COMMONWEALTH OF
PUERTO RICO
Environmental Quality Board

# STATEMENT OF BASIS – TITLE V PERMIT RENEWAL
# BACARDI CORPORATION
# PFE-TV-2085-17-1206-2442

The Environmental Quality Board (EQB) is issuing a Title V permit in conformity with Title 40 of the Code of Federal Regulations (CFR), Part 70 and with Part VI of the Regulations for the Control of Atmospheric Pollution (RCAP) for **Bacardi Corporation (Bacardi)**. The facility is located on Highway PR-165, Km. 2.6, Intersection 88 in Cataño, Puerto Rico. The EQB received the application for Title V permit renewal on December 15, 2006, which was amended on several occasions.

**Bacardi Corporation** is a company dedicated to the production of distilled spirits (rum). Distilled spirits production begins with the fermentation process of the raw material (molasses), the product of this process passes to the distillation process where it is separated and concentrated into alcohol from fermented grain mass. After distillation, the alcohols are pumped to stainless steel tanks and diluted with demineralized water to the desired alcohol concentration before filling into barrels and aging. Variations in the aging process are essential to produce the characteristic flavor of rum.

**Bacardi** is subject to the applicable requirements of Title 40 Code of Federal Regulations, Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units and 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. **Bacardi** is also affected by the 40 CFR Part 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial and Institutional Boilers; and 40 CFR Part 63, Subpart ZZZZ, for Reciprocating Internal Combustion Engines (RICE, in English); and an engine by 40 CFR Part 60, Subpart IIII, Standard of Performance for Stationary Compression Ignition Engines (NSPS). In addition, **Bacardi** is a **major source** of sulfur dioxide ($SO_2$), nitrogen oxides (NOx), volatile organic compounds (VOCs) and carbon monoxide (CO) to be on the threshold of 100 ton/year for criteria air pollutants and it is a minor source of hazardous air pollutants.

## Emission Units

The Emission Units section lists the significant emission units, the associated control equipment, if any, and fuel type. This section is general overview of the facility.

The emission units are the following:

**EU-1 and EU-2: Boiler #1 and Boiler #3 to generate steam.** Each is rated at 3000 hp. Consume: Fuel No. 6 at a rate of 833 gallons per hour with a sulfur content of 0.5% per weight; biogas at a rate of 205,479 $ft^3$/hr containing 0.5% $H_2S$ by volume and fuel No. 2 (diesel) at a rate of 1,011 gallons per hour with a sulfur content of 0.5% per weight.

**EU-66: Boiler #2A to generate steam.** Rated at 350 HP and consumes No. 2 fuel (diesel) at a rate of 107.3 gallons per hour with a sulfur content of 0.5% per weight.

**EU-67: Internal Combustion Engines.** Includes engines for seven electrical generators for emergencies and five fire pumps. Although 40 CFR Part 63 Subpart ZZZZ does not limit the yearly operating hours in an emergency, the PREQB construction permit limit yearly operating hours for each engine in this unit.

**EU-3: Fermenting Tanks.** Twenty fermentation tanks with a capacity of 55,000 gallons each. Used to convert sugar into ethyl alcohol (ethanol) and carbon dioxide. Also has a closed receiver tank capacity of 50,000 gallons. The gases generated in the process are removed by scrubbers with a minimum efficiency of 95%.

**EU-6, EU-7, EU-8, EU-9 and EU-65: Distillation Area.** This consists of Distillation System C, and distillation columns 1, 2, 3 and Woodchip Column, to recover the ethanol produced through fermentation and primary distillation. Connected to a condenser with minimum removal efficiency of 95.6% for volatile organic compounds and a scrubber with minimum removal efficiency of 95%.

**EU10: Biological Treatment Plant.** It consists of four biological reactors used to treat wastewater from the distillation process. These generate biogas for consumption in boilers or burned in the flare. Controls: Normal Flare (CD-2), emergency Flare (CD-3) and $H_2S$ scrubber (CD-4).

**EU-11: The process of filling barrels.** Consists of the filling of wooden barrels to age, with a capacity of receiving and managing 26.5 million gallons/year of rum with an ethanol content equal to or less than 170° proof.

**EU-12: The process of emptying barrels.** It consists of emptying barrels of rum, with a capacity to receive and handle 27.5 million gallons/year of rum, with an ethanol content equal to or less than 170° Proof.

**Storage Tank Farm for Ethanol.** It consists of 33 storage tanks with fixed roof vents connected to in line conservation vents with scrubbers with minimal removal efficiencies of 95%. (EU-16, EU-17, EU-18, EU-19, EU-21, EU-22, EU-23, EU-24, EU-25, EU-26, EU-27, EU-28, EU -29, EU-30, EU-31, EU-32, EU-33, EU-34, EU-35, EU-36, EU-37, EU-38, EU-39, EU-40, EU-42 , EU-43, EU-44, EU-46, EU-47, EU-57, EU-58, EU-61, EU-62).

**EU-20: Tank Filling Area.** System of rum filling to **tank** trucks.

**EU-51: Carbon Dioxide ($CO_2$) Recovery Plant.**

**EU-68:** ***New Blending Facilities.*** New facilities consisting of tanks for filtration, dosage, pre-mixed, mixed, blending, and storage.

## Allowable Emissions

The emissions described in the following table represent the facility allowable emissions at the time of the permit application and will be used only for payment purposes. According to Rule 610(a) of the RCAP, when **Bacardi** requests a modification, administrative change or minor modification to its Title V permit, the source will only pay those charges related with any emission increase (if any) per ton based on the change and not based on the previously paid total charges in conformity with Rule 610(a) of the RCAP.

| Pollutants | Allowable Emissions (tons/year) |
|---|---|
| $PM_{10}$ | 30.14 |
| $SO_2$ | 1,153.98 |
| $NO_X$ | 298.69 |
| CO | 177.50 |
| Pb | 4.84E-03 |
| VOC | 168.14 |
| HAP's | 0.380 |
| $CO_{2e}$ | 81,483.70 |

According to EQB Resolution, RI-06-02[1], the emission calculations will be based on the current emissions from **Bacardi**; however calculations based on the allowable emissions of the installation will be accepted. If **Bacardi** decides to realize the calculations based on the allowable emissions, you shall pay the same charge per ton as the facilities that decide to make the calculations based on current emissions.

## Applicable Requirements

### New Sources Performance Standards (NSPS) for Steam Generating Units Industrial-Commercial-Institutional: 40 CFR Part 60, Subpart Db.

This emission source is subject to the performance standards of Subpart Db because it has a boiler (EU-2) to produce steam which began construction, modification or reconstruction after June 19, 1984, and having an input capacity burner for fuel to heat the steam generating unit greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

### New Sources Performance Standards (NSPS) for Small Steam Generating Units Industrial-Commercial-Institutional: 40 CFR Part 60, Subpart Dc.

This Subpart applies to **Bacardi** for having a steam generating unit (EU-66) for construction, modification or reconstruction which began after June 9, 1989

[1] EQB Resolution – Fee Payment Procedure and Fees for renovation of the Title V permit issued in March 20, 2006.

and has a capacity of maximum heat input of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

**National Emission Standards for Hazardous Air Pollutants of Area Sources for Industrial, Commercial and Institutional Boilers contained in Title 40, Part 63, Subpart JJJJJJ**

This Subpart applies to the owner or operator of an industrial, commercial or institutional boiler, as defined in section 40 CFR 63.11237 found in, or is part of, an area source of hazardous air pollutants (HAPs). **Bacardi** is a minor source of hazardous air pollutants.

**National Emission Standards for Hazardous Air Pollutants for Internal Reciprocal Combustion Engines - 40 CFR Part 63 Subpart ZZZZ**

This Subpart applies to any existing stationary internal reciprocal combustion engine, new or reconstructed located at area sources or major sources of hazardous air pollutants. **Bacardi** is a minor source of hazardous air pollutants. The engines of unit EU-67 are considered an existing unit. The engines of the EU-67 unit are authorized as emergency engines in their construction permits.

**Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII)**

This Subpart applies to stationary compression ignition (CI) internal combustion engines (ICE) that were ordered after July 11, 2005 and manufactured after April 1, 2006. This Subpart applies to engine EU67-P13. Engine EU67-P13 shall comply with the applicable emission standards in Table 4 to Subpart IIII, for all pollutants.

**The following requirements do not apply to the Bacardi Corporation:**

- Standards of Performance for New Sources for Steam Generators that burn fossil-fuel-- 40 CFR Part 60 Subpart D. This Subpart does not apply to boilers EU-1, EU-2 and EU-66 because its heat input capabilities are less than 250 MMBtu/hr.

- Standards of Performance for Electric Utility Steam Generating Units - 40 CFR Part 60 Subpart Da. Not applicable because the boilers (EU-1, EU-2 and EU-66) are less than 250 MMBtu/hr.

- Standards of Performance for Industrial-Commercial- Institutional Steam Generating Units - 40 CFR Part 60 Subpart Db. Does not apply to EU-1 because they started construction, modification or reconstruction before June 19, 1984 and does not apply to EU-66 because it has a heat input capacity for burned fuels in the unit generating steam exceeding 100 MMBtu/hr.

- Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units - 40 CFR Part 60 Subpart Dc. Does not apply to EU-1 because they started construction, modification or reconstruction after June 9, 1989 and heat capacity that is greater than 100 MMBtu/hr. Does not apply to EU-2 because of boiler heat input capacity that is greater than 100 MMBtu/hr.

- National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters - 40 CFR Subpart DDDDD. This Subpart does not apply to boilers EU-1, EU-2 and EU-66 since the facility is not a major source of hazardous air pollutants.

- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines - 40 CFR Part 60 Subpart IIII, applies to stationary compression ignition internal combustion engines. This Subpart does not apply to engines P1 to P12 of unit EU-67 since they are engines that began construction before 2005.

- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines - 40 CFR Part 60 Subpart JJJJ, applies to stationary spark ignition internal combustion engines. This Subpart does not apply to engines of unit EU-67 since they are compression ignition engines and not by spark.

- Standards of Performance for Volatile Organic Liquids Storage Vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification is commenced after July 23, 1984. 40 CRF Part 60 Subpart Kb. Does not apply to storage vessels used to store alcoholic beverages. Does not apply to storage vessels with a capacity greater than or equal to 151 cubic meters ($m^3$) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 $m^3$ but less than 151 $m^3$ storing a liquids with a maximum true vapor pressure less than 15.0 kPa.

The frequency of reporting for compliance certification for this source should be annually. Unless specifically established, all the terms and conditions of the Title V permit, including the provisions designed to limit the emission capacity of the source, are enforceable by EPA and citizens, under the Federal Clean Air Act. The terms and conditions are designated as enforceable only by the state, as indicated by the permit, are enforceable by the EQB.

The EQB has determined that this Title V Operating Permit fulfills the requirements under Part VI of the RCCA.

COMMONWEALTH OF
PUERTO RICO
Environmental Quality Board

**TITLE V OPERATING PERMIT**
**AIR QUALITY AREA**
**ENVIRONMENTAL QUALITY BOARD**

| | |
|---|---|
| **Permit Number:** | PFE-TV-2085-17-1206-2442 |
| **Application Receipt Date:** | December 15, 2006 |
| **Final or Effective Issue Date:** | August 31, 2016 |
| **Expiration Date:** | August 31, 2021 |

In conformity with the provisions of Part VI of the Regulation for Atmospheric Pollution Control (RCAP) and the provisions of the Code of Federal Regulations (CFR), Volume 40, Part 70 we authorize:

## BACARDI CORPORATION
## CATAÑO, PUERTO RICO

hereinafter **Bacardi Corporation, Bacardi** or **permittee**, to operate a stationary source of emission of air pollutants consisting of the units described in this permit. Until such time as this permit expires, is modified or revoked, **Bacardi** may emit air pollutants as a result of those processes and activities directly related to or associated with the emission sources, according to the requirements, limitations and conditions of this permit, until the expiration date or until it is modified or revoked.

The conditions of the permit will be enforceable by the federal and state government. Those requirements that are enforceable only by the state government will be identified as such in the permit. A copy of the permit must be kept in the aforementioned facility at all times.

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## Section I - General Information

### A. Facility Information

| | |
|---|---|
| Facility Name: | Bacardi Corporation |
| Postal Address: | P.O. Box 363549 |
| City: | San Juan |
| State: | Puerto Rico |
| Postal Code: | 00936-3549 |
| Company Name: | Bacardi Corporation |
| Plant Location: | Road 165 Km 2.6<br>Intersection 88<br>Cataño, Puerto Rico |
| Responsible Officer: | Jorge Marcano<br>Vice-President |
| Phone: | (787) 788-1500 |
| Technician Contact: | Magaly Feliciano<br>EHS Manager |
| Phone: | (787) 788-1500 |
| Fax: | (787) 788-5075 |
| SIC Primary Code: | 2085 |

### B. Process Description

**Bacardi Corporation** is located at Road 165 Km 2.6, Intersection 88, in Cataño, Puerto Rico. **Bacardi** is dedicated to the production of distilled spirits, better known as rum.

The production of distilled spirits begins with the fermentation process of the raw material (molasses), from said process the product passes to the distillation process where it separates and the alcohol is concentrated from the fermented grain mass. After distillation, the alcohol is pumped into stainless steel tanks and is diluted with demineralized water to the desired alcohol concentration before being filled into barrels and aged. The variations

in the aging process are essential to produce the characteristic flavors from a certain brand of rum.

The company operates a boiler (EU-66) which burns diesel fuel solely, and two boilers (EU-1 and EU-2) which burn combustible No. 6, biogas and diesel fuel. Normally the biogas which is produced in the biological treatment plant (EU-10) is consumed by the boilers. Before burning the biogas in the boilers, **Bacardi** has a control unit to reduce the concentration of hydrogen sulfur ($H_2S$) and produce elemental sulfur. The fuel is stored in two tanks on the premises of the facility before being taken for the process of combustion in the boilers to produce vapor.

The plant uses completely closed fermentation tanks. During the fermentation process of the primary material (molasses) ethanol and carbon dioxide ($CO_2$) are produced as a byproduct of the production of the distilled spirits. These gases are removed by two gas washers (CD-1). The treated gases are passed to the $CO_2$ Recovery Unit (EU-51), where they are stored and pressurized to create dry ice. Ethanol is also recovered and sent to the distillation system. The ethanol that is not processed in this unit is removed by a gas washer with 95% efficiency.

The Distillation Area is made up of a distillation system (EU-6) and four distillation columns (EU-7, EU-8, EU-9, and EU-65) to recover all the ethanol produced in the fermentation process. The residue of the columns (none-distilled product) is sent to the biological treatment plant to be processed.

The Biological Treatment Plant (EU-10) is comprised of four bio-reactors where methane, water, and hydrogen sulfide are produced. This unit utilizes two flares, of which one operates normally as control equipment and the other can be operated simultaneously when the amount of biogas fluctuates or in case of emergency.

The alcohol produced in comprised mostly of ethanol and water, and it is stored in wooden barrels to be aged and to produce rum (EU-11). After the necessary time has passed the barrels are emptied (EU-12) and the product is transferred via pumps to different tanks within the facility.

A number of the tanks use to store product is considered as insignificant activity for their emission potential.

**Bacardi** includes new emission units (EU-68) associated with the operation of Project New Blending Facilities (NBF). The purpose of the NBF is to increase the mix capacity of products derived from rum to respond to the worldwide demand of these products. Project NBF consists of modern installations of mixing and manufacturing rum and has new utilities centralized for these new installations. New stainless steel tanks will be installed for mixing and processing, an area for receiving raw materials and ingredients, an area to

receive tank trucks, an office area, a laboratory and sampling retention area, and a utility and a fire protection system.

The process of transition from the existing sources to the new ones (EU-68) is estimated to be a period of 3 years. During the first two years **Bacardi** will be transferring every one of its processes to ensure that that all new installations comply with the specifications of design and quality. They will as well be performing the introduction of the manufacturing process in the new installations. Once this stage is complete, **Bacardi** estimates that within one year the existing units will be removed via a process of demolition of equipment and structures.

**Bacardi** includes two Scenarios of Alternative Operation (AOS1 & AOS2) for boilers EU-1 and EU-2. These boilers use alcohol as fuel. Alcohols approved by the Board are known as ethers in the industry of distilled spirits. These are produced early in the distillation process and are characterized to interfere with the flavors of the liquor and for producing migraines. These are discarded, having a usable caloric value.

**Bacardi** relies on electric generators in case of emergency and fire pumps (EU-67). All engines are subject to National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE MACT), contained within Title 40 from the Code of Federal Regulations (CFR), Part 63, Subpart ZZZZ, and in addition, those specified, are subject to the Standards of Performance for Stationary Compression Ignition Engines contained within Title 40 of the Code of Federal Regulations (CFR), Part 60, Subpart IIII.

This facility is affected by federal regulations constituted within 40 CFR, Part 60, Subpart Db – Standards of Performance for Industrial- Commercial-Institutional Steam Generating Unit and by 40 CFR, Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. **Bacardi** is also affected by 40 CFR Parte 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers.

**Bacardi** is a major emission source since their allowed emissions exceed the 100 tons a year of criteria pollutants sulfur dioxide ($SO_2$), nitrogen oxide ($NO_x$), volatile organic compounds (VOC), and carbon monoxide (CO). This facility is a minor source of emissions for hazardous air pollutants since it will not exceed 10 tons per year of any hazardous air pollutants or 25 tons per year of a combination of these.

**Section II - Emission Units Description**

The emission units regulated by this permit are the following:

| Emission Units | Description | Control Equipment |
|---|---|---|
| | **Combustion Equipment** | |
| | **Boilers** | |
| EU-1 | Boiler #1 to generate steam, has a power of 3000 hp.<br>Comsumes:<br>• Fuel #6 at a rate of 833 gallons per hour with a sulfur content of 0.5% per weight.<br>• Biogas at a rate of 205,479 cubic feet per hour containing $H_2S$ at 0.5% per volume.<br>• Fuel number 2 (diesel) at a rate of 1,011 gallons per hour with a sulfur content of 0.5% per weight.<br><br>Hours of Operation: 8,760 hr/year | None |
| EU-2 | Boiler #3 to generate steam, has a power of 3000 hp.<br>Comsume:<br>• Fuel #6 at a rate of 833 gallons per hour with a sulfur content of 0.5% per weight.<br>• Biogas at a rate of 205,479 cubic feet per hour containing $H_2S$ at 0.5% per volume.<br>• Fuel No. 2 (diesel) at a ratio of 1,011 gallons per hour with a sulfur content of 0.5% per weight.<br><br>Hours of Operation: 8,760 hr/year | None |
| EU-66 | Boiler #2A to generate steam, has a power of 350 hp.<br>Comsumption:<br>• Fuel No. 2 (diesel) at a rate of 107.31 gallons per hour with a sulfur content of 0.5% per weight.<br><br>Hours of Operation: 8,760 hr/year | None |

| Emission Units | | Description | Control Equipment |
|---|---|---|---|
| | | **Internal Combustion Engines** | |
| EU67 | EU67-P1 Marilyn | Engine for electrical generator for emergencies, with 268 hp. Diesel consumption rate of 14.0 gallons per hour with a sulfur content of 0.2% per weight. | None |
| | EU67-P2 Hydrangea | Engine for electrical generator for emergencies, with 335 hp. Diesel consumption rate of 17.5 gallons per hour with a sulfur content of 0.2% per weight. | None |
| | EU67-P3 Visitor Center | Engine for electrical generator for emergencies, with 335 hp. Diesel consumption rate of 19.1 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P4 Distillery | Engine for electrical generator for emergencies, with 429 hp. Diesel consumption rate of 7.97 gallons per hour with a sulfur content of 0.2% per weight. | None |
| | EU67-P5 Information System | Engine for electrical generator for emergencies, with 124 hp. Diesel consumption rate of 19.1 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P6 Elevator | Engine for electrical generator for emergencies, with 124 hp. Diesel consumption rate of 5.8 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P7 Palo Seco | Engine for electrical generator for emergencies, with 335 hp. Diesel consumption rate of 18.9 gallons per hour with a sulfur content of 0.2% per weight. | None |
| | EU67-P8 | Engine for fire pumps #3 with 170 hp. Diesel consumption rate of 13.5 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P9 | Fire pump #2 with 370 hp. Diesel consumption rate of 11.2 gallons per hour with a sulfur content of 0.5% per weight. | None |

| Emission Units | Description | | Control Equipment |
|---|---|---|---|
| EU67 | EU67-P10 | Fire pump #1 with 370 hp. Diesel consumption rate of 11.2 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P11 | Engine for fire pumps #1 Palo Seco with 170 hp. Diesel consumption rate of 13.5 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P12 | Engine for fire pumps #2 Palo Seco with 170 hp. Diesel consumption rate of 13.5 gallons per hour with a sulfur content of 0.5% per weight. | None |
| | EU67-P13 | Engine for fire pumps in the rum terminal with 575 hp. Diesel consumption rate of 29 gallons per hour with a maximum sulfur content of 0.0015% per weight. | None |
| **Fermentation Tanks** | | | |
| EU-3 | Twenty fermentation tanks with capacity of 55,000 gallon, each one. Used to convert sugar into ethanol alcohol and carbon dioxide. One enclosed receiver tank with a capacity of 55,000 gallons.<br><br>*Throughput:* 142,000,000 gal/year | | Scrubber CD-1 with a minimum removal efficiency of VOC of 95%. Scrubber CD-5 with a minimum removal efficiency of 95%. |
| **Distillation Area** | | | |
| EU-6 | Distillation System C, to recover the ethanol produced through the fermentation process, with capacity of 45,000 PG/day with an ethanol content equal to or less than 191° proof. | | Conservation Vent working with Condenser CD-6a with a minimum removal efficiency of VOC of 95.6%. Scrubber CD-6d with a minimum removal efficiency of 95%. |
| EU-7 | Distillation Column 1, to recover the ethanol produced through the fermentation process, with capacity of 11,000 PG/day with an ethanol content equal to or less than 160° proof. | | Condenser CD-6b with a minimum removal efficiency of VOC of 95.6%. Scrubber CD-6e with a minimum removal efficiency of 95%. |

| Emission Units | Description | Control Equipment |
|---|---|---|
| EU-8 | Distillation Column 2, to recover the ethanol produced through the fermentation process, with capacity of 11,000 PG/day with an ethanol content equal to or less than 160° proof. | Condenser CD-6b with a minimum removal efficiency of VOC of 95.6%. Scrubber CD-6e with a minimum removal efficiency of 95% |
| EU-9 | Distillation Column 3, to recover the ethanol produced through the fermentation process, with capacity of 40,000 PG/day with an ethanol content equal to or less than 160° proof. | Condenser CD-6a with a minimal removal efficiency of VOC of 95.6%. Scrubber CD-6b with a minimum removal efficiency of 95% |
| EU-65 | Woodchip Distillation Column, to recover the ethanol produced through the primary distillation process, with capacity of 8,000 liters per day with an ethanol content equal to or less than 140° proof. | None |
| | **Biological Treatment Plant** | |
| EU-10 | Consist of four biological reactors that are used to treat distillation process wastewater. Generates biogas to be consumed by the boilers or burned by the flare. | Normal flare CD-2. Emergency flare CD-3. $H_2S$ scrubber CD-4. |
| | **Barrels Filling/Emptying Process** | |
| EU-11 | Filling process of wooden barrels for aging with capacity to receive and handle 26.5 million gallons/year of rum with an ethanol content equal to or less than 170° proof. | None |
| EU-12 | Emptying process of aged rum with capacity to receive and handle 27.5 million gallons/year of rum with an ethanol content equal to or less than 170° proof. | None |
| | **Vertical Storage Tanks with Fixed Roof** | |
| EU-16 | Tank 17 with a nominal capacity of 500,000 gallons of ethanol equal to or less than 191° proof.<br><br>Throughput: 16,333,200 gal/year | Conservation Vent CD-8a with scrubber CD-8b with a minimal removal efficiency of 97.2% |
| EU-17 | Tank 18 with a nominal capacity of 500,000 gallons of ethanol equal to or less than 191° proof.<br><br>Throughput: 10,000,000 gal/year | Conservation Vent CD-8a with scrubber CD-8b with a minimal removal efficiency |

| Emission Units | Description | Control Equipment |
|---|---|---|
| | | of 97.2% |
| EU-18 | Tank 19 with a nominal capacity of 500,000 gallons of ethanol equal to or less than 191° proof.<br><br>Throughput: 10,000,000 gal/year | Conservation Vent CD-8a with scrubber CD-8b with a minimal removal efficiency of 97.2% |
| EU-19 | Tank 18 with a nominal capacity of 500,000 gallons of ethanol equal to or less than 191 proof.<br><br>Throughput: 10,000,000 gal/year | Conservation Vent CD-8a with scrubber CD-8b with a minimal removal efficiency of 97.2% |
| | **Tank Filling Area** | |
| EU-20 | Filling system for rum to truck tanks. A maximum of the following millions of gallons of alcohol is handled per year:<br><br>7.68 million of gallons of 139°<br>21.26 millions of gallon of 154°<br>4.34 millions of gallon of 157°<br>2.53 millions of gallon of 191° | None |
| | **Farm of Vertical Storage Tanks with Fixed Roofing** | |
| EU-21 | Tank P-111 with nominal capacity of 101,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 700,000 gal/year | Conservation Vent CD-9A with scrubber CD-9B with minimum removal efficiency of 95%. |
| EU-22 | Tank P-112 with nominal capacity of 101,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 3,856,000 gal/year | Conservation Vent CD-9A with scrubber CD-9B with minimum removal efficiency of 95%. |
| EU-23 | Tank P-JACK 36 with nominal capacity of 69,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 4,477,612 gal/year | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum removal efficiency of 95%. |
| EU-24 | Tank P-JACK 37 with nominal capacity of 69,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area. | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum |

| Emission Units | Description | Control Equipment |
|---|---|---|
| | Throughput: 4,477,612 gal/year | removal efficiency of 95%. |
| EU-25 | Tank P-JACK 38 with nominal capacity of 80,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 5,223,881 gal/year | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum removal efficiency of 95%. |
| EU-26 | Tank P-JACK 39 with nominal capacity of 69,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 5,970,149 gal/year | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum removal efficiency of 95%. |
| EU-27 | Tank P-JACK 42 with nominal capacity of 102,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 6,716,418 gal/year | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum removal efficiency of 95%. |
| EU-28 | Tank P-JACK 43 with nominal capacity of 104,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 4,746,287 gal/year | Conservation Vent CD-10a in line with scrubber No. 3 (CD-10b) with minimum removal efficiency of 95%. |
| EU-29 | Tank R-Dist with nominal capacity of 31,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 15,000,000 gal/year | Vent Condenser CD-11 in line with minimum removal efficiency of 80%. |
| EU-30 | Tank F-1A with nominal capacity of 52,000 gallons of ethanol equal to or less than 150° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-31 | Tank F-2A with nominal capacity of 52,000 gallons of ethanol equal to or less than 150° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | *Conservation Vent* CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |

| Emission Units | Description | Control Equipment |
|---|---|---|
| EU-32 | Tank F-3A with nominal capacity of 52,000 gallons of ethanol equal to or less than 150° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-33 | Tank F-3R with nominal capacity of 52,000 gallons of ethanol equal to or less than 150° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-34 | Tank F-4A with nominal capacity of 52,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 4,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-35 | Tank F-4R with nominal capacity of 78,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 7,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-36 | Tank F-5A with nominal capacity of 80,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 4,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-37 | Tank F-5R with nominal capacity of 78,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 7,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-38 | Tank F-6 with nominal capacity of 80,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 7,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-39 | Tank F-6R with nominal capacity of 80,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area. | Conservation Vent CD-7b. Scrubber CD-7e |

| Emission Units | Description | Control Equipment |
|---|---|---|
| | Throughput: 6,800,000 gal/year | with minimum removal efficiency of 98.6%. |
| EU-40 | Tank F-7 with nominal capacity of 80,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 7,000,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-42 | Tank with nominal capacity of 700,000 gallons of ethanol equal to or less than 191° proof. Located at the aging area.<br><br>Throughput: 17,500,000 gal/year | Conservation Vent CD-8a. Scrubber CD-8b with minimum removal efficiency of 97.2%. |
| EU-43 | Tank F-1R Cistern 1 with nominal capacity of 32,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-44 | Tank F-2L Cistern 2 with nominal capacity of 32,000 gallons of ethanol equal to or less than 191° proof. Located at the distillery area.<br><br>Throughput: 1,800,000 gal/year | Conservation Vent CD-7b. Scrubber CD-7e with minimum removal efficiency of 98.6%. |
| EU-46 | Tank CB-1 with nominal capacity of 80,000 gallons of ethanol equal to or less than 152° proof. Located at the processing area.<br><br>Throughput: 2,600,000 gal/year | Conservation Vent CD-10a. Scrubber CD-10b with minimum removal efficiency of 95%. |
| EU-47 | Tank CB-2 with nominal capacity of 100,000 gallons of ethanol equal to or less than 190° proof. Located at the processing area.<br><br>Throughput: 1,250,000 gal/year | Conservation Vent CD-10a. Scrubber CD-10b with minimum removal efficiency of 95%. |
| EU-57 | Tank P-JACK 44 with nominal capacity of 25,000 gallons of ethanol equal to or less than 125° proof. Located at the processing area.<br><br>Throughput: 2,790,000 gal/year | Conservation Vent CD-10a. Scrubber CD-10b with minimum removal efficiency of 95%. |
| EU-58 | Tank P-JACK 45 with nominal capacity of 25,000 gallons of ethanol equal to or less than 125° proof. Located at the processing area. | Conservation Vent CD-10a. Scrubber CD-10b with |

| Emission Units | Description | | Control Equipment |
|---|---|---|---|
| | Throughput: 2,790,000 gal/year | | minimum removal efficiency of 95%. |
| EU-61 | Tank P-113 with nominal capacity of 100,000 gallons of ethanol equal to or less than 80° proof. Located at the processing area.<br><br>Throughput: 3,840,000 gal/year | | Conservation Vent CD-10a. Scrubber CD-10b with minimum removal efficiency of 95%. |
| EU-62 | Tank P-114 with nominal capacity of 100,000 gallons of ethanol equal to or less than 80° proof. Located at the processing area.<br><br>Throughput: 3,840,000 gal/year | | Conservation Vent CD-9a with scrubber No. 2 (CD-9b) with minimum removal efficiency of 95%. |
| EU-64 | Four tanks with nominal capacity of 800,000 gallons and one tank with nominal capacity of 275,000 gallons of ethanol 188° proof. Located at the alcohol terminal in the port of Puerto Nuevo.<br><br>Throughput: 4,000,000 gal/year | | Scrubber with minimum removal efficiency of 90.0%. |
| EU-64 | Four tanks with nominal capacity of 110,000 gallons each (Tank 115, Tank 116, Tank 50, and Tank 51). Store ethanol to a maximum of 140° proof. Located at the processing area.<br><br>Throughput: 2,000,000 gal/year | | Scrubber with minimum removal efficiency of 90.0%. |
| EU-51 | **Carbon Dioxide Recovery Plant ($CO_2$)** | | None |
| | **New Blending Facilities** | | |
| EU-68 | EU-FILT100 | 100K Product Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 242,551,420.02 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-FILT250 | 250K Product Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 244,699,304.82 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-FILT500 | 500K Product Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 245,069,755.31 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-ARUMTK | A Rum Tanks (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 44,432,784.00 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-BLEOPS | Blending Operations (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 609,465,547.50 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-FLTREG | Filter Regeneration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 7,355,090.37 pounds/year | Scrubber with a minimum efficiency of 95%. |

| Emission Units | Description | | Control Equipment |
|---|---|---|---|
| EU-68 | EU-EXTSOL | Extract Solution (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 6,423,590.25 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-LCLFLT | LCD Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 230,815,444.08 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-PIRUM | P1 rum aged (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 83,655,872.98 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-RUMPES | Rum Residues (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 491,138,392.88 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-PREMIX | Pre-Mixes (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 622,671.55 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-PRMKUP | Processed Make Up. Uses alcohol (ethanol) with a maximum 95% at a rate of 486,782,539.20 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-RCLWAT | Reclaim Water Tank (1.0). Uses alcohol (ethanol) with a maximum 95% ratio of 51,707,150.39 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-REMNTK | Remnant Tank (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 459,829,603.90 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-DRUMAG | D Rum Aged (1.0). Uses alcohol (ethanol) with a maximum 95% ratio of 120,830,277.10 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-RUMAFLT | Rum A Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 120,830,277.12 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-RRUMAG | R Rum Aged (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 88,793,372.40 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-RUMRFLT | Rum R Filtration (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 115,154,299.66 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-SRUMTK | S-Rum Tanks (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 120,830,277.12 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-TOTEFL | Tote Filling Operation (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 3,240,323.80 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-LCDLDG | LCD Loading (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 439,657,083.36 pounds/year | Scrubber with a minimum efficiency of 95%. |

| Emission Units | Description | | Control Equipment |
|---|---|---|---|
| EU-68 | EU-P2RUMTK | P2 Rum Tank (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 385,068,439.08 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-LOAD100 | 100k Truck Loading (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 404,464,841.12 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-LOAD250 | 250k Truck Loading (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 388,441,048.88 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-LOAD500 | 500k Truck Loading (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 406,396,036.71 pounds/year | Scrubber with a minimum efficiency of 95%. |
| | EU-THERMAL | Thermal Breathing All Tanks (1.0). Uses alcohol (ethanol) with a maximum 95% at a rate of 270,263,238.95 pounds/year | Scrubber with a minimum efficiency of 95%. |

**Section III – General Permit Conditions**

1. **Sanctions and Penalties:** The permittee must comply with all terms, conditions, requirements, limitations and restrictions established in this permit. Any violation to the terms of this permit is subject to administrative, civil or criminal measures, as established in Section 16 of the Environmental Public Policy Act (Law No. 416 of September 22, 2004, as amended).

2. **Right of Entry**: As specified under Rules 103 and 603(c)(2) of the RCAP, the permittee shall allow the Board or an authorized representative, upon presentation of credentials and other documents as may be required by law, to perform the following activities:

   a. Enter upon the permittee premises where an emission source is located or where emissions related activities are conducted, or where records must be kept under the conditions of this permit, under the RCAP, or under the Clean Air Act;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit, under the RCAP, or under the Clean Air Act;

   c. Inspect and examine any facility, equipment (including monitoring and air pollution control equipment), practices or operations (including QA/QC methods) regulated or required under this permit; as well as sampling emissions of air quality and fuels; and

d. As authorized by the Clean Air Act and the RCAP, to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

3. **Sworn Statement or Affidavit:** All reports required pursuant Rule 103(D) of the RCAP (i.e., semiannual monitoring reports and annual compliance certification) should be submitted together with a sworn statement or affidavit by the Responsible Official or a duly authorized representative. Such sworn statement or affidavit shall attest to the truth, correctness and completeness of such records and reports.

4. **Data Availability:** As specified under Rule 104 of the RCAP, all emission data obtained by or submitted to the EQB, including data reported pursuant to Rule 103 of the RCAP, as well as that obtained in any other way, shall be available for public inspection and may also be made available to the public in any additional manner that the EQB may deem appropriate.

5. **Emergency Plan:** As specified under Rule 107 of the RCAP, the permittee shall have available an Emergency Plan which must be consistent with adequate safety practices, and provides for the reduction or retention of the emissions from the plant during periods classified by the EQB as air pollution alerts, warnings or emergencies. These plans shall identify the emission sources, include the reduction to be accomplished for each source, and the means by which such reduction will be accomplished. These plans will be available for any authorized representative of the EQB at any time.

6. **Control Equipment :** The permittee shall comply with Rule 108 of the RCAP, as follows:

a. All air pollution control equipment or control measures shall provide for continuous compliance with applicable rules and regulations. Such equipment or measures shall be installed, maintained, and operated according to those conditions imposed by this Title V permit, within the specified operating limitations of the manufacturer. [Rule 108(A) of the RCAP]

b. The collected material from air pollution control equipment shall be disposed in accordance with applicable rules and regulations. The removal, manipulation, transportation, storage, treatment or disposal will be done in such or manner that shall not to produce environmental degradation, and in accordance with applicable rules and regulations. [Rule 108(B) of the RCAP]

c. The EQB may require, when deemed appropriate to safeguard the health and welfare of human beings, the installation and maintenance of additional, complete and separate air pollution control equipment of a capacity equal to the capacity of the primary control equipment. Furthermore, the Board may require that such additional air pollution control equipment be operated continuously

and conjunctionally with the primary air pollution control equipment. [Rule 108(C) of the RCAP]

d. All air pollution control equipment shall be operated at all times while the source being controlled is in operation. [Rule 108(D) of the RCAP]

e. In the case of a shutdown of air pollution control equipment for the necessary scheduled maintenance, the intent to shutdown such equipment shall be reported to the Board at least three days prior to the planned shutdown. Such prior notice shall include, but is not limited to the following: [Rule 108(E) of the RCAP]

   i. Identification of the specific source to be taken out of service with its location and permit number.

   ii. The expected length of time that the air pollution control equipment will be out of service.

   iii. The nature and quantity of emissions of air pollutants likely to be permitted during the shutdown period.

   iv. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

   v. The reasons why it will be impossible or impractical to shutdown the operating source during the maintenance period.

f. The owner or operator of a source shall, to the extent possible, maintain and operate at all times, including periods of start-up, shutdown and malfunction, any affected source and the associated air pollution control equipment, in a manner consistent with the original manufacturers design specifications and in compliance with applicable rules and regulations and permit conditions. [Rule 108(F) of the RCAP]

7. **Compliance Certification:** As specified under Rule 602(c)(2)(ix)(C) of the RCAP, the permittee shall submit each year a compliance certification. This certification must be submitted to both the EQB and the Environmental Protection Agency (EPA)[1] no later than **April 1st of each year**, covering the previous calendar year. The compliance certification shall include, but is not limited to, the information required under Rule 603(c) of the RCAP as follows:

[1] The certification to the EQB shall be mailed to: Manager, Air Quality Area, P.O. Box 11488, San Juan, P.R. 00910. The certification to the EPA shall be mailed to: U.S. Environmental Protection Agency, 48 Carr. 165 Suite 7000, Guaynabo, P.R. 00968-8073

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

b. The compliance status. Each deviation shall be identified and taken into account in the compliance certification; and

c. A statement indicating whether the compliance was continuous or intermittent; and

d. The methods or other means used for determining the compliance status with each term and condition, currently and over the reporting period consistent with sections (a)(3)-(5) of Rule 603 of the RCAP; and

e. Identification of possible exceptions to compliance, any periods which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (CAM) occurred; and

f. Such other facts as the Board may require to determine the compliance status of a source.

8. **Regulation Compliance:** As specified under Rule 115 of the RCAP, any violation to the RCAP, or to any other applicable rule or regulation, shall be grounds for the Board to suspend, modify, or revoke any relevant permit, approval, variance or other authorization issued by the Board.

9. **Location Approval:** As specified under Rule 201 of the RCAP, nothing in this permit shall be interpreted as authorizing the location or construction of a major stationary source, or the modification of a major stationary source, or a major modification of a significant source, without obtaining first a location approval from the EQB and without first demonstrating compliance with the National Ambient Air Quality Standards (NAAQS). This permit does not allow the construction of new minor sources without the required permit under Rule 203 of the RCAP.

10. **Open Burning:** Pursuant to Rule 402 of the RCAP, the permittee shall not cause or permit the open burning of refuse in their premises except as established under paragraph (E) of such rule which authorizes to conduct training or research of firefighting techniques, as previously approved by the Board.

11. **Objectionable Odors:** As specified under Rule 420 of the RCAP, the permittee shall not cause or permit emissions to the atmosphere of any matter which produces an *objectionable* odor that can be perceived in an area other than that designated for industrial purposes. [This condition is enforceable only by the State]

12. **Permit Renewal Applications:** As established under Rule 602 (a)(1)(iv) of the RCAP, the permittee shall submit a permit renewal application applications for permit renewal shall be submitted at least 12 months prior to the date of permit expiration. A responsible official must certify all required applications consistent with paragraph (c)(3) of Rule 602 of the RCAP.

13. **Permit Duration:** As specified under Rule 603 of the RCAP, the following terms will apply during the duration of this permit:

    a. Expiration: This authorization shall have a fixed term of 5 years since the effective date. The expiration date will be automatically extended until the Board approves or denies a renewal application (Rule 605(c)(4)(ii) of the RCAP) but <u>only</u> in those cases where the permittee submits a complete renewal application at least twelve (12) months before the expiration date. [Rules 603 (a)(2), 605 (c)(2), and 605(c)(4) of the RCAP]

    b. Permit Shield: As specified under Rule 605 (c)(4)(i) of the RCAP, the permit shield may be extended until the time the permit is renewed if a timely and complete renewal application is submitted.

    c. In case that this permit is subject to any challenge by third parties, the permit shall remain in effect until the time it is revoked by a court of law with jurisdiction in the matter.

14. **Recordkeeping Requirement:** As established under Rule 603(a)(4)) of the RCAP, the permittee shall retain records of all required monitoring data and support information for a period of 5 years from the date of the monitoring sample, measurement, report, or application. The permittee shall maintain available in the facility, copies of all records of required monitoring information including the following:

    a. The date, places- as defined in the permit, and the time of sampling or measurements;

    b. The date(s) analysis were performed;

    c. The company or entity that performed the analysis;

    d. The analytical techniques or methods used;

    e. The results of such analysis; and

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

15. **Semiannual Monitoring Reports/Samplings:** As established under Rule 603(a)(5)(i) of the RCAP, the permittee shall submit reports to the EQB of all required monitoring every 6 months, or more frequently if required by the Board or any other underlying applicable requirement. These reports cover two major elements. The first element is the summary of all periodic monitoring / sampling required in this permit. The second element requires that all deviations from permit conditions are clearly identified, summarized and reported to the Board. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as established under Rule 602(c)(3) of the RCAP. The report covering the period from January through June shall be submitted no later than October 1 of the same year and the report covering the period from July through December shall be submitted no later than April 1 of the following year. Once the guidelines are developed by the Board, the permittee must use them to complete these reports.

16. **Deviations Reporting due to Emergencies:** According to Rule 603(a)(5)(ii)(a) of the RCAP, any deviation resulting from an upset (such as sudden malfunction or break-down) or emergency conditions, as defined in Rule 603(e) of the RCAP, must be reported within the next 2 working days from the time the emission limits are exceeded due to the emergency, if the permittee wishes to assert the affirmative defense authorized under Rule 603(e) of the RCAP. If the permittee raises the emergency defense upon an enforcement action, the permittee shall demonstrate that such deviation happens due to an emergency and that the Board was adequately notified. If such emergency deviation last for more than 24 hours, the affected units may be operated until the end of the cycle or 48 hours, whichever occurs first. The Board may only extend the operation of an emission source in excess of 48 hours, if the source demonstrates to the Board's satisfaction that the National Air Quality Standards have not been exceeded and that there is no risk to the public health.

17. **Deviation Reporting (Hazardous Air Pollutants):** The source shall act as specified in its Emergency Response Plan (established in Rule 107(C) of the RCAP), when such Plan has shown no significant impact on an area other than those that have been designated for industrial purposes or will cease operations immediately if there is a significant impact on an area other than those that have been designated for industrial purposes (state-only enforceable condition). In accordance with Rule 603(a)(5)(ii)(b) of the RCAP, the Board shall be notified within the next 24 hours if a deviation that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit occurs. For the discharge of any regulated air pollutant that continues for more than 2 hours in excess of the applicable limit, the permittee shall notify the Board within 24 hours of the deviation. The permittee shall submit to the Board, within 7 days of the deviation, a detailed written report which includes probable causes, time and duration of the deviation, remedial action taken and the steps you are following to prevent recurrence.

18. **Severability Clause:** As specified under Rule 603(a)(6) of the RCAP, the clauses in this permit are severable. In the event of a successful challenge to any portion of the permit in an administrative or judicial forum, or in the event any of its clauses is held to be invalid, all other portions of the permit shall remain valid and effective, including those related to emission limits, terms and conditions, be they specific or general, as well as monitoring, record keeping and reporting requirements.

19. **Permit Noncompliance:** According to Rule 603(a)(7)(i) of the RCAP, the permittee must comply with all conditions of the permit. Permit noncompliance constitutes a violation of the RCAP and will be grounds for taking the appropriate enforcement action, impose sanctions, revoke, terminate, modify, and/or reissue the permit, or to deny a permit renewal application.

20. **Defense not Allowed:** As specified under Rule 603(a)(7)(ii) of the RCAP, the permittee shall not allege as a defense in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

21. **Permit Modification and Revocation:** As specified under Rule 603(a)(7)(iii) of the RCAP, the permit may be modified, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

22. **Property Rights:** As specified under Rule 603(a)(7)(iv) of the RCAP, this permit does not convey any property rights of any sort, nor does it grant any exclusive privilege.

23. **Obligation to Furnish Information:** As specified under Rule 603(a)(7)(v) of the RCAP, the permittee shall furnish to the EQB, within a reasonable time, any information that the EQB 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 EQB copies of documents related to this permit.

24. **Prohibition on Default Issuance:** As specified under Rule 605(d) of the RCAP, it shall never be considered that a permit has been issued by default as a result of the EQB's failure to take final action on a permit application within 18 months. The EQB's failure to issue a final permit within 18 months should be treated as a final action solely for the purpose of obtaining judicial review in a state court.

25. **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified unless the permittee complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.

26. **Permit Reopening:** As specified under Rule 608(a)(1), this permit shall be reopened and revised under the following circumstances:

    a. Whenever additional applicable requirements under any law or regulation become applicable to the permittee, when the remaining permit term is of 3 or more years. Such reopening shall be completed 18 months after promulgation of said applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to Rule 605(c)(4)(i) or Rule 605(c)(4)(ii) of the RCAP.

    b. Whenever the EQB or the EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit.

    c. Whenever the EQB or the EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

27. **Changes in Name or Responsible Official:** This permit is issued to **Bacardi Corporation.** In the event that the company and/or facility change its name, the responsible official must submit an administrative amendment to this permit to reflect the change in name. If the event that the responsible official changes, the new responsible official must submit no later than 30 days after the change, an administrative amendment including a sworn statement in which he/she accepts and promises to comply with all the conditions of this permit.

28. **Changes in Ownership**: This permit is issued to **Bacardi Corporation.** In the event that the company and/or facility is transferred to a different owner or change operational control and the Board determines that no other change in the permit is necessary, the new responsible official must submit an administrative amendment. The administrative amendment shall include a sworn statement in which the new responsible official accepts and promises to comply with all the conditions of this permit, <u>and</u> a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee. This is not applicable if the Board determines that changes to the permit are necessary.

29. **Renovation Work/ Demolition:** The permittee shall comply with the provisions set forth in 40 CFR §61.145 and §61.150, and Rule 422 of the RCAP, and Regulations for the Processing of General Permits (General Permit for the Handling of Asbestos Containing Materials) when doing renovation or demolition activities of asbestos containing materials at the facility.

30. **Compliance Clause**: Under no circumstances does compliance with this permit exempt the permittee from complying with all other applicable state or federal laws, regulations, permits, administrative orders or applicable court orders.

31. **Requirements for Refrigerants (Climatologic and Stratospheric Ozone Protection):**

    a. In the event that the permittee has equipment or appliances, including air conditioning units, which use Class I or II refrigerants as defined in 40 CFR part 82, subpart A, Appendices A and B, the permittee shall take the necessary measures to ensure that all maintenance, service or repair services performed are done so according to the practices, certification and personnel requirements, disposition requirements, and recycling and/or recovery equipment certification requirements specified under 40 CFR part 82, subpart F.

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

    c. Service on Motor Vehicles: If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, subpart B, Servicing of Motor Vehicle Air Conditioners. The term motor vehicle as used in subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term MVAC as used in subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo or system used on passenger buses using HCFC-22 refrigerant.

32. **Labeling of Products Using Ozone-Depleting Substances**: The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR part 82, subpart E.

    a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to 40 CFR §82.106.

    b. The placement of the required warning statement must comply with the requirements pursuant to 40 CFR §82.108.

    c. The form of the label bearing the required warning statement must comply with the requirements pursuant to 40 CFR §82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in 40 CFR §82.112.

33. **Risk Management Plan (RMP):** If during the effectiveness of this permit, the permittee is subject to the 40 CFR part 68, the permittee shall submit a Risk Management Plan according with the compliance schedule in the 40 CFR part 68.10. If during the effectiveness of this permit, the permittee is subject to the 40 CFR part 68, the permittee shall submit a compliance certification with the requirements of part 68 as part of the annual compliance certification required under 40 CFR part 70, including the recordkeeping and the Risk Management Plan.

34. **General Duty:** The permittee has the general obligation of identifying hazards which may result from accidental releases of any controlled substance under section 112(r) of the Clean Air Act or any other extremely hazardous substance in a process, using appropriate hazard assessment techniques, designing, maintaining, and operating a safe facility and minimizing the consequences of accidental releases if they occur as required in section 112(r)(1) of the Act and Rule 107(D) of the RCAP.

35. **Roof Surface Coating:** This is a state only enforceable requirement. Pursuant to Rule 424 of the RCAP, the permittee shall not cause or permit the roof surface coating by applying hot tar or any other coating material containing organic compounds without previous notification to the Board. The use of used oil or hazardous waste for roof surface coating is prohibited.

36. **Particulate Matter Fugitive Emissions:** As defined in Rule 404 of the RCAP, the permittee shall not cause or permit:
    a. the handling, transport or storage of any material in a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished, without taking reasonable precautions to prevent particulate matter from becoming airborne.

    b. fugitive emissions visible beyond the boundary line of the property on which the emissions originate dust.

37. **Emissions Calculations**: The permittee shall submit, on or before **April 1st of each year**, the actual or permissible emissions calculations for the previous natural year. The emissions calculations shall be submitted on the forms prepared by the Board for this purpose and the responsible official must certify all the information submitted as true, correct and representative of the permitted activity.

38. **Annual Fee:** As specified under Rule 610 of the RCAP, the permittee must submit an annual payment based on the emissions calculations for each regulated pollutant. The

payment will be based on their actual emissions at a rate of $37.00 per ton, unless the Board decides otherwise as permitted under Rule 610(b)(2)(iv) of the RCAP. This payment for the previous year must be made on or before **June 30 of each year**.

39. **New or Amended Regulation:** If federal or state regulation is promulgated or amended and the facility is affected by it, the owner or operator shall comply with the requirements of the new or amended regulation by the compliance date or granted extension of compliance date.

40. **Reports:** Unless a permit condition establishes otherwise, any requirement of information submittal to the Board shall be addressed to: Manager, Air Quality Area, PO Box 11488, San Juan, P.R. 00910.

41. **Reservation of Rights:** Except as expressly provided in this Title V permit:

    a. Nothing herein shall prevent Board or the EPA from taking administrative enforcement measures or seeking legal or equitable relief to enforce the terms of the Title V permits, including but not limited to the right to seek injunctive relief, and imposition of statutory penalties and/or fines.

    b. Nothing herein shall be construed to limit the rights of the Board or the EPA to undertake any criminal enforcement activity against the permittee or any person.

    c. Nothing herein shall be construed to limit the authority the Board or the EPA to undertake any actions in response to conditions that present an imminent and substantial endangerment to public health or welfare, or the environment

    d. Nothing herein shall be construed to limit the permittee's rights to administrative hearing and judicial appeal of termination/ revocation/ disputes over modification/ denial actions in accordance with regulations and the Environmental Public Policy Act.

**42.** **Source Modifications without a permit revision**: According to Rule 607 of the RCAP, the permittee may perform:

    (a) Source changes –

        (1) Permitted sources may make Section 502(b)(10) changes without requiring a permit revision, if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions).

(i) For each such change, the facility must provide the Administrator and the Board with written notification in advance of the proposed changes, which shall be seven (7) days. The written notification shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The source, the Board, and EPA shall attach each such notice to their copy of the relevant permit.

(ii) The permit shield described in paragraph (d) of Rule 603 shall not apply to any change made pursuant to section (a)(1) of Rule 607.

(2) Permitted sources may trade increases and decreases in emissions in the permitted facility for the same pollutant, where the permit provides for such emissions trades without requiring a permit revision and based on the 7-day notice prescribed in section (a)(2) of Rule 607. This provision is available in those cases where the permit does not already provide for such emissions trading.

(i) Under paragraph (a)(2) of Rule 607, the written notification required shall include such information as may be required by the provision in the Puerto Rico State Implementation Plan (PR-SIP) authorizing the emissions trade, including when the proposed change will occur, a description of each such change, any change in emissions, the permit requirements with which the source will comply using the emissions trading provisions of the PR-SIP, and the pollutants emitted subject to the emissions trade. The notice shall also refer to the provisions with which the source will comply in the PR-SIP and that provide for the emissions trade.

(ii) The permit shield described in paragraph (d) of Rule 603 shall not extend to any change made under section (a)(2) of Rule 607. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the applicable implementation plan authorizing the emissions trade.

(3) If a permit applicant requests it, the Board shall issue permits that contain terms and conditions (including all terms required under sections (a) and (c) of Rule 603 to determine compliance) allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally-enforceable emissions cap. Such a cap must be established in the permit independent of otherwise applicable requirements. The permit applicant shall include in its application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The Board shall not be required to include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall also require compliance with all applicable requirements.

(i) Under section (a)(3) of Rule 607, the written notification required shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit.

(ii) The permit shield described in paragraph (d) of Rule 603 may extend to terms and conditions that allow such increases and decreases in emissions.

(b) Off-Permit Changes. The Board may allow changes that are not addressed or prohibited by the permit and/or State Law.

(1) A permitted facility may make changes without obtaining a permit revision if such changes are not addressed or prohibited by the permit, other than those described in paragraph (c) of Rule 607.

(i) Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition.

(ii) Sources must provide contemporaneous written notice to the Board and EPA of each such change, except for changes that qualify as insignificant under paragraph (c)(1) of Rule 602. Such written notice shall describe each such change, including the date, any change in

emissions, pollutants emitted and any applicable requirement that would apply because of the change.

(iii) The change shall not qualify for the shield under paragraph (d) of Rule 603.

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

(c) A permitted facility cannot make changes without a permit revision if such changes are modifications under any provision of Title I of the Act.

43. (a) The permittee may make changes under section 502(b)(10) of the Act without requiring a permit revision if such changes:

(1) are not modifications under any provision of Title I of the Act,

(2) do not exceed the allowable emissions under the permit,

(3) do not result in the emission of any pollutant not previously emitted,

(4) do not violate any applicable requirement or contravene federally enforceable terms and permit conditions such as monitoring (including test methods), recordkeeping, reporting and compliance certification requirements,

(5) are not changes under Title I of the Act to an emission limit, a work practice or a voluntary emission cap.

(b) Rule 203 of the RCAP is required for any construction or modification of an emission source. For purposes of part II of the RCAP, a modification is defined as any physical change in, change in the method of operation or a change in type of fuel used of an existing stationary source, that would result in a net increase in that stationary source's potential to emit any air pollutant (subject to any standard), or which results in the emission of any pollutant (subject to an standard) not previously emitted. A physical change shall not include routine maintenance, repair and the replacement of any equipment having the same capacity, equal efficiency or greater environmental benefit to be used for the same purpose.

(c) The written notification addressed in condition 42(a)(1)(i) refers to changes covered under condition 42(a)(1). Changes not covered will be processed under the requirements of Rule 203 of the RCAP.

(d) Any emission trading as provided in condition 42(a)(2) above will not be authorized if the facility does not provide the reference to the PR-SIP provisions authorizing such emissions trading.

(e) If the permittee requests so, the Board may allow the emission trading in the facility solely for the purpose of complying with a federally-enforceable emissions cap. The application shall be based in replicable procedures and shall include permit terms that ensure the emission trades are quantifiable, replicable and enforceable.

(f) Off-permit changes will not be exempt from complying with the requirements and procedures of Rule 203 of the RCAP, if applicable.

**Section IV – Allowable Emissions**

A. The emissions described in the following table represent the allowable emissions at the time of the permit application and will be used for payment purposes only.

| Pollutant | Allowable Emissions (ton/year) |
|---|---|
| $PM_{10}$ | 30.14 |
| $SO_2$ | 1,153.98 |
| $NO_X$ | 298.69 |
| CO | 177.50 |
| COV | 168.17 |
| Pb | 4.84E-03 |
| HAP's | 0.380 |
| GHG's ($CO_2e$) | 81,483.70 |

B. According to Resolution RI-06-02[2], the emissions calculations will be based on actual emissions of **Bacardi**, however calculations based on allowable emissions of the installation will be accepted. If **Bacardi** decides to perform the calculations based on allowable emissions, **Bacardi** shall pay the same charge per ton as the facilities that decide to do the calculations based on actual emissions.

C. According to Rule 610(a) of the RCAP, when **Bacardi** requests a modification, administrative change or minor modification to its Title V permit, the source will pay only those charges related with any emission increase (if any) per ton, based on the change and not based on the previous total charges in accordance with RCAP Rule 610(a).

D. According to Resolution EQB R-12-17-5[3], payment exemptions for greenhouse gases ($CO_2$, $N_2O$, $CH_4$, $CO_2e$) to those sources which must include or are solicited the estimate of emissions of the same according to the Tailoring Rule, in Title V permits until the Board issues its final judgment in regards to the costs for emissions deemed necessary or until Resolution R-12-17-5 is revoked, whichever occurs first.

**Section V - Specific Permit Conditions**

**I. Applicable requirements for boilers EU-1 and EU-66**

**A. Particulate Matter Emission Limits:**

1. The permittee shall not cause nor permit the emission of particulate matter, from any equipment burning solid or liquid fuel, in excess of 0.3 pounds per million Btu. [Rule 406 of the RCAP]

2. The permittee shall perform a performance test within the first year of the permit to determine compliance with the standard using Method 5 described in 40 CFR, Part 60, Appendix A. [Rule 602(c)(2)(ix)(C) of the RCAP].

3. The permittee must submit to the EQB 30 days prior to the start of the test, a protocol. [Rule 106(C) of the RCAP].

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[2] EQB Resolution, Payment procedure for Title V operating charges and Title V permit renewal charges, issued on March 20, 2006.

[3] EQB Resolution, PR Tailoring Requirements for Greenhouse Gases (GHGs) – Exemption from payment issued on September 7, 2012.

4. The permittee must submit a writing notification 15 days prior of the performance test in order to allow the EQB to assign an observer. [Rule 106 (D) of the RCAP]

5. The permittee must submit a final report within 60 days after the performance of the emission test. [Rule 106(E) of the RCAP].

**B. Visible Emission Limit:**

1. The permittee shall not exceed the opacity limit of 20% for each unit in a 6 minutes average. Nevertheless, and as specified under Rule 403(A) of the RCAP, the permittee may discharge into the atmosphere visible emissions of opacity of up to 60% for a period of no more than 4 minutes in any consecutive 30 minutes period. [RCAP Rule 403(A)]

2. The permittee shall perform annually at least 6 readings of visible emissions utilizing Method 9 established in the CFR, Part 60, Appendix A. The permittee shall hire an independent opacity reader, certified by the EPA to perform these tests. The readings shall be performed approximately every 2 months.

3. The permittee shall perform a daily opacity inspection, every time that the emission source is in operation. These inspections shall consist in a daily observations of the stack for a period of 2 minutes to determine if there are visible emissions present, excluding water vapors. The observer shall select a position of at least 15 feet, but less than 0.25 miles of the source. The sun light shall not focus directly in the observer's eyes. If emissions are observed, the permittee shall do the following:

   i. Verify that the equipment and/or control equipment that is responsible of visible emissions is operating according to the manufacturer's specification and the conditions of this permit. If it is not operating properly, corrective actions should be taken immediately to eliminate the excess of opacity.

   ii. If the corrective actions do not correct the opacity problem in 24 hours, the permittee shall perform an opacity reading following Method 9 co the 40 CFR, Part 60, Appendix A. The permittee shall hire during the next 24 hours after the violation, an independent opacity reader properly

certified by the EQB to perform these tests. The tests shall be perform in every working shift until the problem has been corrected.

iii. Any deviation shall be reported to the EQB in 24 hours.

4. The permittee shall submit to the EQB and the EPA a copy of the visible emissions reading report 60 days after each reading.

5. Shall submit, every 6 months, copies of daily visible emissions readings records performed according with condition V(B)(3).

## II. Applicable Requirements for Boiler EU-2

### A. Conditions according to Part 60, Subpart Db of 40 CFR, Standards of Performance for Industrial-- Commercial - Institutional Steam Generating Units

1. Boiler #3 (EU-2) with 3000 hp capacity, is affected by the New Sources Performance Standards (NSPS) under 40 CFR, Part 60, Subpart Db (Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units). [PFE-14-0505-0692-II-C]

2. The permittee achieved the applicable test requirements to demonstrate compliance with section 60.8 of 40 CFR, according to the requirements of permit PFE-17-0505-0692-II-C.[4]

3. There may be additional tests required at the discretion of the EPA and/or the EQB. If additional tests are required, the permittee shall:

   a. At least 30 days prior to the start of the tests must submit a Test Protocol detailing the methods and procedures that shall be used during the performance test. A Test Protocol that does not have approval from the EQB and/or the EPA may be invalid and may require the test to be conducted once again.

   b. Shall provide the EQB at least 15 days prior notice of the test date and time, to afford the EQB the opportunity to have an observer present.

[4] Date or period of testing: February 12, 2009 - March 19, 2009.

c. All performance tests shall be conducted with a maximum capacity of operation of the unit that is being tested and/or another load specified by the EQB and/or the EPA.

d. The results of the tests that indicate the emissions are under the limits of detection shall be considered to be in compliance.

e. For purposes of performance tests, the sampling ports, the platforms, and the accesses shall be provided by the permittee in the exhaust system of combustion gases according to 40 CFR Part 60.8(e).

f. The results of the tests of emission shall be submitted to the EQB within 30 days of completion of the performance tests.

g. Operations during periods of startup, shutdown, and malfunctioning shall not constitute representative conditions for the purposes of performance test.

**B. Standards for sulfur dioxide**

1. The permittee shall demonstrate that the fuel (oil No. 6) complies with the definition of oil containing low sulfur in the following manner: [PFE-17-0505-0692-II-C]

   a. Following the procedures of performance testing as described in §60.45b(c) of 40 CFR, and following the procedures of the test as described in §60.47b(a) or §60.47b(d) of 40 CFR, to determine the emission rate of sulfur dioxide or the amount of sulfur in the fuel; or

   b. Keeping all receipts of fuel purchases as described in 40 CFR §60.49b(r).

**C. Standards for particulate matter and nitrogen oxides**

1. On and after the date of which the initial performance test has been completed or as required to be completed under §60.8 of 40 CFR, whichever date is first, the permittee shall not permit any atmospheric discharge of any gas that exhibits an opacity level higher than 20% (within an average of 6 minutes), except for a period of 6 minutes per hour of no more than 27% of opacity. [40 CFR §60.43b(f), PFE-17-0505-0692-II-C]

2. Except as provided under paragraphs (k) and (l) of section 60.44b of 40 CFR, on and after the date on which the initial performance test is completed or is required to be completed under §60.8 of 40 CFR, whichever date comes first, the permittee shall cause to be discharged any gas that contain nitrogen oxides

(expressed as $NO_2$) in excess of the following emission limits: [40 CFR§60.44b(a), PFE-17-0505-0692-II-C]

| **Fuel/Steam generating unit type** | **Nitrogen oxide emission limits ng/J (lb/MMBtu) (expressed as $NO_2$) heat input** |
|---|---|
| Residual Oil:<br>(i) Ratio for low heat release<br>(ii) Ratio for high heat release | <br>130 (0.30)<br>170 (0.40) |

3. On and after the day on which the initial performance test is completed or is required to be completed under §60.8 of 40 CFR, whichever date comes first, no owner or operator of boiler #3, who has initiated construction or reconstruction after July 9, 1997, shall cause to be discharge into the atmosphere any gases that contain nitrogen oxides (expressed as $NO_2$) in excess of the following limits: [40 CFR, §60.44b(l)(1), PFE-17-0505-0692-II-C]

   a. If the installation burns oil, natural gas or any mixture of these fuels or any other fuel: a limit of 86 nanograms/Joule (ng/J)(0.20 lb/MMBtu) for heat input, unless that the installation has an annual capacity factor for oil and gas federally enforceable requirement that limits operation to an annual capacity factor of 10% (0.10) or less for oil and natural gas.

4. The opacity limits established in Section 60.43b of 40CFR, apply at all times, except during periods of startup, shutdown, or malfunction. The standards of nitrogen oxides available in Section 60.44b of 40 CFR apply at all times. [40 CFR §60.46b(a), PFE-17-0505-0692-II-C]

5. To determine compliance with the limits of opacity [covered under Section 60.42b of 40 CFR], the owner or operator of boiler #3 **conducted** an initial performance test as described per Section 60.8 of 40 CFR on **February 12, 2009**. Additional tests may be required at the discretion of the EPA and/or the EQB. If additional tests are required, the permittee shall use the following procedures and methods:

   a. Method 9 shall be used to determine the opacity of the stack emissions. [40 CFR §60.46b(d)(7)]

   b. The permittee shall perform annually at least 6 readings of visible emissions utilizing Method 9 established in the CFR, Part 60, Appendix

A. The permittee shall hire an independent opacity reader, certified by the EQB to perform these tests. The readings shall be performed approximately at intervals of every 2 months.

c. The permittee shall perform a daily opacity inspection, every time that the emission source is in operation. These inspections shall consist in a daily observations of the stack for a period of 2 minutes to determine if there are visible emissions present, excluding water vapors. The observer shall select a position at least 15 feet but less than 0.25 miles of the source. The sun light shall not focus directly in the observer's eyes. If emissions are observed, the permittee shall do the following:

i. Verify that the equipment and/or control equipment that is responsible of the visible emissions is operating according to the manufacturer's specification and the conditions of this permit. If it is not operating properly, corrective actions be taken immediately to eliminate the excess of opacity.

ii. If the corrective actions do not correct the opacity problem in 24 hours, the permittee shall perform an opacity reading following Method 9 of the 40 CFR, Part 60, Appendix A. The permittee shall hire during the next 24 hours after the violation, an independent opacity reader properly certified by EQB to perform these tests. The tests shall be perform in every working shift until the problem has been corrected.

iii. Any deviation shall be reported to the EQB in 24 hours.

d. The permittee shall submit to the EQB and the EPA a copy of the report of the visible emissions readings 60 days after each reading.

6. To determine compliance with the emission limits of nitrogen oxides required under 40 CFR §60.44b, the permittee **conducted** an initial performance test as described under §60.8 of 40 CFR, **on March 12-19, 2009**. The EQB and/or the EPA may require at their discretion a repeat of said test, using the continuous system to test nitrogen oxide under §60.48 (b) of 40 CFR or any other method specified by the EPA and/or the EQB.

7. The owner or operator of the unit affected by Subpart Db of 40 CFR Part 60, which burns oil with a low sulfur content shall not be subject to the requirements of performance test for $SO_2$ and PM, if the owner or operator

obtains the purchase receipts of fuel as described in §60.49b(r) of 40 CFR. [PFE-17-0505-0692-II-C]

8. The permittee shall install, calibrate, maintain and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system for boiler #3 (EU-2), **according to §60.48b(a) of 40 CFR.** The owner or operator of a boiler subject to an opacity standard under 40 CFR §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), (5) or (6) of 40 CFR section 60.48b, who elects not to use a COMS shall conduct a performance test using Method 9 Appendix A-4 part 60 and procedures in §60.11 to demonstrate compliance with the applicable limit in the §60.43b 40 CFR before April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after the initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1) (a)(2) or (a)(3) of section 40 CFR 60.48b. The observation period for Method 9 of Appendix A-4 of the performance tests may be reduced from 3 hours to 60 minutes, if all 6-minutes averages are less than 10 percent and all individual observations of 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. [40 CFR §60.48b (a)]

   a. The owner or operator shall conduct subsequent performance tests using Method 9 of Appendix A-4 Part 60, using the procedures in paragraphs (a) of section 60.48b according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of section 60.48b, as determined by the most recent Method 9 of Appendix A-4 performance test results. [40 CFR §60.48b (a)(1)]

   b. If the maximum opacity 6-minute opacity is less than 10 percent during the most recent Method 9 of Appendix A-4 performance test, the owner or operator may, as an alternative to performing subsequent Method 9 Appendix A-4 performance tests, elect to perform subsequent monitoring using Method 22 of Appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of 40 CFR section 60.48b 4. [40 CFR §60.48b (a)(2)]

   c. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 Appendix A-4 performance test, the owner or operator, as an alternative to performing subsequent Method 9 of Appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by EPA or EQB. [40 CFR §60.48b (a)(3)]

9. The permittee shall install, calibrate, maintain and operate a continuous emission monitoring system (CEMS) for measuring $NO_x$ and $O_2$ (or $CO_2$)

emissions discharged to the atmosphere, and shall record the output of the system. [40 CFR §60.48b(b)(1)]

10. The CEMS shall be operated and data recorded during all periods of operation except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR §60.48b(c), PFE-17-0505-0692-II-C]

11. The 1-hour average $NO_x$ monitor required by **condition C.9** of this section of the permit and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rate under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2). [40 CFR §60.48b(d), PFE-17-0505-0692-II-C]

12. The procedures under §60.13 of 40 CFR shall be followed for the installation, evaluation and operation of all continuous monitoring systems. [40 CFR §60.48b(e)]

13. For the permittee, the span value of nitrogen oxide shall be determined in the following manner: [40 CFR §60.48b(e)(2), PFE-17-0505-0692-II-C]

| **Fuel** | **Value measured for nitrogen oxide (ppm)** |
|---|---|
| Oil<br>(residual and distillate) | 500 |

14. According to 40 CFR section 60.48b(g), the owner or operator of boiler #3 (EU-2), that has a heat input capacity of 73MW (250 MMBtu) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30% per weight or less, distilled oil, or any mixture of these fuels, greater than 10% (0.10), shall:

    a. Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3) and (f) of section 60.48b of Subpart Db of 40 CFR.

    b. Monitor boiler operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to §60.49b(c) of 40 CFR.

**D. Requirements for reports and maintenance record keeping**

1. The owner or operator of the affected boiler by Subpart Db of 40 CFR Part 60 shall submit notification to the Board with a copy to the EPA of the date of initial startup, as provided by §60.7 of 40 CFR. This notification shall include: [40 CFR §60.49b(a)]

    a. The design heat input capacity and identification of the fuels to be combusted in the boiler #3 (EU-2).

    b. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

2. The owner or operator of the boiler subject to the $SO_2$, PM, and/or NOx emission limits under §§60.42b, 60.43b and 60.44b of 40 CFR, shall submit to the Board the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B of 40 CFR Part 60. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) of 40 CFR shall submit to the Board the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the boiler. [40 CFR, §60.49b(b)]

3. The permittee shall recork and keep records as described in **condition C.5** of this section of the permit. [40 CFR, §60.49b(d)]

4. According to 40 CFR §60.49b(g), The permittee shall maintain records for the nitrogen oxides of the following information for the boiler:

    a. Calendar date.

    b. The average hourly nitrogen oxides emission rates (expressed as $NO_2$) (ng/J or lb/MMBtu heat input) measured or predicted.

    c. The 30-day average nitrogen oxides emission rates (ng/J or lb/MMBtu) calculated at the end of each steam generating unit operating day from the measured hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

    d. Identification of the steam generating unit operating days when the calculated 30-days average nitrogen oxides emission rates are in excess of the $NO_x$ emissions standards under §60.44b of 40 CFR, with the reasons for such excess emissions as well as a description of corrective action taken.

e. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

f. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

g. Identification of "F" factor used for calculations, methods of determination and the type of fuel combusted.

h. Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

i. Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with the Performance Specifications 2 or 3 of 40 CFR Part 60.

j. Results of the daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of part 60.

5. The permittee shall comply with all the applicable requirements in section 60.49b of 40 CFR, including but not limited to, submit excess emission reports for any excess emissions that occurred during the reporting period. This report shall comply with the dispositions in section 60.49b(h)(2)(i), (2)(ii), (3) and (4) of 40 CFR. [40 CFR §60.49b(h)]

6. The owner or operator of boiler #3 (EU-2) is subject to the requirements of continuous monitoring for nitrogen oxides under §60.48(b) of 40 CFR shall submit reports that contain the information under **condition D.4** of this section. [40 CFR §60.49b(i), PFE-17-0505-0692-II-C]

7. All records required shall be maintained by the permittee for a period of 2 years following the date of such record. [40 CFR §60.49b(o), PFE-17-0505-0692-II-C]

8. If the permittee elects to demonstrate that the facility combusts only very low sulfur fuel, according to §60.41b of 40 CFR, shall obtain and maintain fuel receipts from the fuel supplier, which certify that the oil meets the definition of oil with a very low sulfur content equal to or less than 0.5% per weight. [40 CFR §60.49b(r)PFE-17-0505-0692-II-C]

9. The owner or operator shall maintain records of opacity. In addition, the owner or operator elects to monitor emissions according to the requirements in §60.48b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of section 60.49b (f) 40 CFR, as applicable to the visible emissions monitoring methos used. [40 CFR §60.49b (f)]

10. The owner or operator may submit electronic quarterly reports for $SO_2$ and / or NOx and / or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of section 60.49b. The format of each quarterly electronic report should be coordinated with the Compliance and Inspection Division of EQB's Air Quality. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of subpart Db was achieved during the reporting period. Before submitting reports in electronic format, the owner or operator shall coordinate with the Compliance and Inspection Division of EQB's Air Quality to obtain the agreement to submit reports in this alternative format. [40 CFR §60.49b (v)]

11. The reporting period for the reports required under Subpart Db is each 6 month period. All reports shall be submitted to the Board and EPA and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR §60.49b (w)]

## III. Applicable Requirements for Boiler EU-66

### A. Conditions according to Part 60, Subpart Dc of Title 40 of the Code of Federal Regulations, Standards of Performance for Small Industrial- - Commercial - Institutional Steam Generating Units

1. The boiler EU-66 of 350 hp (14.7 MMBtu/hr), is affected by the New Source Performance Standards (NSPS) under 40 CFR, Part 60, Subpart Dc - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units for which it must comply with the following. [PFE-17-1110-0599-II-C]

2. The fuel sulfur limits shall be determined based on fuel supplier certification, as described in section 60.48c(f) of 40 CFR, as applicable. [40 CFR §60.42c(h)]

3. The initial performance test for boiler EU-66 shall consist of the certification from the fuel supplier, as described in section 60.48c(f) of 40 CFR, as applicable. [40 CFR §60.44c(h)]

4. The permittee shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of 40 CFR. This notification shall include: [40 CFR §60.48c(a)]

   a. The design heat input capacity of the boiler and identification of fuels to be combusted in said the boiler.

   b. If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c of 40 CFR.

   c. The annual capacity factor at which the owner or operator anticipates operarating the boiler based on fuel fired.

5. The owner or operator of the boiler shall submit monthly reports to the EPA with a copy to the Board of the requirements of the supplier certification of fuel to demonstrate compliance with the sulfur limits. The report shall include a certified statement signed by the owner or operator of the boiler that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period. [PFE-17-1110-0599-II-C]

6. Fuel supplier certification shall include the following information: [40 CFR §60.48c(f)]

   a. The name of the supplier,

   b. A statement from the supplier that the fuel complies with the specifications under the definition of distilled oil in §60.41c of 40 CFR, and,

   c. The sulfur content of the fuel.

7. The owner or operator of each affected facility shall record and maintain records of the amount of fuel combusted during each operating day. [40 CFR §60.48c(g)(1)]

8. All records requires shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. [40 CFR §60.48c(i)(1)]

## VI - Applicable Requirements for Boilers EU-1, EU-2 and EU-66

### A. Fuel consumption limit

1. The two boilers with a capacity of 3,000 hp each (EU-1 and EU-2) shall use fuel No. 6 at the rate of 883 gal/hr, with a maximum sulfur content of 0.5% by weight or fuel No. 2 (diesel) at a rate of 1,011 gal/hr, with a maximum sulfur content of 0.5% by weight. The boilers can also use biogas as fuel at a rate of 205,479 $ft^3$/hr with a maximum $H_2S$ content of 0.5% by weight. Both boilers can burn fuel No. 2 (diesel) in substitution for fuel No. 6. Understand that consumed gallons of diesel shall be counted under the same limit of No. 6 fuel consumption. [PFE-17-0505-0692-II-C][5]

2. Boilers #1 and #3 (EU-1 and EU-2) shall be limited to operate under the following operating scenarios to prevent that boiler #1 is affected by Subpart Db of Part 60 of 40 CFR: [PFE-17-0505-0692-II-C]

   a. **Scenario 1:** The consumption of boiler #1 shall not exceed 418,000 gal/year of No.6 fuel or No.2 fuel. The limit of consumption of boiler #3 shall be achieved by subtracting 6,000,000 gal/year (on a daily rotating base) the gal/year of No.6 fuel or No. 2 fuel consumed by boiler #1 up until that moment. Both boilers will not exceed the combined consumption of 1,500,000,000 $ft^3$/year in biogas[6].

   b. **Scenario 2:** When the consumption of boiler #1 exceeds 418,000 gal/year of fuel No. 6 or No. 2, **Bacardi Corporation** shall operate under scenario 2, where boiler #1 will be limited to consume 822,000,000 $ft^3$/year of biogas or less, and boiler #3 is limited to consume the difference between 1,500,000,000 $ft^3$/year and the consumed biogas from boiler #1 up until that moment. Both boilers can consume up to 6,000,000 gal/year of fuel No.6 or No.2[7].

3. The permittee shall document and maintain records for the quantities and types of fuel consumed daily in boilers EU-1 and EU-2 and calculate the factor of the annual capacity for the fuels consumed in the boilers. The annual capacity factor shall be determined on an average basis of 12 months with an annual capacity factor calculated at the end of every calendar month. [PFE-17-0505-0692-II-C]

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[5] To accommodate the use of alcohol as fuel in boilers EU-1 and EU-2, refer to Section VII - Alternate Operating Scenarios.

[6] However, to accommodate the use of alcohol as fuel in boilers EU-1 and EU-2, refer to Section VII - Alternate Operating Scenarios.

[7] However, to accommodate the use of alcohol as fuel in boilers EU-1 and EU-2, refer to Section VII - Alternate Operating Scenarios.

4. The permittee shall prepare and maintain a daily log of consumption, type, and sulfur content of fuels burned in boilers EU-1 and EU-2. This record shall be kept on a daily rolling basis, this is, the value of the day in question shall be added to the consumption of 364 previous days so that it meets the consumption limit set in this authorization. [PFE-17-0505-0692-II-C]

5. The permittee shall submit a monthly report indicating on a daily basis, the consumption, type, and sulfur content in the fuel burned by boiler #1 (EU-1) and boiler #3 (EU-2). This report shall include the determination of factors of load and fuel analysis. This shall be submitted in the formulas provided by the Board within the next 15 days of the month following for which the report is representative and shall be addressed to the Chief of the Validation Data and Mathematical Model Division. [Rule 410 of the RCAP]

6. Consumption of diesel fuel permitted for the boiler of 350 hp (EU-66) is 500,166.8 gal/year, with a maximum sulfur content of 0.5% by weight. [PFE-17-1110-0599-II-C]

7. The permittee shall install, operate and maintain a fuel meter in unit EU-66. Fuel meters shall be calibrated every six months and it shall always have all certificates and records available of the calibrations for the evaluation and inspection of Board personnel. [PFE-17-1110-0599-II-C]

8. The permittee shall install, calibrate and maintain a fuel meter in each fuel supply line (inline analyzers) in boilers #1 (EU-1) and #3 (EU-2), to verify the fuel consumption of fuel No. 6 or No. 2, biogas and alcohol as an alternative operating scenario. It shall be calibrate every six months or in accordance with the manufacturer's recommendations, whichever is more frequent. Maintain the records of the periodic calibrations available for review by the Board's technical personnel. [PFE-17-0505-0692-II-C]

**B. National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers in Title 40, Part 63, Subpart JJJJJJ**

**Boilers EU-1 and EU-2 (Existing Boilers)**

1. The permittee shall comply with all the applicable requirements of National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers contained within Part 63 Subpart JJJJJJ of 40 CFR. [PFE-17-0505-0692-II-C]

2. The compliance date with the provisions of Subpart JJJJJJ for the 3000 hp boilers (EU-1 and EU-2) will depend on the applicable requirements as described in section 63.11196 of 40 CFR. [PFE-17-0505-0692-II-C]

3. The permittee shall comply with each emission limit and with each work practice standard, emission reduction measure, and management practice specified in Tables 1 and 2, respectively, that apply to the boilers EU-1 and EU-2, described in this permit. [Section 63.11201 of 40 CFR]

4. The permittee shall comply with each work practice standard, emission reduction measure, and management practice, specified in Table 2 of Subpart JJJJJJ, respectively, that apply to boilers EU-1 and EU-2 authorized and included in this permit. [Section 63.11201(b) of 40 CFR].

   a. The permittee shall conduct a performance tune-up, and another tune-up **every 2 years** as specified in section 63.11223 of 40 CFR.

   b. The permittee shall conduct an energy assessment (one-time energy assessment) completed **on or after January 1, 2008** that meet the energy assessment requirements in Table 2 of Subpart JJJJJJ satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with the ISO 50001, that includes the affected units, also satisfies the energy assessment requirement. [Section 63.11201(b) of 40 CFR]

5. The standards of Subpart JJJJJJ apply at all times the boilers are operating, except during periods of startup and shutdown as defined in section 63.11237 of 40 CFR, during which time you must comply only with Table 2 of Subpart JJJJJJ. [Section 63.11201(d) of 40 CFR]

6. You must comply with the **Applicable General Requirements Compliance** as described in section 63.11205(a), (b) and (c) of 40 CFR.

7. You must comply with the **Initial Requirements Compliance** applicable as specified in sections 63.11210, 63.11211, 63.11212, 6311213, and 63.11214 of 40 CFR.

8. You must comply with the **Continual Requirements Compliance** that apply in sections 63.11220, 63.11221, 63.11222, 63.11223, 63.11224, 63.11225 and 63.11226 of 40 CFR.

9. The owners or operators of the **existing** affected boilers EU-1 and EU-2, that have not operated between the effective date of the rule and the compliance date

that is specified in section 63.11196 of 40 CFR, **shall complete** the initial performance tune-up, if subject to the tune-up requirements in section 63.11223(b) no later than 30 days after the re-start of the affected boiler. [Section 63.11210(j) of 40 CFR]

10. The owners or operators of the **existing** affected boilers EU-1 and EU-2 with a heat input capacity **equal to 10 MMBtu/hr or greater,** shall submit a signed certification in the Notification of Compliance Status (NCS) report that an energy assessment of the boiler and its energy systems was completed according to Table 2 of the Subpart JJJJJJ and is an accurate depiction of your facility. [Section 63.11214(c) of 40 CFR]

11. All sampling and collection of data, relating to Subpart JJJJJJ, the permittee shall monitor and collect data according to section 63.11221 and the Site-specific Monitoring Plan required by section 63.11205(c) of 40 CFR. [Section 63.01121 of 40 CFR]

12. The owner or operator of the affected boilers must comply with the notifications, reporting and recordkeeping requirements according to the requirements of section 63.11225 of 40 CFR.

    a. An **Initial Notification** shall be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to Subpart JJJJJJ. [Section 63.11225(a)(2) of 40 CFR]

    b. The permittee shall submit the **Notification of Compliance Status** (NCS) no later than 120 days after the applicable compliance date specified in section 63.11196 of 40 CFR, unless you must conduct a performance stack test. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of competing the performance stack test. [Section 63.11225(a)(4) of 40 CFR]

    c. The Notification of Compliance Status shall be submitted electronically using the CEDRI (Compliance and Emissions Data Reporting Interface) application under the CDX program of EPA. The application can be accessed through the internet address www.epa.gov/cdx. However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted at the appropriate address listed in section 63.13 of 40 CFR. [Section 63.11225(a)(4)(vi) of 40 CFR]

    d. The permittee shall prepare, by **March 1 of each year**, and submit to the EQB upon request, an Annual Compliance Certification Report for

previous calendar year containing the information specified in sections 63.1125(b)(1) through (b)(4) of 40 CFR. The permittee shall submit the report by March 15 if you had any instance described in Section 63.11225(b)(1) through (2) of 40 CFR. [Section 63.11225(b) of 40 CFR]

e. All records required by subpart JJJJJJ will remain accessible and ready to be reviewed by the EPA staff or JCA. It shall maintain records for 5 years. The first two years the records are maintained in electronic or physical form within the facility. Over the past three years records may be kept outside the facility. [Section 63.11225(d) of 40 CFR]

13. The permittee shall comply with the general provisions of Sections 63.1 through section 63.16 that apply, which are included in Table 8 of this Subpart JJJJJJ of 40 CFR.

**Boiler EU-66 (<u>new</u> boiler with a capacity equal to 10 MMBtu/hr)**

14. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers in Part 63, Subpart JJJJJJ of 40 CFR. [PFE-17-1110-0599-II-C]

15. The compliance date with the provisions of Subpart JJJJJJ for boiler EU-66 of 14.7 MMBtu is upon startup. [PFE-17-1110-0599-II-C]

16. The permittee shall comply with each emission limit specified in Table 1 of Subpart JJJJJJ that applies to boiler EU-66. [Section 63.11201(a) of 40 CFR]

    a. The limit for particulate matter shall be less than or equal to 0.03 lb by MMBtu of heat input.

17. The permittee shall comply with each work practice standard, emission reduction measure and management practices, specified in Table 2 of Subpart JJJJJJ, respectively, that apply to boiler EU-66. [Section 63.11201(b) of 40CFR].

    a. The permittee shall minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.

    b. The permittee shall conduct a tune-up **every 2 years** as specified on section 63.11223(b) of 40 CFR.

18. The permittee shall comply with each operating limit specified in Table 3 of Subpart JJJJJJ that applies to EU-66. [Section 63.11201(c) of 40 CFR]

19. The standards of Subpart JJJJJJ apply at all times the boiler is operating, except during periods of startup and shutdown as defined in section 63.11237 of 40 CFR, during which time the permittee shall comply only with Table 2 of Subpart JJJJJJ. [Section 63.11201(d) of 40 CFR]

20. The permittee shall comply with the **applicable General Compliance Requirements** as described in section 63.11205(a), (b) and (c) of 40 CFR.

21. The permittee shall comply with the **Initial Compliance Requirements** applicable as specified in sections 63.11210, 63.11211, 63.11212, 6311213, and 63.11214 of 40 CFR.

22. The permittee shall comply with the **Continual Requirements Compliance** that apply in sections 63.11220, 63.11221, 63.11222, 63.11223, 63.11224, 63.11225 and 63.11226 of 40 CFR.

23. The permittee shall demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or a continuous monitoring system (CMS), including a continuous emissions monitoring system (CEMS), a continuous opacity monitoring system (COMS), or a continuous parameter monitoring system (CPMS) where applicable. The permittee shall may demonstrate compliance with the applicable mercury (Hg) emission limit using fuel analysis if the emission rate calculated according to section 63.11211(c) of 40 CFR is less than the applicable emission limit. Otherwise, you must demonstrate compliance using stack testing. [Section 63.11205(b) of 40 CFR]

24. The permittee shall demonstrate compliance with any applicable emission limits through performance stack testing and subsequent compliance with operating limits (including the use of CPMS), with a CEMS, or with a COMS, you must develop a **Site-specific Monitoring Plan** according to the requirements in sections 63.11205(c)(1), (2) and (3) of 40 CFR. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under section 63.8(f) of 40 CFR. [Section 63.11205(c) of 40 CFR]

    a. Specific Monitoring Plan shall be developed for each installed monitoring system (CEMS, COMS, or CPMS). **Only if required by the EQB or EPA**, the owner or operator shall submit for approval the Monitoring Plan, starting 60 days before the initial evaluation of operation of CMS. Facility monitoring systems operated under the provisions contained in Part 60 Appendix B and comply with the

requirements of section 40 CFR 63.11224 **do not have** to meet the requirement to develop and submit a specific Monitoring Plan. [Section 63.11205 (c) (1) of 40 CFR]

b. Installing the sampling port CMS or some other means to take samples at some point on each processing unit affected, so that the samples are representative of the emissions output after they leave, if any, the last team emission control. [Section 63.11205 (c) (1) (i) of 40 CFR]

25. The owners or operators affected boiler, **new or reconstructed**, that only burns oil with a sulfur content of no more than 0.50% by weight or that burns oil with a sulfur content of no more than 0.50% by weight mixed with other authorized fuels, which are not subject to the emission limits for particulate matter (PM) and that do not use post-combustion technology (excluding scrubbers or "scrubbers") for reducing particulate matter or emissions of $SO_2$, **shall monitor and monthly record** the type of fuel used, and **will not be subject** to the PM emission limits of Table 1 of subpart JJJJJJ. If the permittee intend to burn a new type of fuel or fuel mixture that does not meet the requirements, the permittee shall conduct a performance test within 60 days of burning the new fuel.[8] [Section 63.11210(e) of 40 CFR]

26. Initial compliance requirements for affected boilers that demonstrate compliance with any emission limits of Subpart JJJJJJ through performance (stack) testing includes:

    a. Performance tests according to the established procedures in section 63.11212 and Table 4 of Subpart JJJJJJ.

    b. Conducting a fuel analysis for each type of fuel burned in your boiler according to the established procedures in section 63.11213 and Table 5 of Subpart JJJJJJ.

    c. Establishing operating limits according to section 63.11222 and Table 6 of Subpart JJJJJJ.

    d. Conducting CMS performance evaluation according to section 63.11224 of 40 CFR.

    For affected boilers that burn a single type of fuel, you are exempted from the compliance requirements of conducting a fuel analysis for each type of fuel

[8] To burn a new fuel, the permittee shall request and obtain a modification to the construction permit for this boiler, before burning in it.

burned in your boiler. For purposes of the subpart JJJJJJ, boilers that use a supplemental fuel only for startup, unit shutdown, and the supplemental fuel is not subject to the fuel analysis requirements under section 63.11213 and Table 5 of Subpart JJJJJJ. [Section 63.11211(a) of 40 CFR]

27. The permittee shall conduct each stack test according to the requirements in Table 4 of Subpart JJJJJJ. Boilers that use a CEMS for carbon monoxide (CO) are exempt from the initial CO performance testing in Table 4 to the subpart JJJJJJ and the oxygen (O2) concentration operating limit requirement specified in Table 3 to the Subpart JJJJJJ. [Section 63.11212(b) of 40 CFR]

28. To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A-7, to parte 60 of chapter 40 to convert the measured PM concentrations and the measured mercury (Hg) concentrations that result from the performance test to pounds per million Btu heat input emission rates. (lbs/MMBtu). [Section 63.11212(e) of 40 CFR]

29. The owners or operators of affected boilers that have a heat input capacity of **10 MMBtu/hr or more,** must conduct all applicable performance (stack) tests according to 63.11212 on a **triennial** basis, except as specified in sections 63.11220(b), through (d) of 40 CFR. Triennial performance test must be completed no more than 37 months after the previous performance test. [Section 63.11220(a) of 40 CFR]

30. All monitoring system and collect data required in Subpart JJJJJJ, shall be according to section 63.11221 of 40 CFR and the site-specific monitoring plan required by 63.11205(c) of 40 CFR. [Section 63.11221 of 40 CFR]

31. The permittee shall submit a signed statement in the Notification of Compliance Status (NCS) report, required by section 63.11225(a)(4) of 40 CFR, that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available. [Section 63.1123(g) of 40 CFR]

32. All continuous monitoring systems required in Subpart JJJJJJ must be installed, operated, and maintained according to section 63.11224 of 40 CFR.

33. The owners or operators of the affected boilers must submit the notifications, information and maintain records as required in section 63.11225 of 40 CFR.

a. An **Initial Notification** shall be submitted no later than January 20, 2014, or within 120 days after the source becomes subject to Subpart JJJJJJ. [Section 63.11225(a)(2) of 40 CFR]

b. A **Notice of Compliance Status** (NCS) shall be submitted no later than 120 days after the compliance date set forth in section 63.11196 40 CFR, unless he is required to perform a stack test. The owners or operators who have to perform a stack test subject the NCS 60 days after completion of the test of fire. [Section 63.11225(a)(4) of 40 CFR]

c. The Notification of Compliance Status shall be submitted electronically using the CEDRI (Compliance and Emissions Data Reporting Interface) application under the CDX program of EPA. The application can be accessed through the internet address www.epa.gov/cdx. However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted at the appropriate address listed in section 63.13 of 40 CFR. [Section 63.11225(a)(4)(vi) of 40 CFR]

d. The permittee shall prepare, by **March 1 of each year**, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the request, an annual compliance certification report for the previous calendar year containing the information specified in sections 63.1125(b)(1) through (4) of 40 CFR. You must submit the report by March 15 if you had any deviation from the applicable requirements in Subpart JJJJJJ, upon request by the EQB. [Section 63.11225(b) of 40 CFR]

e. All records required by Subpart JJJJJJ must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means than instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years. [Section 63.11225(d) of 40 CFR]

34. The permittee shall comply with the general provisions of Sections 63.1 through section 63.15 that apply, which are included in Table 8 of this Subpart JJJJJJ of 40 CFR.

## VII. Applicable requirements for the emergency engines of the Emergency Electrical Generator and Fire Pumps of unit EU-67:

1. The maximum operating hours for the emergency engines in unit EU-67 shall not exceed the hourly operating limits established in the following table for each engine according to each referred construction permit. In order to maintain the emergency use category as specified in 40 CFR Part 63 Subpart ZZZZ, each engine is authorized to operate for a maximum of 100 hours per calendar year for any of the combination of the purposes specified in 40 CFR §63.6640(f)(2)(i) through (iii), and up to 50 hours of operation in non-emergency situations, as specified in 40 CFR 63.6640(f)(4). The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in section 63.6640(f)(2) of the 40 CFR, whereas these 100 hours of operation shall be counted as part of the hours of operation limited in the construction permit, as follows:

| Internal Combustion Engine | Maximum Operation Hours per Year | Limit established in: |
|---|---|---|
| EU67-P1 Marilyn | 500 | PFE-17-0198-0099-II-C |
| EU67-P2 Hortensia | 500 | PFE-17-0198-0099-II-C |
| EU67-P3 Visitor Center | 500 | PFE-17-1005-1780-II-C |
| EU67-P4 Distillery | 500 | PFE-17-0699-0795-I-II-C |
| EU67-P5 Information System | 500 | PFE-17-0802-1391-I-II-C |
| EU67-P6 Elevator | 500 | PFE-17-1289-1078-I-II-O |
| EU67-P7 Palo Seco | 500 | PFE-17-0997-1065-II-C |
| EU67-P8 | 500 | PFE-17-1289-1078-I-II-O |
| EU67-P9 | 500 | PFE-17-0500-0853-I-II-C |
| EU67-P10 | 500 | PFE-17-0500-0853-I-II-C |
| EU67-P11 | 500 | PFE-17-1289-1078-I-II-O |

| Internal Combustion Engine | Maximum Operation Hours per Year | Limit established in: |
|---|---|---|
| EU67-P12 | 500 | PFE-17-1289-1078-I-II-O |
| EU67-P13 | 500 | PFE-65-0209-0053-I-C |

2. A non-resettable hours meter shall be operated and maintained for each internal combustion engine included in the table above to verify the hours of operation and the fuel consumption.

3. The maximum sulfur content in the diesel fuel to be oxidized in the internal combustion engines shall not exceed 0.2% by weight for the units EU67:P1, P2 and P4, 0.5% by weight for units EU-67: P-3, P5, P6, P7, P8, P10, P11 and P12; and 0.0015% by weight for unit EU67-P13.

4. The permittee shall maintain monthly records of hours of operation, the reason (purpose of operation; emergency, nonemergency, maintenance, demand response, etc.) for operation, daily fuel consumption and the sulfur content (percent by weight) in the fuel for each engine. The registered schedule in the hours meter will be used to calculate the base cumulative consumption per month. The calculation of fuel consumption during any consecutive 12-month period shall be calculated by adding the monthly fuel consumption. The records shall be kept available at any times at the facility for the revision of the technical personnel of the Board.

5. The permittee shall submit to the Board a semiannual report indicating the monthly consumption of fuel and the sulfur content for each engine. The report that covers the period of January to June shall be submitted no later than October 1 of the same year and the report that covers the period of July to December shall be submitted no later than April 1 of the following year. Once the guidelines are developed by the Board, these same guidelines shall be used to complete these reports. These as well shall be delivered to the attention of the Data Validation Division and Mathematical Modeling Area of the Quality of Air. Maintain a copy of these reports at all times at the installation to be reviewed by technical personnel of the Board.

6. In case the internal combustion engines listed in Section II of this authorization are reconstructed, they must comply with the applicable requirements of 40 CFR, Part 60, Subpart IIII (for *CI engines*), where applicable. This may implicate limits more strict in the quantity of sulfur in the fuel.

**National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63 Subpart ZZZZ)**

7. The engines of unit EU-67, with exception of unit EU67-P13, are affected by specific requirements under 40 CFR, Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE NESHAP), as defined in section 63.6585(a) of 40 CFR, to which all aplicable requirements are to be met of said regualtions on or before **May 3, 2013**.

8. According to Table 2d of Subpart ZZZZ, the permittee shall:

   a. change oil and filter of each engine every 500 hours of operation or annually, whichever comes first;

      i. Sources have the option to utilize an oil analysis program as described in section 63.6625 (i) of 40 CFR in order to extend the specified oil change requirement in Table 2d in Subpart ZZZZ.

   b. inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

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

9. In accordance with 40 CFR §63.6625, the permittee shall:

   a. operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

   b. install a non-resettable hour meter, if one is not already installed.

   c. minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

10. In accordance with 40 CFR §63.6605 the engine must operate in a manner that minimizes emissions.

11. In accordance with 40 CFR §63.6640 the permittee must operate and demonstrate continuous compliance with the emissions and operating limitations and work or management practices contained in Table 6 of the Subpart.

12. To maintain the emergency engine category the permittee shall comply with the limitations in use and operations contained in 40 CFR §63.6640(f). For any engine operation that does not meet these requirements, the engine will not be considered an emergency engine under the Subpart ZZZZ, and must meet all requirements for *non-emergency* engines.

13. The permittee shall maintain all applicable records established according to 40 CFR §63.6655(f).

    a. Keep records of the hours of operation of the engine that is records through the non-resettable hour meter.

    b. Document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

    c. If the engine is used for purposes specified in 40 CFR §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep record of the notification of the emergency situation, and the date, start time, and end time of the engine operation for these purposes

14. The permittee shall comply with the **General Provisions** in sections 63.1 through 63.15 where applicable, which are included in Table 8 to the Subpart ZZZZ of 40 CFR.

**Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60 Subpart IIII)**

**For engine EU67-P13:**

15. In accordance with Section 63.6590 (c) of 40 CFR, the EU67-P13 engine must meet the requirements of Subpart ZZZZ, by meeting the requirements of 40 CFR Part 60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines). All applicable requirements under Subpart IIII must be complied with.

16. In accordance with Section 60.4205(c) of 40 CFR, the engine shall comply with the applicable emission standards in Table 4 of Subpart IIII , for all pollutants: According to Table 4, the engine may not exceed the following emissions:

    a. 7.8 g/HP-hr for NMHC + NOx

    b. 2.6 g/HP-hr for CO, and

    c. 0.40 g/HP-hr for PM

17. The permittee must operate and maintain this engine that achieve the emission standards required **in condition 16** of this section over the entire life of the engine. [40 CFR Section 60.4206]

18. According to section 60.4207 (b) of 40 CFR, the permittee must use diesel fuel that meets the requirements of 40 CFR Section 80.510 (b). This is,

    a. The maximum sulfur content in the fuel shall not exceed 15 ppm or 0.0015% by weight.

    b. The cetane index shall not be less than 40 or aromatic content shall not exceed 35% by volume.

19. The permittee must meet the requirements of section 60.4208(h) and (i) of 40 CFR.

20. The permittee shall comply with the monitoring requirements of Section 60.4209 (a) of 40 CFR. A non-resettable hour meter must be installed prior to startup of the engine.

21. The permittee shall comply with the requirements pursuant to section 60.4206 and section 60.4211 (a), (b), (f) and (g) of 40 CFR.

    a. The permittee must operate the engine according to the requirements in paragraph (f) of section 60.4211, to be considered an emergency stationary ICE under this Subpart. If this engine is not operated in accordance with the requirements in paragraph (f) of section 60.4211, the engine will not be considered as an emergency engine under this Subpart and must meet all requirements for non-emergency engines.

22. The permittee shall comply with the test methods and other procedures of 40 CFR section 60.4212, where applicable.

23. The permittee shall comply with the notification requirements, reports and maintenance records applicable under section 60.4214 (b) and (d) of 40 CFR, where applicable.

24. The permittee will comply with the general provisions of Sections 60.1 through section 60.19 which apply, that are included in Table 8 Subpart IIII of 40 CFR.

**VISIBLE EMISSIONS LIMIT UNIT EU-67:**

25. The permittee shall not exceed the opacity limit of 20% in 6 minutes average for engines in this unit. Nevertheless, the permittee may discharge into the atmosphere visible emissions of an opacity up to 60% for a period of no more than four (4) minutes in any consecutive thirty (30) minutes interval. [Rule 403 (A) of the RCAP]

26. The permittee shall contract an independent opacity reader, certified in a school approved by EPA or EQB, to perform one (1) opacity reading to each stack of each engine unit during the first year of the permit using Method 9 established under 40 CFR part 60, Appendix A. The engine shall be operating at the time of the performance of the opacity readings.

27. The permittee shall submit to the Board, a copy of the format to be used to record the reading of visible emissions at least thirty (30) days prior to the reading of the initial opacity reading.

28. The permittee shall notify in writing the Board at least fifteen (15) days of prior of the initial reading of Method 9, to allow the Board the opportunity to have an observer present. [Rule 106 (D) of the RCAP]

29. Two (2) copies of the report of the initial reading under Method 9 shall be submitted by the permittee within 60 days after the tests. This report shall contain the information required in Rule 106 (E) of the RCAP.

**VIII - Requirements applicable to the Fermentation Process EU-3:**

**A. Design Capacity**

1. The design capacity for fermentation tanks is 55,000 gallons. [PFE-17-0699-0795-I-II-C]

2. The permittee shall properly maintain fermentation tanks. The maintenance that shall be given to tanks and their accessory equipment shall be in accordance with the manufacturer's recommendations and in accordance with the best engineering practices.

3. The permittee shall keep documents establishing the dimensions and capacity of the tanks.

4. The documentation on the design of equipment, tanks or emission control equipment will remain at the facility until the equipment is replaced or until it is taken out of service permanently.

**B. Maximum Operation Hours**

1. The fermentation process is limited to operate 365 days a year [ PFE-17-0597-0558-IC]

2. The permittee shall prepare and maintain a daily record of the hours of operation for the fermentation process. It shall be kept available at any time for inspection by EQB and EPA personnel. [PFE-TV-2085-17-0397-0031]

3. Maintain a monthly record with gallons per day and the days when each of the 20 tanks is loaded with raw material (molasses) to be fermented. It shall be kept available at any time for inspection by EQB personnel. [PFE-17-0699-0795-I-II-C]

**C. Efficiency Test for the Control Equipment**

1. The scrubber, model 24-180, shall reach a minimum efficiency of 95% for ethanol emissions removal.[PFE-17-0597-0558-IC]

2. The permittee shall perform an efficiency test to verify a 95 % efficiency of removal for the scrubber. The test shall be performed no later than 180 days from the date of approval of this permit.

3. The permittee shall submit to EQB a test protocol for the efficiency test at least 30 days prior to the start of the test as determined by Rule 106 (C) of the RCAP.

4. The permittee shall provide the Board a written notification at least 15 days prior to the efficiency test to afford the EQB the opportunity to have an observer present as determined by Rule 106 (D) of the RCAP.

5. The permittee shall submit a final report within 60 days after the performance of the efficiency test as determined by Rule 106 (E) of the RCAP.

**D. Calibration Instruments and Maintenance**

1. The control equipment operation will be performed in accord with the results obtained by the efficiency test to guarantee the control efficiency for ethanol.

2. The permittee shall calibrate the scrubber flux and temperature meters every 6 months.

3. In order to verify compliance, the permittee shall keep the records for each calibration. The calibration data and methodology shall be kept on file at the facility for a period of five years.

4. The permittee shall keep a daily record for the preventive maintenance and operation conditions (water flux rates and temperatures) of the scrubber in accord with the results obtained from the efficiency test.

5. The records required under **conditions 3 and 4** of this section shall be kept available at any time for inspection by EQB and EPA personnel.

## IX. Applicable Requirements to Storage Tanks /Tank Farms

**A. Operational Conditions:**

1. The permittee shall not exceed the maximum ethanol storage throughput (gallons per year), the volume percent ethanol in the batch, mass fraction of ethanol and VOC emissions in the tanks specified in Section II of this permit. [PFE-17-0703-1082-I-II-C]

2. The permittee can store at any time a lower proof alcoholic content in tanks specified in Section II of this permit. [PFE-17-0703-1082-I-II-C]

3. The permittee shall record monthly the identity of ethanol and load out to tanks (gallons) given to each storage tank, the method of delivery and the transfer time for each liquid tank, characteristics of the tank and calculations for monthly emissions. [PFE-17-0410-0250-I-C; PFE-17-0699-0795-I-II-C]

4. The permittee shall visually inspect the tanks at least once a year to try to identify defects that could result in air emissions of atmospheric pollutants. The defects include, but are not limited to: visible cracks, holes or openings in the ceiling or between ceiling and the tank walls, seals or gaskets in closure devices are broken or cracked, and doors, gates or closure apparatus' that are broken, cracked or not in the tank. [PFE-17-0410-0250-I-C]

5. If any defects are found during inspections of the tanks, there will first be an attempt to repair it within five (5) days of finding the defect. The final repair shall be completed within forty-five (45) days after finding the defect, unless the permittee demonstrates to the satisfaction of the Board that the repair cannot be made within this period without emptying the tank and there is no alternate storage capacity at the facility. [ PFE-17-0410-0250-I-C]

6. The permittee shall maintain records of inspections of tanks, which shall include, but not be limited to, the following information: date and time of the inspection and whether or not a defect was found in the tanks. For those tanks which were found to be defective, they must register: the identification of the tank, the date the defect was detected, location of the default, corrective action taken, if there was delay in repairing the defect, when the repair is completed. [PFE-17-0410-0250-I-C]

7. The permittee shall monitor the quantities of ethanol transferred during each delivery, the delivery method used to transfer ethanol from the barge or truck to the storage tank and the transfer time required to complete the transfer. [PFE-17-0410-0250-I-C]

8. The permittee shall not place, store or hold in any stationary tank, reservoir, or other container of more than 40,000 gallons capacity of any VOC compounds, unless such tank, reservoir or other container is a pressure tank capable of maintaining working pressures sufficient, under normal operating conditions, to control vapor or gas loss to the atmosphere, or unless it is equipped with: a floating roof as specify in Rule 417 (A) of RCAP, a vapor recovery system as specify in Rule 417 (B) of RCAP, and any other federal applicable requirements.

9. Compliance of the above condition is exempted for the following: [PFE-TV-2085-17-0397-0031]

    a. Storage of any liquid having no photochemical reactivity (including those compounds listed under the definition of VOC) and/or having a true vapor pressure less than 0.75 pounds per square inch.

    b. Tanks that treat wastewater permitted under the Clean Water Act and exempted by rule from Resource Conservation and Recovery Act.

10. Exemptions based on vapor pressure shall be demonstrated with calculations using Antoine's equation and the average liquid surface temperature. [PFE-TV-2085-17-0397-0031]

**B. Load Limit of ethanol in tanks EU-42 and EU-64:**

1. Tank 700 with 700,000 gallons capacity shall only be used for storage of ethanol 191° proof ( 95.5 % alcohol by volume) or less. [PFE-17-0699-0795-I-II-C]

2. The maximum permitted storage of ethanol in EU-42 shall be 13.16 million gallons per year. [PFE- 17-0699-0795-I-II-C]

3. The four tanks of 110,000 gallons each shall only be used for storage of 140 proof ethanol. The maximum permitted storage is 2,000,000 gal/year each. The diameter of each tank is 28 feet and the height is 24 feet. The volume of liquid does not exceed 105,942 gallons in each. [ PFE-17-0410-0250-I-C]

**X. Applicable Requirements to Distillation Columns, Process filling/emptying barrels, Area for Filling tanks and $CO_2$ Recovery Plant:**

1. The permittee shall maintain a monthly record with gallons per day charged to each emission unit (distillation columns, filling and emptying barrels and filling truck tanks) included in this permit. The record shall be kept available at any times for inspection by the EQB personnel. [ PFE-17-0703-1082-I-II-C]

**A. VOC Emission Limit:**

1. According to Rule 419 of the RCAP, the permittee shall not permit the emission of 3 pounds per hour or 15 pounds per day of ethanol in any article, machine, equipment or any other contrivance unless it is provided with an acceptable control system, pollution prevention and reductions mechanism or programs or both, as approved or required by the Board. [State only enforceable condition]

2. The permittee shall provide acceptable control systems for these units or establish a program of prevention and reduction of ethanol emissions no later than 180 days from the date of approval of this permit.

3. A semiannual VOC report of emissions in pounds per hour and pounds per day must be submitted to the Board to demonstrate compliance with emission limit VOC Rule 419 of the RCAP. The report that covers the period from January to June must be submitted no later than October 1 of the same year and the report covering the period from July to December must be submitted no later than April 1 of next year.

4. If you need to increase the consumption with VOC substances within this unit that may affect these values or another unit using VOCs, the permittee must

apply for and obtain a construction permit revision, along with a demonstration of compliance with the VOC limit for said unit before performing the increase.

**B. Distillation Column EU- 65:**

1. The permittee shall not exceed the maximum processed amount of 8,000 liters per day of ethanol and 140 proof specified in Section II of this authorization. [PFE-17-0912-0667-I-C]

2. This permit authorizes only the emissions expelled into the air (vent) during startups of the distillation column EU- 65. These events should not exceed 18.6 days per year (at a rate of 5.73 lb /day VOC). [ PFE-17-0912-0667-I-C]

3. Maintain a monthly record with liters per day loaded into the distillation column EU- 65 and the events of venting the distillation column included in Section II of this permit. The record shall be available at any times for inspection by the EQB personnel. [ PFE-17-0912-0667-I-C]

**XI. Applicable Requirements to the Normal Flare and Emergency Flare CD-2 and CD-3:**

**A. Operational Conditions:**

1. The emergency flare shall be used when the normal flare is not operating, in which case the net increase in emissions of sulfur dioxide generated by burning biogas will be zero. [ PFE-17-0703-1082-I-II-C]

2. The emergency flare may operate simultaneously with the normal flare so that the net increase in emissions from the operation of the normal flare does not exceed the potential emissions to 35 tons per year of sulfur dioxide. This is equivalent not to oxidize more than 23.10 x $10^6$ cubic feet of biogas per year. [PFE-17-0703-1082-I-II-C]

**B. Visible Emissions Limit:**

1. The permittee shall operate the flares without visible emissions as determined in Method 22, established under 40 CFR Part 60, Appendix A. Nevertheless, the permittee shall emit visible emissions for a period no greater than five minutes in total in any period of two consecutive hours. [ PFE-17-0703-1082-I-II-C]

2. The permittee shall perform a daily visible emissions inspection, every time that the emission sources are in operation. These inspections shall consist in a daily observation of the flares for a period of two minutes to determine if there are visible emissions present, excluding water vapor. The observer shall select a position of at least 15 feet, but less than 0.25 miles of the source. The sun light

shall not focus directly in the observer's eyes. If emissions are observed, the permittee shall do the following: [PFE-17-0703-1082-I-II-C]

a. Verify that the equipment and/or control equipment that is responsible of the visible emissions is operating according to the manufacturer's specification and the conditions of this permit. If it is not operating properly, corrective action should be taken immediately to eliminate the excess of emissions.

b. If the corrective actions do not correct the visible emissions problem 24 hours, the permittee shall perform a visible emissions reading following Method 22 of the 40 CFR 60, Appendix A. The permittee shall hire during the next 48 hours after the violation, an independent opacity reader properly certified by EQB to perform these tests. The tests shall be performed every working shift until the problem has been corrected.

c. Any deviation must be reported to the EPA board within 24 hours.

3. The permittee shall submit to EQB and EPA a copy of the visible emission readings report every 60 days of each reading. [PFE-17-0703-1082-I-II-C]

4. A copy of all daily visible emissions readings records performed according **to condition 2** of this section must be submitted every 6 months [PFE-17-0703-1082-I-II-C]

**C. Biogas Oxidation Limit:**

1. The limit of oxidation of biogas for the two flares will be $6.11 \times 10^8$ cubic feet for any period of 12 consecutive months. If the productions of biogas increases, then the construction permit shall be modified to account for the increase in emissions. [PFE-17-0703-1082-I-II-C]

**D. $H_2S$ Emission Limit**

1. As specified under Rule 411 of the RCAP, the permittee shall not cause or permit the emission of hydrogen sulfide ($H_2S$), which would causes ground level concentrations equal to or greater than 0.1 ppm in any one-hour or 0.03 ppm in any 24 hour period.

2. The permittee shall install a continuous monitoring system for $H_2S$ concentration at ground level no later than nine months after the effective date of this permit. [PFE-TV-2085-17-0397-0031]

3. The permittee shall record the concentrations continuously to verify compliance with the one hour and 24 hours concentration limits. [ PFE -TV- 2085-17-0397-0031 ]

4. The permittee shall submit, within 15 days of the month following the one being reported, a monthly report indicating the average daily hydrogen sulfide concentrations, the exceedances of concentrations (ppm/hour and ppm/24 hours) the reason of the exceedance, duration and action taken to correct the exceedance. [PFE-TV-2085-17-0397-0031]

5. The permittee shall submit, with each annual compliance certification, a copy of all reports for that year indicating the average of the actions taken to correct the exceedance. [PFE-TV-2085-17-0397-0031]

6. The permittee will have the opportunity to demonstrate to the Board satisfaction, that the concentration of $H_2S$ will not exceed 0.1 ppm in any one-hour period or 0.03 ppm in any 24-hour period. This demonstration shall be submitted to the Board no later than 30 days after the effective date of this permit.

## XII. Applicable Requirements for the Sulfur Recovery Plant

### A. $SO_2$ Emission Limit:

1. As specified under Rule 414 of the RCAP, the permittee shall not cause or permit the emission of sulfur oxides, calculated as sulfur dioxide ($SO_2$) from a sulfur recovery plant, in excess of 0.10 pounds per pound of sulfur processed.

2. The permittee shall submit, within 15 days of the month following the one being reported, a monthly report indicating the amount of sulfur processed and $SO_2$ emission calculations based on the AP-42 emission factors for sulfur recovery (Section 8.13).

3. The permittee shall submit semi-annually copies of the reports for that period of six months, indicating the amount of sulfur processed in the unit and a copy of the calculations of $SO_2$ emissions in tons per year. The report that covers the period from January to June must be submitted no later than October 1 of the same year and the report covering the period from July to December must be submitted no later than April 1 of next year.

## XIII. Applicable Requirements for Control Equipment

1. The permittee shall install, operate and maintain temperature indicators in the condensers according to the manufacturer's specifications. Temperature gauges should be calibrated every six months according to the manufacturer's specifications. [PFE-17-0703-1082-I-II-C]

2. The permittee must install, operate and maintain flow meters in all scrubbers included as control equipment in this permit. These flow meters should be calibrated every six months or according to the manufacturer's recommendations, whichever comes first. The permittee shall maintain calibration records available at all times for review by Board personnel. [PFE-17-0703-1082-I-II-C]

3. Maintain copies of calibrations and inspections of control equipment and maintain records of all incidents of control equipment shutdowns if the process continues operating. The reports should be available to the EQB personnel. [PFE-17-0703-1082-I- II-C]

## XIV. New Blending Process

1. The maximum allowable annual production for the project of New Blending Facilities shall be 40,000,000 proof gallons of ethanol per year. [PFE-17-0410-0250-I-C]

2. The permittee shall monitor the quantities of ethanol transferred during each delivery, the delivery method used to transfer ethanol from the barge or truck to the storage tank and the transfer time required to complete the transfer. [PFE-17-0410-0250-I-C]

3. The permittee shall not exceed the ethanol processing limits for each tank (gallons/year), as established in Section II of this permit. The diameter of each tank and the liquid volume does not exceed the provisions in Table I (Appendix II(A)(2)) as part of this authorization. [PFE-17-0410-0250-I-C]

4. The permittee shall keep a monthly record with the identity of ethanol and loads to the tanks (gallons) given to each storage tank, the method of delivery and the transfer time for each liquid, tank features and calculations for the monthly emissions. The record shall be available at all times for inspection. [PFE-17-0410-0250-I-C]

5. The permittee shall visually inspect the tanks at least once a year to try to identify defects that could result in air emissions of air pollutants. The defects include, but are not limited to: visible cracks, holes or openings in the ceiling or between ceiling and the tank walls, seals or gaskets in closure devices are broken or cracked, and doors, gates or closure apparatus is broken, cracked or not in the tank. [PFE-17-0410-0250-I-C]

6. If any defects are found during inspections of the tanks, there will first be an attempt to repair it within five (5) days of finding the defect. The final repair shall be completed within forty-five (45) days after finding the defect, unless the permittee demonstrates to the satisfaction of the Board that the repair cannot be made within this period without emptying the tank and there is no alternate storage capacity at the facility. [PFE-17-0410-0250-I-C]

7. The permittee shall maintain records of inspections carried out at the tank, which must include, without limitation, the following information: date and time of the inspection and whether or not a defect was found in the tanks. For those tanks which were found to be defective, they must register: identification of the tank, date when the defect was detected, location of the defect, corrective action taken, if there was delay in repairing the defect, and date it was completed repair. [PFE-17-0410-0250-I-C]

8. VOC emission limit:

   a. As determined by Rule 419 of the RCAP, the permittee shall not permit the emission of 3 pounds of volatile organic compounds (ethanol) in any one hour, no more than 15 pounds in any day from an article, machine, equipment or any other contrivance unless it is provided with a control system, pollution prevention and reductions mechanism or programs or both, as approved or required by the Board. [State-only enforceable condition]

   b. The permittee shall submit to the Board a semiannual report of VOC emissions in pounds per hour and pounds per day to demonstrate compliance with the emission limit of VOC, Rule 419 of the RCAP. The report which covers the period from January to June must be submitted no later than October 1 of the same year and the report covering the period from July to December must be submitted no later than April 1 of next year.

   c. If the permittee needs to increase the consumption of VOC substances within this unit that may affect these values or another unit using VOCs, the permittee shall apply for and obtain a construction permit revision, along with a demonstration of compliance with the VOC emission limit before performing an increase.

9. The permittee shall provide acceptable control systems for emission units listed in Section II of this permit, or establish a program of prevention and reduction of emissions of ethanol no later than 180 days after the granting of this permit. [PFE-17-0410-0250-I-C]

10. The permittee shall not place, store or hold in any stationary tank, reservoir, or other container of more than 40,000 gallons capacity of any VOC, unless such tank,

reservoir, or other container is a pressure tank capable of maintaining working pressures sufficient, under normal operating conditions, to control vapor or gas loss to the atmosphere, or unless it is designed and equipped with a floating roof as indicated in Rule 417 (A) of the RCAP, a vapor recovery system as indicated in Rule 417 (B) of the RCAP and any other applicable federal requirement. [PFE-17-0410-0250-I-C]

11. Compliance with the above condition is exempt for the following: [PFE-17-0410-0250-IC]

    a. Storage of any liquid having no photochemical reactivity (including those compounds listed under the definition of VOC) and/or having a true vapor pressure less than 0.75 pounds per square inch (psia).

    b. Tanks that treat waste water permitted under the Clean Water Act and exempted by rule from the Resource Conservation and Recovery Act.

12. Exemptions based on vapor pressure are demonstrated with calculations using Antoines equation and the average temperature of the liquid surface. [PFE-TV-2085-17-0410-0250-I-C]

13. The permittee shall test the efficiency of the scrubbers included in Table I (Appendix II(A)(2) of this authorization. Each scrubber must achieve a minimum efficiency of 95% ethanol to remove emissions. The test shall take place no later than 180 days after ending the transition process and the start of operations of the emission source control. [PFE-17-0410-0250-I-C]

14. The permittee shall submit to the Board at least protocol test for efficiency 30 days before the start date of the test, under Rule 106 (c) of the RCAP. [PFE-17-0410-0250-I-C]

15. The permittee shall send a written notice 15 days before the test so that the Board can appoint an observer under Rule 106 (D) of the RCAP. [PFE-17-0410-0250-I-C]

16. The permittee shall submit a final report within 60 days following the date of completion of sampling under Rule 106 (E) of the RCAP. [PFE-17-0410-0250-I-C]

17. In accordance with Rule 603 (a)(4)(ii) of the RCAP, the permittee shall retain records of all required monitoring data and supporting information for a period of 5 years from the sample date, measurement, report or sampling application.[PFE-17-0410-0250-I-C]

18. The operation of the control equipment will be conducted in accordance with the results obtained from the approved efficiency to ensure efficient control of ethanol. [PFE-17-0410-0250-I-C]

19. The permittee shall calibrate flow and temperature meters that are part of the scrubbers every 6 months. [PFE-17-0410-0250-I-C]

20. To demonstrate compliance, the permittee shall keep a record of each calibration, data and calibration methodology should be kept on file at the facility for a period of five years. [PFE-17-0410-0250-I-C]

21. The permittee shall keep a daily log of preventive maintenance and operating conditions (water flow rates and temperature) of the scrubber according to the results of the efficiency test. [PFE-17-0410-0250-I-C]

22. All records required under this authorization must be available at the facility at any times for inspection by Board and the EPA personnel. [PFE-17-0410-0250-I-C]

**Section VI – Transition Process**

1. The Process of transition for existing emission units to the emission units of EU-68 (New Blending Facilities), authorized in Section II of this permit (new units) will last approximately three years after having given complete mechanical installation of new equipment. During the first two years, the permittee will be making the transfer and boot manufacturing processes in the new units. The same is carried out in compliance with all design specifications and quality. [PFE-17-0410-0250-I-C]

2. During the transition period **Bacardi Corporation**, may operate existing emission units and new units (EU-68) simultaneously provided do not exceed potential emissions allowed for existing units (44.35 tons per year of VOC) in any period of twelve consecutive months. [PFE-17-0410-0250-I-C]

3. The permittee shall keep a monthly record with the identification of the tanks either existing and/or new, identity of ethanol, loads (in gallons) given to each storage tank, delivery method, characteristics of tank and emission calculations. [PFE-17-0410-0250-I-C]

4. During the transfer process, the permittee shall visually inspect the tanks at least once a month to try to identify defects that could result in air emissions of air pollutants. The defects include, but are not limited to: visible cracks, holes or openings in the ceiling or between ceiling and the tank walls, seals or gaskets in closure devices are broken or cracked, and doors, gates or closure apparatus is broken, cracked or not in the tank. [PFE-17-0410-0250-I-C]

5. If a defect is found during inspections of tanks, the first attempt to repair as soon as possible must be performed, but no later than five (5) calendar days after finding the defect. The final repair shall be completed within fifteen (15) days after the defect has

been detected unless the permittee demonstrates to the satisfaction of the Board that the repair cannot be made within this period without emptying the tank and there is no capacity alternative of storage at the facility. [PFE-17-0410-0250-I-C]

6. The permittee shall maintain records of inspections carried out at the tank, which must include, without limit, the following information: date and time of the inspection and whether or not a defect was found in the tanks. For those tanks which were found to be defective, they must register: identification of the tank, date when the defect was detected, location of the defect, corrective action taken, if there was delay in repairing the defect, and date it was repaired. [PFE-17-0410-0250-I-C]

7. Once the new emission units are fully mechanically installed, the permittee shall notify in writing to the Board no later than 30 calendar days. [PFE-17-0410-0250-I-C]

8. Once the transfer and commencement process on new units is finalized, **Bacardi Corporation** must notify in writing to the Board no later than 30 calendar days. [PFE-17-0410-0250-I-C]

9. Once the transfer and commencement processes are finalized, the permittee shall have one year to eliminate existing emission units through demolition processes of equipment and structures. [PFE-17-0410-0250-I-C]

10. During the process of removing the existing units the permittee shall comply with the following:

    a. The permittee shall not cause or permit visible fugitive emissions beyond the boundary line of the property from which the emissions originate. [Rule 404(B) of the RCAP ]

    b. The permittee shall perform daily visual observations during the demolition operation to determine compliance with visible emission limits mentioned in **subsection a** of this section.

    c. The permittee shall maintain a record of the results of the daily visible observations. This record shall be kept accessible at any time at the facility for review of the technical personnel of the EQB and the EPA.

    d. The permittee shall use dust suppression measures, as necessary, to comply with the limits referred to in **subsection a** of this section.

    e. The permittee shall record daily every use of dust suppression equipment for demolition processes, which are manually operated and are intermittent (ex., operation of water trucks to spray roads). This record shall be kept accessible

at any time at the facility for review of the technical personnel of the EQB and the EPA.

11. The permittee must notify the Board no later than 10 calendar days of the completion of the demolition of existing units. [PFE-17-0410-0250-I-C]

**Section VII – Alternative Operating Scenarios**

**AOS 1 & AOS 2 – Use of Alcohol in boiler EU-1 and EU-2:**

1. Boilers #1 (EU-1) and #3 (EU-2) are limited to operate under the following alternative operating scenarios: [PFE-17-0505-0692-II-C]

    a. **Scenario 1:** To accommodate the use of alcohol as fuel in boilers EU-1 and EU-2, the permittee may replace 1,786 gallons of alcohol per gallon of No. 6 fuel consumption up to 475,200 gallons per year of alcohol.[9]

    b. **Scenario 2:** To accommodate the use of alcohol as fuel in boilers EU-1 and EU-2, the permittee may replace 0.006 gallons of alcohol per cubic feet of biogas consumption up to 475,200 gallons annually of alcohol.[10]

2. The consumption of alcohol as fuel allowed for Boilers #1 (EU-1) and #3 (EU-2) is 475,200 gal/year. For this exchange this requires a replacement of 266,011 gal/year of Fuel No. 6. To introduce the burning of alcohol, the permittee will be required to stop burning the aforementioned amount of fuel number 6. [PFE-17-0505-0692-II-C]

3. The permittee shall prepare a record and complete it daily for the operation of boilers EU-1 and EU-2 where the recorded hours of operation, alcohol as fuel in each boiler, sulfur (in weight percent) and any other adjustments or maintenance performed to combustion equipment shall be recorded. The record shall be available for inspection of the Board technical staff at all times. [PFE-17-0505-0692-II-C]

4. The permittee shall submit a monthly report indicating on a daily basis the amount of burned alcohols and sulfur content in weight percent. This report will be sent to the Board and to the attention of the Chief of Inspection and

[9] Refer to Scenario 1 (regular operation) in Part C - Maximum Fuel Economy Section VI - Specific Permit Conditions.
[10] Refer to Scenario 2 (regular operation) in Part C - Maximum Fuel Economy Section VI - Specific Permit Conditions.

Compliance Division of Air Quality Area, no later than the next 15 days after the end of the reporting period. [PFE-17-0505-0692-II-C]

5. The permittee shall not exceed the emission limits for boilers included in the table below. Compliance with these emission limits will be determined daily. The permittee shall calculate the total emissions of each pollutant from burning fuel No. 6 or No. 2, biogas and alcohol to each particular day and adding it to the total emissions of each pollutant of 364 consecutive days prior to showing total emissions for each contaminate not to exceed the limits listed in the table, in tons per year, during any consecutive 365 - day period. The permittee shall use the calculation methodology included in Appendix II(A)(1) to calculate the daily emissions from boilers. [PFE-17-0505-0692-II-C]

| Pollutant | Ton/year (365 day rolling period) |
|---|---|
| $PM_{10}$ | 6 |
| $SO_2$ | 609.93 |
| $NO_x$ | 102.94 |
| CO | 30.88 |
| VOC | 2.02 |

**Section VIII – Insignificant Emission Units**

A. Only included on the list are insignificant activities that are exempt by size or production rate and some may require a building permit under Rule 203 of the RCAP.

| Identification of the Emission Unit | Description (Base of exemption) |
|---|---|
| F-1 (Tank: 7,000 gal) | Appendix B (2) of the RCAP |
| F-2 (Tank: 7,000 gal) | Appendix B (2) of the RCAP |
| F-3 (Tank: 7,000 gal) | Appendix B (2) of the RCAP |
| F-4 (Tank: 7,000 gal) | Appendix B (2) of the RCAP |
| F-5 (Tank: 7,000 gal) | Appendix B (2) of the RCAP |
| P-1 (Tank: 25,500 gal) | Appendix B (2) of the RCAP |
| P-2 (Tank: 25,500 gal) | Appendix B (2) of the RCAP |
| P-3 (Tank: 25,500 gal) | Appendix B (2) of the RCAP |
| P-4 (Tank: 25,500 gal) | Appendix B (2) of the RCAP |
| P-5 (Tank: 24,900 gal) | Appendix B (2) of the RCAP |
| P-6 (Tank: 25,700 gal) | Appendix B (2) of the RCAP |
| P-8 (Tank: 6,900 gal) | Appendix B (2) of the RCAP |
| P-9 (Tank: 6,900 gal) | Appendix B (2) of the RCAP |

| Identification of the Emission Unit | Description (Base of exemption) |
|---|---|
| Fours tanks of propane storage, capacity of 1,000 gallons each. | Storage Tanks with capacity less than 10,000 gal.[Appendix B, Section 3(ii)((N) of the RCAP] |
| Tank: storage of fuel No.6 with a capacity of 508,000 gallons | Appendix B (2) of the RCAP. |
| Tank: storage of fuel No.6 with a capacity of 126,000 gallons. | Appendix B (2) of the RCAP. |
| Tank: molasses storage | Appendix B (3) (xxxiii) of the RCAP. |
| Tank: propane gas storage with capacity for 500 gallons. | Appendix B (2) of the RCAP. |
| Storage of substances: closed drum, barrels or bottles. | Appendix B (3) (xxxxiv) of the RCAP. |

**Section IX – Permit Protection**

A. In accordance with Rule 603 (D) of the RCAP, compliance with permit conditions shall be deemed compliance with any applicable requirement as of the date of permit issuance, but only if such applicable requirement is included and specifically identified in the permit. Moreover, the permittee shall be deemed in compliance with any other requirement specifically identified in the permit as a Non Applicable.

1.Not Applicable Requirements

| Code for Non-Applicability | |
|---|---|
| **Code** | **Foundation** |
| Limits for Hazardous Air Pollutants | No applicable requirements. |
| 40 CFR Part 60 Subpart D | Standards of Performance for New Sources for Steam Generators that burn Fossil Fuel. Not applicable because the boilers (EU-1, EU-2 and EU-66) are less than 250 MMBtu /hr. |
| 40 CFR Part 60 Subpart Da | Standards of Performance for New Sources of Steam Generating Units Electrical Utility. Not applicable because the boilers (EU-1, EU-2 and EU-66) are less than 250 MMBtu/hr. |

| Code for Non-Applicability | |
|---|---|
| **Code** | **Foundation** |
| 40 CFR Part 60 Subpart Db | Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. Does not apply to EU-1 because they started construction, modification or reconstruction after June 19, 1984 and does not apply to EU-66 because it does not have a heat input capacity for burned fuels at the steam generating units exceeding 100 MMBtu/hr. |
| 40 CFR Part 60 Subpart Dc | Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Does not apply to EU-1 because it did not start construction, modification or reconstruction after June 9, 1989 and for heat capacity that is greater than 100 MMBtu/hr. Does not apply to EU-2 boiler because the heat input capacity is greater than 100 MMBtu /hr. |
| 40 CFR Part 60 Subpart Kb | Not applicable to tanks used to store alcoholic beverages. It does not apply to tanks greater than or equal to 151 $m^3$ capacity to store liquid with an actual vapor pressure maximum less than 3.5 kPa or greater or equal to 75 $m^3$ but less than 151 $m^3$ when storing liquid with a real maximum vapor pressure less than 15 kPa. |
| 40 CFR Part 63 Subpart DDDDD | National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers.<br>The facility is not a Major Source for HAP. |
| 40 CFR Part 60 Subpart IIII | Standards of Performance for Stationary Compression Ignition Internal Combustion Engines<br>Does not apply to internal combustion units that were manufactured in or before the year 2005. This standard does not apply to engines EU-67-P1 to P12. |

| Code for Non-Applicability | |
|---|---|
| **Code** | **Foundation** |
| 40CFR Part 63, Subpart JJJJ | Standards of Performance for Stationary Spar Ignition Internal Combustion Engines.<br>The internal combustion engines that are authorized are not spark ignition. |

**Section X - Permit Approval**

By virtue of the authority conferred upon the Environmental Quality Board by the Public Policy Environmental Act, Law No. 416 of September 22, 2004, as amended, and after verifying the administrative record and compliance with the Uniform Administrative Procedure Act, Law No. 170, August 12, 1988, as amended, the Federal Clean Air Act, the Public Policy Environmental Act and the Regulation for the Control of Atmospheric Pollution , the Environmental Quality Board approves this permit subject to all the terms and conditions herein established.

In San Juan, Puerto Rico, today August 29, 2016.

**ENVIRONMENTAL QUALITY BOARD**

María de los Ángeles Ortiz
Alternate Member

Rebeca Acosta Pérez
Vice President

Weldin F. Ortiz Franco
President

# APPENDICES

## A. Appendix I - Definitions y Abbreviations

### A. Definitions:

1. Act - Federal Clean Air Act, as amended, 42 US7401, et seq.

2. Responsible Officer - See definition of responsible official as established in the Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board (1995).

3. Regulations - Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board.

4. Title V - Title V of the Federal Clean Air Act (42 USC 7661).

### B. Abbreviations:

| | |
|---|---|
| AP-42 | *Compilation of Air Pollutant Emission Factors* |
| EPA | Federal Environmental Protection Agency |
| Btu | British Thermal Unit |
| CFR | Code of Federal Regulations |
| CO | Carbon Monoxide |
| $CO_2e$ | Carbon dioxide equivalent |
| dscf | Dry Standard cubic feet |
| dscm | Dry standard cubic meter |
| °F | Degrees Fahrenheit |
| GHGs | Greenhouse gases |
| HAP | Hazardous Air Pollutants |
| $H_2S$ | Hydrogen sulfide |
| hp | horsepower |

| | |
|---|---|
| EQB | Environmental Quality Board of Puerto Rico |
| kPa | Pascal Kilo |
| Lb | Pounds |
| MACT | Maximum Achievable Control Technology |
| MMBtu | Millon of Btu |
| NAAQS | National Ambient Air Quality Standards |
| $NO_x$ | Nitrogen oxides |
| NSPS | New Source Performance Standards |
| PG | Proof Gallon, refers to a gallon of alcoholic spirits or equivalent containing 50% ethyl alcohol (Ethanol) by volume. |
| PM | Particulate matter |
| $PM_{10}$ | Particulate matter with particle diameter that has a size of aerodynamic mass equal to or less than ten (10) microns |
| ppm | Parts per million |
| PSIA | Unit of pressure, psia, pound per square inch |
| RICE | Reciprocating Internal Combustion Engine |
| RCAP | Regulations for the Control of Atmospheric Pollution of the Environmental Quality Board |
| RMP | Risk Management Plan |
| *SIC* | *Standard Industrial Classification* |
| SOx | Sulfur oxides |
| $SO_2$ | Sulfur dioxide |
| VOC | Volatile Organic Compounds |

# Appendix II

**Appendix II (A)(1): Methodology to calculate emissions from boilers**

A. Boilers emissions burning fuel oil No. 6

The permittee shall use the following equation to calculate the emissions:

*Tons of pollutant/ time unit = FE x F/1000/2000* where:

F = quantity of total fuel burned in gallons per unit of time.

EF = AP-42 emission factor, Section 1.3, as included in the following table:

| Pollutant | Emission Factor (lb/1000 gal) | Reference AP-42 |
|---|---|---|
| $SO_2$ | 157 (S)[9] | Table 1.3-1 |
| $NO_x$ | 55 | Table 1.3-1 |
| CO | 5 | Table 1.3-1 |
| TOC[10] | 0.28 | Table 1.3-3 |
| $PM_{10}$ | 7.17A[11] | Table 1.3-5 |
| PM filtrable[12] | 9.19(S) = 3.22 | Table 1.3-1 |
| PM condensable | 1.5 | Table 1.3-2 |

B. Boilers emissions burning fuel oil No. 2

The permittee shall use the following equation to calculate the emissions:

*Tons of pollutant/ time unit = FE x F/1000/2000* where:

F = quantity of total fuel burned in gallons per unit of time.

EF = AP-42 emission factor, Section 1.3, as included in the following table:

[9] S = % Sulfur percent
[10] Does not includes methane (NMTOC)
[11] A = 1.12(S) + 0.37 (For fuel oil No. 6)
[12] PM = PM filterable + PM condensable

| Pollutant | Emission Factor (lb/1000 gal) | Reference AP-42 |
|---|---|---|
| $SO_2$ | 142S[13] | Table 1.3-1 |
| $NO_x$ | 20 | Table 1.3-1 |
| CO | 5 | Table 1.3-1 |
| TOC | 0.252 | Table 1.3-3 |
| $PM_{10}$ | 1.00 | Table 1.3-6 |
| PM filtrable | 2 | Table 1.3-1 |

C. Emissions from biogas burning

1. The permittee shall use the following equation to calculate the emissions:

   *Tons of pollutant/ time unit = EF /2000 x F x H* where:

   F = total fuel burned in standard cubic feet (scf) per unit of time.

   H = heating value of the gas burned, in MMBtu by scf.

   EF = emission factor [lb/MMBtu]

2. The permittee shall use the following equation to calculate the $SO_2$ emissions:

   *Emission Factor for $SO_2$* [lb/MMBtu] = S[14]/100 x (64[15]/32[16]) x $10^6$/4,100 Btu[17]/lb

   where:

   *S* = sulfur concentration in biogas, in percent by weight.

3. For the other criteria pollutants, the permittee shall use the emissioms factors provided by pollutant, and included in the following table:

| **Pollutant** | **Emission Factor (lbs/MMBtu)** |
|---|---|
| $NO_x$ | 0.10 |
| CO | 0.25 |

[13] S = % sulfur percent by weight
[14] S = concentration of sulfur in biogás, in percent
[15] 64 = molecular weight of $SO_2$
[16] 32 = molecular weight of sulfur
[17] 4,100 = heating value of the biogas in Btu/lb (504.6 Btu/scf)

| Pollutant | Emission Factor (lbs/MMBtu) |
|---|---|
| $PM_{10}$ | 0.28 |
| COV | 0.01 |

D. Emissions from alcohol burning

1. The permittee shall use the following equation to calculate the emissions:

   *Tons of pollutant/ time unit = EF /2000 x F x H* where:

   *EF = emission* factor [lb/MMBtu]

   F = total fuel burned in gallones per unit of time.

   H = heating value of the alcohol burned, in MMBtu per gallon.

2. The permittee shall use the following equation to calculate the SO2 emissions:

   $SO_2$ Emission Factor [lb/MMBtu] = S/100 *x* ($64^{18}/32^{19}$) x $10^6$ / 13,056.2[20] Btu/lb

[18] 64 = molecular weight of $SO_2$
[19] 32 = molecular weight of sulfur
[20] 13,056.2 = heating value of alcohol in Btu/lb (0.08617 MMBt/gal)

## Appendix II(A)(2): Table I – EI-64 Emission Unit Specifications:

| Emission Unit | | Process in the tank | Identification of the tank | Control Equipment / Emission Point | Dimensions | | Tank Description | Tank Type | Content | Capacity | | | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Diameter (ft) | Height (ft) | | | | liters | gallons | Cubic feet | NBF[21] |
| 1 | EU-FILT100 | **Filtration** | TK-5111 | Fume Vent / EP-5111 | 1.67 | 2.1 | De Precoat Tank | DE Filter Skid | Rum up to 95% ethyl alcohol by volume (ABV) | 100 | 27 | 3.53 | NBA |
| 2 | EU-FILT-250 | **Filtration** | TK-5111 | Fume Vent / EP-5111 | 1.67 | 2.1 | De Precoat Tank | DE Filter Skid | Rum up to 95% ethyl alcohol by volume (ABV) | 100 | 27 | 3.53 | NBA |
| 11 | EU-PREMIX | **Dosification** | TK-5091 | Fume Vent / EP-1K | 3.5 | 3.70 | Dosing Tank 1 | Cone Bottom Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 1,000 | 265 | 35.31 | NBT |
| 11 | EU-PREMIX | **Pre-mix** | TK-5090 | Fume Vent / EP-2K | 4.5 | 4.00 | Pre-mix Tank | | Rum up to 95% ethyl alcohol by volume (ABV) | 2,000 | 529 | 70.63 | NBA |
| 7 | EU-EXTSOL | **Mix** | TK-5140 | SC-5210 / EP-SC-5210 | 8 | 8.50 | Extract Mix Tank | Mix Tank | Solution 0 to 20% alcohol by volume (ABV) | 15,000 | 3,968 | 529.79 | NBA |

[21] *New Blending Facilities*

| Emission Unit | | Process in the tank | Identification of the tank | Control Equipment / Emission Point | Dimensions | | Tank Description | Tank Type | Content | Capacity | | | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Diameter (ft) | Height (ft) | | | | liters | gallons | Cubic feet | NBF[21] |
| 1<br>5<br>23<br>26 | EU-FILT100 EU-BLEOPS EU-LOAD100 EU-THERMAL | Blending | TK-5108 | SC-5210 / EP-SC-5210 | 14 | 23 | Blending Tank | Blending Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 100,000 | 26,455 | 3,531.47 | NBT |
| 1<br>5<br>23<br>26 | EU-FILT100 EU-BLEOPS EU-LOAD100 EU-THERMAL | | TK-5109 | | | | | | | | | | |
| 2<br>4<br>5<br>6<br>9<br>12<br>17<br>18<br>24<br>26 | EU-FILT250 EU-ARUMTK EU-BLEOPS EU-FLTREG EU-P1RUM EU-PRMKUP EU-RRUMAG EU-RUMRFLT EU-LOAD250 EU-THERMAL | | TK-5105<br>TK-5104<br>TK-5106<br>TK-5107 | SC-5210 / EP-SC-5210 | 20 | 28.50 | Blending Tank | Blending Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 250,000 | 66,138 | 8,828.67 | NBT |
| 3<br>4<br>5<br>8<br>16<br>22<br>25<br>26 | EU-FILT500 EU-ARUMTK EU-BLEOPS EU-LCDFLT EU-RUMAFLT EU-P2RUMTK EU-LOAD500 EU-THERMAL | | TK-5101<br>TK-5100<br>TK-5102<br>TK-5103 | SC-5210 / EP-SC-5210 | 21 | 51 | Blending Tank | Blending Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 500,000 | 132,275 | 17,657.33 | NBT |

[22] *New Blending Facilities*

| Emission Unit | | Process in the tank | Identification of the tank | Control Equipment / Emission Point | Dimensions | | Tank Description | Tank Type | Content | Capacity | | | Location NBF[21] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Diameter (ft) | Height (ft) | | | | liters | gallons | Cubic feet | |
| 6 | EU-FILTREG | Almacenaje | TK-5220 | HE-5220,SC5221 / EP-SC-5221 | 6 | 10 | CF Regen Condenstate Tank | Storage Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 10,000 | 2,646 | 353.15 | NBS |
| 13 | EU-RCLWAT | | TK-5208 | Fume Vent /EP-5208 | 10 | 12 | Water RECLAIM Tank | | Solution 0 to 10% ABV alcoholume | 22,713 | 6,009 | 802.102 | NBS |
| 7 | EU-EXTSOL | | TK-5141 | Fume Vent / EP-30K | 10 | 13.50 | Extract Storage Tank | | Solution 0 to 20% alcohol by volume (ABV) | 30,000 | 7,937 | 1,059.44 | NBA |
| 10<br>14<br>15<br>19<br>26 | EU-RUMRES<br>EU-REMNTK<br>EU-DRUMAG<br>EU-SRUMTK<br>EU-THERMAL | | TK-5046 | SC-5210 / EP-SC-5210 | 12 | 16 | Residues Tank | | Rum up to 95% ethyl alcohol by volume (ABV) | 50,000 | 13,228 | 1,765.73 | NBT |
| | | | TK-5110 | | | | Remnant Tank | | | | | | |
| | | | TK-5062 | | | | D Tank | | | | | | |
| | | | TK-5042 | | | | S1 Tank | | | | | | |
| | | | TK-5044 | | | | S3 Tank | | | | | | |
| | | | TK-5045 | | | | S4 Tank | | | | | | |
| | | | TK-5043 | | | | S2 Tank | | | | | | |
| 2<br>4<br>5<br>6<br>9<br>12<br>17<br>18<br>24<br>26 | EU-FILT250 EU-ARUMTK EU-BLEOPS EU-FLTREG EU-P1RUM EU-PRMKUP EU-RRUMAG EU-RUMRFLT EU-LOAD250 EU-THERMAL | | TK-5061 | SC-5210 / EP-SC-5210 | 20 | 28.50 | T-AG-2 | | | 250,000 | 66,138 | 8,828.67 | NBT |
| | | | TK-5021 | | | | T-Stock-4 | | | | | | |
| | | | TK-5020 | | | | T-Stock-3 | | | | | | |
| | | | TK-5040 | | | | T-P-1A | | | | | | |
| | | | TK-5041 | | | | T-P-1B | | | | | | |
| | | | TK-5032 | | | | T-Proc-1 | | | | | | |

[23] *New Blending Facilities*

| Emission Unit | | Process in the tank | Identification of the tank | Control Equipment / Emission Point | Dimensions | | Tank Description | Tank Type | Content | Capacity | | | Location |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Diameter (ft) | Height (ft) | | | | liters | gallons | Cubic feet | NBF[21] |
| 3<br>4<br>5<br>8<br>16<br>22 | EU-FILT500 EU-ARUMTK EU-BLEOPS EU-LCDFLT EU-RUMAFLT EU-P2RUMTK' | Storage | TK-5060 | SC-5210 / EP-SC-5210 | 21 | 51 | T-AG-1 | Storage Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 500,000 | 132,275 | 17,657.33 | NBT |
| | | | TK-5011 | | | | T-Stock-2 | | | | | | |
| | | | TK-5010 | | | | T-Stock-1 | | | | | | |
| | | | TK-5030 | | | | T-AgD-1 | | | | | | |
| | | | TK-5031 | | | | T-AgD-2 | | | | | | |
| | | | TK-5050 | | | | T-P-2-1 | | | | | | |
| 25<br>26 | EU-LOAD500 EU-THERMAL | | TK-5051 | | | | T-P-2 | | | | | | |
| 4<br>16<br>17 | EU-ARUMTK EU-RUMAFLT EU-RRUMAG | | TF-1 | TF-Scrubber Existing / EP-6 | 53.30 | 30 | Stream A Storage Tank | Storage Tank | Rum up to 95% ethyl alcohol by volume (ABV) | 2,000,000 | 500,000 | 66,840.28 | NBO |
| | | | TF-2 | | | | Rum-A Storage Tank | | | | | | |
| | | | TF-3 | | | | Rum R Post Age Storage | | | | | | |
| | | | TF-4 | | | | STREAM R Storage Tank | | | | | | |
| 21 | EU-LCDLDG | | TF-5 | TF-Scrubber Existing / EP-6 | 60 | 34 | LCD Storage Tank | Storage Tank | Rum 60 to 90% grade proof | 2,500,000 | 700,000 | 93,576.39 | NBO |