gpm, 3,600 ppm TDS, 0.005% DL
EX014	Baltimore Aircoil Cooling Tower, M/N: 33424-2X, S/N: 97222462, 3,000 gpm, 3,600 ppm TDS, 0.005% DL
EX015	Baltimore Aircoil Cooling Tower, M/N: 33424-2X, S/N: 97222472, 3,000 gpm, 3,600 ppm TDS, 0.005% DL
EX016	Sprayline Spray Paint Booth, M/N: FDG20249, S/N: FAF24U, 21'x24'x10'
EX017	F. C. Lowe Aboveground Storage Tank, M/N: 4-91, S/N: 492030, 1000 gallons
EX018	Spectrum 30 Emergency Generator, M/N: 30DS60, S/N: 354543, 64.4 hp
EX019	Murphy-Rodgers Dust Collector, M/N: MRM-124D, S/N: 1553
EX020	Lochinvar Pool Heater, M/N CPN 0991, S/N CO7H0019350, 0.99 MMBtu/hr
EX021	Lochinvar Pool Heater, M/N CPN 1801, S/N CO7H00196352, 1.8 MMBtu/hr
EX022	Lochinvar Spa Heater, M/N ERN-252-A, S/N D07H00196542, 0.25 MMBtu/hr
EX023	Lochinvar Spa Heater, M/N ERN-252-A, S/N D07H00196543, 0.25 MMBtu/hr
EX024	Lochinvar Spa Heater, M/N ERN-252-A, S/N D07H00196544, 0.25 MMBtu/hr
EX025	A.O. Smith Hot Water Heater, M/N: BTH 199-970, S/N: MLO300-02-3147, 0.199 MMBtu/hr
EX026	A.O. Smith Hot Water Heater, M/N: BTH 199-970, S/N: MLO300-02-3146, 0.199 MMBtu/hr
EX027	Raypak Pool Heater, M/N: C-R267A-EN-C, S/N: 0411227811, 0.27 MMBtu/hr
TM001	Patterson-Kelley Water Boiler, M/N: N-1900-2, S/N: T.B.D, 1.90 MMBtu/hr
TM002	Cummins Diesel Emergency Generator, M/N: 6CT8.3-G2, S/N: 45748231, 207 hp
TM003	Baltimore Aircoil Cooling Tower, M/N: F1462-PM, S/N: 99201761, 600 gpm, 2,100 ppm TDS
TM004	Cummins Emergency Generator, M/N: B5.9-C, S/N: 21337208, 174 hp
TM005	Cummins Emergency Generator, M/N: B5.9-C, S/N: 21337209, 174 hp

## 2. Emission Limitations and Standards

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.H.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.H.2.a: PTE (tons per year) – Excalibur and Tram**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
EX001	29.30 MMBtu/hr	12,000 hrs/yr	1.31	5.52	11.60	0.10	0.95	0.32
EX002	29.30 MMBtu/hr							
EX003	29.30 MMBtu/hr							
EX004	2.1 MMBtu/hr		0.07	0.34	0.34	0.01	0.05	0.02
EX005	2.1 MMBtu/hr		0.07	0.34	0.34	0.01	0.05	0.02
EX006	2.2 MMBtu/hr		0.07	0.35	0.36	0.01	0.05	0.02
EX007	1,592 hp	15 hrs/yr	0.01	0.29	0.07	0.01	0.01	0.01
EX008	1,592 hp	15 hrs/yr	0.01	0.29	0.07	0.01	0.01	0.01
EX009	1,592 hp	15 hrs/yr	0.01	0.29	0.07	0.01	0.01	0.01
EX010	1,592 hp	15 hrs/yr	0.01	0.29	0.07	0.01	0.01	0.01
EX011	270 hp	15 hrs/yr	0.01	0.06	0.01	0.01	0.01	0.01
EX012	350 hp	15 hrs/yr	0.01	0.08	0.02	0.01	0.01	0.01
EX013	3,000 gpm		0.56					
EX014	3,000 gpm		0.56					

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
EX015	3,000 gpm		0.56					
EX016	N/A	900 gal/yr	0.00	0.00	0.00	0.00	0.80	0.12
EX017	1,000 gallons	15,000 gal/yr	0.00	0.00	0.00	0.00	0.84	0.01
EX018	64.4 hp	26 hrs/yr	0.01	0.03	0.01	0.01	0.01	0.01
EX019	N/A	1,200 hrs/yr	0.01	0.00	0.00	0.00	0.00	0.00
EX020	0.99 MMBtu/hr		0.03	0.16	0.32	0.01	0.02	0.01
EX021	1.8 MMBtu/hr		0.06	0.29	0.59	0.01	0.04	0.01
EX022	0.25 MMBtu/hr		0.01	0.04	0.08	0.01	0.01	0.01
EX023	0.25 MMBtu/hr		0.01	0.04	0.08	0.01	0.01	0.01
EX024	0.25 MMBtu/hr		0.01	0.04	0.08	0.01	0.01	0.01
EX025	0.199 MMBtu/hr		0.01	0.06	0.03	0.01	0.01	0.01
EX026	0.199 MMBtu/hr		0.01	0.06	0.03	0.01	0.01	0.01
EX027	0.27 MMBtu/hr		0.01	0.08	0.05	0.01	0.01	0.01
TM001	1.90 MMBtu/hr		0.06	0.30	0.31	0.01	0.04	0.02
TM002	207 hp	24 hrs/yr	0.01	0.08	0.02	0.00	0.01	0.00
TM003	600 gpm, 3,000 ppm TDS		0.18					
TM004	174 hp	26 hrs/yr	0.01	0.07	0.02	0.01	0.02	0.01
TM005	174 hp	13 hrs/yr	0.01	0.04	0.01	0.01	0.01	0.01

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.H.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.H.2.b: PTE (pounds per hour) – Excalibur and Tram**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
EX001	29.30 MMBtu/hr	0.22	0.92	1.93	0.02	0.16	0.05
EX002	29.30 MMBtu/hr	0.22	0.92	1.93	0.02	0.16	0.05
EX003	29.30 MMBtu/hr	0.22	0.92	1.93	0.02	0.16	0.05

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]
- d. Each of the Cummins diesel emergency engines shall comply with the emission standards set forth in Table 1 of 40 CFR 60 Subpart IIII for the same model year and maximum engine power (EU: TM004 and TM005).

### 3. Production Limitations

- a. The Permittee shall limit the operation of the boilers rated at 29.3 MMBtu/hr to 12,000 hours per rolling 12-months as a group (EUs: EX001 through EX003).
- b. The Permittee shall limit the operation of each of the four 1,592 hp diesel emergency generators to 15 hours per rolling 12-months for testing and maintenance purposes (EUs: EX007 through EX010).

- c. The Permittee shall limit the operation of each of the 270 hp and 350 hp diesel emergency generators to 15 hours per rolling 12-months each for testing and maintenance purposes (EUs: EX011 and EX012).
- d. The Permittee shall limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, inks, thinners, solvents, etc. from the spray booth (EU: EX016) to 900 gallons per rolling 12-months, based on an average VOC content of 1.78 pounds per gallon and 47 percent HAP content.
- e. The Permittee shall limit the throughput, aggregate of all gasoline products, to 15,000 gallons per rolling 12-months (EU: EX017).
- f. The Permittee shall limit the operation of the 64 hp diesel emergency generator to 26 hours per rolling 12-months for testing and maintenance purposes (EUs: EX018).
- g. The Permittee shall operate the Murphy Rodgers dust collector at all times PM<sub>10</sub> is emitted during the use of the (EU: EX019).
- h. The Permittee shall limit the operation of the shop to 1,200 hours per rolling 12-months (EU: EX019).
- i. The Permittee shall limit the operation of the 207 hp diesel emergency generator to 24 hours per rolling 12-months for testing and maintenance purposes (EU: TM002).
- j. The Permittee shall limit the operation of the 174 hp diesel emergency generator to 26 hours per rolling 12-months for testing and maintenance purposes (EUs: TM004).
- k. The Permittee shall limit the operation of the 174 hp diesel emergency generator to 13 hours per rolling 12-months for testing and maintenance purposes (EUs: TM005).

#### **4. Emission Controls**

##### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.
- c. The Permittee shall operate each of the 29.3 MMBtu/hr boilers with burners rated for a maximum emission rate of 25 ppm NO<sub>x</sub> and 89 ppm CO (EUs: EX001 through EX003).
- d. The Permittee shall operate each of the 2.1 MMBtu/hr water heaters with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO (EUs: EX004 and EX005).
- e. The Permittee shall operate the 2.2 MMBtu/hr water heater with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 50 ppm CO (EU: EX006).

- f. The Permittee shall operate the 0.99 MMBtu/hr pool heater with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EU: EX020).
- g. The Permittee shall operate the 1.8 MMBtu/hr pool heater with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EU: EX021).
- h. The Permittee shall operate each of the 0.25 MMBtu/hr spa heaters with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EUs: EX022 through EX024).
- i. The Permittee shall operate each of the two hot water heaters and Raypak pool heater with burners rated for a maximum emission rate of 55 ppm NO<sub>x</sub> and 53 ppm CO (EUs: EX025 through EX027).
- j. The Permittee shall operate the boiler with burners rated for a maximum emission rate of 30 ppm NO<sub>x</sub> and 100 ppm CO (EU: TM001).

#### Diesel Generators/Fire Pumps

- k. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- l. The Permittee shall operate each of diesel emergency generators and fire pumps with turbochargers (EUs: EX007 through EX012, EX018 and TM002).
- m. The Permittee shall operate each of the diesel emergency generators with turbochargers and aftercoolers (EUs: TM004 and TM005).

#### Cooling Towers

- l. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- n. The Permittee shall operate each of the three cooling towers with drift eliminators with a manufacturer's maximum drift rate of 0.005 percent (EUs: EX013 through EX015).
- o. The Permittee shall limit the TDS content of the cooling water in each of the cooling towers to 3,000 ppm (EUs: EX013 through EX015).
- p. The Permittee shall operate the cooling tower with drift eliminators with a manufacturer's maximum drift rate of 0.002 percent (EU: TM003).
- q. The Permittee shall maintain the cooling water such that the maximum TDS content does not exceed 3,000 ppm (EU: TM003).

#### Gasoline Storage/Dispensing

- m. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following *[40 CFR 63.11116]*:
  - a. minimize gasoline spills;

- b. clean up spills as expeditiously as practicable;
  - c. cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
  - d. minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators;
  - e. the Permittee shall have records documenting gasoline throughput within 24 hours of a request of the Control Officer; and
  - f. the Permittee must comply with the requirements of the 40 CFR 63, Subpart CCCCCC by January 10, 2011.
- n. Gasoline storage tank (EU: EX017) shall be equipped with CARB certified Phase I vapor recovery controls.
- o. The Phase I Vapor Recovery System shall be constructed in accordance with the "Two-Point Phase I Vapor Recovery System" drawing, and shall use components specified in the current CARB EO G-70-102 series.
- p. Phase I Vapor Recovery. The following control requirements apply to the ACE aboveground storage tank (EU: MG46):
- i. The highest point of discharge from a submerged fill-pipe shall be no more than 6.0 inches from the tank bottom.
  - ii. Pursuant to AQR Section 12, all Phase I vapor recovery equipment shall be installed and operated in accordance with the manufacturer's specifications and certification requirements.
  - iii. All Phase I vapor recovery equipment shall be maintained to be leak free, vapor tight, and in good working order.
  - iv. All Phase I vapor recovery equipment shall have a CARB-certified device, which prevents loosening or over tightening of the Phase I product adaptor.
  - v. Each system that has a pressure/vacuum vent valve installed must also meet the standards as outlined in the current CARB EO G-70-102 series.

#### Surface Coating

- q. The Permittee shall not operate spray booths unless all exhaust air passes through appropriate filter media having a particulate capture efficiency of at least 99.0 percent. (This is usually accomplished with tacky filter material that is at least 2 inches thick.) The dry filter media must cover all openings in the spray booth.
- r. The Permittee shall use covered containers for storage or disposal of VOC or HAP-containing cloth or paper (excluding masking tape) used for surface preparation and cleanup.
- s. All filters or other control equipment associated with surface coating operations shall follow manufacturer's specifications for use and operation.

Dry filters must be changed at sufficient intervals to prevent a decrease in their effectiveness and prevent them from clogging.

- t. The Permittee shall use a manometer (or equivalent) to monitor the pressure drop across the spray booth filters. The filters should be replaced when the pressure drop exceeds 0.25 inches of water (6.35 millimeters of water), unless the manufacturer's specifications for use indicate a different pressure drop value.
- u. The Permittee shall clean surface coating application equipment in an enclosed container to minimize VOC volatilization into the ambient air.
- v. All containers with VOC and HAP-containing products shall remain securely closed, except during product transfer. Containers shall be inspected regularly for leakage and the contents of any leaking container must be immediately transferred to an appropriately labeled container that has been specifically designed for storage of the compound.
- w. The Permittee shall employ good housekeeping practices to prevent the accumulation and/or dispersal of particulate matter from sanding, blasting, surface preparation, etc. carried out in conjunction with surface coating operations. No more than 0.25 inches of particulate matter shall accumulate on surrounding surfaces at any time.

#### Woodworking

- x. The Permittee shall operate the Murphy-Rodgers dust collector during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions (EUs: EX019).

### **5. Monitoring**

- a. The Permittee shall install and utilize non-resettable hour meters for each applicable boiler (EUs: EX001 through EX003). *[AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]*
- b. The Permittee shall monitor operating hours for each diesel engine utilizing non-resettable hour meters when operated for testing, maintenance, or during emergencies (EUs: EX007 through EX012, EX018, TM002, TM004, and TM005). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- c. The Permittee shall inspect spray paint booth and all ancillary equipment for leaks, malfunctions, proper operation of gauges and pressure drops, each day the booth is operated. A log must be kept of such inspections as well as any corrective actions taken to repair the equipment. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- d. The Permittee shall conduct daily inspections for requirements listed in AQR Subsection 52.4 that are associated with the Phase I vapor recovery system to

determine if components of the system are defective. [AQR 12.5.2.6/AQR 19.4.3.1]

- e. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]
- f. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: EX001 through EX003). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. [AQR 12.5.2.6/AQR 19.4.3.1]
- b. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]

- d. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. *[AQR 12.5.2.6/AQR 19.4.3.1]*

**Boiler/ Water Heater Performance Tests**

- e. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: EX001 through EX003). *[AQR 12.5.2.6/AQR 19.4.3.1]*
- s. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units EX001 through EX003. *[AQR 12.5.2.6/AQR 19.4.3.1]*
- f. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.H.6.a:

**Table III.H.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

**Diesel Generators/Fire Pumps**

- g. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

**Gasoline Storage/Dispensing**

- h. The Permittee shall conduct performance testing on the Vapor Control Systems associated with EU: EX017, listed in Table III.H.6.b. *[AQR 4.5]*
  - i. Each performance tests shall be conducted in accordance with the applicable CARB Test Procedure that is required by the CARB EO.
  - ii. The source shall give a 7-day written prior notice of the date of the test to the Control Officer, Compliance Division.
  - iii. Any prior approved scheduled performance test cannot be canceled and/or rescheduled except with the prior approval of the Control Officer, Compliance Division.
  - iv. Within 7 days from the end of an initial or annual performance test, source shall submit a report containing the results of such test to the Control Officer, Compliance Division.

- v. The report shall have, as the first page of text, a signed Certification of Performance Test Results (see Attached).
- i. Each performance test shall be conducted by a DAQEM approved Certified Phase II Vapor Recovery Tester, as defined in AQR Subsection 52.2.
- j. If any performance test fails, then the affected portion of the GDO will be tagged “Out of Order” until corrective action has been taken and the retest passed.
- k. If the source fails a performance test, the Control Officer, Compliance Division, shall be notified within 24 hours or by 12:00 p.m. (Noon) of DAQEM's next business day, whichever is soonest. Repairs to correct the defects shall be made and a retest scheduled with the Control Officer. The retest shall be scheduled within 10 calendar days of the failed test. If the repairs and retest cannot be accomplished within 10 calendar days, the source must submit the reasons and a proposed date for retesting in writing to the Control Officer for approval.
- l. The source shall conduct performance tests listed in Table III.H.6.b on the Phase II system (EU: EX017):

**Table III.H.6.b: Required Performance Test Criterion: Balance System**

Description	CARB Test Procedure	Standard
Determination of Static Pressure of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks	TP-201.3B	Initial: 2.0" wc Final: Referenced Value
Dynamic Back Pressure	TP-201.4	0.45" wc @ 60 SCFH, N <sub>2</sub> <sup>2</sup>
Dispensing nozzle flow rate <sup>1</sup>	As Specified in EO	10 gpm (max.)

<sup>1</sup>If the source fails the Dynamic Back Pressure performance test, the source shall be required to comply with additional performance testing requirements in accordance with the applicable EO for this equipment.

- m. Initial Performance Test [AQR 12.5.2.6/AQR 19.4.3.1]:
  - i. The source shall conduct and pass an initial performance test within 30 days of the source commencing operations.
  - ii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of new emission units that require performance testing.
  - iii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of modified emission units that require performance testing.
  - iv. The initial performance test must be witnessed by an inspector from the DAQEM.
- n. Annual Performance Test, Vapor Recovery System:

- i. Annual performance testing shall be accomplished prior to the anniversary date of the previous performance test that the source passed.
- ii. Pursuant to AQR Section 4, the Control Officer may require additional testing.
- o. The source shall implement changes to the existing vapor recovery system if any performance test results indicate such changes are necessary to maintain compliance with this permit.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: EX007 through EX012, EX018, TM002, TM004, and TM005);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: EX013 through EX015 and TM003);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. MSDS or records demonstrating the VOC and HAP content for each compound used for surface coating activities;
  - vi. a log book of all inspections, maintenance, and;
  - vii. records of burner efficiency testing;
  - viii. results of performance testing; and
  - ix. GDO records shall contain, at minimum, the following information (EU: EX017) [AQR 12.5.2.6/AQR 19.4.3.1]:
    - (i) a record of any maintenance on any part of the Phase I equipment, including a general description of the maintenance;
    - (ii) the date and time the equipment was taken out-of-service;
    - (iii) the date of repair or replacement;
    - (iv) a general description of the part location (e.g., pump, tank, nozzle number, etc.);
    - (v) a description of the problem; and
    - (vi) the results of the daily inspections.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:

- i. monthly total of operating hours for each boiler/water heater (EUs: EX001 through EX003);
  - ii. monthly total of operating hours for each diesel generator and fire pump (EUs: EX0017 through EX012, EX018, TM002, TM004, and TM005);
  - iii. monthly and rolling 12-month total consumption (in gallons) of each VOC-containing compound related to surface coating activities (paints, basecoats, primers, reducers, thinners, solvents, etc.);
  - iv. monthly and 12-month rolling total of gasoline throughput [40 CFR 63.11116(b)]; and
  - v. monthly and rolling 12-month total hours of woodworking operations (EUs: EX019).
- c. For all Inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). [AQR 12.5.2.6/AQR 19.4.3.1]
- d. All records, i.e., daily self-inspection records, daily logs, etc., or a copy thereof, for Phase I and Phase II (EU: EX017), shall contain, at minimum, the following information:
- i. a record of any maintenance on any part of the Phase I and Phase II equipment, including a general description of the maintenance;
  - ii. the date and time the equipment was taken out-of-service;
  - iii. the date of repair or replacement;
  - iv. a general description of the part location (e.g., pump, tank, nozzle number, etc.);
  - v. a description of the problem; and
  - vi. the results of the daily inspections.
- e. The Control Officer or the DAQEM-approved Certified Phase II Vapor Recovery Tester shall use an approved Audit Form to record the type of performance tests conducted, as well as, the results of the tests. An approved form may be obtained from DAQEM or a DAQEM approved Certified Phase II Vapor Recovery Tester. The source shall retain the completed Audit Form for each test performed.
- f. Records and data required by this permit and maintained by the source and may be audited, at the source's expense, at any time by a third party selected by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

**I. BELLAGIO**

**1. Emission Units**

- a. The stationary source covered by the Part 70 OP consists of the emission units and associated appurtenances summarized in Table III.I.1.a following table summarizes the emission units emitted for this facility.

**Table III.I.1.a: Summary of Emission Units – Bellagio**

<b>EU</b>	<b>Description</b>
BE01	Unilux Manufacturing Boiler, M/N: ZF2000W, S/N: 2082, 20.0 MMBtu/hr
BE02	Unilux Manufacturing Boiler, M/N: ZF2000W, S/N: 2138, 20.0 MMBtu/hr
BE03	Unilux Manufacturing Boiler, M/N: ZF2000W, S/N: 2139, 20.0 MMBtu/hr
BE04	Unilux Manufacturing Boiler, M/N: ZF2000W, S/N: 2140, 20.0 MMBtu/hr
BE05	Unilux Manufacturing Boiler, M/N: ZF500HS, S/N: 2141, 5.0 MMBtu/hr
BE06	Unilux Manufacturing Boiler, M/N: ZF500HS, S/N: 2142, 5.0 MMBtu/hr
BE07	Bryan Steam Corp. Boiler, M/N: RV200S, S/N: 81606, 2.0 MMBtu/hr
BE09	Raypak Company Inc. Pool Heater, M/N: P-3500, S/N: 9801146092, 3.5 MMBtu/hr
BE10	Raypak Company Inc. Pool Heater, M/N: P-3001, S/N: 9801146003, 3.0 MMBtu/hr
BE32	Aerco Water Heater, S/N: G-97-201, 1.0 MMBtu/hr
BE33	Aerco Water Heater, S/N: G-97-208, 1.0 MMBtu/hr
BE34	Aerco Water Heater, S/N: G-97-207, 1.0 MMBtu/hr
BE35	Aerco Water Heater, S/N: G-97-205, 1.0 MMBtu/hr
BE36	Aerco Water Heater, S/N: G-97-204, 1.0 MMBtu/hr
BE37	Aerco Water Heater, S/N: G-96-471, 1.0 MMBtu/hr
BE38	Aerco Water Heater, S/N: G-97-210, 1.0 MMBtu/hr
BE39	Aerco Water Heater, S/N: G-97-203, 1.0 MMBtu/hr
BE46	Aerco Water Heater, S/N: G-96-569, 1.0 MMBtu/hr
BE57	Aerco Water Heater, S/N: G-96-517, 1.0 MMBtu/hr
BE58	Aerco Water Heater, S/N: G-96-498, 1.0 MMBtu/hr
BE59	Aerco Water Heater, S/N: G-96-514, 1.0 MMBtu/hr
BE60	Aerco Water Heater, S/N: G-96-499, 1.0 MMBtu/hr
BE68	Banza Spray Booth Heater, S/N: 3061000.154, 1.36 MMBtu/hr (See BE097)
BE74	Bryan Boiler, S/N: 91445, 18 MMBtu/hr (burner rated at 14.7 MMBtu/hr)
BE75	Bryan Boiler, S/N: 91338, 18 MMBtu/hr (burner rated at 14.7 MMBtu/hr)
BE76	Bryan Boiler, S/N: 91416, 18 MMBtu/hr (burner rated at 14.7 MMBtu/hr)
BE90	Ceramic Cooling Tower, Inc., M/N: PCS2187, S/N: N/A, 9-Cell, 33,750 gpm, 3,000 ppm TDS, 0.001% Drift Loss
BE91	Baltimore Cooling Tower, S/N: U040161301MAD, 3,000 gpm, 0.005% Drift
BE92	Baltimore Cooling Tower, S/N: U040161302MAD, 3,000 gpm, 0.005% Drift
BE93	Baltimore Cooling Tower, S/N: U040161303MAD, 3,000 gpm, 0.005% Drift
BE94	Baltimore Cooling Tower, S/N: U041435902MAD, 140 gpm, 0.001% Drift
BE95	Baltimore Cooling Tower, S/N: U041435901MAD, 140 gpm, 0.001% Drift
BE80	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00541, 1,750 kW, 2,345 hp
BE81	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00542, 1,750 kW, 2,345 hp
BE82	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00543, 1,750 kW, 2,345 hp
BE83	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00544, 1,750 kW, 2,345 hp
BE84	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00545, 1,750 kW, 2,345 hp
BE85	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00546, 1,750 kW, 2,345 hp
BE86	Caterpillar Diesel Emergency Generator, M/N: 3516, Gen. #: 7GM00547, 1,750 kW, 2,345 hp
BE87	Caterpillar Diesel Emergency Generator, S/N: 1LZ00545, 1,750 kW, 2,345 hp

EU	Description
BE88	Caterpillar Diesel Emergency Generator, S/N: 1LZ00546, 1,750 kW, 2,345 hp
BE89	Whisper Watt Diesel Emergency Generator, S/N: 7200884, 55.2 hp
BE101	Caterpillar Emergency Generator, M/N: CAT 3412, 764 hp
BE96	Binks Mfg. Spray Paint Booth, M/N: AA-530, S/N: N/A, (14'W x 9'H x 26'D)
BE97	Binks Spray Booth (Showroom), M/N: I-121217 Pressurized Dry Filter Booth (13' x 14' x 23'-10")
BE98	Binks Spray Booth (Closet), M/N: I-121217, (7' x 7' x 5')
BE99	Powder Coating Booth – Nordson power System, S/N: 00497-8 Grieve Electric Oven, S/N: 64130
BE109	Aget Dust Collector, M/N FT64-SP & 90B70-SP, S/N 1792 & 912
BE110	Torit Dust Collector, M/N: VS2400, S/N: IG465155
BE100	Solvent Degreasing Operations
BE102	RBI Futera Boiler, M/N: MW2000, S/N: 050746069, 1.999 MMBtu/hr
BE103	RBI Futera Boiler, M/N: MW2000, S/N: 050746070, 1.999 MMBtu/hr
BE104	RBI Futera Boiler, M/N: MW2000, S/N: 050746071, 1.999 MMBtu/hr
BE105	RBI Futera Boiler, M/N: MW2000, S/N: 050746072, 1.999 MMBtu/hr
BE106	RBI Futera Boiler, M/N: MW1000, S/N: 050746087, 1.999 MMBtu/hr
BE107	RBI Futera Boiler, M/N: MW1000, S/N: 050746088, 1.999 MMBtu/hr
BE108	5,000 gallon (3,700 gallons gasoline/1,300 gallons diesel) above ground storage tank, SuperVault MH5000, Gasboy Dispenser 9852AX, Emco Wheaton Balance Nozzle
BE111	Hurst Boiler, Series 400 Wetback, S/N: TBD, 2.1 MMBtu/hr
BE112	Raypak Water Heater, M/N: RP2100 C-R265B-EN, S/N: 0410227265, 0.264 MMBtu/hr
BE113	Raypak Pool Heater, M/N: C-R267A-EN-C, S/N: 0506237175, 0.266 MMBtu/hr
BE114	Raypak Pool Heater, M/N: P-0514, S/N: 0412229726, 0.5115 MMBtu/hr
BE115	Gas Master Boiler, M/N: GMI 1ML, S/N: 245.03, 1.0 MMBtu/hr
BE116	Raypak Water Heater, M/N: C-R267A-EN-C ASME, S/N: 0412229039, 0.266 MMBtu/hr
BE117	Raypak Water Heater, M/N: C-R267A-EN-C ASME, S/N: 0412229044, 0.266 MMBtu/hr
BE118	Raypak Water Heater, M/N: C-R206A-EN ASME, S/N: 0510242278, 0.1995 MMBtu/hr
BE119	RBI Boiler, M/N: MW1000, S/N: 080953935, 1.0 MMBtu/hr
BE120	RBI Boiler, M/N: MW1000, S/N: 080953938, 1.0 MMBtu/hr
BE121	RBI Boiler, M/N: MW1000, S/N: 080953876, 1.0 MMBtu/hr
BE122	RBI Boiler, M/N: MW1000, S/N: 080953937, 1.0 MMBtu/hr
BE123	RBI Boiler, M/N: MW1000, S/N: 080953927, 1.999 MMBtu/hr
BE124	RBI Boiler, M/N: MW1000, S/N: 0809539326, 1.999 MMBtu/hr

## 2. Emission Limitations and Standards

- a. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.I.2.a on a 12-month rolling basis. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.I.2.a: PTE (tons per year) – Bellagio**

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
BE01	20.0 MMBtu/hr	24,000	1.80	8.78	14.26	0.14	1.30	0.46
BE02	20.0 MMBtu/hr							
BE03	20.0 MMBtu/hr							
BE04	20.0 MMBtu/hr							
BE05	5.0 MMBtu/hr	6,000hrs/yr	0.13	0.58	0.98	0.01	0.09	0.03
BE06	5.0 MMBtu/hr	7,000 hrs/yr	0.13	0.58	0.98	0.01	0.09	0.03
BE07	2.0 MMBtu/hr	4,745 hrs/yr	0.04	0.23	0.39	0.01	0.03	0.01

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
BE09	3.5 MMBtu/hr		0.11	0.75	1.26	0.01	0.08	0.03
BE10	3.0 MMBtu/hr		0.10	0.64	1.08	0.01	0.07	0.02
BE32	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE33	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE34	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE35	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE36	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE37	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE38	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE39	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE46	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE57	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE58	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE59	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE60	1.0 MMBtu/hr		0.03	0.16	0.16	0.01	0.02	0.01
BE68	1.36 MMBtu/hr		0.04	0.08	0.22	0.01	0.03	0.01
BE74	14.7 MMBtu/hr		0.48	0.92	2.33	0.04	0.35	0.12
BE75	14.7 MMBtu/hr		0.48	0.92	2.33	0.04	0.35	0.12
BE76	14.7 MMBtu/hr		0.48	0.92	2.33	0.04	0.35	0.12
BE80	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE81	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE82	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE83	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE84	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE85	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE86	2,345 hp	26 hrs/yr	0.01	0.92	0.18	0.05	0.01	0.01
BE87	2,345 hp	26 hrs/yr	0.03	0.46	0.57	0.01	0.07	0.01
BE88	2,345 hp	26 hrs/yr	0.03	0.46	0.57	0.01	0.07	0.01
BE89	55.2 hp	12 hrs/yr	0.01	0.01	0.01	0.01	0.01	0.01
BE90	33,750 gpm		2.22					
BE91	3,000 gpm		0.47					
BE92	3,000 gpm		0.47					
BE93	3,000 gpm		0.47					
BE94	140 gpm		0.01					
BE95	140 gpm		0.01					
BE96	7.90 lbs/gal	621 gal/yr	0.00	0.00	0.00	0.00	1.73	0.81
BE97	7.42 lbs/gal	100 gal/yr	0.00	0.00	0.00	0.00	0.24	0.11
BE98	7.9 lbs/gal	621 gal/yr	0.00	0.00	0.00	0.00	1.73	0.81
BE99	9.1 lbs/gal	910 gal/yr	0.00	0.00	0.00	0.00	0.01	0.01
BE100	6.8 lbs/gal VOC	660 gal/yr	0.00	0.00	0.00	0.00	2.24	2.24
BE101	764 hp	26 hrs/yr	0.01	0.13	0.01	0.01	0.01	0.01
BE102	1.999 MMBtu/hour		0.07	0.11	0.32	0.01	0.05	0.02
BE103	1.999 MMBtu/hour		0.07	0.11	0.32	0.01	0.05	0.02
BE104	1.999 MMBtu/hour		0.07	0.11	0.32	0.01	0.05	0.02
BE105	1.999 MMBtu/hour		0.07	0.11	0.32	0.01	0.05	0.02
BE106	1.0 MMBtu/hour		0.03	0.05	0.16	0.01	0.02	0.01
BE107	1.0 MMBtu/hour		0.03	0.05	0.16	0.01	0.02	0.01
BE108	3,700 gallons	264,000 gal/yr	0.00	0.00	0.00	0.00	0.44	0.01
BE109	N/A	2,600 hr/yr	0.03	0.00	0.00	0.00	0.00	0.00
BE110	N/A	1,200 hr/yr	0.01	0.00	0.00	0.00	0.00	0.00
BE111	2.1 MMBtu/hr		0.07	0.22	0.34	0.01	0.02	0.02

EU	Rating	Conditions	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
BE112	0.264 MMBtu/hr		0.01	0.08	0.05	0.01	0.01	0.01
BE113	0.266 MMBtu/hr		0.01	0.08	0.05	0.01	0.01	0.01
BE114	0.5115 MMBtu/hr		0.02	0.15	0.09	0.01	0.01	0.01
BE115	1.0 MMBtu/hr		0.03	0.16	0.32	0.01	0.02	0.01
BE116	0.266 MMBtu/hr		0.01	0.08	0.05	0.01	0.01	0.01
BE117	0.266 MMBtu/hr		0.01	0.08	0.05	0.01	0.01	0.01
BE118	0.1995 MMBtu/hr		0.01	0.06	0.03	0.01	0.01	0.01
BE119	1.0 MMBtu/hr		0.03	0.11	0.16	0.01	0.02	0.01
BE120	1.0 MMBtu/hr		0.03	0.11	0.16	0.01	0.02	0.01
BE121	1.0 MMBtu/hr		0.03	0.11	0.16	0.01	0.02	0.01
BE122	1.0 MMBtu/hr		0.03	0.11	0.16	0.01	0.02	0.01
BE123	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02
BE124	1.999 MMBtu/hr		0.07	0.21	0.32	0.01	0.05	0.02

- b. The Permittee shall allow neither the actual nor the allowable emissions from each emission unit to exceed the calculated PTE listed below in Table III.I.2.b. [AQR 12.5.2.3/AQR 19.2.1]

**Table III.I.2.b: PTE (pounds per hour) – Bellagio**

EU	Rating	PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
BE01	20.0 MMBtu/hr	0.15	0.73	1.19	0.01	0.11	0.04
BE02	20.0 MMBtu/hr	0.15	0.73	1.19	0.01	0.11	0.04
BE03	20.0 MMBtu/hr	0.15	0.73	1.19	0.01	0.11	0.04
BE04	20.0 MMBtu/hr	0.15	0.73	1.19	0.01	0.11	0.04
BE74	14.7 MMBtu/hr	0.11	0.21	0.53	0.01	0.08	0.03
BE75	14.7 MMBtu/hr	0.11	0.21	0.53	0.01	0.08	0.03
BE76	14.7 MMBtu/hr	0.11	0.21	0.53	0.01	0.08	0.03

- c. The Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes when viewed in accordance with EPA Method 9. [AQR 26.1.1]

### 3. Production Limitations

- a. The Permittee shall limit the operation of the four 20.0 MMBtu/hr boilers to 24,000 hours per rolling 12-months as a group EU: BE01 through BE04).
- b. The Permittee shall limit the operation of the 5.0 MMBtu/hr boiler to 6,000 hours per rolling 12-months (EU: BE05).
- c. The Permittee shall limit the operation of the 5.0 MMBtu/hr boiler to 7,000 hours per rolling 12-months (EU: BE06).
- d. The Permittee shall limit the operation of the 2.0 MMBtu/hr boiler to 4,745 hours per rolling 12-months (EU: BE07).
- e. The Permittee shall limit the operation of the nine 2,345 hp diesel emergency generators to one hour per day and 12 hours per rolling 12-months for testing and maintenance purposes (EUs: BE80 through BE88).

- f. The Permittee shall limit the operation of the 55.2 hp diesel emergency generator to one hour per day and 12 hours per rolling 12-months for testing and maintenance purposes (EU: BE89).
- g. The Permittee shall limit the operation of the 764 hp diesel emergency to 0.5 hours per day and 26 hours per rolling 12-months for testing and maintenance purposes (EU: BE101).
- h. The Permittee shall limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, thinners, solvents, etc., to 621 gallons per rolling 12-months based on a weighted average VOC content of 7.90 pounds per gallon and a 47 percent HAP content (EUs: BE096 and BE098).
- i. The Permittee shall limit the consumption of VOC and HAP containing paints, basecoats, primers, reducers, thinners, solvents, etc., to 100 gallons per rolling 12-months for the Binks spray paint booth in the showroom based on a weighted average VOC content of 7.42 pounds per gallon and a 47 percent HAP content (EU: BE097).
- j. The Permittee shall limit the consumption of and HAP containing powder coating to 910 pounds per rolling 12-months for the Binks spray paint booth in the showroom (EU: BE099).
- k. The Permittee shall limit the consumption of VOC and HAP containing degreasers to 660 gallons per rolling 12-months, based on a VOC content limit of 6.8 pounds per gallon (EU: BE100).
- l. The Permittee shall limit the maximum amount of throughput, aggregate of all gasoline products, to 26,400 gallons per month and 264,000 gallons of gasoline per rolling 12-months for the aboveground storage tank (EU: BE108).
- m. The Permittee shall limit the operation of the shop to 2,600 hours per rolling 12-months (EU: BE109).
- n. The Permittee shall operate the Aget dust collector at all times PM<sub>10</sub> is emitted during the use of the respective shop (EU: BE109).
- o. The Permittee shall limit the operation of the shop to 1,200 hours per rolling 12-months (EU: BE110).
- p. The Permittee shall operate the Torit dust collector at all times PM<sub>10</sub> is emitted during the use of the respective shop (EU: BE110).

#### **4. Emission Controls**

##### Boilers/Water Heaters

- a. The Permittee shall combust only natural gas in all boilers/water heaters.
- b. The Permittee shall operate and maintain all boilers/water heaters in accordance with the manufacturer's specifications.

- c. The Permittee shall operate the 20.0 MMBtu/hr boilers with burners rated for maximum emission rates of 39 ppm NO<sub>x</sub> and 70 ppm CO (EUs: BE001 through BE004).
- d. The Permittee shall operate the Unilux 5.0 MMBtu/hr boilers with burners rated for maximum emission rates of 27 ppm NO<sub>x</sub> and 75 ppm CO (EUs: BE005 through BE006).
- e. The Permittee shall operate the 2.0 MMBtu/hr boiler with burners rated for maximum emission rates of 40 ppm NO<sub>x</sub> and 111 ppm CO (EU: BE007).
- f. The Permittee shall operate the 3.5 MMBtu/hr pool heater with burners rated for maximum emission rates of 40 ppm NO<sub>x</sub> and 111 ppm CO (EU: BE009).
- g. The Permittee shall operate the 3.0 MMBtu/hr pool heater with burners rated for maximum emission rates of 40 ppm NO<sub>x</sub> and 111 ppm CO (EU: BE010).
- h. The Permittee shall operate the 1.0 MMBtu/hr water heaters with burners rated for maximum emission rates of 30 ppm NO<sub>x</sub> and 50 ppm CO (EUs: BE032 through BE039, BE046, and BE057 through BE060).
- i. The Permittee shall operate the Spray Booth Heater with burners rated for maximum emission rates of 12 ppm NO<sub>x</sub> and 50 ppm CO (EU: BE68).
- j. The Permittee shall operate the 14.7 MMBtu/hr boilers with burners rated for maximum emission rates of 12 ppm NO<sub>x</sub> and 50 ppm CO (EUs: BE74 through BE76).
- k. The Permittee shall operate the 1.0 MMBtu/hr boilers with burners rated for maximum emission rates of 10 ppm NO<sub>x</sub> and 50 ppm CO burners (EUs: BE102 and BE103).
- l. The Permittee shall operate the 1.999 MMBtu/hr boilers with burners rated for maximum emission rates of 10 ppm NO<sub>x</sub> and 50 ppm CO burners (EUs: BE104 through BE107).
- m. The Permittee shall operate the 2.1 MMBtu/hr boiler with burners rated for maximum emission rates of 20 ppm NO<sub>x</sub> and 50 ppm CO burners (EU: BE111).
- n. The Permittee shall operate each of the pool heaters with burners rated for maximum emission rates of 55 ppm NO<sub>x</sub> and 53 ppm CO (EUs: BE112 through BE114 and BE116 through BE118).
- o. The Permittee shall operate the boiler with burners rated for maximum emission rates of 30 ppm NO<sub>x</sub> and no and 100 ppm CO (corrected to 3 percent oxygen) (EU: BE115).
- p. The Permittee shall operate each of the boilers with burners rated for maximum emission rates of 20 ppm NO<sub>x</sub> and no more than 50 ppm CO (EUs: BE119 through BE124).

### Diesel Generators/Fire Pumps

- q. The Permittee shall operate and maintain all diesel generators and fire pumps in accordance with the manufacturer's specifications. All diesel generators and fire pumps shall combust only low sulfur (<0.05 percent) diesel fuel.
- r. The Permittee shall operate each of the diesel emergency generators with turbochargers and aftercoolers (EUs: BE080 through BE088).
- s. The Permittee shall operate each of the diesel emergency generators with turbochargers (EUs: BE089 and BE101).

### Cooling Towers

- t. The Permittee shall operate and maintain all cooling towers in accordance with the manufacturer's specifications. No chromium-containing compounds shall be used for water treatment. *[40 CFR 63, Subpart Q]*
- u. The Permittee shall operate the 33,750 gpm cooling tower with drift eliminators with a manufacturer's minimum rated drift efficiency of 0.001 percent (EU: BE090).
- v. The Permittee shall operate each of the 3,000 gpm cooling towers with drift eliminators with a manufacturer's minimum rated drift efficiency of 0.005 percent (EUs: BE091 through BE093).
- w. The Permittee shall operate each of the 140 gpm cooling towers with drift eliminators with a manufacturer's minimum rated drift efficiency of 0.001 percent (EUs: BE094 through BE095).
- x. The Permittee shall maintain each of the cooling towers such that the maximum TDS content does not exceed 3,000 ppm (EUs: BE90 through BE95).

### Woodworking

- y. The Permittee shall operate the Aget and Torit baghouse dust collectors during all cutting, sanding, blasting, and surface preparation to control 99% of PM<sub>10</sub> emissions (EUs: BE109 and BE110).

### Gasoline Storage/Dispensing

- z. The Permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following *[40 CFR 63.11116 and 63.11117]*:
  - a. minimize gasoline spills;
  - b. clean up spills as expeditiously as practicable;
  - c. cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

- d. minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators;
  - e. load gasoline into the storage tank by utilizing submerged fill pipes no more than 6 inches from the bottom of the tank;
  - f. the Permittee shall have records documenting gasoline throughput within 24 hours of a request of the Control Officer;
  - g. submit the applicable notifications as required under 40 CFR 63.11124(a); and
  - h. the Permittee must comply with the requirements of the 40 CFR 63, Subpart CCCCCC by January 10, 2011.
- aa. The Permittee must only load gasoline into the storage tank by utilizing submerged fill pipes no more than 6 inches from the bottom of the tank.
  - bb. The gasoline side of the aboveground storage tank (EU: BE108) shall be equipped with CARB certified Phase I vapor recovery controls.
  - cc. The Phase I Vapor Recovery System shall be constructed in accordance with the "Two-Point Phase I Vapor Recovery System" drawing, and shall use components specified in the current CARB EO G-70-132 series.
  - dd. Phase I Vapor Recovery. The following control requirements apply to the gasoline dispensing operations of the ACE aboveground storage tank (EU: BE108):
    - i. The highest point of discharge from a submerged fill-pipe shall be no more than 6.0 inches from the tank bottom.
    - ii. Pursuant to AQR Section 12, all Phase I vapor recovery equipment shall be installed and operated in accordance with the manufacturer's specifications and certification requirements.
    - iii. All Phase I vapor recovery equipment shall be maintained to be leak free, vapor tight, and in good working order.
    - iv. All Phase I vapor recovery equipment shall have a CARB-certified device, which prevents loosening or over tightening of the Phase I product adaptor.
    - v. Each system that has a pressure/vacuum vent valve installed must also meet the standards as outlined in the current CARB EO G-70-132 series.
  - ee. The Phase II gasoline vapor control system shall be in accordance with the current CARB EO G-70-17 series.
    - i. Only Emco Wheaton A4005 nozzles or equivalent CARB approved nozzle, are approved for a Balance Phase II Gasoline Vapor Control System.
    - ii. The gasoline product and vapor return hoses shall be coaxial.

- iii. The maximum allowable hose length shall be in accordance to the current CARB EO G-70-132 series.
- iv. Breakaway hose(s) shall be CARB approved.
- v. Pursuant to AQR Section 12, all Phase II vapor recovery equipment shall be installed and operated in accordance with the manufacturer's specifications and the current CARB EO G-70-17 series.
- vi. All Phase II vapor recovery equipment shall be maintained to be leak free, vapor tight, and in good working order.
- vii. Each Balance Vapor Recovery System dispenser shall limit each nozzle's gasoline dispensing rate to the values listed in Table III.I.4.a. Dispenser fuel flow restrictors shall be installed as necessary and must be CARB approved.

**Table III.I.4.a: Phase II Balance Vapor Recovery Nozzle Requirements<sup>1</sup>**

Model/Nozzle	Current CARB EO Series	GPM
Emco Wheaton A4005	G-70-17	6-10

<sup>1</sup>A/L Ratio not applicable to Balance Vapor Recovery Systems.

Surface Coating

- ff. The Permittee shall not operate spray booths unless all exhaust air passes through appropriate filter media having a particulate capture efficiency of at least 99.0 percent. (This is usually accomplished with tacky filter material that is at least 2 inches thick.) The dry filter media must cover all openings in the spray booth.
- gg. The Permittee shall not use open containers for storage or disposal of VOC or HAP-containing cloth or paper (excluding masking tape) used for surface preparation and cleanup.
- hh. All filters or other control equipment associated with surface coating operations shall follow manufacturer's specifications for use and operation. Dry filters must be changed at sufficient intervals to prevent a decrease in their effectiveness and prevent them from clogging.
- ii. The Permittee shall use a manometer (or equivalent) to monitor the pressure drop across the spray booth filters. The filters should be replaced when the pressure drop exceeds 0.25 inches of water (6.35 millimeters of water), unless the manufacturer's specifications for use indicate a different pressure drop value.
- jj. The Permittee shall clean surface coating application equipment in an enclosed container to minimize VOC volatilization into the ambient air.
- kk. All containers with VOC and HAP-containing products shall remain securely closed, except during product transfer. Containers shall be inspected regularly for leakage and the contents of any leaking container must be

immediately transferred to an appropriately labeled container that has been specifically designed for storage of the compound.

- ll. The Permittee shall employ good housekeeping practices to prevent the accumulation and/or dispersal of particulate matter from sanding, blasting, surface preparation, etc. carried out in conjunction with surface coating operations. No more than 0.25 inches of particulate matter shall accumulate on surrounding surfaces at any time.

Other

- mm. Pursuant to AQR Sections 40 and 43, no person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance.

**5. Monitoring**

- a. The Permittee shall install and utilize non-resettable hour meters for each of boilers (EUs: BE01 through BE04 and BE74 through BE76). [AQR 12.5.2.6/AQR 19.4.3.1, 40 CFR 60, Subpart Dc]
- b. The Permittee shall install and utilize non-resettable hour meter for each of the boilers (EUs: BE05 through BE07). [AQR 12.5.2.6/AQR 19.4.3.1]
- c. The Permittee shall install and utilizing non-resettable hour meters when operating for testing, maintenance, or during emergencies (EUs: BE80 through BE89 and BE101). [AQR 12.5.2.6/AQR 19.4.3.1]
- d. The Permittee shall inspect spray paint booth and all ancillary equipment for leaks, malfunctions, proper operation of gauges and pressure drops, each day the booth is operated. A log must be kept of such inspections as well as any corrective actions taken to repair the equipment. [AQR 12.5.2.6/AQR 19.4.3.1]
- e. The Permittee shall conduct daily inspections for requirements listed in AQR Subsection 52.4 that are associated with the Phase I vapor recovery system to determine if components of the system are defective. [AQR 12.5.2.6/AQR 19.4.3.1]
- f. The Permittee shall perform visual emissions checks each calendar quarter on a source-wide level for each emission unit. The quarterly visual checks shall include the boilers, diesel-fired emergency generators and fire pumps while operating to demonstrate compliance with the opacity limit. If any of the diesel-fired emergency generators or fire pumps does not operate during the calendar quarter, then no observation of that unit shall be required. If visible emissions are observed, then corrective actions shall be taken to minimize the emissions and the opacity of emissions shall be visually determined in accordance with 40 CFR 60 Appendix A: Reference Method 9. [AQR 12.5.2.6/AQR 19.4.3.1]
- g. The Permittee shall monitor the TDS in the cooling tower circulating water monthly. [AQR 12.5.2.6/AQR 19.4.3.1]

## 6. Testing

### Burner Efficiency Tests

- a. The Permittee operating a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr but less than 10.0 MMBtu/hr shall perform a burner efficiency test at least once each calendar year. Burner efficiency tests shall be conducted in accordance with the manufacturer's specifications and specifications for good combustion practices (EUs: BE05 and BE06). [AQR 12.5.2.6/AQR 19.4.3.1]
- b. The Permittee operating a boiler with a maximum heat input rating of 10.0 MMBtu/hr or greater shall perform burner efficiency tests at least twice each year. The tests shall be performed at least five (5) months but no more than seven (7) months apart during each calendar year (EUs: BE01 through BE04 and BE74 through BE76). If the boiler has a permitted hourly limit of less than 2,000 hours per year, then a burner efficiency test may be performed at least once each calendar year. Currently no emission units with a heat input rating of 10.0 MMBtu/hr or greater have been proposed to operate for less than 2,000 hours per year. [AQR 12.5.2.6/AQR 19.4.3.1]
- c. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 4.0 MMBtu/hr are zero (0) during a calendar year, the Permittee may choose not to perform a burner efficiency test on that boiler during that calendar year. To document that the actual hours of operation for that boiler are zero (0) during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- d. If the documented actual hours of operation of a boiler with a maximum heat input rating equal to or greater than 10.0 MMBtu/hr are less than 50 hours during a calendar year, the Permittee may perform a burner efficiency test on that boiler only once during that calendar year. To document that the actual hours of operation for that boiler are less than 50 hours during a calendar year, the Permittee shall install an hour meter prior to the beginning of that calendar year and maintain written records to verify the actual hours of operation during that calendar year. [AQR 12.5.2.6/AQR 19.4.3.1]
- e. A performance test conducted in accordance with AQR Subsection 49.4 may replace a required burner efficiency test as approved by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

### Boiler/ Water Heater Performance Tests

- f. Performance testing is subject to the requirements of 40 CFR 60 (as amended), and AQR Section 49. Performance testing shall be the instrument for determining compliance with emission limitations set forth in this permit for all boilers that have a heat input rating equal to or greater than 10.0 MMBtu/hr (EUs: BE01 through BE04 and BE74 through BE76). [AQR 12.5.2.6/AQR 19.4.3.1]

- t. Subsequent performance testing shall be conducted at a frequency of no later than once every 5 years from the previous performance test on that boiler. Subsequent performance testing shall be conducted on emission units BE01 through BE04 and BE74 through BE76. [AQR 12.5.2.6/AQR 19.4.3.1]
- g. Performance testing for the applicable boilers shall comply with the testing protocol requirements identified in Table III.I.6.a:

**Table III.I.6.a: Performance Testing Protocol Requirements**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	PM <sub>10</sub>	EPA Method 9
Stack Gas Parameters		EPA Methods 1, 2, 3A, and 4

Note: 40 CFR Part 60, Subpart Dc and AQR Section 49 are applicable to this facility.

Diesel Generators/Fire Pumps

- h. Testing of diesel emergency generators shall not take place during CO advisories. It is the Permittee’s responsibility to satisfy all federal requirements to which this facility is subject.

Gasoline Storage/Dispensing

- i. The Permittee shall conduct performance testing on the Vapor Control Systems associated with EU: BE108, listed in Table III.I.6.b. [AQR 4.5]
  - i. Each performance tests shall be conducted in accordance with the applicable CARB Test Procedure that is required by the CARB EO.
  - ii. The source shall give a 7-day written prior notice of the date of the test to the Control Officer, Compliance Division.
  - iii. Any prior approved scheduled performance test cannot be canceled and/or rescheduled except with the prior approval of the Control Officer, Compliance Division.
  - iv. Within 7 days from the end of an initial or annual performance test, source shall submit a report containing the results of such test to the Control Officer, Compliance Division.
  - v. The report shall have, as the first page of text, a signed Certification of Performance Test Results (see Attached).
- j. Each performance test shall be conducted by a DAQEM approved Certified Phase II Vapor Recovery Tester, as defined in AQR Subsection 52.2.
- k. If any performance test fails, then the affected portion of the GDO will be tagged “Out of Order” until corrective action has been taken and the retest passed.

- l. If the source fails a performance test, the Control Officer, Compliance Division, shall be notified within 24 hours or by 12:00 p.m. (Noon) of DAQEM's next business day, whichever is soonest. Repairs to correct the defects shall be made and a retest scheduled with the Control Officer. The retest shall be scheduled within 10 calendar days of the failed test. If the repairs and retest cannot be accomplished within 10 calendar days, the source must submit the reasons and a proposed date for retesting in writing to the Control Officer for approval.
- m. The source shall conduct performance tests listed in Table III.I.6.b on the Phase II system (EU: BE108):

**Table III.I.6.b: Required Performance Test Criterion: Balance System**

Description	CARB Test Procedure	Standard
Determination of Static Pressure of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks	TP-201.3B	Initial: 2.0" wc Final: Referenced Value
Dynamic Back Pressure	TP-201.4	0.45" wc @ 60 SCFH, N <sub>2</sub> <sup>2</sup>
Dispensing nozzle flow rate <sup>1</sup>	As Specified in EO	10 gpm (max.)

<sup>1</sup>If the source fails the Dynamic Back Pressure performance test, the source shall be required to comply with additional performance testing requirements in accordance with the applicable EO for this equipment.

- n. Initial Performance Test [AQR 12.5.2.6/AQR 19.4.3.1]:
  - v. The source shall conduct and pass an initial performance test within 30 days of the source commencing operations.
  - vi. The source shall conduct and pass an initial performance test within 30 days of commencing operations of new emission units that require performance testing.
  - vii. The source shall conduct and pass an initial performance test within 30 days of commencing operations of modified emission units that require performance testing.
  - viii. The initial performance test must be witnessed by an inspector from the DAQEM.
- o. Annual Performance Test, Vapor Recovery System:
  - iii. Annual performance testing shall be accomplished prior to the anniversary date of the previous performance test that the source passed.
  - iv. Pursuant to AQR Section 4, the Control Officer may require additional testing.
- p. The source shall implement changes to the existing vapor recovery system if any performance test results indicate such changes are necessary to maintain compliance with this permit.

## 7. Record Keeping

- a. The Permittee shall maintain records on site that include, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. daily hour meter readings of each diesel emergency generator and fire pump when operated for testing and maintenance purposes, and separately for use during emergencies (EUs: BE80 through BE89 and BE101);
  - ii. sulfur content of diesel fuel certified by the supplier;
  - iii. monthly hours of operation of each cooling tower (EUs: BE90 through BE95);
  - iv. monthly TDS content of cooling tower circulation water;
  - v. MSDS or records demonstrating the VOC and HAP content for each compound used for surface coating activities;
  - vi. a log book of all inspections, maintenance; and,
  - vii. records of burner efficiency testing;
  - viii. results of performance testing; and
  - ix. GDO records shall contain, at minimum, the following information (EU: BE108) [AQR 12.5.2.6/AQR 19.4.3.1]:
    - (i) a record of any maintenance on any part of the Phase I equipment, including a general description of the maintenance;
    - (ii) the date and time the equipment was taken out-of-service;
    - (iii) the date of repair or replacement;
    - (iv) a general description of the part location (e.g., pump, tank, nozzle number, etc.);
    - (v) a description of the problem; and
    - (vi) the results of the daily inspections.
- b. The Permittee shall maintain on site and report the following information semi-annually [AQR 12.5.2.6/AQR 19.4.3.1(b)]:
  - i. monthly total of operating hours for each boiler/water heater (EUs: BE01 through BE07, and BE74 through BE76);
  - ii. monthly total of operating hours for each diesel generator and fire pump (EUs: BE80 through BE89 and BE101);
  - iii. monthly and rolling 12-month total consumption (in gallons) of each VOC-containing compound related to surface coating activities (paints, basecoats, primers, reducers, thinners, solvents, etc.);

- iv. monthly and 12-month rolling total of gasoline throughput [40 CFR 63.11116(b)]; and
  - v. monthly and rolling 12-month total hours of woodworking operations (EUs: BE109 and BE110).
- c. For all Inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective action taken (if required). [AQR 12.5.2.6/AQR 19.4.3.1]
- d. All records, i.e., daily self-inspection records, daily logs, etc., or a copy thereof, for Phase I and Phase II (EU: BE108), shall contain, at minimum, the following information [AQR 12.5.2.6/AQR 19.4.3.1]:
- i. a record of any maintenance on any part of the Phase I and Phase II equipment, including a general description of the maintenance;
  - ii. the date and time the equipment was taken out-of-service;
  - iii. the date of repair or replacement;
  - iv. a general description of the part location (e.g., pump, tank, nozzle number, etc.);
  - v. a description of the problem; and
  - vi. the results of the daily inspections.
- e. The Control Officer or the DAQEM-approved Certified Phase II Vapor Recovery Tester shall use an approved Audit Form to record the type of performance tests conducted, as well as, the results of the tests. An approved form may be obtained from DAQEM or a DAQEM approved Certified Phase II Vapor Recovery Tester. The source shall retain the completed Audit Form for each test performed. [AQR 12.5.2.6/AQR 19.4.3.1]
- f. Records and data required by this permit and maintained by the source and may be audited, at the source's expense, at any time by a third party selected by the Control Officer. [AQR 12.5.2.6/AQR 19.4.3.1]

#### **IV. MITIGATION**

1. The source must comply with the offset requirements contained in AQR Section 59 and Appendix S of 40 CFR Part 51. If there is a difference in stringency between the two rules, then the source shall comply with the more stringent offset requirements.

## **V. ADDITIONAL COMPLIANCE CONDITIONS**

1. MGM RESORTS INTERNATIONAL shall meet applicable requirements that become effective during the term of this permit in a timely manner. *[AQR 19.3.3.8 c, and 19.4.3.3]*
2. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility 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 information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. *[40 CFR 60.11(d)]*

## **VI. OTHER REQUIREMENTS**

1. The source is not evaluated for permit shield. Compliance with the terms contained in this permit shall not be necessarily deemed compliance with the applicable requirements of all applicable federal requirements to which this facility is subject. *[AQR § 19]*
2. The source is currently not subject to the Title IV (Acid Rain Program) Requirements.

**END OF PART 70 OPERATING PERMIT 00825**