

COMMONWEALTH OF PUERTO RICO / OFFICE OF THE GOVERNOR

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



Permit Number: PFE-TV-2834-36-0397-0023
Permit Application Received: March 26, 1997, May 6, 2002 & September 18, 2003
Issue and/or Effectiveness Date: February 25, 2006
Expiration Date: February 25, 2011

In accordance with the provisions of Part VI of the Regulations for the Control of Atmospheric Pollution (RCAP) and the Code of Federal Regulations, Title 40, Part 70

**BRISTOL-MYERS SQUIBB MANUFACTURING COMPANY
HUMACAO, PUERTO RICO**

hereinafter referred to as “the permittee” or **BMSMC-Humacao**, is authorized to operate a stationary source of air pollutants consisting of the emission units and conditions described in this permit. Until such time as this permit expires, is modified or revoked, the permittee is allowed to discharge air pollutants from those processes and activities directly related to or associated with air pollutant sources in accordance with the requirements, limitations and conditions of this permit.

The conditions in this permit are federally and state enforceable. Requirements that are only state enforceable are identified as such in the permit. A copy of this permit shall be kept on-site at the above-mentioned facility at all times.

TABLE OF CONTENTS

Section I –General Information	3
1. Facility Information	3
2. Process Description.....	3
Section II –Emission Units and Control Devices	5
Section III – General Permit Conditions.....	8
Section IV – Potential Emissions.....	18
Section V – Permit Conditions	18
A. Requirements for each Emission Unit	18
B. Compliance with the 40 CFR Part 63 Subpart GGG (EUVO1-MACT, EUTF1- MACT, EUWW1-MACT, EULDAR1-MACT, EUMISC-MACT).....	42
C. Alternate Operating Scenarios	110
D. Changes after the Title V Permit is Issued	120
E. Management of Change under the 40 CFR Part 63 Subpart GGG.....	124
F. Additional Recordkeeping & Reporting Requirements	152
Section VI – Insignificant Emission Units.....	153
Section VII – Permit Shield	155
Section VIII – Permit Approval.....	156
Appendixes	157
Appendix I – Definitions and Abbreviations	158
Appendix II- List of Hazardous Air Pollutants authorized in BSMC-Humacao at the Time of the Permit Application	161
Appendix III – Calculation Methodology.....	162
Appendix IV- List of Existing Processes at the Time of the Permit Application.....	166
Appendix V – Process Equipments and Control Devices.....	167
Appendix VI – Control Devices Description.....	194

Section I - General Information

1. Facility Information

Company Name: **Bristol-Myers Squibb Manufacturing Co. – Humacao Operations**

Mailing Address: P.O. Box 609

City: Humacao State: PR Zip Code: 00792

Facility Physical Address: Road No. 3 Km. 77.5 Humacao, PR

Responsible officer: Charles Laranjeira
Vice-President and General Manager

Telephone: (787) 656-4865

Contact Person: Alvin E. Crespo
Environmental Affairs, Health & Safety Director

Telephone: (787) 656-4731 Fax: (787) 656-4924

Technical Contact Person: Francisco J. Burgos
Environmental Affairs Manager

Telephone: (787) 656-4417 Fax: (787) 656-4924

Primary SIC Code: 2834

Secondary SIC Code: 2833

2. Process Description

Bristol-Myers Squibb Manufacturing Company - Humacao Operations (henceforth referred to as BSMC-Humacao) is a pharmaceutical manufacturing facility dedicated to chemical synthesis manufacturing for intermediates, final bulk and finished dosages of pharmaceutical products and the performance of research and development related operations for manufacturing process validation. The name BSMC-Humacao, and this permit, both apply to the combined facilities of Bristol-Myers Squibb Manufacturing Company and Squibb Manufacturing Company at this location, which are under the common ownership of the Bristol-Myers Squibb Company.

Emissions units include batch process sources where common manufacturing activities take place such as: filling, depressurizing, gas sweeping, heating, gas evolution, air drying, vacuum

drying, and vacuum distillation. Storage tanks are used to store chemical materials used in the pharmaceutical production process.

BMSMC-Humacao installed air pollution control equipment and wastewater treatment equipment to ensure that all its operations comply with the National Emission Standards for Hazardous Air Pollutants (NESHAPS) for pharmaceutical production. The air pollution control equipment consists of three identical centralized thermal oxidizers that operate in parallel to reduce hazardous air pollutants (HAP) emissions. Dedicated wet scrubbers treat the exhaust gases from the thermal oxidizers to control acid gas emissions that may result from the combustion of certain HAPs (e.g., methylene chloride). Prior to entering the scrubbers, hot gases from each thermal oxidizer pass through a waste heat boiler and quench chamber to cool the gases. Nearly all process waste gases originating in the tank farms, batch processes, and solvent recovery areas are controlled by any one of the three thermal oxidizing units (TOUs) before being vented to the atmosphere. Affected storage tanks are equipped with a closed vent system to direct emissions to the TOU complex for control. At present, wastewater streams generated as part of the pharmaceutical production processes are designated as affected wastewater.

The company currently has two chemical sewer systems, one for concentrated waste streams and another for dilute waste streams. The concentrated waste streams, referred to as salty waste are hard-piped and generally collected in salty waste tanks at each building, and pump transferred via an overhead piping system to the RCRA salty waste tank farm for on-site incineration, in a RCRA permitted unit. At other times salty waste may be containerized on-site and transported to an offsite treatment facility. The dilute waste streams, referred to as “Bio-wastes”, are hard piped and collected in bio-waste tanks at each building and pump transferred via an overhead piping system to an on-site treatment system consisting of air stripping and biological treatment. Emissions from the air strippers are routed to the TOUs and substantially controlled.

Two industrial boilers, designated as Boilers H-1001A and H-1001C, provide steam to the plant.

Three liquid waste incinerators thermally destroy wastes generated onsite. The units use kerosene as a supplemental fuel. Liquid wastes may include organic compounds containing chlorine and nitrogen, and elemental sulfur. Acid gas and particulate emissions from the units are controlled using a venturi/caustic wet scrubber.

Diesel-fired stationary internal combustion engines provide energy in case of emergencies.

BMSMC-Humacao is subject to the Regulations for the Control of Atmospheric Pollution (RCAP); to the New Source Performance Standards (NSPS) for volatile organic liquid storage vessels for which construction, reconstruction, or modification commenced after July 23, 1984 (40 CFR Part 60 Subpart Kb), to the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for Hazardous Waste Combustors (40 CFR Part 63, Subpart EEE) and to the NESHAP for Pharmaceuticals Production (40 CFR Part 63 Subpart GGG). The applicable requirements specific to all emission units are included in section V of this permit.

The emission units are defined next.

Section II - Emission Units and Control Devices

The emission units regulated by this permit are the following:

EMISSION UNIT	DESCRIPTION	CONTROL DEVICE ¹
EUCO1	<p>The emission unit consists of two boilers, designated at the facility as Boiler H-1001A and Boiler H-1001C. Each boiler burns liquid fuels to generate steam for process heat and uses propane for pilot and for startup. The heat input ratings of Boilers H-1001A and H-1001C are 21 MMBtu/hr and 33.5 MMBtu/hr, respectively. The two boilers are limited to burning 862,400 gallons of kerosene per year with a sulfur content limit of 0.2 percent by weight.</p>	None
EUVO1	<p>The emissions unit consists of all equipment used in pharmaceutical production at the facility that emit volatile organic compounds (VOC) as regulated atmospheric pollutants that are not hazardous air pollutants. The equipment consists of, but is not necessarily limited to, process vessels, reactors, tanks, fugitive emission sources (valves, flanges, etc.), centrifuges, stills, process condensers, inline filters, dryers, etc. Processes are not necessarily restricted to a particular vessel or process train for production. Furthermore, production of specific products is not necessarily confined to a particular building.</p> <p>The processes and equipment included in the emission unit use a variety of solvents, some of which may be VOC.</p> <p>VOC emissions are controlled by the thermal oxidizer units installed to facilitate compliance with the NESHAP for pharmaceutical production. This equipment includes three thermal oxidizers, each with a dedicated scrubber, operating in parallel.</p>	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EUTF1	<p>The emission unit consists of storage tanks used in pharmaceutical manufacturing at the facility that emit VOC that are not hazardous air pollutants and are not exempted per RCAP Appendix B. Tank service may change during the term of the operating permit, that is, different raw materials may be stored in a given tank at different times as long as it complies with the provisions of the permit and applicable regulations.</p> <p>These tanks are not subject to the NSPS of Subpart Kb (40 CFR Part 60). As part of the emission unit are some storage tanks greater than 40 m³, installed after July 23, 1984 that contain acetone and methylene chloride because according to the definition of subpart Kb of the 40 CFR, these compounds are not volatile organic liquids.</p>	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EUTF1-NSPS	<p>VOC solvent storage tanks that are subject to NSPS for Storage Vessels (40 CFR 60 Subpart Kb). These tanks were constructed, reconstructed or modified after July 20, 1984 and have a capacity greater than 40 m³ (approximately 10,550 gallons).</p>	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EMISSION UNIT	DESCRIPTION	CONTROL DEVICE ¹
EUCO2-MACT	The emission unit consists of a Trane incinerator subject to the NESHAP for hazardous waste combustors (40 CFR Part 63 Subpart EEE). This incinerator burns kerosene to assist in the incineration of aqueous waste materials generated onsite, and uses gaseous fuel for pilot and startup. This incinerator has a heat input rating of 22.2 MMBtu/hr and a rated capacity of 191 gallons per hour. The pollution control system consists of a venturi scrubber and a CHEAF particulate removal filter operating in series. This emission unit includes the requirements applicable to the Trane incinerator after the MACT compliance date for hazardous waste combustors which is September 30, 2004, as per the compliance extension approved by the Board.	CDCO2, CDCO2-PM
EUCO3A-MACT	The emission unit consists of a Caloric I incinerator, subject to the NESHAP for hazardous waste combustor requirements (40 CFR 63 Subpart EEE). The incinerator burns kerosene to assist in the incineration of aqueous waste materials generated onsite, and use gaseous fuel for pilot and startup. The incinerator has a heat input rating of 22.2 MMBtu/hr and a rated capacity of 180 gallons per hour. The pollution control system consists of a venturi scrubber and a CHEAF particulate removal filter operating in series. This emission unit includes the requirements applicable to the Caloric I incinerator after the MACT for hazardous waste combustor compliance date, which is September 30, 2004 as per the compliance extension granted by EQB.	CDCO3A, CDCO3A-PM
EUCO3B-MACT	The emission unit consists of a Caloric II incinerator, subject to the NESHAP for hazardous waste combustor requirements (40 CFR 63 Subpart EEE). The incinerator burns kerosene to assist in the incineration of aqueous waste materials generated onsite, and use gaseous fuel for pilot and startup. The incinerator has a heat input rating of 22.2 MMBTtu/hr and a rated capacity of 180 gallons per hour. The pollution control system consists of a venturi scrubber and a CHEAF particulate removal filter operating in series. This emission unit includes the requirements applicable to the Caloric II incinerator after the MACT for hazardous waste combustor compliance date, which is September 30, 2004 as per the compliance extension granted by EQB.	CDCO3B, CDCO3B-PM

EMISSION UNIT	DESCRIPTION	CONTROL DEVICE ¹
EUCO6, EUCO7 and EUCO8	<p>These emission units consist of the thermal oxidizers 1, 2, and 3 as combustion equipment. Includes the emissions generated by the combustion of auxiliary fuel in the units. These emission units operate as the primary VOC and HAPs control device of the facility. The three thermal oxidizer units may operate simultaneously for control of VOC/HAPs emissions during plant operations. However, maximum allowed operations for these emission units are two units at full capacity, or three units at two-thirds capacity each.</p> <p>Each emission unit has a heat input capacity of approximately 40 MMBtu/hr, uses kerosene as fuel and propane for startup. Each unit has a rated capacity of 220 gallons per hour; however, peak capacity is limited as a group to 466.4 gal/hr. By design, the unit assures ¾ second retention time at peak volumetric loading. The maximum capacity of each thermal oxidizer is 20,000 SCFM. A scrubber to control SO₂ and HCl emissions is used as part each the unit.</p>	CDCO6S, CDCO7S, CDCO8S
EUVO1-MACT	<p>The emissions unit consists of Pharmaceutical MACT (40 CFR Part 63 Subpart GGG) defined process vents resulting from pharmaceutical production at the facility that use and emit hazardous air pollutants (HAPs). The emission unit is subject to the provisions of the 40 CFR §63.1252 and §63.1254.</p> <p>The equipment consists of, but is not necessarily limited to, process vessels, reactors, tanks, fugitive emission sources (valves, flanges, etc.), centrifuges, stills, process condensers, inline filters, dryers, etc. This equipment is organized in process trains generally used together for production.</p> <p>VOC emissions are controlled by the thermal oxidizer units installed to facilitate compliance with the NESHAP for pharmaceutical production. This equipment includes three thermal oxidizers, each one with a dedicated scrubber, operated in parallel.</p>	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EUTF1-MACT	Storage tanks for storage of organic raw material containing HAPs and recovered organic solvents containing HAPs for use in pharmaceutical manufacturing, not including waste solvents and solvent based products. These tanks are subject to the requirements of 40 CFR §63.1253.	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EMISSION UNIT	DESCRIPTION	CONTROL DEVICE ¹
EUWW1-MACT	<p>The emission unit consists of the wastewater treatment facilities consisting of air strippers, biological treatment and liquid waste incinerators from which VOC or HAP compounds may be emitted. This facility receives wastes from the batch processes and solvent recovery areas. Wastewater streams generated as part of the pharmaceutical production processes are designated as affected wastewater. The emission unit also includes the conveyance of affected wastewater for onsite and off-site treatment.</p> <p>This emissions unit is subject to the applicable requirements of Section 63.1256 of the 40 CFR.</p>	CDCO6/ CDCO6S, CDCO7/ CDCO7S, CDCO8/ CDCO8S, CDAS1001A, CDAS1001B, CDBIO
EULDAR1-MACT	<p>The emission unit consists of fugitive emissions of HAPs from equipment and piping systems that arises from batch chemical processes and solvent recovery operations. Includes equipment in organic HAP service subject to the Leak Detection and Repair requirements of the Pharmaceutical Production MACT in the 40 CFR §63.1255. BMSMC-Humacao elected to comply with the requirements in 40 CFR 63 Subpart GGG for sources subject to 40 CFR 63, Subpart H.</p>	None
EUMISC-MACT	<p>The emission unit consists of process condensers, heat exchange systems and vapor suppression equipment regulated under the pharmaceutical production MACT of the 40 CFR 63 Subpart GGG. The applicable work practice requirements for this emission unit include monitoring standards to prevent inadvertent HAP emissions. Process condenser demonstration requirements are defined in the MACT Precompliance Report. Heat exchange systems are subject to the requirements of 40 CFR §63.1252(c) and vapor suppression equipment is subject to the requirements of 40 CFR §63.1258(h).</p>	None

¹ Not all of the individual equipments that are part of the emission unit are necessarily connected to the primary control equipment of the emission unit. Appendix V includes a list of all the authorized individual equipment and control equipment, which represent the equipment configuration at the time of the permit application. The configuration of the process equipment and of the control equipment may vary according to the provisions of this permit, as long as it complies with the provisions of the RCAP. Appendix IV includes the existing process at BMSMC-Humacao at the time of the permit application.

Section III - General Permit Conditions

1. **Sanctions and Penalties:** BMSMC-Humacao is obligated to comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Any violation of the terms of this permit will be subject to administrative, civil or criminal penalties as established in the Puerto Rico Environmental Public Policy Act, Article 16 (Act Number 416, September 22, 2004). Also, administrative, civil or criminal measures may be adopted to enforce the conditions established in this permit.
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's 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 Act and the RCAP, to sample, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.
3. **Sworn Statement:** All reports required pursuant Rule 103(D) of the RCAP (i.e., semiannual monitoring reports and annual compliance certification) shall be submitted together with a sworn statement or affidavit by the Responsible Official or a duly authorized representative. Such sworn statement 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 Board, including data reported pursuant to Rule 103 of the RCAP, and data 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 Board may deem appropriate, except when requested by the petitioner, the Governing Board has determined that the information is confidential. Shall follow the procedure established by the Resolution R-83-7-4 of March 2, 1983.
5. **Emergency Plan:** According to Rule 107 (B) 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 Board 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 representative of the Board 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.

- 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.
- c. The Board 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.
- d. All air pollution control equipment shall be operated at all times while the source being controlled is in operation.
- 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:
 - (1) Identification of the specific source to be taken out of service with its location and permit number.
 - (2) The expected length of time that the air pollution control equipment will be out of service.
 - (3) The nature and quantity of emissions of air pollutants likely to be permitted during the shutdown period.
 - (4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.
 - (5) The reasons why it will be impossible or impractical to shutdown the operating source during the maintenance period.
- f. The permittee 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.

7. **Compliance Certification:** According to Rule 602(c)(2)(ix)(C) of the RCAP, BSMSC-Humacao shall submit every year a Compliance Certification. This certification shall be submitted to both the Board and the EPA² no later than 90 days after the anniversary of the granted permit. In case there are conditions subject to a reconsideration process to the final permit adopted by the Board, the compliance certification for the conditions included in the reconsideration will only be applicable for the time passed since the effective date determined by the Administrative Judge once the applicable procedure has been resolved and after the 45-day review period by the EPA. It shall include, but will not be limited to, the information required by Rule 603(c) of the RCAP.
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 Board 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 previously obtaining a construction permit under Rule 203 of the RCAP.
10. **Open Burning:** According to Rule 402 of the RCAP, the permittee shall not cause or permit the open burning of refuse in their premises. This Rule will not apply to open burning for the purpose of training or research of fire fighting techniques when conducted at an institutionalized training center, as previously approved by the Board. The permittee shall keep records of fire fighting activities related to research or training. These records shall be made available upon request.
11. **Particulate Fugitive Emissions:** As established in Rule 404 of the RCAP, the permittee shall not cause or permit:
 - a. any materials to be handled, transported, or stored 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. the discharge of visible emissions of fugitive dust beyond the boundary line of the property on which the emissions originate.

² The certification to the EQB shall be mailed to: Manager, Air Quality Area, P.O. Box 11488, Santurce, PR 00910. The certification to the EPA shall be mailed to: CEPD Director, US EPA-Region II, Centro Europa Building 1492, Ponce de Leon Ave. Stop 22, Santurce, PR 00909

12. **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. The permittee shall demonstrate compliance with Rule 420 (A)(1) as follows: if objectionable odors are detectable by an odor committee established by the Board beyond the premises designated for industrial purposes, and complaints are received, the permittee shall investigate and take measures to minimize or eliminate the malodors, if necessary. [This condition is enforceable only by the State].
13. **Permit Renewal Applications:** According to Rule 602 (a)(1)(iv) of the RCAP, applications for permit renewal shall be submitted twelve (12) months prior to the date of permit expiration. The Responsible Official must certify each one of the forms required pursuant to paragraph (c)(3) of Rule 602 of the RCAP.
14. **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 but only in those cases where the permittee submits a complete renewal application at least 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.
15. **Recordkeeping Requirements:** As established under Rule 603(a)(4)(ii) 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.
16. **Reporting Requirement for Monitoring:** As established under Rule 603(a)(5)(i) of the RCAP, the permittee shall submit reports of all required monitoring every 6 months, or more frequently if required by the Board or any other underlying applicable requirement. 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.

17. **Deviations Reporting due to Emergencies³:** 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 of the time when emission limitations were exceeded due to the emergency, if BMSMC-Humacao 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 occurred due to an emergency and that the Board was adequately notified. If such emergency deviation lasts 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.
18. **Deviation Notifications (Hazardous Air Pollutants):** The source (except sources affected by the Pharmaceutical Industry MACT and included in the SSMP for BMSMC-Humacao, which shall comply with the provisions of 40 CFR §63.6(e) specifically) shall shut down its operations immediately or shall act as specified in its Emergency Response Plan (established in Rule 107 (C) of the RCAP), when such Plan has demonstrated that there is no significant impact at the fenceline. (This condition is state-enforceable only). Pursuant to Rule 603 (a)(5)(ii)(b), a notification will be required if a deviation occurs that results in the release of emissions of hazardous air pollutants for more than an hour in excess of the applicable limit. The permittee shall notify the Board within 24 hours of the deviation. 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 also 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 steps which are being taken to prevent a reoccurrence.
19. **Severability Clause:** As established 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.
20. **Permit Noncompliance:** As established under Rule 603(a)(7)(i) of the RCAP, the permittee must comply with all conditions of this permit. Permit noncompliance constitutes a violation of the RCAP and will be grounds for taking the appropriate enforcement action, impose sanctions, revoke, terminate, modify, reissue the permit, or to deny a permit renewal application.

3 Except sources affected by the 40 CFR part 63, subpart GGG (MACT for pharmaceutical production) and included in the Startup, Shutdown and Malfunction Plan of BMSMC-Humacao, that shall comply with the provisions of the 40 CFR §63.6(e) specifically.

21. **Defense not Allowed:** As specified under Rule 603(a)(7)(ii) of the RCAP, it shall not be a defense for a permittee 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 this permit.
22. **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, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
23. **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.
24. **Obligation to Furnish Information:** As specified under Rule 603(a)(7)(v) of the RCAP, the permittee shall furnish to the Board, within a reasonable time, any information that the Board 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 Board copies of records required to be kept by the permit.
25. **Changes in Operating Scenarios:** As specified under Rule 603(a)(10) of the RCAP, the permittee shall record in a logbook, contemporaneously with making a change from one operating scenario to another, the scenario under which it is operating. This logbook must be kept at the facility at all times.
26. **Final Action:** According to Rule 605(d) of the RCAP, it shall never be considered that a permit has been issued by default as a result of the Board's failure to take final action on a permit application within 18 months. The Board'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.
27. **Administrative Permit Amendments and Permit Modifications:** As specified under Rule 606 of the RCAP, the permit shall not be amended nor modified for changes qualifying as a permit revision unless the permittee complies with the requirements for administrative permit amendments and permit modifications as described in the RCAP.
28. **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 Board or 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 Board or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
29. **Changes in Name and/or Ownership:** This permit is issued to **Bristol Myers Squibb Manufacturing Co. - Humacao Operations**. In the event that the company and/or installation changes its name or is transferred to a different owner, the new responsible official must submit a sworn statement in which he/she accepts and promises to comply with all conditions of this permit.
30. **Renovation/Demolition Work:** The permittee shall comply with the provisions set forth in 40 CFR §61.145 and §61.150, and Rule 422 of the RCAP when conducting any renovation or demolition activities of asbestos containing material at the facility.
31. **Risk Management Plan:** If during the effectiveness of this permit, the permittee is subject to the 40 CFR Part 68, he/she shall submit a Risk Management Plan according with the compliance schedule in the 40 CFR Section 68.10. If during the effectiveness of this permit, the permittee is subject to the 40 CFR Part 68, as part of the annual compliance certification required under 40 CFR Part 70, the permittee shall submit a compliance certification with the requirements of Part 68, including the recordkeeping and the Risk Management Plan. The permittee shall comply with the general duty requirements of section 112(r)(1) of the Act as follows:
- a. Identify hazards that may result from accidental releases using appropriate hazard assessment techniques.
 - b. Design, maintain, and operate a safe facility.
 - c. Minimize the consequences of accidental releases if they occur.
32. **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 82, Subpart A, Appendices A and B, he/she 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 82, Subpart F. Owners or operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166 of the 40 CFR.

- b. **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.
33. **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 §82.106 of the 40 CFR.
 - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108 of the 40 CFR.
 - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110 of the 40 CFR.
 - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112 of the 40 CFR.
34. **Emergency Generators:**
- a. The operation for each electricity generator identified as insignificant activity is limited to 500 hours per year.
 - b. The permittee shall keep an annual record of the hours of operation and fuel consumption for each electricity generator. It shall be kept available at any time for inspection by EQB and EPA personnel.
35. **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.

36. **Emissions Calculations:** The permittee shall submit, on the first day of April each year, the actual or permissible emissions calculations for the previous calendar year. The emissions calculations shall be submitted on the forms prepared by the Board for this purpose. The responsible official must certify all the information submitted as true, correct and representative of the permitted activity. The permittee must make the applicable payment for the emissions calculations for the previous calendar year on or before June 30 of each year.
37. **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.
38. **Reservation of Rights:** Except as expressly provided in this Title V permit:
- a. Nothing herein shall prevent EPA or the Board from taking administrative enforcement measures or seeking legal or equitable relief to enforce the terms of the Title V permit, including but not limited to the right to seek injunctive relief, and imposition of statutory penalties and fines.
 - b. Nothing herein shall be construed to limit the rights of EPA or the Board to undertake any criminal enforcement activity against the permittee or any person.
 - c. Nothing herein shall be construed to limit the authority of EPA or the Board 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.
39. **New Requirements or New Applicable Amendments:** In case a new regulation is established or an existing one is amended (state or federal) and the Board determines that it applies to the facility, BSMC-Humacao shall comply with what is established as soon as this regulation or amendment becomes effective.
40. **Reports:** Any requirement of information submittal to the Board shall be addressed to: Manager, Air Quality Area, PO Box 11488, Santurce, P.R. 00910.
41. In case there is a discrepancy or inconsistency between the federal regulations and the conditions in this permit, BSMC-Humacao shall apply for an administrative amendment to the permit to clarify the discrepancy.

Section IV - Potential Emissions

1. The emissions described in the following table represent the facility’s potential emissions at the time of the permit application and will only be used for fee purposes. According to the Resolution R-97-47-1, the emissions calculations will be based in actual emissions from BMSMC-Humacao, although emissions calculations based on the facility’s allowable emissions will be accepted. If BMSMC-Humacao wants to perform the calculations based on allowable emissions, will pay the same charge per ton as the sources that perform the calculations based on actual emissions. Also, when BMSMC-Humacao applies for a modification, administrative change, or minor modification to its Title V permit, will only have to pay the amount per ton based in the increase in emissions, if any, caused by the change, and not the whole charges, according to Rule 610(a) of the RCAP.

Criteria Pollutant	Potential Emissions (tons/year)
PM ₁₀	53.1
SO ₂	662.8
NO _x	258.3
CO	35
VOC (including acetone)	222.9
Lead	0.05
HAPs	142.4

2. Appendix II contains a list of those HAPs that BMSMC-Humacao is authorized to emit. Previous to the construction of new emission sources or the modification of existing sources that result in the emission of any HAP not included in Appendix II, BMSMC-Humacao shall obtain a construction permit under Rule 203 of the RCAP, unless Rule 206 of the RCAP exempts it.

Section V - Permit Conditions

A. Requirements for each emission unit

The following tables contain a summary of the applicable requirements, and the test methods for the emission units identified in Section II of this permit.⁴

⁴ In case there is any discrepancies or inconsistencies between the information in the tables and the narrative conditions in the permit, BMSMC-Humacao shall apply for an administrative permit amendment to clarify the discrepancy.

1. **EUCO1 - Boilers H-1001A and H-1001C**

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Sulfur Limit in the fuel	Sulfur content	Less than or equal to 0.2	Weight percent	Analysis of the fuel by the supplier	In each fuel delivery	Daily records of the sulfur content in the fuel and the fuel consumption	Monthly Annual
Fuel consumption limit	Kerosene used	Equal or less than 862,400	Gallons per year (365-day rolling period)	Consumption	Calculate daily consumption	Daily Records of the fuel consumption	Annual
Particulate Matter Emission Limit	Particulate Matter	0.3	Pounds per million Btu	Certification by the supplier about the type of fuel used	Whenever fuel is received in the facility	Daily Records of the type of fuel and the sulfur content in the fuel burned	Annual
Visible emissions limit	Visible emissions	20	Average percent 6 minutes	Method 9 Visible emissions	Once during the first year of the permit Weekly	With each reading	60 days after the reading

a. Sulfur limit in the fuel

- i. As approved by the permit PFE-36-0479-0356-II-C, the boilers shall only burn kerosene, with a sulfur content not to exceed 0.2 percent by weight.
- ii. BMSMC-Humacao shall record the sulfur content in the kerosene fuel in weight percent each time it is delivered in the facility. This record shall be made available at all times for review by the Board's and the Environmental Protection Agency's personnel. [PFE-36-0479-0356-II-C]
- iii. To comply with the previous condition BMSMC-Humacao shall retain a copy certified by the supplier indicating the sulfur content in the fuel.
- iv. BMSMC-Humacao shall submit a monthly report indicating the daily fuel consumption in the boilers and the sulfur content certified by the supplier no later than the next 15 days of the month following the one being reported as required by Rule 410 of the RCAP. This report shall be addressed to the Validation and Data Management Division and shall be available in the facility for review by the Board's technical personnel. [PFE-36-0479-0356-II-C]
- v. BMSMC-Humacao shall submit each year, with the annual emissions calculation report required by condition 36 of section III of this permit, a summary with the information included in the fuel consumption monthly

reports. The information will include the fuel consumption and the sulfur content in weight percent in the fuels burned.

- vi. Any period during which the sulfur content in the fuel exceeds 0.2 weight percent shall be reported immediately to EQB. [PFE-36-0479-0356-II-C]
- vii. BMSMC-Humacao shall keep for at least 5 years the fuel sampling reports, monthly reports of the fuel consumption and the sulfur content in the fuel burned, in compliance with Rule 603(a)(4)(ii) of the RCAP.

b. Fuel consumption limit

- i. The kerosene fuel consumption in the boilers shall not exceed 862,400 gal/year. [PFE-36-0479-0356-II-C]
- ii. Records of the amount of fuel burned shall be maintained, on both a daily and a rolling 365-day basis. Daily compliance with the limit on fuel use shall be determined by adding the total amount of gallons of fuel used by the three boilers during each day to the total gallons of fuel used by the boilers in the preceding 364 days. The records shall be available for inspection by technical personnel of the Board and the Environmental Protection Agency [PFE-36-0479-0356-II-C]
- iii. The boilers shall have a fuel flow meter installed at the entrance of the boilers which shall be calibrated every six months to guarantee that the fuel consumption limit is not exceeded. Records indicating the date, hour and calibration results shall be prepared and maintained. It shall be available for review by the Board's technical personnel. [PFE-36-0479-0356-II-C]
- iv. BMSMC-Humacao shall retain for at least 5 years a copy of the monthly and annual consumption reports and of the methodology used for the calibrations of the fuel flow meters, in compliance with Rule 603(a)(4)(ii) of the RCAP.
- v. Any period during which the fuel use limit for the boilers exceeds 862,400 gallons shall be reported immediately to the EQB. [PFE-36-0479-0356-II-C]

c. Particulate matter emission limit

- i. The permittee shall not cause or allow the emission of particulate matter in excess of 0.30 pounds per million Btu of heat input from any fuel burning equipment burning solid or liquid fuel. [Rule 406 of the RCAP]

- ii. To demonstrate compliance with the previous condition, shall use the fuel supplier certification of the type of fuel used in the boilers in the following way:
 - (1) BSMC-Humacao shall keep records of the type of fuel used, actual usage and fuel sulfur percent certified by the supplier in these boilers.
 - (2) The most recent AP-42 emission factors shall be used together with the records of fuel usage and the sulfur content to calculate particulate matter emissions and demonstrate compliance with the limit established in the previous table. AP-42 emission Factors: *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition, Office of Air Quality Planning and Standards*

d. Visible emissions limit:

- i. The permittee shall not exceed the opacity limit of 20% for the unit EU01. 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.
- ii. BSMC-Humacao shall hire an independent opacity reader, certified in a school approved by EPA, to perform one opacity reading in the chimney of each boiler or in a common stack, as applicable, during the first year of the permit using Method 9 established in the 40 CFR part 60, Appendix A. The boilers shall be operating at the time of the opacity reading.
- iii. A stack test protocol shall be submitted at least 30 days prior to the test for approval by EQB. This protocol shall contain the information described in Rule 106(C) of the Regulations for the Control of Atmospheric Pollution (RCAP).
- iv. The Board shall be notified in writing 15 days prior to the performance test to allow EQB the opportunity to have an observer present. [Rule 106 (D) of the RCAP]
- v. The permittee shall submit two copies with the results of the performance test within 60 days after the tests are done. The report shall include the information required by Rule 106 (E) of the RCAP.
- vi. BSMC-Humacao shall perform weekly visual inspections during the hours of the day in the chimney of each boiler or in a common stack, as

applicable, using a visible emissions reader certified by a program endorsed by EPA or EQB. When a certified reader establishes that the opacity limit is being exceeded according to Rule 403 of the RCAP, BMSMC-Humacao shall verify that the equipment causing the visible emissions is operating in accordance with the manufacturer's specifications and permit conditions. If it is not operating adequately, BMSMC-Humacao shall take immediate corrective actions to eliminate the excess opacity.

- vii. BMSMC-Humacao shall keep a copy of the visible emissions reading report including the date and time of the reading for at least five years, in compliance with Rule 603(A)(4)(ii) of the RCAP.
- viii. The Board reserves its right to require additional visible emission readings in order to demonstrate compliance with the opacity limit.

2. EUVO1 - Bulk Manufacturing Batch Pharmaceutical Processes with the Potential to Emit VOC

a. Rule 419 of the RCAP [State-enforceable only]

- i. According to Rule 419 of the RCAP, the permittee shall not cause or permit the emission of 3 pounds per hour or 15 pounds of VOC in any one day from any article, machine, equipment or any other contrivance unless it is provided with a control system, pollution prevention and reduction mechanism or programs or both, as approved or required by the Board.
- ii. BMSMC-Humacao shall comply with the previous condition using the thermal oxidizers described in the emission units EUCO6, EUCO7 and EUCO8.
- iii. BMSMC-Humacao shall operate the thermal oxidizer at all times while emissions are generated or could be generated during the manufacturing processes in excess of the limits established by Rule 419 of the RCAP.

3. EUTF1 - Storage Tanks for Organic Liquid Material

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Stationary Tanks	N/A	N/A	N/A	Design or Control device	N/A	Maintenance, repairs	Annual
Rule 419 of the RCAP	VOC	3 15	pounds per hour Pounds per day	N/A	N/A	N/A	N/A

a. Stationary tanks

- i. The Permittee shall not place, store or hold any VOC in any stationary tank, reservoir, or other container of more than 40,000 gallons, 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 indicated in Rule 417(A), a vapor recovery system as indicated in Rule 417(B), and any other federal applicable requirements.
- ii. Compliance with the above condition i. is exempted for the following:
 - (A) Storage of any liquid having no photochemical reactivity (including those compounds listed under the definition of VOC) and having a true vapor pressure less than 0.75 psia, and
 - (B) Tanks that treat wastewater permitted under the Clean Water Act and exempted by rule from RCRA or CERCLA.
- iii. Exemptions based on vapor pressure shall be demonstrated with calculations using Antoine's equation and average liquid surface temperature.

b. Rule 419 of the RCAP for tanks not covered by Rule 417 of the RCAP [State-enforceable only]

- i. According to Rule 419(A) of the RCAP, the permittee shall not cause or permit the emission of 3 pounds per hour or 15 pounds of VOC in any one day from any article, machine, equipment or any other contrivance unless it is provided with a control system, pollution prevention and reduction mechanism or programs or both, as approved or required by the Board.
- ii. According to Rule 419(D)(6)⁵, storage tanks used to store VOC's with a capacity of less than 40,000 gallons are exempted from the rule provided such storage tanks are equipped with a conservation vent, a flame arrestor or any other equivalent control.

4. EUTF1-NSPS Storage tanks subject to 40 CFR Part 60 Subpart Kb

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Stationary tanks	N/A	N/A	N/A	Design or control device	N/A	Maintenance, repairs	Annual

⁵ The condition references Rule 417(D), which corresponds to Rule 417(F) in the Spanish version of the RCAP.

a. Stationary tanks

- i. The Permittee shall not place, store or hold any VOC in any stationary tank, reservoir, or other container of more than 40,000 gallons, 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 indicated in Rule 417(A), a vapor recovery system as indicated in Rule 417(B), and any other federal applicable requirements.
- ii. Compliance of the above condition i. is exempted for the following:
 - (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 psia.
 - (B) Tanks that treat wastewater permitted under the Clean Water Act and exempted by rule from Resource Conservation and Recovery Act.
- iii. Exemptions based on vapor pressure shall be demonstrated with calculations using Antoine's equation and average liquid surface temperature.

b. 40 CFR Part 60 Subpart Kb

- i. The vapor pressure of the material stored in tanks subject to this emission unit is limited to the following parameters:

Tank Capacity	Maximum True Vapor Pressure
Greater than or equal to 151 m ³	less than 3.5 kPa
greater than or equal to 75 m ³ but less than of 1541 m ³	less than 15.0 kPa

- ii. Vapor pressure shall be demonstrated with calculations using Antoine's equation and average liquid surface temperature.
- iii. As required by §60.116b(b) of the 40 CFR, BMSMC-Humacao shall keep records with the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel.

- iv. Records required by the previous condition will be kept at the facility for the life of the tank. The record shall be available for inspection by EQB personnel.

5. EUCO2-MACT Trane Incinerator

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Visible emissions limit	Visible emissions	20	Average percent 6 minutes	Method 9 Visible emissions	Once during the first year of the permit Weekly	With each reading	60 days after the reading
Sulfur limit in the fuel	Sulfur content	0.5	Weight percent	Analysis of the fuel by the supplier	In each fuel delivery	Daily records of the sulfur content in the fuel and the fuel consumption	Monthly
Fuel consumption limit	Kerosene used	191	Gallons per hour	Consumption	Calculate monthly consumption	Daily Records of the fuel consumption	Annually

a. Visible emissions limit

- i. The permittee shall not exceed the opacity limit of 20% for the unit EUCO2-MACT. 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 percent for a period of no more than 4 minutes in any consecutive 30 minutes period.
- ii. BMSMC-Humacao shall hire an independent opacity reader, certified in a school approved by EPA, to perform one opacity reading in the chimney of the emission unit during the first year of the permit using Method 9 established in the 40 CFR part 60, Appendix A. The incinerator shall be operating at the time of performance of the opacity reading.
- iii. A stack test protocol shall be submitted at least 30 days prior to the test for approval by EQB. This protocol shall contain the information described in Rule 106(C) of the Regulations for the Control of Atmospheric Pollution (RCAP).
- iv. The Board shall be notified in writing 15 days prior to the performance test to allow EQB the opportunity to have an observer present. [Rule 106 (D) of the RCAP]

- v. The permittee shall submit two copies with the results of the test within 60 days after the tests are done. The report shall include the information required by Rule 106 (E) of the RCAP.
- vi. BMSMC-Humacao shall perform weekly visual inspections during the hours of the day using a visible emissions reader certified by a program endorsed by EPA or EQB. When a certified reader establishes that the opacity limit is being exceeded according to Rule 403 of the RCAP, BMSMC-Humacao shall verify that the equipment and control device causing the visible emissions is operating in accordance with the manufacturer's specifications and permit conditions. If it is not operating adequately, BMSMC-Humacao shall take immediate corrective actions to eliminate the excess opacity.
- vii. BMSMC-Humacao shall retain a copy of the visible emissions reading report including the date and time of the reading for at least five years, in compliance with Rule 603(A)(4)(ii) of the RCAP.
- viii. The Board reserves its right to require additional visible emission readings in order to demonstrate compliance with the opacity limit.

b. Sulfur limit in the fuel

- i. The sulfur weight percent in the kerosene burned in the Trane incinerator shall not exceed 0.5, according to the Order & Resolution R-80-16-1 from September 4, 1980 and in the permit PFE-36-0791-0999-III-O.
- ii. BMSMC-Humacao shall submit a monthly report indicating the fuel consumption in the unit and the sulfur content in the fuel in weight percent within the first 15 days of the month following the one being reported. This report shall be addressed to the Chief of the Validation and Data Management Division of the Air Quality Area.
- iii. BMSMC-Humacao shall submit each year, with the annual emissions calculations report required by condition 36 of section III of this permit, a summary with the information of the sulfur content in the fuel burned by the incinerator.
- iv. In order to comply with the requirement of keeping a daily record of the sulfur content in the fuel burned, the permittee shall retain a copy certified by the supplier indicating the sulfur content in the fuel.
- v. BMSMC-Humacao shall keep for at least 5 years the fuel sampling reports, monthly reports of the fuel consumption and the sulfur content in the fuel burned, in compliance with Rule 603(a)(4)(ii) of the RCAP.

c. Fuel consumption limit

- i. The kerosene fuel consumption in the incinerator shall not exceed 191 gallons per hour, equivalent to 1,673,160 gallons per year
- ii. The incinerator shall be provided with a fuel flow meter to make sure that the value mentioned in the previous condition is not exceeded. The fuel flow meter shall be calibrated every six months according to the manufacturer’s recommendations. A record indicating the date, time, methodology used and the results of the calibration shall be prepared and maintained for inspection by EQB personnel.
- iii. BMSMC-Humacao shall retain the results and methodology for the calibration of the fuel flow meter of the combustion unit for at least five years, in compliance with Rule 603(a)(4)(ii) of the RCAP.
- iv. BMSMC-Humacao shall submit each year, with the annual emissions calculation report required by condition 36 of section III of this permit, a summary with the information of the fuel consumption and type of fuel burned in the incinerator.

d. Control device

- i. Emissions from the Trane incinerator shall be controlled by a venturi-type scrubber, as required by the permit PFE-36-0791-0999-II-O.

6. EUCO3A-MACT and EUCO3B-MACT - Caloric I and Caloric II Incinerators

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Visible emissions limit	Visible emissions	20	Average percent 6 minutes	Method 9	Once during the first year of the permit	With each reading	60 days after the reading
				Visible emissions	Weekly		
Sulfur limit in the fuel	Sulfur content	0.2	Weight percent	Analysis of the fuel by the supplier	In each fuel delivery	Daily records of the sulfur content in the fuel and the fuel consumption	Monthly
Fuel consumption limit	Kerosene used	3	gallons per minute (each unit)	Consumption	Calculate monthly consumption	Daily Records of the fuel consumption	Annually

a. Visible emissions limit

- i. The permittee shall not exceed the opacity limit of 20% for the units EUCO3A-MACT and EUCO3B-MACT. 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.

- ii. BMSMC-Humacao shall hire an independent opacity reader, certified in a school approved by EPA, to perform one opacity reading in the chimney of each incinerator or in a common stack, as applicable during the first year of the permit using Method 9 established in the 40 CFR part 60, Appendix A. The incinerators shall be operating at the time of the opacity reading.
- iii. A stack test protocol shall be submitted at least 30 days prior to the test for approval by EQB. This protocol shall contain the information described in Rule 106(C) of the Regulations for the Control of Atmospheric Pollution (RCAP).
- iv. The Board shall be notified in writing 15 days prior to the performance test to allow EQB the opportunity to have an observer present. [Rule 106 (D) of the RCAP]
- v. The permittee shall submit two copies with the results of the performance test within 60 days after the tests are done. The report shall include the information required by Rule 106 (E) of the RCAP.
- vi. BMSMC-Humacao shall perform weekly visual inspections in the chimney of each incinerator, or in a common stack during the hours of the day using a visible emissions reader certified by a program endorsed by EPA or EQB. When a certified reader establishes that the opacity limit is being exceeded according to Rule 403 of the RCAP, BMSMC-Humacao shall verify that the equipment and control device causing the visible emissions is operating in accordance with the manufacturer's specifications and permit conditions. If it is not operating adequately, BMSMC-Humacao shall take immediate corrective actions to eliminate the excess opacity.
- vii. BMSMC-Humacao shall retain a copy of the visible emissions reading report including the date and time of the reading for at least five years, in compliance with Rule 603(A)(4)(ii) of the RCAP.
- viii. The Board reserves its right to require additional visible emission readings in order to demonstrate compliance with the opacity limit.

b. Sulfur limit in the fuel

- i. The sulfur weight percent in the kerosene fuel burned in the incinerators shall not exceed 0.2, as per the Order & Resolution R-80-16-1 from September 4, 1980 and the permit PFE-36-0894-1026-III-O.
- ii. BMSMC-Humacao shall submit a monthly report indicating the fuel consumption in the unit and the sulfur content in the fuel in weight percent within the first 15 days of the month following the one being reported. This report shall be addressed to the Chief of the Validation and Data Management Division of the Air Quality Area.
- iii. BMSMC-Humacao shall submit each year, with the annual emission calculations report required by condition 36 in section III of this permit, a summary with the information of the sulfur content in the fuel burned in the incinerators.
- iv. In order to comply with the requirement of keeping a daily record of the sulfur content in the fuel burned, the permittee shall retain a copy certified by the supplier indicating the sulfur content in the fuel.
- v. BMSMC-Humacao shall keep for at least 5 years the fuel sampling reports, monthly reports of the fuel consumption and the sulfur content in the fuel burned, in compliance with Rule 603(a)(4)(ii) of the RCAP.

c. Fuel consumption limit

- i. As required by the permit PFE-0894-1026-III-O, the fuel consumption in the incinerators shall not exceed 3 gallons per minute, equivalent to 1,576,800 gallons per year for each unit.
- ii. The incinerators shall be provided with a fuel flow meter to make sure that the value mentioned in the previous condition is not exceeded. The fuel flow meters shall be calibrated every six months according to the manufacturer's recommendations. A record indicating the date, time, methodology used and the results of the calibration shall be prepared and maintained for inspection by EQB personnel.
- iii. BMSMC-Humacao shall retain the results and methodology for the calibration of the fuel flow meters for the combustion units for at least five years, in compliance with Rule 603(a)(4)(ii) of the RCAP.
- iv. The permittee shall submit each year, with the annual emissions calculations report required by condition 36 of in section III of this permit,

a summary with the information of the fuel consumption and type of fuel burned by the incinerators.

d. Control device

- i. Emissions from the operation of the Caloric I and II incinerators shall be controlled at all times by the control system for particulate & gases, as required by the permit PFE-36-0894-1026-III-O.

7. EUCO2-MACT, EUCO3A-MACT, EUCO3B-MACT - Liquid Waste Incinerators

a. 40 CFR Part 63 Subpart EEE

BMSMC-Humacao shall comply with the 40 CFR Part 63, Subpart EEE and the provisions of subpart A according to Table 1 of subpart EEE (HWC MACT). BMSMC-Humacao shall be in compliance with the HWC MACT by September 30, 2004 or before, according to the compliance extension granted by the resolution R-03-29-1 on October 4, 2003. The requirements are summarized next.

Compliance Extension

- i. BMSMC shall comply with the following itineraries corresponding to the compliance extension.

(A) Dates by which steps toward compliance are to be taken:

- (1) Installation of Controls, as described on BMSMC's letter dated May 29, 2003

Task No.	Activity	Initial Date	Completion Date
1	Mechanical Upgrades/Mechanical Reliability	Currently	November 1, 2003
2	Media Evaluation	November 1, 2003	January 1, 2004
3	Pressure Control Evaluation	January 1, 2004	March 15, 2004
4	Instrumentation and Control		August 1, 2003
5	System Acceptance testing/De-bugging	March 15, 2004	September 30, 2004
6	Achieve Compliance with the HWC MACT		September 30, 2004

(2) Other TV Permit Applicable Requirements to which the compliance extension date applies

Task No.	Applicable Requirement	Final Compliance Date
1	§63.1211(c) Development and inclusion of the Documentation of Compliance (DOC) in BMSMC-Humacao's operating record	September 30, 2004
2	§63.1207(e) Revision of the Continuous Monitoring Systems (CMS) Evaluation Test Plan and the comprehensive performance test plan (CPTP), if makes a change as defined in §63.1206(b)(5)(iii)	March 30, 2004 for submittal
3	§63.1207(e)(1)(i)(A) EQB deadline for approving or denying the CPTP and CMS Evaluation Test Plan	December 30, 2004
4	§63.1207(e)(1)(i)(B) BMSMC—Humacao must submit notification of their intention to conduct the CPTP and Continuous Monitoring System Evaluation Test Plan to both the EQB and the EPA	January 30, 2005
5	§63.1207(e)(2) On receipt of EQB approval, BMSMC-Humacao will issue a Public Notice announcing the approval of the test plans and the location where the test plans are available to the public for review	January 30, 2005
6	§63.1207 (c)(1) Commence the Initial Comprehensive Performance Test and the Continuous Monitoring System Evaluation Test	March 30, 2005
7	§63.1207(j), §63.1210(b) Submit the Notification of Compliance (NOC)	June 28, 2005
8	§63.1211(b) Startup, Shutdown and Malfunction (SSM) Plan; the Operator Training and Certification Program; the Operation and Maintenance (O&M) Plan; and the Feedstream Analysis Plan will be available in the BMSMC-Humacao's operating record	September 30, 2004

- (3) Dates for submittal of progress reports in accordance with §63.6(i)(11) of the 40 CFR.

Progress Report	Final Submittal Date
1	January 3, 2004
2	April 3, 2004
3	July 3, 2004
4	September 15, 2004

- ii. EQB may terminate the extension of compliance at an earlier date if any specification of the previous condition is not met. Upon a determination to terminate, EQB will notify, in writing, the owner or operator its determination to terminate in accordance with §63.6(i)(14) of the 40 CFR
- iii. In accordance with §63.10(f) of 40 CFR, EQB authorizes BMSMC-Humacao to waive the reporting requirements set forth in §63.1211(a) of 40 CFR until the termination date of this extension of compliance, except for the following:

Reference	Report
§63.10(d)(4)	Compliance Progress Report
§63.10(d)(5)(ii)	Immediate SSM Reports

- iv. In addition, the Board authorizes BMSMC-Humacao to waive the recordkeeping requirements set forth in §63.1211(b) of 40 CFR until the termination date of this extension of compliance, except for the following:

Reference	Document, data or information
§63.1200, 63.10(b) and (c)	For retaining in the operating record those reports in §63.1211(a) that were not waived by the Board
§63.1206(b)(1)(ii)	If applicable
§63.1206(b)(5)(ii)	If BMSMC-Humacao makes a change as defined in §63.1206(b)(5)(iii), the Comprehensive Performance Test Plan must be revised as necessary.
§63.1206(b)(11)	Calculation of the hazardous waste residence time

Reference	Document, data or information
§63.1206(c)(5)(ii)	To specify in the Comprehensive Performance Test workplan the method that will be used to control combustion system leaks, if applicable
§63.1209(q)	If applicable

- v. The approval of the waiver granted under §63.10(f) of the 40 CFR shall not abrogate EQB or in any way prohibit EQB from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source, in accordance with §63.6 (f)(6) of the 40 CFR.

Emission Standards of the 40 CFR part 63 Subpart EEE

- vi. Emission limits for existing sources, 40 CFR §63.1203. BMSMC-Humacao shall not discharge or cause combustion gases to be emitted into the atmosphere that contain:
- (A) For dioxins and furans:
 - (1) Emissions in excess of 0.20 ng TEQ/dscm corrected to 7 percent oxygen; or [40 CFR §63.1203(a)(1)(i)]
 - (2) Emissions in excess of 0.40 ng TEQ/dscm corrected to 7 % oxygen provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400 Fahrenheit degrees or lower based on the average of the test run average temperatures (for purposes of compliance, operation of a wet particulate control device is presumed to meet the 400 Fahrenheit degrees or lower); [40 CFR §63.1203(a)(1)(ii)]
 - (B) Mercury in excess of 130 µg/dscm corrected to 7 % oxygen; [40 CFR §63.1203(a)(2)]
 - (C) Lead and cadmium, in excess of 240 µg/dscm, combined emissions, corrected to 7% oxygen; [40 CFR §63.1203(a)(3)]
 - (D) Arsenic, beryllium, and chromium in excess of 97 µg/dscm, combined emissions, corrected to 7 % oxygen; [40 CFR §63.1203(a)(4)]
 - (E) For carbon monoxide and hydrocarbons, either:
 - (1) Carbon monoxide in excess of 100 parts per million by volume, over an hourly rolling average (monitored continuously with a

continuous emissions monitoring system), dry basis and corrected to 7 % oxygen. If BMSMC-Humacao elects to comply with this carbon monoxide standard rather than the hydrocarbon standard under section 63.1203(a)(5)(ii), must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent, as provided in 63.1206(b)(7), hydrocarbons do not exceed 10 ppm by volume during those runs, over an hourly rolling average (monitored continuously with a continuous monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane, or [40 CFR §63.1203(a)(5)(i)]

(2) Hydrocarbons in excess of 10 ppm by volume, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane; [40 CFR §63.1203(a)(5)(ii)]

(F) Hydrochloric acid and chlorine gas in excess of 77 ppm by volume, combined emissions, expressed as hydrochloric acid equivalents, dry basis and corrected to 7% oxygen; and [40 CFR §63.1203(a)(6)]

(G) Particulate matter in excess of 34 mg/dscm corrected to 7 % oxygen. [40 CFR §63.1203(a)(7)]

vii. Destruction and removal efficiency (DRE) standard [40 CFR §63.1203(c)]

(A) 99.99% *DRE* [40 CFR §63.1203(c)(1)]. Except as provided in Section 63.1203 of the 40 CFR, BMSMC-Humacao shall achieve a destruction and removal efficiency of 99.99% for each principle organic hazardous constituent (POHC) designated in Section 63.1203(c)(3) of the 40 CFR. BMSMC-Humacao shall calculate DRE for each POHC from the following equation:

$$DRE = [1 - (W_{out} / W_{in})] \times 100\%$$

where:

W_{in} = mass feedrate of one POHC in a waste feedstream; and

W_{out} = mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

(B) 99.9999% *DRE*. If BMSMC-Humacao burns the dioxin-listed hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27 (see 40 CFR section 261.31), BMSMC-Humacao shall achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC that BMSMC-Humacao

designates under section 63.1203(c)(3) of the 40 CFR. BMSMC-Humacao shall demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-*p*-dioxins and dibenzofurans. BMSMC-Humacao shall use the equation in paragraph 63.1203(c)(1) of the 40 CFR to calculate DRE for each POHC. In addition, BMSMC-Humacao shall notify the Administrator of its intent to incinerate hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27. [40 CFR §63.1203(c)(2)]

(C) *Principal organic hazardous constituents (POHC's)*. [40 CFR §63.1203(c)(3)]

(1) BMSMC-Humacao shall treat the POHCs in the waste feed that BMSMC-Humacao specifies under Section 63.1203(c)(3)(ii) of the 40 CFR to the extent required by Section 63.1203(c)(1) and (c)(2) of the 40 CFR. [40 CFR §63.1203(c)(3)(i)]

(2) BMSMC-Humacao shall specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by 40 CFR section 63.60, for each waste to be burned. BMSMC-Humacao shall base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information. [40 CFR §63.1203(c)(3)(ii)]

viii. Significant figures. The emission limits provided by Section 63.1203(a) of the 40 CFR are presented with two significant figures. Although BMSMC-Humacao must perform intermediate calculations using at least three significant figures, BMSMC-Humacao may round the resultant emission levels to two significant figures to document compliance. [40 CFR §63.1203(d)]

ix. Compliance Procedures - BMSMC-Humacao shall meet all applicable requirements of 40 CFR §63.1206(b).

a. EQB will review the performance test results in making a finding of compliance (FOC) required by sections 63.6(f)(3) and 63.1206(b)(3) to ensure that BMSMC-Humacao has interpreted the performance test results properly and the operating requirements specified in the Notification of Compliance (NOC) are appropriate for this source. BMSMC-Humacao will request a permit revision or permit reopening according to the procedures in Rule 602 or 608 of the RCAP within 30 days after a FOC is

completed. A schedule of compliance consistent with section (c)(2)(viii) of Rule 602 and section (c)(3) of Rule 603 of the RCAP must be included in the permit revision application or permit reopening request.

- x. Operating requirements - BMSMC-Humacao shall meet all applicable operating requirements as specified in 40 CFR §63.1206(c).
- xi. Testing
 - (A) BMSMC-Humacao shall comply with the provisions of 40 CFR §63.7(b) and (c) and §63.8(e) [as modified by 40 CFR §63.1207(e)] for notification of performance tests and CMS performance evaluations, and for approval of test plans and CMS performance evaluation plans, according to the itinerary approved by the compliance extension granted on October 4, 2003.
 - (B) BMSMC-Humacao shall conduct all performance tests according to the requirements of 40 CFR §63.1207 and §63.1208, as modified by the compliance extension granted on October 4, 2003.
- xii. Monitoring. BMSMC-Humacao shall meet all applicable monitoring requirements as specified in 40 CFR §63.1209.
- xiii. Notifications. BMSMC-Humacao shall meet all applicable notification requirements as specified in 40 CFR §63.1210, as modified by the compliance extension granted on October 4, 2003.
- xiv. Recordkeeping and Reporting. BMSMC-Humacao shall meet all applicable recordkeeping and reporting requirements as specified in 40 CFR §63.1211, as modified by the compliance extension granted on October 4, 2003.

8. EUCO6, EUCO7, EUCO8 Thermal Oxidizers

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Visible emissions limit	Visible emissions	20	Average percent 6 minutes	Method 9	Once during the first year of the permit	With each reading	60 days after the reading
				Visible emissions	Weekly		

Condition	Parameter	Value	Units	Test Method	Frequency of Method	Recordkeeping Requirements	Reporting frequency
Sulfur Limit in the fuel	Sulfur content	Less than or equal to 0.2	Weight percent	Analysis of the fuel by the supplier	In each fuel delivery	Daily records of the sulfur content in the fuel and the fuel consumption	Monthly
NOx emission limit	NOx	257.5	pounds/day	Records	Daily	Daily	Monthly
		47	ton/year		Daily	Daily	
Fuel Consumption Limit	Kerosene	4,085,664	gal/year	Records	Daily	Daily	Monthly
		466.4	gal/day		Daily	Daily	Monthly
Simultaneous Operation	Operating Rate	13,000	SCFM	N/A	Daily	Records	Semiannual
		20,000	SCFM				
SO ₂ and halogens control device	Efficiency	SO ₂	95%	Stack Test	N/A	Keep a copy of the stack test report	N/A
		Halogens	95%				

a. Visible emissions limit

- i. The permittee shall not exceed the opacity limit of 20% for the units EUCO6, EUCO7 and EUCO8. 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.
- ii. BMSMC-Humacao shall hire an independent opacity reader, certified in a school approved by EPA, to perform one opacity reading in the chimney of each oxidizer during the first year of the permit using Method 9 established in the 40 CFR part 60, Appendix A. The oxidizers shall be operating at the time of performance of the opacity reading.
- iii. A stack test protocol shall be submitted at least 30 days prior to the test for approval by EQB. This protocol shall contain the information described in Rule 106(C) of the RCAP.
- iv. The Board shall be notified in writing 15 days prior to the performance test to allow EQB the opportunity to have an observer present. [Rule 106 (D) of the RCAP]
- v. The permittee shall submit two copies with the results of the performance test within 60 days after the tests are done. The report shall include the information required by Rule 106 (E) of the RCAP.
- vi. BMSMC-Humacao shall perform weekly visual inspections during the hours of the day in the chimney of each unit, or in a common stack, using

a visible emissions reader certified by a program endorsed by EPA or EQB. When a certified reader establishes that the opacity limit is being exceeded according to Rule 403 of the RCAP, BSMC-Humacao shall verify that the equipment and control device causing the visible emissions is operating in accordance with the manufacturer's specifications and permit conditions. If it is not operating adequately, BSMC-Humacao shall take immediate corrective actions to eliminate the excess opacity.

- vii. BSMC-Humacao shall keep a copy of the visible emissions reading report including the date and time of the reading for at least five years, in compliance with Rule 603(A)(4)(ii) of the RCAP.
- viii. The Board reserves its right to require additional visible emission readings in order to demonstrate compliance with the opacity limit.

b. Sulfur limit in the fuel

- i. According to the permit PFE-36-0202-0227-II-C and the PSD non-applicability determination dated January 7, 2002, the three thermal oxidizers shall only fire kerosene as supplemental fuel, with a sulfur content not to exceed 0.2 percent by weight.
- ii. BSMC-Humacao shall record the sulfur content in the kerosene fuel in weight percent each time it is delivered in the facility. This record shall be made available at all times for review by the Board's and the Environmental Protection Agency's personnel [PFE-36-0479-0356-II-C].
- iii. BSMC-Humacao shall submit a monthly report indicating the fuel consumption in the thermal oxidizers and the sulfur content certified by the supplier no later than the next 15 days of the month following the one being reported as required by Rule 410 of the RCAP. This report shall be addressed to the Validation and Data Management Division and shall be available in the facility for review by the Board's technical personnel.
- iv. To comply with the previous condition BSMC-Humacao shall retain a copy certified by the supplier indicating the sulfur content in the fuel.
- v. BSMC-Humacao shall submit each year, with the annual emissions calculations report required by condition 36 of this permit, a summary with the information of the sulfur content in the fuel burned by the thermal oxidizers.
- vi. BSMC-Humacao shall keep for at least 5 years the fuel sampling reports, monthly reports of the fuel consumption and the sulfur content in the fuel burned, in compliance with Rule 603(a)(4)(ii) of the RCAP.

c. Fuel consumption limit

- i. The thermal oxidizers shall burn a maximum of 4,085,664 gallons of kerosene, based in a rolling 365-day period. [PFE-36-0202-0227-II-C and PSD non-applicability determination]
- ii. As required by the permit PFE-36-0202-0227-II-C, the thermal oxidizers shall be equipped with a fuel flow meter at the entrance of the thermal oxidizers which will be calibrated every six months to guarantee that the fuel consumption limit will not be exceeded. A record indicating the date, hour and calibration results shall be prepared and maintained. This record shall be available at all times for inspection by EQB's technical personnel.
- iii. The daily and yearly amount of kerosene used in the thermal oxidizers and in the boilers shall be recorded separately. [PFE-36-0202-0227-II-C and PSD non-applicability determination]
- iv. BMSMC-Humacao shall retain for at least 5 years a copy of the monthly and annual consumption reports and of the methodology used for the calibrations of the fuel flow meters, in compliance with Rule 603(a)(4)(ii) of the RCAP.
- v. BMSMC-Humacao shall submit each year, with the annual emissions calculations report required by condition 36 of this permit, a summary with the information of the fuel consumption in the oxidizers.

d. NOx emission limit

- i. The NOx emissions from the thermal oxidizers shall be limited to 257.5 pounds per day based on a 365 days rolling average. [PFE-36-0202-0227-II-C and PSD non-applicability determination]
- ii. Each thermal oxidizer shall be equipped with low NOx burners. [PFE-36-0202-0227-II-C and PSD non-applicability determination]
- iii. Prior to the date of startup of the thermal oxidizers and thereafter, BMSMC-Humacao shall install, calibrate, maintain and operate a continuous emission monitoring system (CEM) in each of the oxidizer exhaust stack. The stack gas NOx concentration in the oxidizer exhaust stack (as measured as NO₂) shall be recorded. The system shall meet all applicable Environmental Protection Agency (EPA) monitoring performance specifications (including but not limited to 40 CFR section 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 2,

and Appendix F. [PFE-36-0202-0227-II-C and PSD non-applicability determination]

iv. Daily compliance with the 257.5 lbs emission limit on NO_x emissions shall be determined by adding the total amount of NO_x emissions by all three thermal oxidizers during each calendar day to the total NO_x emissions by all three thermal oxidizers in the preceding 364 calendar days and dividing it by 365. [PFE-36-0202-0227-II-C and PSD non-applicability determination]

v. The daily amount of NO_x emissions from each thermal oxidizer shall be calculated in the following way:

BMSMC-Humacao will continuously measure and record stack gas NO_x concentrations in ppmvd using a CEM. The emission rate in ppmvd shall be measured and recorded (averaged over 24 hours) every calendar day. BMSMC-Humacao shall convert the NO_x monitored concentration (in ppm NO₂) to a mass load using the monitored vapor flow rate. Daily NO_x emission rates for each thermal oxidizer will be calculated and recorded every day. [PFE-36-0202-0227-II-C and PSD non-applicability determination]

vi. For the purpose of complying with the requirements of these emission units, the 365 days rolling period starts since the first operating year of the thermal oxidizers. During the first year of operation, the daily emissions will be added to the total emission of the previous days until reaching 365 days. Starting on the 366th day, the daily emissions shall be calculated and shall be added to the emissions of the 364 previous days. BMSMC-Humacao shall ensure that the annual emissions will not exceed at any time the limits established in the permit.

vii. All continuous emission monitoring (CEM) data used to determine the NO_x emissions from the thermal oxidizers shall be recorded, the daily and yearly emission rates and any related data. [PFE-36-0202-0227-II-C and PSD non-applicability determination]

viii. The NO_x emissions measured at the thermal oxidizers exhaust shall not exceed 47 tons, based on a 365-day rolling period. If this limit is exceeded, or the fuel consumption limit of the boilers authorized by the permit PFE-36-0479-0356-II-C, BMSMC-Humacao will be in violation to this permit and could be subject to the New Source Review Program or to the provisions of Rule 201 of the RCAP. The net increase in NO_x and SO₂ emissions in the source that will result from the operation of the thermal oxidizers will be limited to 39 and 3.68 tons per year, respectively.

- ix. As required by the permit PFE-36-0202-0227-II-C and the PSD non-applicability determination, shall submit an excess emission report to the Board for each calendar quarter. All quarterly reports will be postmarked or delivered to the Board within 30 days following the end of each quarter and will include the following information:
 - a. The magnitude of excess emissions computed in accordance with 40 CFR section 60.13(h), any conversion factor(s) used and the date and time of commencement and completion for each time period of excess emissions.
 - b. The date and time identifying each period during which the continuous monitoring was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - c. When no excess emissions have occurred or the monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
 - d. Any period during which the fuel sulfur content exceeds 0.2% shall be reported immediately to the Board.

e. Simultaneous operation

- i. Only two thermal oxidizers shall be operated simultaneously, at a rate of 20,000 CFM each one. Alternatively, three thermal oxidizers could be operated at a rate of 13,333 CFM, each. [PFE-36-0202-0227-II-C]
- ii. BMSMC shall keep records with the periods during which the thermal oxidizers are operating. The record will contain the identification of the thermal oxidizer that is operating and the operating rate of each oxidizer. This record shall be made available for inspection by EQB's technical personnel.

f. Control device

- i. As required by the permit PFE-36-0202-0227-II-C, each thermal oxidizer shall be equipped with a packed column scrubber, which shall meet a 95% removal efficiency for sulfur dioxide and halogens. This scrubbers shall comply with the testing, monitoring, recordkeeping and reporting requirements pursuant to 40 CFR Part 63 Subpart GGG (Pharmaceutical MACT) [PFE-36-0202-0227-II-C and PSD non-applicability determination].

- ii. BMSMC-Humacao shall retain the copies of the stack test performed from September 20 through 21, 2002 for at least 5 years available for inspection by EQB technical personnel.

B. Compliance with the 40 CFR Part 63 Subpart GGG (EUVO1-MACT, EUTF1-MACT, EUWW1-MACT, EULDAR1-MACT, EUMISC-MACT)

Applicability [40 CFR §63.1250]

1. The emission units EUVO1-MACT, EUTF1-MACT, EUWW1-MACT, EULDAR1-MACT, EUMISC-MACT are subject to the National Emission Standards For Hazardous Air Pollutants for Pharmaceutical Production included in the 40 CFR Part 63 Subpart GGG. BMSMC-Humacao shall comply with the requirements of this subpart and with the applicable requirements of the 40 CFR Part 63 Subpart A, as provided in Table 1 of subpart GGG of the 40 CFR.
2. According to section 63.1250(g)(1) of the 40 CFR, the emission limitations shall not apply during periods of startup, shutdown, and malfunction, if these periods preclude the ability of a particular emission point of an affected source to comply with one or more specific emission limitations to which it is subject and the owner or operator follows the provisions for these periods, as specified in sections 63.1259(a)(3) and 63.1260(i) of the 40 CFR.
3. According to section 63.1250(g)(2) of the 40 CFR, the provisions for equipment leaks set forth in Section 63.1255 of the 40 CFR shall apply at all times except during periods of no operation of the pharmaceutical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in the cessation of the emissions to which this section applies.
4. BMSMC-Humacao shall not shut down the operation of equipments that are required or utilized for compliance with the emissions limitations during times when emissions are being routed to such equipment, if the shutdown would contravene emissions limitations applicable to such equipments. This premise does not apply if the equipment is malfunctioning, if BMSMC-Humacao shut down the equipment to avoid damage due to a malfunction of the Pharmaceutical Manufacturing Process Unit (PMPU) or portion thereof, according to section 63.1250(g)(3) of the 40 CFR.
5. During startups, shutdowns, and malfunctions when the emissions limitations do not apply pursuant to sections 63.1250(g)(1) through (2) of the 40 CFR, BMSMC-Humacao shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the extent practical. The measures to be taken shall be identified in the startup, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, work practices, pollution prevention, monitoring, and changes in the manner of operation of the

source. Back-up control devices are not required, but may be used if available, according to section 63.1250(g)(4) of the 40 CFR.

Standards: General [40 CFR §63.1252]

6. Opening of a safety device – According to section 63.1252(a) of the 40 CFR, BMSMC-Humacao is allowed to open any safety device, as defined in Section 63.1251, at any time conditions require it to do so to avoid unsafe conditions.
7. Closed-vent systems. Pursuant to section 63.1252(b) of the 40 CFR, the bypass lines of a closed vent system that could divert a vent stream away from a control device used to comply with the emission standards shall comply with the requirements of Table 4 of subpart GGG. To comply with the requirements of such section, BMSMC-Humacao shall install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere.
8. Heat exchange systems (EUMISC-MACT) – According to section §63.1252(c) of the 40 CFR, heat exchange systems that cool process equipment or materials used in pharmaceutical manufacturing operation shall be treated according to the provisions of §63.104 of the 40 CFR, except that the monitoring frequency shall be no less than quarterly. For identifying leaking equipment, the owner or operator of heat exchange systems on equipment which meet current good manufacturing practice (CGMP) requirements of 21 CFR part 211 may elect to use the physical integrity of the reactor as the surrogate indicator of heat exchange system leaks around the reactor.
9. Control requirements for certain liquid streams in open systems within a PMPU [40 CFR §63.1252(f)] – BMSMC-Humacao shall comply with the provisions of Table 5 of subpart GGG for each item of equipment meeting all the following criteria specified in §63.1252(f)(2) through (4) and (f)(5)(i) or (ii):
 - a. The item of equipment is of a type identified in Table 5 of subpart GGG of the 40 CFR. [40 CFR §63.1252(f)(2)]
 - b. The item of equipment is part of a PMPU, as defined in §63.1251 of the 40 CFR. [40 CFR §63.1252(f)(3)]
 - c. The item of equipment is controlled less stringently than in Table 5 of subpart GGG and the item of equipment is not otherwise exempt from controls by the provisions of subpart GGG or subpart A of this part; and [40 CFR §63.1252(f)(4)]

- d. The item of equipment:
 - i. Is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with an annual average concentration greater than or equal to 1,300 ppmw of partially soluble HAP compounds; or an annual average concentration greater than or equal to 5,200 ppmw of partially soluble and/or soluble HAP compounds. The annual average concentration shall be determined according to the procedures in §63.1257(e)(1)(ii) of the 40 CFR. [40 CFR §63.1252(f)(5)(i)]
 - ii. Is a tank that receives one or more streams that contain water with an annual average concentration greater than or equal to 1,300 ppmw of partially soluble HAP compounds. The owner or operator of the source shall determine the average concentration of the stream at the inlet to the tank and according to the procedures in §63.1257(e)(1)(ii) of the 40 CFR. [40 CFR § 63.1252(f)(5)(ii)]
- 10. Control requirements for halogenated vent streams that are controlled by combustion devices – In compliance with section 63.1252(g) of the 40 CFR, halogenated vent stream from the thermal oxidizer used to comply with the emission standards of subpart GGG shall be ducted to a scrubber before it is discharged to the atmosphere. The scrubber must achieve a reduction efficiency of 95%.
- 11. Planned routine maintenance for centralized combustion control devices (CCCD)- According to section 63.1252(h), BSMC-Humacao may operate non-dedicated PMPU's during periods of planned routine maintenance for CCCD in accordance with the provisions specified next:
 - a. For equipment leaks and wastewater emissions that normally are controlled by the CCCD, if any, BSMC-Humacao must continue to comply with the requirements in §63.1255(b)(4)(ii) and 63.1256(h) of the 40 CFR, respectively, using other control devices during the planned routine maintenance period for the CCCD. [40 CFR §63.1252(h)(1)]
 - b. During the planned routine maintenance period, BSMC-Humacao must route emissions from process vents with organic HAP emissions greater than 15 pounds per day (lb/day) through a closed-vent system to a condenser that meets the conditions specified next: [40 CFR §63.1252(h)(2)]
 - i. The outlet gas temperature must be less than –50 °C (-58 °F) when the emission stream contains organic HAP with a partial pressure greater than 20 kPa (2.9 psia). [40 CFR §63.1252(h)(2)(i)]

- ii. The outlet gas temperature must be less than $-5\text{ }^{\circ}\text{C}$ ($23\text{ }^{\circ}\text{F}$) when the emission stream contains organic HAP with a partial pressure less than or equal to 20 kPa (2.9 psia). [40 CFR §63.1252(h)(2)(ii)]
- c. BMSMC-Humacao must route HCl emissions from process vents with HCl emissions greater than 15 lb/day through a closed-vent system to a caustic scrubber, and the pH of the scrubber effluent must be maintained at or above 9. [40 CFR §63.1252(h)(3)]
- d. For the purposes of the emission calculations required in paragraphs (h)(2) and (3) of section 63.1252 of the 40 CFR, the term “process vent” shall mean each vent from a unit operation. The emission calculation shall not be performed on the aggregated emission stream from multiple unit operations that are manifolded together into a common header. Once an affected process vent has been controlled in accordance with section 63.1252 of the 40 CFR, it is no longer subject to the requirements of such section or section 63.1254 of the 40 CFR during the routine maintenance period. [40 CFR §63.1252(h)(4)]
- e. The total period of planned routine maintenance, during which non-dedicated PMPU’s that are normally controlled by the CCCD continue to operate, and process vent emissions are controlled as specified in §§63.1252(h)(2) and (3), must not exceed 240 hours in any 365-day period. [40 CFR §63.1252(h)(5)]

Standards: Storage tanks (EUTF1-MACT) [40 CFR §63.1253]

- 12. As a primary compliance strategy, BMSMC-Humacao shall comply with section 63.1253(d) of the 40 CFR by routing the emissions from the storage tanks to a combustion device that achieves an outlet TOC concentration of 20 ppmv or less, as calibrated with methane or the predominant HAP. As an alternative, BMSMC-Humacao shall control the halogens and halide emissions by 95%. Compliance with the outlet concentrations will be determined according to the procedures of section 63.1257(c)(4) of the 40 CFR and with the continuous emission monitoring requirements in section 63.1258(b)(5) of the 40 CFR.
- 13. Planned Routine Maintenance – The specifications and requirements in the previous condition for control devices do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of the control devices (including CCCD subject to section 63.1252(h)), during which the control device does not meet the specifications of the previous condition shall not exceed 240 hours in any 365-day period. [40 CFR §63.1253(e)]

Standards: Process Vents (EUVO1-MACT) [40 CFR §63.1254]

14. As the primary compliance strategy, the emissions from a new or existing source from BMSMC-Humacao shall comply with the process vents emission standards by routing the process vents to the thermal oxidizer complex, which will achieve a TOC outlet concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less. The halogens and hydrogen halide emissions shall be reduced by 95%. Continuous compliance shall be demonstrated according to the emission monitoring requirements described in §63.1258(b)(5) of the 40 CFR. [40 CFR §63.1254(c)]
15. Those miscellaneous emissions that for operational control, safety concerns, or engineering reasons are not routed to the thermal oxidizers for control shall comply with the process based annual mass limit (PBAML) requirements, included in section 63.1254(a)(2) of the 40 CFR, as described next.
 - a. Actual HAP emissions from the sum of all process vents within a process must not exceed 900 kg in any 365-day period. [40 CFR §63.1254(a)(2)(i)]
 - b. Actual HAP emissions from the sum of all process vents within processes complying with the emission limits in the previous condition are limited to a maximum of 1,800 kg in any 365-day period. [40 CFR §63.1254(a)(2)(ii)]
 - c. Emissions from vents that are subject to the requirements to reduce emissions from an individual vent in §63.1254(a)(3) of the 40 CFR and emissions from vents that are controlled in accordance with the procedures in §63.1254(c) of the 40 CFR may be excluded from the sums calculated in §63.1254(a)(2)(i) and (ii). [40 CFR §63.1254(a)(2)(iii)]
 - d. BMSMC-Humacao may switch from compliance with 63.1254(a)(2) of the 40 CFR to compliance with §63.1254(a)(1) of the 40 CFR only after at least 1 year of operation in compliance with paragraph (a)(2) of the 40 CFR. Notification of such a change in the compliance method shall be reported according to the procedures in section 63.1260(h) of the 40 CFR. [40 CFR §63.1254(a)(2)(iv)]
 - e. Emissions streams that are undiluted and uncontrolled containing less than 50 ppmv HAP, as determined through process knowledge that no HAPs are present in the emission stream or using an engineering assessment as discussed in §63.1257(d)(2)(ii), test data using Method 18 of 40 CFR part 60, appendix A, or any other test method that has been validated according to the procedures in Method 301 of appendix A of Part 63 are not considered process vents. [40 CFR §63.1251]

- f. Emissions from elephant trunk lines that collect general ventilation inside the buildings for industrial hygiene purposes and are not routed to the thermal oxidizers because they do not contain HAP concentrations in excess of 50 ppm, are not considered process emissions, as long as they comply with the requirements of the previous condition, according to section 63.1251 of the 40 CFR.
16. Planned routine maintenance, 40 CFR 63.1254(a)(4)- For each PMPU that is controlled with a CCCD, BMSMC-Humacao must comply with the provisions specified next during periods of planned routine maintenance of the CCCD. BMSMC-Humacao is not required to comply with the same provision for all of the PMPU's controlled by the CCCD.
- a. Shutdown the affected process. [40 CFR §63.1254(a)(4)(i)]
 - b. Comply with the requirements of section 63.1254(a)(1) through (3) by using other means. [40 CFR §63.1254(a)(4)(ii)]
 - c. For non-dedicated PMPU, implement the procedures described in section 63.1254(a)(4)(iii)(A) through section 63.1254(a)(4)(iii)(C) of the 40 CFR during planned routine maintenance for CCCD for those process vents that are normally controlled by the CCCD. This option is not available for process vents from dedicated PMPU's. [40 CFR §63.1254(a)(4)(iii)]

Standards: Equipment leaks (EULDAR1-MACT) [40 CFR §63.1255]

17. General Equipment Leak Requirements [40 CFR §63.1255(a)]
- a. The provisions of the 40 CFR §63.1255 apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, control devices, and closed-vent systems required by the 40 CFR Part 63 Subpart GGG that are dedicated to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within a source subject to the provisions of the 40 CFR Part 63 Subpart GGG. [40 CFR §63.1255(a)(1)]
 - b. According to the 40 CFR §63.1255(a)(2), after the compliance date for a process, equipment subject to both section 63.1255 of the 40 CFR and either of the following, will only be required to comply with the provisions of subpart GGG:
 - i. 40 CFR Part 60
 - ii. 40 CFR Part 61

- c. The provisions in section 63.1(a)(3) of subpart A of part 63 do not alter the provisions in paragraph (a)(2) of section 63.1255. [40 CFR §63.1255(a)(4)]
- d. Lines and equipment not containing process fluids are not subject to the provisions of section 63.1255. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process. [40 CFR §63.1255(a)(5)]
- e. The provisions of section 63.1255 do not apply to bench-scale⁶ processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of 40 CFR part 63, subpart GGG. [40 CFR §63.1255(a)(6)]
- f. Equipment to which section 63.1255 applies shall be identified such that it can be distinguished readily from equipment that is not subject to section 63.1255. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed, within 90 calendar days or by the next Periodic Report following the end of the monitoring period for that component, whichever is later. [40 CFR §63.1255(a)(7)]
- g. Equipment that is in vacuum service is excluded from the requirements of section 63.1255 of the 40 CFR. [40 CFR §63.1255(a)(8)]
- h. Equipment that is in organic hazardous air pollutants service, but is in such service less than 300 hours per calendar year, is excluded from the requirements of section 63.1255 if it is identified as required in paragraph (g)(9) of section 63.1255. [40 CFR §63.1255(a)(9)]
- i. Pursuant to 40 CFR §63.1255(a)(10), when each leak is detected by visual, audible, or olfactory means, or by monitoring as described in section 63.180(b) or (c), the following requirements apply:

⁶ Bench-scale batch process means a batch process (other than a research and development facility) that is capable of being located on a laboratory bench top. This bench-scale equipment will typically include reagent feed vessels, a small reactor and associated product separator, recovery and holding equipment. These processes are only capable of producing small quantities of product.

- i. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. [40 CFR §63.1255(a)(10)(i)]
 - ii. The identification on a valve in light liquid or gas/vapor service may be removed after it has been monitored as specified in paragraph (e)(7)(iii) of section 63.1255, and no leak has been detected during the follow-up monitoring. [40 CFR §63.1255(a)(10)(ii)]
 - iii. The identification on equipment, except on a valve in light liquid or gas/vapor service, may be removed after it has been repaired. [40 CFR §63.1255(a)(10)(iii)]
- j. Except as provided in paragraph (a)(11)(i) of section 63.1255, all terms in this subpart GGG that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual) refer to the standard calendar periods unless specified otherwise in the section or paragraph that imposes the requirement. [40 CFR §63.1255(a)(11)]
- i. If the initial compliance date does not coincide with the beginning of the standard calendar period, BSMC-Humacao may elect to utilize a period beginning on the compliance date, or may elect to comply in accordance with the provisions of paragraph (a)(11)(ii) or (iii) of section 63.1255 of the 40 CFR.
 - ii. Time periods specified in subpart GGG for completion of required tasks may be changed by mutual agreement between BSMC-Humacao and EQB and EPA, as specified in subpart A of part 63. For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period. [40 CFR §63.1255(a)(11)(ii)]
 - iii. Except as provided in paragraph (a)(11)(i) or (ii) of section 63.1255, where the period specified for compliance is a standard calendar period, if the initial compliance date does not coincide with the beginning of the calendar period, compliance shall be required according to the schedule specified in paragraph (a)(11)(iii)(A) or (B) of section 63.1255, as appropriate. [40 CFR §63.1255(a)(11)(iii)]
 - (A) Compliance shall be required before the end of the standard calendar period within which the initial compliance date occurs if there remain at least 3 days for tasks that must be

performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or [40 CFR §63.1255(a)(11)(iii)(A)]

(B) In all other cases, compliance shall be required before the end of the first full standard calendar period after the period within which the initial compliance date occurs. [40 CFR §63.1255(a)(11)(iii)(B)]

iv. In all instances where a provision of subpart GGG requires completion of a task during each of multiple successive periods, BMSMC-Humacao may perform the required task at any time during each period, provided the task is conducted at a reasonable interval after completion of the task during the previous period. [40 CFR §63.1255(a)(11)(iv)]

k. In all cases where the provisions of subpart GGG require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of section 63.1255 of the 40 CFR to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of section 63.1255 of the 40 CFR. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of section 63.1255. [40 CFR §63.1255(a)(12)]

18. References [40 CFR §63.1255(b)]

a. The owner or operator of a source subject to section 63.1255 shall comply with the provisions of subpart H of part 63, as specified in paragraphs (b)(2) through (4) of section 63.1255. The term “process unit” as used in subpart H of Part 63 shall be considered to be defined the same as “group of processes” for sources subject to subpart GGG. The term “fuel gas system”, as used in subpart H of Part 63, shall not apply for the purposes of subpart GGG. [40 CFR §63.1255(b)(1)]

b. Sections 63.160, 63.161, 63.162, 63.163, 63.167, 63.168, 63.170, 63.173, 63.175, 63.176, 63.181 and 63.182 shall not apply for the purposes of subpart GGG. BMSMC-Humacao shall comply with the provisions specified in paragraphs (b)(2)(i) through (viii) of section 63.1255. [40 CFR §63.1255(b)(2)]

- i. Sections 63.160 and 63.162 shall not apply; instead, BSMC-Humacao shall comply with paragraph (a) of section 63.1255 of the 40 CFR; [40 CFR §63.1255(b)(2)(i)]
 - ii. Section 63.161 shall not apply; instead, BSMC-Humacao shall comply with section 63.1251 of the 40 CFR; [40 CFR §63.1255(b)(2)(ii)]
 - iii. Sections 63.163 and 63.173 shall not apply; instead, BSMC-Humacao shall comply with paragraph (c) of section 63.1255 of the 40 CFR; [40 CFR §63.1255(b)(2)(iii)]
 - iv. Section 63.167 shall not apply; instead, BSMC-Humacao shall comply with paragraph (d) of section 63.1255 of the 40 CFR; [40 CFR §63.1255(b)(2)(iv)]
 - v. Section 63.168 shall not apply; instead, BSMC-Humacao shall comply with el paragraph (e) of section 63.1255 of the 40 CFR; [40 CFR §63.1255(b)(2)(v)]
 - vi. Section 63.170 shall not apply; instead, BSMC-Humacao shall comply with section 63.1254 of the 40 CFR; [40 CFR §63.1255(b)(2)(vi)]
 - vii. Section 63.181 shall not apply; instead, BSMC-Humacao shall comply with el paragraph (g) of section 63.1255 of the 40 CFR; and [40 CFR §63.1255(b)(2)(vii)]
 - viii. Section 63.182 shall not apply; instead, BSMC-Humacao shall comply with el paragraph (h) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(b)(2)(viii)]
- c. BSMC-Humacao shall comply with sections 63.164, 63.165, 63.166, 63.169, 63.177 and 63.179 in their entirety, except that when these sections reference other sections of subpart H of part 63, the references shall mean the sections specified in paragraphs (b)(2) and (4) of section 63.1255. Section 63.164 applies to compressors. Section 63.165 applies to pressure relief devices in gas/vapor service. Section 63.166 applies to sampling connection systems. Section 63.169 applies to pumps, valves, connectors and agitators in heavy liquid service; instrumentation systems and pressure relief devices in liquid service. Section 63.177 applies to general alternative means of emission limitation. Section 63.179 applies to alternative means of emission limitation for enclosed-vented process. [40 CFR §63.1255(b)(3)]

- d. BMSMC-Humacao shall comply with sections 63.171, 63.172, 63.174, 63.178, and 63.180, except as specified in paragraphs (b)(4)(i) through (vi) of section 63.1255. [40 CFR §63.1255(b)(4)]
 - i. Section 63.171 shall apply, except §63.171(a) shall not apply. Instead, delay of repair of equipment for which leaks have been detected is allowed if one of the conditions in the following paragraphs (d)(i)(A) through (B) exists:
 - (A) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [40 CFR §63.1255(b)(4)(i)(A)]
 - (B) BMSMC-Humacao determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown. [40 CFR §63.1255(b)(4)(i)(B)]
 - ii. Section 63.172 shall apply for closed-vent systems used to comply with section 63.1255, and for control devices used to comply with section 63.1255 only, except:
 - (A) Section 63.172(k) and (l) shall not apply. BMSMC-Humacao shall instead comply with paragraph (f) of section 63.1255. [40 CFR §63.1255(b)(4)(ii)(A)]
 - (B) BMSMC-Humacao may, instead of complying with the provisions of §63.172(f), design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gage or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating. [40 CFR §63.1255(b)(4)(ii)(B)]
 - (C) The requirements apply at all times, except as specified in §63.1250(g). BMSMC-Humacao may not comply with the planned routine maintenance provisions in §63.1252(h). [40 CFR §63.1255(b)(4)(ii)(C)]

- iii. Section 63.174 shall apply except:
- (A) Section 63.174(f), (g), and (h) shall not apply. Instead of §63.174(f), (g), and (h), BMSMC-Humacao shall comply with paragraph (f) of section 63.1255. Section 63.174(b)(3) shall not apply. Instead of §63.174(b)(3), BMSMC-Humacao shall comply with paragraphs (b)(4)(iii)(B) through (F) of section 63.1255. [40 CFR §63.1255(b)(4)(iii)(A)]
 - (B) If the percent leaking connectors in a group of processes was greater than or equal to 0.5% during the initial monitoring period, monitoring shall be performed once per year until the percent leaking connectors is less than 0.5%. [40 CFR §63.1255(b)(4)(iii)(B)]
 - (C) If the percent leaking connectors in the group of processes was less than 0.5%, but equal to or greater than 0.25%, during the initial or last required monitoring period, BMSMC-Humacao may elect to monitor once every four years. An owner or operator may comply with the requirements of paragraph (b)(4)(iii)(C) of section 63.1255 by monitoring at least 40 % of the connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all required monitoring performed during the 4-year period. [40 CFR §63.1255(b)(4)(iii)(C)]
 - (D) Except as provided in paragraph (b)(4)(iii)(B) of section 63.1255, if leaking connectors comprise at least 0.5 % but less than 1.0 % of the connectors during the last monitoring period, BMSMC-Humacao shall monitor at least once every 2 years for the next monitoring period. At the end of that 2-year monitoring period, if the percent leaking connectors is greater than or equal to 0.5 %, BMSMC-Humacao shall monitor once per year until the percent leaking connectors is less than 0.5 %. If, at the end of a monitoring period, the percent leaking connectors is less than 0.5 %, BMSMC-Humacao shall monitor in accordance with paragraph (b)(4)(iii)(C) or (F) of section 63.1255, as appropriate. [40 CFR §63.1255(b)(4)(iii)(D)]
 - (E) If BMSMC-Humacao determines that 1% or greater of the connectors in a group of processes are leaking, BMSMC-Humacao shall monitor the connectors once per year.

BMSMC-Humacao may elect to use the provisions of paragraph (b)(4)(iii)(C), (D), or (F) of section 63.1255, as appropriate, after a monitoring period in which less than 1% of the connectors are determined to be leaking. [40 CFR §63.1255(b)(4)(iii)(E)]

(F) BMSMC-Humacao may elect to perform monitoring once every 8 years if the percent leaking connectors in the group of processes was less than 0.25 % during the initial or last required monitoring period. BMSMC-Humacao shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 years is equal to or greater than 0.35 %, the monitoring program shall revert at that time to the appropriate monitoring frequency specified in paragraph (b)(4)(iii)(C), (D), or (E) of section 63.1255. [40 CFR §63.1255(b)(4)(iii)(F)]

iv. Section 63.178 shall apply except:

(A) Section 63.178(b), requirements for pressure testing, may be applied to all processes (not just batch processes) and to supply lines between storage and processing areas. [40 CFR §63.1255(b)(4)(iv)(A)]

(B) For pumps, the phrase “at the frequencies specified in Table 1 of subpart GGG” in §63.178(c)(3)(iii) shall mean “quarterly” for the purposes of subpart GGG. [40 CFR §63.1255(b)(4)(iv)(B)]

v. Section 63.180 shall apply except §63.180(b)(4)(ii)(A) through (C) shall not apply. Instead, calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators; 2,000 parts per million for pumps; and 500 parts per million for all other equipment, except as provided in section 63.180(b)(4)(iii). [40 CFR §63.1255(b)(4)(v)]

vi. When sections 63.171, 63.172, 63.174, 63.178, and 63.180 reference other sections in subpart H of part 63, the references shall mean those sections specified in paragraphs (b)(2) and (b)(4)(i) through (v) of section 63.1255, as applicable. [40 CFR §63.1255(b)(4)(vi)]

19. Standards for Pumps in Light Liquid Service and Agitators in Gas/Vapor Service and in Light Liquid Service [40 CFR §63.1255(c)]

- a. The provisions of section 63.1255 of the 40 CFR apply to each pump that is in light organic HAP liquid service, and to each agitator in organic HAP gas/vapor service or in light organic HAP liquid service. [40 CFR §63.1255(c)(1)]
- b.
 - i. Monitoring. Each pump and agitator subject to section 63.1255 shall be monitored quarterly to detect leaks by the method specified in §63.180(b) except as provided in sections 63.177, 63.178, paragraph (f) of section 63.1255, and paragraphs (c)(5) through (9) of section 63.1255. [40 CFR §63.1255(c)(2)(i)]
 - ii. Leak definition - According to the 40 CFR §63.1255(c)(2)(ii), the instrument reading, as determined by the method as specified in section 63.180(b), that defines a leak is:
 - (A) For agitators, an instrument reading of 10,000 ppm or greater. [40 CFR §63.1255(c)(2)(ii)(A)]
 - (B) For pumps, an instrument reading of 2,000 ppm or greater. [40 CFR §63.1255(c)(2)(ii)(B)]
 - iii. Visual Inspections - Each pump and agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump or agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, BSMC-Humacao shall follow the procedure specified in either paragraph (c)(2)(iii)(A) or (B) of section 63.1255 prior to the next weekly inspection: [40 CFR §63.1255(C)(2)(iii)]
 - (A) BSMC-Humacao shall monitor the pump or agitator by the method specified in the 63.180(b). If the instrument reading indicates a leak as specified in §63.1255(c)(2)(ii), a leak is detected. [40 CFR §63.1255(c)(2)(iii)(A)]
 - (B) BSMC-Humacao shall eliminate the visual indications of liquids dripping. [40 CFR §63.1255(c)(2)(iii)(B)]
- c. Repair provisions [40 CFR §63.1255(c)(3)]
 - i. When a leak is detected pursuant to paragraph (c)(2)(i), (c)(2)(iii)(A), (c)(5)(iv)(A), or (c)(5)(vi)(B) of section 63.1255, it

shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in paragraph (b)(4)(i) of section 63.1255. [40 CFR §63.1255(c)(3)(i)]

ii. According to the 40 CFR §63.1255(c)(3)(ii), a first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(A) Tightening of packing gland nuts. [40 CFR §63.1255(c)(3)(ii)(A)]

(B) Ensuring that the seal flush is operating at design pressure and temperature. [40 CFR §63.1255(c)(3)(ii)(B)]

d. Calculation of percent leakers [40 CFR §63.1255(c)(4)]

i. BMSMC-Humacao shall decide no later than the end of the first monitoring period what groups of processes will be developed. Once BMSMC-Humacao has decided, all subsequent percent calculations shall be made on the same basis. [40 CFR §63.1255(c)(4)(i)]

ii. BMSMC-Humacao shall monitor each pump once per month, until the calculated 1-year rolling average value drops below 10% or three pumps, as applicable if, calculated on a 1-year rolling average, the greater of either 10% or three of the pumps in a group of processes leak. [40 CFR §63.1255(c)(4)(ii)]

iii. The number of pumps in a group of processes shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process within 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only. [40 CFR §63.1255(c)(4)(iii)]

iv. According to the 40 CFR §63.1255(c)(4)(iv), percent leaking pumps shall be determined by the following equation:

$$\%P_L = [(P_L - P_S) / (P_T - P_S)] * 100, \text{ where}$$

$\%P_L$ = percent leaking pumps.

P_L = number of pumps found leaking as determined through periodic monitoring as required in paragraphs (c)(2)(i) and (ii) of section 63.1255.

P_T = total pumps in organic HAP service, including those meeting the criteria in paragraphs (c)(5) and (6) of section 63.1255.

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period.

e. Exemptions - According to the 40 CFR §63.1255(c)(5), each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraphs (c)(1) through (c)(4)(iii) of section 63.1255, provided the following requirements are met:

i. Each dual mechanical seal system is:

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or [40 CFR §63.1255(c)(5)(i)(A)]

(B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of paragraph (b)(4)(ii) of section 63.1255; or [40 CFR §63.1255(c)(5)(i)(B)]

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream. [40 CFR §63.1255(c)(5)(i)(C)]

ii. The barrier fluid is not in light liquid service. [40 CFR §63.1255(c)(5)(ii)]

iii. Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both. [40 CFR §63.1255(c)(5)(iii)]

iv. Each pump/agitator is checked by visual inspection each calendar week for indications of liquids dripping from the pump/agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, BSMC-Humacao shall follow the procedures specified in either paragraph (c)(5)(iv)(A) or (B) of section 63.1255 prior to the next required inspection. [40 CFR §63.1255(c)(5)(iv)]

(A) BSMC-Humacao shall monitor the pump or agitator using the method specified in §63.180(b) to determine if

there is a leak of organic HAP in the barrier fluid. If the instrument reading indicates a leak, as specified in paragraph (c)(2)(ii) of section 63.1255, a leak is detected. [40 CFR §63.1255(c)(5)(iv)(A)]

- (B) BMSMC-Humacao shall eliminate the visual indications of liquids dripping. [40 CFR §63.1255(c)(5)(iv)(B)]
- v. Each sensor as described in paragraph (c)(5)(iii) of section 63.1255 is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site. [40 CFR §63.1255(c)(5)(v)]
- vi. (A) BMSMC-Humacao determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system, or both. [40 CFR §63.1255(c)(5)(vi)(A)]
 - (B) A leak is detected if indications of liquids dripping from the pump/agitator seal exceed the criteria established in paragraph (c)(5)(vi)(A) of section 63.1255, or if, based on the criteria established in paragraph (c)(5)(vi)(A) of section 63.1255, the sensor indicates failure of the seal system, the barrier fluid system, or both. [40 CFR §63.1255(c)(5)(vi)(B)]
- vii. When a leak is detected pursuant to paragraph (c)(5)(iv)(A) or (B) of section 63.1255, the leak must be repaired as specified in paragraph (c)(3) of section 63.1255. [40 CFR §63.1255(c)(5)(vii)]
- f. Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of paragraphs (c)(1) through (3) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(c)(6)]
- g. Any pump/agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of paragraph (b)(4)(ii) of section 63.1255 is exempt from the requirements of paragraphs (c)(2) through (5) of section 63.1255. [40 CFR §63.1255(c)(7)]
- h. Any pump/agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c)(2)(iii) and (c)(5)(iv) of section 63.1255, and the daily

requirements of paragraph (c)(5)(v) of section 63.1255, provided that each pump/agitator is visually inspected as often as practicable and at least monthly. [40 CFR §63.1255(c)(8)]

- i. If more than 90% of the pumps in a group of processes meet the criteria in either paragraph (c)(5) or (6) of section 63.1255, the group of processes is exempt from the requirements of paragraph (c)(4) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(c)(9)]

20. Standards: Open-Ended Valves or Lines [40 CFR §63.1255(d)]

- a.
 - i. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in section 63.177 of the 40 CFR and paragraphs (d)(4) through (6) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(d)(1)(i)]
 - ii. The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. The cap, blind flange, plug, or second valve shall be in place within 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair. The owner or operator is not required to keep a record documenting compliance with the 1-hour requirement. [40 CFR §63.1255(d)(1)(ii)]
- b. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. [40 CFR §63.1255(d)(2)]
- c. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (d)(1) of section 63.1255 at all other times. [40 CFR §63.1255(d)(3)]
- d. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (d)(1) through (d)(3) of section 63.1255. [40 CFR §63.1255(d)(4)]
- e. Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of paragraphs (d)(1) through (d)(3) of section 63.1255. [40 CFR §63.1255(d)(5)]

- f. Open-ended valves or lines containing materials which could cause an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (d)(1) through (d)(3) of section 63.1255 are exempt from the requirements of paragraphs (d)(1) through (d)(3) of section 63.1255. [40 CFR §63.1255(d)(6)]
21. Standards: Valves in Gas/Vapor Service and in Light Liquid Service [40 CFR §63.1255(e)]
- a. The provisions of section 63.1255 apply to valves that are either in gas organic HAPs service or in light liquid organic HAP service. [40 CFR §63.1255(e)(1)]
 - b. For existing and new affected sources, all valves subject to section 63.1255 shall be monitored, except as provided in paragraph (f) of section 63.1255 and in section 63.177, by no later than 1 year after the compliance date. [40 CFR §63.1255(e)(2)]
 - c. Monitoring. According to the 40 CFR §63.1255(e)(3), the owner or operator of a source subject to section 63.1255 shall monitor all valves, except as provided in paragraph (f) of section 63.1255 and in section 63.177, at the intervals specified in paragraph (e)(4) of section 63.1255 and shall comply with all other provisions of section 63.1255, except as provided in paragraph (b)(4)(i) of section 63.1255, sections 63.178 and 63.179.
 - i. The valves shall be monitored to detect leaks by the method specified in section 63.180(b). [40 CFR §63.1255(e)(3)(i)]
 - ii. An instrument reading of 500 parts per million or greater defines a leak. [40 CFR §63.1255(e)(3)(ii)]
 - d. Subsequent monitoring frequencies. Pursuant to the 40 CFR §63.1255(e)(4), after conducting the initial survey required in paragraph (e)(2) of section 63.1255, BMSMC-Humacao shall monitor valves for leaks at the intervals specified below:
 - i. For a group of processes with 2% or greater leaking valves, calculated according to paragraph (e)(6) of section 63.1255, BMSMC-Humacao shall monitor each valve once per month, except as specified in paragraph (e)(9) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(4)(i)]

- ii. For a group of processes with less than 2% leaking valves, BSMC-Humacao shall monitor each valve once each quarter, except as provided in paragraphs (e)(4)(iii) through (e)(4)(v) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(4)(ii)]
 - iii. For a group of processes with less than 1% leaking valves, BSMC-Humacao may elect to monitor each valve once every 2 quarters (every six months). [40 CFR §63.1255(e)(4)(iii)]
 - iv. For a group of processes with less than 0.5% leaking valves, BSMC-Humacao may elect to monitor each valve once every 4 quarters (every 12 months). [40 CFR §63.1255(e)(4)(iv)]
 - v. For a group of processes with less than 0.25% leaking valves, the BSMC-Humacao may elect to monitor each valve once every 2 years. [40 CFR §63.1255(e)(4)(v)]
- e. Calculation of percent leakers. According to the 40 CFR §63.1255(e)(5), for a group of processes to which subpart GGG applies, BSMC-Humacao may choose to subdivide the valves in the applicable group of processes and apply the provisions of paragraph (e)(4) of section 63.1255 to each subgroup. If BSMC-Humacao elects to subdivide the valves in the applicable group of processes, then the provisions of paragraphs (e)(5)(i) through (e)(5)(viii) of section 63.1255 apply.
- i. The overall performance of total valves in the applicable group of processes must be less than 2% leaking valves, as detected according to paragraphs (e)(3) (i) and (ii) of section 63.1255 and as calculated according to paragraphs (e)(6) (ii) and (iii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(i)]
 - ii. The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (e)(5)(ii) (A) through (C) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(ii)]
 - (A) BSMC-Humacao shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data has been obtained. [40 CFR §63.1255(e)(5)(ii)(A)]
 - (B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently

monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group. [40 CFR §63.1255(e)(5)(ii)(B)]

(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup. [40 CFR §63.1255(e)(5)(ii)(C)]

iii. According to §63.1255(e)(5)(iii) of the 40 CFR, BSMC-Humacao shall determine every 6 months if the overall performance of total valves in the applicable group of processes is less than 2% leaking valves and so indicate the performance in the next periodic report. If the overall performance of total valves in the applicable group of processes is 2% leaking valves or greater, BSMC-Humacao shall revert to the program required in paragraphs (e)(2) through (e)(4) of section 63.1255 of the 40 CFR. The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to the following equation:

$$\% V_{LO} = \frac{\sum_{i=1}^n (\% V_{Li} \times V_i)}{\sum_{i=1}^n V_i}$$

where:

$\% V_{LO}$ = overall performance of total valves in the applicable process or group of processes

$\% V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (e)(6)(ii) and (iii) of section 63.1255.

V_i = number of valves in subgroup i

n = number of subgroups

- iv. Records [40 CFR §63.1255(e)(5)(iv)] - In addition to records required by paragraph (g) of section 63.1255 of the 40 CFR, BMSMC-Humacao shall maintain records specified in paragraphs (e)(5)(iv)(A) through (D) of section 63.1255 of the 40 CFR.
- (A) Which valves are assigned to each subgroup, [40 CFR §63.1255(e)(5)(iv)(A)]
- (B) Monitoring results and calculations made for each subgroup for each monitoring period, [40 CFR §63.1255(e)(5)(iv)(B)]
- (C) Which valves are reassigned and when they were reassigned, and [40 CFR §63.1255(e)(5)(iv)(C)]
- (D) The results of the semiannual overall performance calculation required in paragraph (e)(5)(iii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(iv)(D)]
- v. BMSMC-Humacao shall notify the Board and EPA no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating processes and the valves assigned to each subgroup. [40 CFR §63.1255(e)(5)(v)]
- vi. Semiannual reports - In addition to the information required by paragraph (h)(3) of section 63.1255, BMSMC-Humacao shall submit in the periodic reports the information specified in paragraphs (e)(5)(vi)(A) and (B) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(vi)]
- (A) Valve reassignments occurring during the reporting period, and [40 CFR §63.1255(e)(5)(vi)(A)]
- (B) Results of the semi-annual overall performance calculation required by paragraph (e)(5)(iii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(vi)(B)]
- vii. To determine the monitoring frequency for each subgroup, the calculation procedures of paragraph (e)(6)(iii) of section 63.1255 of the 40 CFR shall be used. [40 CFR §63.1255(e)(5)(vii)]

viii. Except for the overall performance calculations required by paragraphs (e)(5)(i) and (e)(5)(iii) of section 63.1255 of the 40 CFR, each subgroup shall be treated as if it were a process for the purposes of applying the provisions of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(5)(viii)]

f. i. BMSMC-Humacao shall decide no later than the implementation date of subpart GGG or upon revision of an operating permit how to group the processes. Once BMSMC-Humacao has decided, all subsequent percentage calculations shall be made on the same basis. [40 CFR §63.1255(e)(6)(i)]

ii. According to the 40 CFR §63.1255(e)(6)(ii), the percent leaking valves for each group of processes or subgroup shall be determined by the following equation:

$$\% V_L = [V_L/V_T] \times 100$$

where:

$\% V_L$ = percent leaking valves as determined through periodic monitoring required in paragraphs (e)(2) through (4) of section 63.1255 of the 40 CFR.

V_L = number of leaking valves, excluding non-repairable valves as provided in paragraph (e)(6)(iv)(A) of section 63.1255 of the 40 CFR.

V_T = total valves monitored, in a monitoring period excluding valves monitored as required by (e)(7)(iii) of section 63.1255 of the 40 CFR.

iii. When determining monitoring frequency for each group of processes or subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each group of processes or subgroup subject to annual or biennial (once every two years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods. [40 CFR §63.1255(e)(6)(iii)]

- iv. (A) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(6)(iv)(B) of section 63.1255. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1% of the total number of valves in organic HAP service at a process may be excluded from calculation of percent leaking valves for subsequent monitoring periods. [40 CFR §63.1255(e)(6)(iv)(A)]
- (B) If the number of nonrepairable valves exceeds 1% of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1% of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves. [40 CFR §63.1255(e)(6)(iv)(B)]

g. Repair provisions [40 CFR §63.1255(e)(7)]

- i. When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(4)(i) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(e)(7)(i)]
 - ii. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR §63.1255(e)(7)(ii)]
 - iii. When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-month period. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of “repaired⁷” and “first attempt at repair⁸” [40 CFR §63.1255(e)(7)(iii)]
- (A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate to determine whether the

⁷ Repaired means that equipment is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable paragraphs of §63.1255, and is unless otherwise specified in applicable provisions of §63.1255, monitored as specified in §63.180(b) and (c) as appropriate, to verify that emissions from the equipment are below the applicable leak definition. [40 CFR §63.1251]

⁸ *First attempt at repair* means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere. [40 CFR §63.1251]

valve has resumed leaking. [40 CFR §63.1255(e)(7)(iii)(A)]

(B) Monitoring required by paragraphs (e)(2) through (4) of section 63.1255 may be used to satisfy the requirements of paragraph (e)(7)(iii) of section 63.1255, if the timing of the monitoring period coincides with the time specified in paragraph (e)(7)(iii) of section 63.1255. Alternatively, other monitoring may be performed to satisfy the requirements of paragraph (e)(7)(iii) of section 63.1255, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in paragraph (e)(7)(iii) of section 63.1255 del 40 CFR. [40 CFR §63.1255(e)(7)(iii)(B)]

(C) If a leak is detected by monitoring that is conducted pursuant to paragraph (e)(7)(iii) of section 63.1255, BMSMC-Humacao shall follow the provisions of paragraphs (e)(7)(iii)(C)(1) and (2) of section 63.1255 to determine whether that valve must be counted as a leaking valve for purposes of paragraph (e)(6) of section 63.1255 del 40 CFR. [40 CFR §63.1255(e)(7)(iii)(C)]

(1) If BMSMC-Humacao elects to use periodic monitoring required by paragraphs (e)(2) through (4) of section 63.1255 to satisfy the requirements of paragraph (e)(7)(iii) of section 63.1255, then the valve shall be counted as a leaking valve. [40 CFR §63.1255(e)(7)(iii)(C)(1)]

(2) If BMSMC-Humacao elects to use other monitoring prior to the periodic monitoring required by paragraphs (e)(2) through (4) of section 63.1255 to satisfy the requirements of paragraph (e)(7)(iii) of section 63.1255, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking. [40 CFR §63.1255(e)(7)(iii)(C)(2)]

h. According to the 40 CFR §63.1255(e)(8), the first attempts at repair include, but are not limited to, the following practices where practicable:

i. Tightening of bonnet bolts,

ii. Replacement of bonnet bolts,

- iii. Tightening of packing gland nuts, and
 - iv. Injection of lubricant into lubricated packing.
 - i. Any equipment located at a plant site with fewer than 250 valves in organic HAP service in the affected source is exempt from the requirements for monthly monitoring specified in paragraph (e)(4)(i) of section 63.1255. Instead, BMSMC-Humacao shall monitor each valve in organic HAPs service for leaks once each quarter, or comply with paragraph (e)(4)(iii), (iv), or (v) of section 63.1255, except as provided in paragraph (f) of section 63.1255. [40 CFR §63.1255(e)(9)]
22. Unsafe to monitor/inspect, difficult to monitor/inspect, and inaccessible equipment [40 CFR §63.1255(f)]
- a. According to the 40 CFR §63.1255(f)(1), equipment that is designated as unsafe to monitor, unsafe to inspect, difficult to monitor, difficult to inspect, or inaccessible is exempt from the monitoring requirements as specified in paragraphs (f)(1)(i) through (iv) of section 63.1255 of the 40 CFR provided that BMSMC-Humacao meets the requirements specified in paragraph (f)(2), (3), or (4) of section 63.1255 of the 40 CFR, as applicable. All equipment must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors.
 - i. For pumps and agitators, paragraphs (c)(2), (3), and (4) of section 63.1255 do not apply. [40 CFR §63.1255(f)(1)(i)]
 - ii. For valves, paragraphs (e)(2) through (7) of section 63.1255 of the 40 CFR do not apply. [40 CFR §63.1255(f)(1)(ii)]
 - iii. For connectors, §63.174(b) through (e) and paragraphs (b)(4)(iii)(B) through (F) of section 63.1255 of the 40 CFR do not apply. [40 CFR §63.1255(f)(1)(iii)]
 - iv. For closed-vent systems, §63.172(f)(1) and (2) and §63.172(g) of the 40 CFR do not apply. [40 CFR §63.1255(f)(1)(iv)]
 - b. Equipment that is unsafe to monitor or unsafe to inspect [40 CFR §63.1255(f)(2)]
 - i. Valves, connectors, agitators, and pumps may be designated as unsafe to monitor if the BMSMC-Humacao determines that monitoring personnel would be exposed to an immediate danger as

a consequence of complying with the monitoring requirements referred to in paragraphs (f)(1)(i) through (iii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(f)(2)(i)]

- ii. Any part of a closed-vent system may be designated as unsafe to inspect if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements referred to in paragraph (f)(1)(iv) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(f)(2)(ii)]
- iii. The owner or operator of equipment that is designated as unsafe to monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe to monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. [40 CFR §63.1255(f)(2)(iii)]
- iv. For any parts of a closed-vent system designated as unsafe to inspect, BMSMC-Humacao must have a written plan that requires inspection of the closed-vent systems as frequently as practicable during safe to inspect times, but not more frequently than annually. [40 CFR §63.1255(f)(2)(iv)]

c. Equipment that is difficult to monitor or difficult to inspect [40 CFR §63.1255(f)(3)]

- i. A valve, agitator, or pump may be designated as difficult to monitor if BMSMC-Humacao determines that the valve, agitator, or pump cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface, or it is not accessible in a safe manner when it is in organic HAPs service. [40 CFR §63.1255(f)(3)(i)]
- ii. Any part of a closed-vent system may be designated as difficult to inspect if BMSMC-Humacao determines that the equipment cannot be inspected without elevating the monitoring personnel more than 2 meters above a support surface, or it is not accessible in a safe manner when it is in organic HAPs service. [40 CFR §63.1255(f)(3)(ii)]
- iii. At an existing source, any valve, agitator or pump within a group of processes that meets the criteria of paragraph (f)(3)(i) of section 63.1255 may be designated as difficult to monitor, and any parts of a closed-vent system that meet the requirements of paragraph

(f)(3)(ii) of section 63.1255 may be designated as difficult to inspect. At a new affected source, BSMC-Humacao may designate no more than 3% of valves as difficult to monitor. [40 CFR §63.1255(f)(3)(iii)]

iv. The owner or operator of valves, agitators, or pumps designated as difficult to monitor must have a written plan that requires monitoring of the equipment at least once per calendar year or on the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located, whichever is less frequent. For any part of a closed-vent system designated as difficult to inspect, BSMC-Humacao must have a written plan that requires inspection of the closed-vent system at least once every 5 years. [40 CFR §63.1255(f)(3)(iv)]

d. Equipment that is inaccessible and ceramic or ceramic lines connectors
[40 CFR §63.1255(f)(4)]

i. According to the 40 CFR §63.1255(f)(4)(i), a connector may be designated as inaccessible if it is:

(A) Buried;

(B) Insulated in a manner that prevents access to the connector by a monitor probe;

(C) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters (25 feet) above the ground; or

(E) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

ii. A connector may be designated as inaccessible if it would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold. [40 CFR §63.1255(f)(4)(ii)]

- iii. At an existing source, any connector that meets the criteria of paragraph (f)(4)(i) or (ii) of section 63.1255 may be designated as inaccessible. At a new affected source, BSMC-Humacao may designate no more than 3 % of connectors as inaccessible. [40 CFR §63.1255(f)(4)(iii)]
- iv. If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(4)(i) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(f)(4)(iv)]
- v. Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of paragraphs (g) and (h) of section 63.1255. [40 CFR §63.1255(f)(4)(v)]

23. Recordkeeping Requirements [40 CFR §63.1255(g)]

- a. An owner or operator of more than one group of processes subject to the provisions of section 63.1255 of the 40 CFR may comply with the recordkeeping requirements for the groups of processes in one recordkeeping system if the system identifies with each record the program being implemented (e.g., quarterly monitoring) for each type of equipment. All records and information required by section 63.1255 of the 40 CFR shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site. [40 CFR §63.1255(g)(1)]
- b. General recordkeeping - According to the 40 CFR §63.1255(g)(2), except as provided in paragraph (g)(5)(i) of section 63.1255 and in paragraph (a)(9) of section 63.1255, the following information pertaining to all equipment subject to the requirements in this section shall be recorded:
 - i. (A) A list of identification numbers for equipment (except connectors that are subject to paragraph (f)(4) of section 63.1255) subject to the requirements of section 63.1255. Except for equipment subject to the recordkeeping requirements in paragraphs (g)(2)(ii) through (viii) of section 63.1255, equipment need not be individually identified if, for a particular type of equipment, all items of that equipment in a designated area or length of pipe

subject to the provisions of section 63.1255 are identified as a group, and the number of subject items of equipment is indicated. The list for each type of equipment shall be completed no later than the completion of the initial survey required for that component. The list of identification numbers shall be updated, if needed, to incorporate equipment changes identified during the course of each monitoring period within 90 calendar days, or by the next Periodic Report, following the end of the monitoring period for the type of equipment component monitored, whichever is later. [40 CFR §63.1255(g)(2)(i)(A)]

- (B) A schedule for monitoring connectors subject to the provisions of §63.174(a) of the 40 CFR and valves subject to the provisions of paragraph (e)(4) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(g)(2)(i)(B)]
 - (C) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of section 63.1255 may be identified on a plant site plan, in log entries, or by other appropriate methods. [40 CFR §63.1255(g)(2)(i)(C)]
- ii. (A) A list of identification numbers for equipment that BMSMC-Humacao elects to equip with a closed-vent system and control device, under the provisions of paragraph (c)(7) of section 63.1255, §63.164(h), or §63.165(c). [40 CFR §63.1255(g)(2)(ii)(A)]
 - (B) A list of identification numbers for compressors that BMSMC-Humacao elects to designate as operating with an instrument reading of less than 500 ppm above background, under the provisions of §63.164(i) of the 40 CFR. [40 CFR §63.1255(g)(2)(ii)(B)]
- iii. (A) A list of identification numbers for pressure relief devices subject to the provisions in §63.165(a) of the 40 CFR. [40 CFR §63.1255(g)(2)(iii)(A)]
 - (B) A list of identification numbers for pressure relief devices equipped with rupture disks, under the provisions of §63.165(d) of the 40 CFR. [40 CFR §63.1255(g)(2)(iii)(B)]
- iv. Identification of instrumentation systems subject to the provisions of section 63.1255 of the 40 CFR. Individual components in an

instrumentation system need not be identified. [40 CFR §63.1255(g)(2)(iv)]

- v. According to the 40 CFR §63.1255(g)(2)(v), the following information shall be recorded for each dual mechanical seal system:
 - (A) Design criteria required by paragraph (c)(5)(vi)(A) of §63.1255 and §63.164(e)(2), and an explanation of the design criteria; and [40 CFR §63.1255(g)(2)(v)(A)]
 - (B) Any changes to these criteria and the reasons for the changes. [40 CFR §63.1255(g)(2)(v)(B)]
 - vi. A list of equipment designated as unsafe to monitor/inspect or difficult to monitor/inspect under paragraph (f) of section 63.1255 of the 40 CFR and a copy of the plan for monitoring or inspecting this equipment. [40 CFR §63.1255(g)(2)(vi)]
 - vii. A list of connectors removed from and added to the process, as described in §63.174(i)(1) of the 40 CFR, and documentation of the integrity of the weld for any removed connectors, as required in §63.174(j) of the 40 CFR. This is not required unless the net credits for removed connectors are expected to be used. [40 CFR §63.1255(g)(2)(vii)]
 - viii. For equipment that BSMC-Humacao elects to monitor as provided under §63.178(c) of the 40 CFR, a list of equipment added to batch product processes since the last monitoring period required in sections 63.178(c)(3)(ii) and (iii). This list must be completed for each type of equipment within 90 calendar days, or by the next Periodic Report, following the end of the monitoring period for the type of equipment monitored, whichever is later. Also, if BSMC-Humacao elects to adjust monitoring frequency by the time in use, as provided in §63.178(c)(3)(iii), records demonstrating the proportion of the time during the calendar year the equipment is in use in a manner subject to the provisions of section 63.1255 are required. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. [40 CFR §63.1255(g)(2)(viii)]
- c. Records of visual inspections. For visual inspections of equipment subject to the provisions of paragraphs (c)(2)(iii) and (c)(5)(iv) of section 63.1255, BSMC-Humacao shall document that the inspection was conducted and

the date of the inspection. BMSMC-Humacao shall maintain records as specified in paragraph (g)(4) of section 63.1255 for leaking equipment identified in this inspection, except as provided in paragraph (g)(5) of section 63.1255 of the 40 CFR. These records shall be retained for 2 years. [40 CFR §63.1255(g)(3)]

- d. Monitoring records. According to the 40 CFR §63.1255(g)(4), when each leak is detected as specified in paragraph (c) of section 63.1255 of the 40 CFR and section 63.164, paragraph (e) of section 63.1255 and section 63.169, and section 63.172 and 63.174, the following information shall be recorded and kept for 5 years (at least 2 years onsite, with the remaining 3 years either onsite or offsite):
- i. The instrument and the equipment identification number and the operator name, initials, or identification number. [40 CFR §63.1255(g)(4)(i)]
 - ii. The date the leak was detected and the date of the first attempt to repair the leak. [40 CFR §63.1255(g)(4)(ii)]
 - iii. The date of successful repair of the leak. [40 CFR §63.1255(g)(4)(iii)]
 - iv. The maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after the leak is successfully repaired or determined to be nonrepairable. [40 CFR §63.1255(g)(4)(iv)]
 - v. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR §63.1255(g)(4)(v)]
 - (A) BMSMC-Humacao may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures shall be included either as part of the startup, shutdown and malfunction plan, required by section 63.1259(a)(3) of the 40 CFR, or in a separate document that is maintained at the plant site. Reasons for delay of repair may be documented by citing the relevant sections of the written procedure. [40 CFR §63.1255(g)(4)(v)(A)]
 - (B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion. [40 CFR §63.1255(g)(4)(v)(B)]

- vi. If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired. [40 CFR §63.1255(g)(4)(vi)]
- vii. (A) If the alternative in §63.174(c)(1)(ii) of the 40 CFR is not in use for the monitoring period, identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in §63.174(b), as described in §63.174(c)(1) of the 40 CFR. [40 CFR §63.1255(g)(4)(vii)(A)]
 - (B) The date and results of follow-up monitoring as required in §63.174(c)(1)(i) and (c)(2)(ii) of the 40 CFR. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored. [40 CFR §63.1255(g)(4)(vii)(B)]
- viii. The date and results of the monitoring required in §63.178(c)(3)(i) for equipment added to a batch process since the last monitoring period required in sections 63.178(c)(3)(ii) and (iii) of the 40 CFR. If no leaking equipment is found in this monitoring, BSMC-Humacao shall record that the inspection was performed. Records of the actual monitoring results are not required. [40 CFR §63.1255(g)(4)(viii)]
- ix. Copies of the periodic reports as specified in paragraph (h)(3) of section 63.1255 of the 40 CFR, if records are not maintained on a computerized data base capable of generating summary reports from the records. [40 CFR §63.1255(g)(4)(ix)]
- e. Records of pressure tests - According to the 40 CFR §63.1255(g)(5), the owner or operator who elects to pressure test a process equipment train or supply lines between storage and processing areas to demonstrate compliance with section 63.1255 is exempt from the requirements of paragraphs (g)(2), (3), (4), and (6) of section 63.1255 of the 40 CFR. Instead, the owner or operator shall maintain records of the following information:
 - i. The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in the process equipment train. [40 CFR §63.1255(g)(5)(i)]
 - ii. Physical tagging of the equipment to identify that it is in organic HAPs service and subject to the provisions of section 63.1255 of

the 40 CFR is not required. Equipment in a process subject to the provisions of section 63.1255 of the 40 CFR may be identified on a plant site plan, in log entries, or by other appropriate methods. [40 CFR §63.1255(g)(5)(ii)]

- iii. The dates of each pressure test required in section 63.178(b) of the 40 CFR, the test pressure, and the pressure drop observed during the test. [40 CFR §63.1255(g)(5)(iii)]
- iv. Records of any visible, audible, or olfactory evidence of fluid loss. [40 CFR §63.1255(g)(5)(iv)]
- v. According to §63.1255(g)(5)(v) of the 40 CFR, when a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years:
 - (A) The date of each pressure test and the date of each leak repair attempt. [40 CFR §63.1255(g)(5)(v)(A)]
 - (B) Repair methods applied in each attempt to repair the leak. [40 CFR §63.1255(g)(5)(v)(B)]
 - (C) The reason for the delay of repair. [40 CFR §63.1255(g)(5)(v)(C)]
 - (D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment. [40 CFR §63.1255(g)(5)(v)(D)]
 - (E) The date of successful repair. [40 CFR §63.1255(g)(5)(v)(E)]
- f. Records of compressor and relief device compliance tests - According to the 40 CFR §63.1255(g)(6), the dates and results of each compliance test required for compressors subject to the provisions in section 63.164(i) of the 40 CFR and the dates and results of the monitoring following a pressure release for each pressure relief device subject to the provisions in sections 63.165(a) and (b) of the 40 CFR. The results shall include:
 - i. The background level measured during each compliance test. [40 CFR §63.1255(g)(6)(i)]

- ii. The maximum instrument reading measured at each piece of equipment during each compliance test. [40 CFR §63.1255(g)(6)(ii)]

- g. Records for closed-vent systems - According to the 40 CFR §63.1255(g)(7), BMSMC-Humacao shall maintain records of the information specified in paragraphs (g)(7)(i) through (iii) of section 63.1255 for closed-vent systems and control devices subject to the provisions of paragraph (b)(4)(ii) of section 63.1255. The records specified in paragraph (g)(7)(i) of section 63.1255 shall be retained for the life of the equipment. The records specified in paragraphs (g)(7)(ii) and (g)(7)(iii) of section 63.1255 shall be retained for 2 years.
 - i. The design specifications and performance demonstrations specified in paragraphs (g)(7)(i)(A) through (g)(7)(i)(D) of section 63.1255 of the 40 CFR, mentioned next:
 - (A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams. [40 CFR §63.1255(g)(7)(A)]
 - (B) The dates and descriptions of any changes in the design specifications. [40 CFR §63.1255(g)(7)(B)]
 - (C) The flare design (i.e., steam assisted, air assisted, or nonassisted) and the results of the compliance demonstration required by §63.11(b) of the 40 CFR. [40 CFR §63.1255(g)(7)(C)]
 - (D) A description of the parameter or parameters monitored, as required in paragraph (b)(4)(ii) of section 63.1255, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring. [40 CFR §63.1255(g)(7)(D)]
 - ii. Records of operation of closed-vent systems and control devices. [40 CFR 63.1255(g)(7)(ii)]
 - (A) Dates and durations when the closed-vent systems and control devices required in paragraph (c) of section 63.1255 and sections 63.164 through 63.166 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame. [40 CFR 63.1255(g)(7)(ii)(A)]

- (B) Dates and durations during which the monitoring system or monitoring device is inoperative. [40 CFR 63.1255(g)(7)(ii)(B)]
 - (C) Dates and durations of startups and shutdowns of control devices required in paragraph (c)(7) of section 63.1255 and sections 63.164 through 63.166 of the 40 CFR. [40 CFR 63.1255(g)(7)(ii)(C)]
 - iii. Records of inspections of closed-vent systems subject to the provisions of §63.172 of the 40 CFR. [40 CFR 63.1255(g)(7)(iii)]
 - (A) For each inspection conducted in accordance with the provisions of section 63.172(f)(1) or (f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [40 CFR 63.1255(g)(7)(iii)(A)]
 - (B) For each inspection conducted in accordance with the provisions of section 63.172(f)(1) or (f)(2) during which leaks were detected, the information specified in paragraph (g)(4) of section 63.1255 of the 40 CFR shall be recorded. [40 CFR 63.1255(g)(7)(iii)(B)]
- h. Records for components in heavy liquid service - Information, data, and analysis used to determine that a piece of equipment or process is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of “in light liquid or gas service”. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge. [40 CFR §63.1255(g)(8)]
- i. Records of exempt components. Identification, either by list, location (area or group) of equipment in organic HAPs service less than 300 hours per year subject to the provisions of section 63.1255 of the 40 CFR. [40 CFR §63.1255(g)(9)]
- j. Records of alternative means of compliance determination. According to the 40 CFR §63.1255(g)(10), owners and operators choosing to comply with the requirements of section 63.179 of the 40 CFR shall maintain the following records:

- i. Identification of the process or processes and the organic HAP they handle. [40 CFR §63.1255(g)(10)(i)]
- ii. A schematic of the process, enclosure, and closed-vent system. [40 CFR §63.1255(g)(10)(ii)]
- iii. A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device. [40 CFR §63.1255(g)(10)(iii)]

24. Reporting requirements [40 CFR §63.1255(h)]

- a. According to the 40 CFR §63.1255(h)(1), each owner or operator of a source subject to section 63.1255 shall submit the reports listed in paragraphs (h)(1)(i) through (ii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(h)(1)]
 - i. A Notification of Compliance Status Report described in paragraph (h)(2) of section 63.1255 of the 40 CFR, [40 CFR §63.1255(h)(1)(i)]
 - ii. Periodic reports described in paragraph (h)(3) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(h)(1)(ii)]
- b. Notification of Compliance Status Report. According to the 40 CFR §63.1255(h)(2), each owner or operator of a source subject to section 63.1255 shall submit the information specified in paragraphs (h)(2)(i) through (iii) of section 63.1255 in the Notification of Compliance Status Report described in section 63.1260(f) of the 40 CFR.
 - i. The notification shall provide the information listed in paragraphs (h)(2)(i)(A) through (C) of section 63.1255 for each process subject to the requirements of paragraphs (b) through (g) of section 63.1255 of the 40 CFR.
 - (A) Process group identification. [40 CFR §63.1255(h)(2)(i)(A)]
 - (B) Number of each equipment type (e.g., valves, pumps) in organic HAPs service, excluding equipment in vacuum service. [40 CFR §63.1255(h)(2)(i)(B)]
 - (C) Method of compliance with the standard (for example, “monthly leak detection and repair” or “equipped with dual mechanical seals”). [40 CFR §63.1255(h)(2)(i)(C)]

- ii. The notification shall provide the information listed in paragraphs (h)(2)(ii)(A) and (B) of section 63.1255 for each process subject to the requirements of paragraph (b)(4)(iv) of section 63.1255 and section 63.178(b) of the 40 CFR. [40 CFR §63.1255(h)(2)(ii)]
 - (A) Products or product codes subject to the provisions of section 63.1255 of the 40 CFR, and [40 CFR §63.1255(h)(2)(ii)(A)]
 - (B) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of section 63.1255 of the 40 CFR. [40 CFR §63.1255(h)(2)(ii)(B)]
 - iii. The notification shall provide the information listed in paragraphs (h)(2)(iii)(A) and (B) of section 63.1255 of the 40 CFR for each process subject to the requirements in section 63.179 of the 40 CFR. [40 CFR §63.1255(h)(2)(iii)]
 - (A) Process identification. [40 CFR §63.1255(h)(2)(iii)(A)]
 - (B) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of paragraph (b)(4)(ii) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(h)(2)(iii)(B)]
 - iv. Any change in the information submitted under paragraph (h) of section 63.1255 of the 40 CFR shall be provided to the Board and the EPA as part of the subsequent periodic reports. Section 63.9(j) of the 40 CFR shall not apply to the Notification of Compliance Status Report described in paragraph (h)(2) of section 63.1255 of the 40 CFR.
- c. Periodic reports. According to the 40 CFR §63.1255(h)(3), the owner or operator of a source subject to section 63.1255 of the 40 CFR shall submit Periodic Reports.
- i. A report containing the information in paragraphs (h)(3)(ii), (iii), and (iv) of section 63.1255 of the 40 CFR shall be submitted semiannually. The first report shall be submitted no later than 240 days after the Notification of Compliance Status Report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status Report is due. Each subsequent

report shall cover the 6-month period following the preceding period. [40 CFR §63.1255(h)(3)(i)]

- ii. For equipment complying with the provisions of paragraphs (b) through (g) of section 63.1255, except paragraph (b)(4)(iv) of section 63.1255 and §63.179, the summary information listed in paragraphs (h)(3)(ii)(A) through (L) of section 63.1255 of the 40 CFR for each monitoring period during the 6-month period. [40 CFR §63.1255(h)(3)(ii)]
 - (A) The number of valves for which leaks were detected as described in paragraph (e)(3) of section 63.1255 of the 40 CFR, the percent leakers, and the total number of valves monitored; [40 CFR §63.1255(h)(3)(ii)(A)]
 - (B) The number of valves for which leaks were not repaired as required in paragraph (e)(7) of section 63.1255 of the 40 CFR, identifying the number of those that are determined nonreparable; [40 CFR §63.1255(h)(3)(ii)(B)]
 - (C) Separately, the number of pumps and agitators for which leaks were detected as described in paragraph (c)(2) of section 63.1255 of the 40 CFR, the total number of pumps and agitators monitored, and, for pumps, the percent leakers; [40 CFR §63.1255(h)(3)(ii)(C)]
 - (D) Separately, the number of pumps and agitators for which leaks were not repaired as required in paragraph (c)(3) of section 63.1255 of the 40 CFR; [40 CFR §63.1255(h)(3)(ii)(B)]
 - (E) The number of compressors for which leaks were detected as described in §63.164(f) del 40 CFR; [40 CFR §63.1255(h)(3)(ii)(E)]
 - (F) The number of compressors for which leaks were not repaired as required in §63.164(g) of the 40 CFR; [40 CFR §63.1255(h)(3)(ii)(F)]
 - (G) The number of connectors for which leaks were detected as described in §63.174(a) of the 40 CFR, the percent of connectors leaking, and the total number of connectors monitored; [40 CFR §63.1255(h)(3)(ii)(G)]

- (H) The number of connectors for which leaks were not repaired as required in §63.174(d) of the 40 CFR, identifying the number of those that are determined nonrepairable; [40 CFR §63.1255(h)(3)(ii)(H)]
 - (I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible. [40 CFR §63.1255(h)(3)(ii)(I)]
 - (J) The results of all monitoring to show compliance with sections 63.164(i), 63.165(a), and 63.172(f) of the 40 CFR conducted within the semiannual reporting period. [40 CFR §63.1255(h)(3)(ii)(J)]
 - (K) If applicable, the initiation of a monthly monitoring program under either paragraph (c)(4)(ii) or paragraph (e)(4)(i) of section 63.1255 of the 40 CFR. [40 CFR §63.1255(h)(3)(ii)(K)]
 - (L) If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1) of the 40 CFR. [40 CFR §63.1255(h)(3)(ii)(L)]
- iii. For owners or operators electing to meet the requirements of §63.178(b), the report shall include the information listed in paragraphs (h)(3)(iii)(A) through (E) of paragraph (h)(iii) of section 63.1255 for each process. [40 CFR §63.1255(h)(3)(iii)]
- (A) Product process equipment train identification; [40 CFR §63.1255(h)(3)(iii)(A)]
 - (B) The number of pressure tests conducted; [40 CFR §63.1255(h)(3)(iii)(B)]
 - (C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests; [40 CFR §63.1255(h)(3)(iii)(C)]
 - (D) The facts that explain any delay of repairs; and [40 CFR §63.1255(h)(3)(iii)(D)]
 - (E) The results of all monitoring to determine compliance with §63.172(f) of subpart H of the 40 CFR. [40 CFR §63.1255(h)(3)(iii)(E)]

- iv. Any revisions to items reported in earlier Notification of Compliance Status report, if the method of compliance has changed since the last report. [40 CFR §63.1255(h)(3)(iv)]

Standards: Wastewater (EUWW1-MACT) – 40 CFR §63.1256

25. General - BSMC-Humacao shall comply with the general wastewater requirements in paragraphs (a)(1) through (3) of the 40 CFR Section 63.1256 and the maintenance wastewater provisions in paragraph (a)(4). BSMC-Humacao may transfer wastewater to a treatment operation not owned by BSMC-Humacao in accordance with the §63.1256(a)(5). [40 CFR §63.1256(a)]

a. Identify wastewater that requires control [40 CFR §63.1256(a)(1)] –

i. BSMC-Humacao has designated all non-exempt wastewater streams as affected wastewater that require control for soluble and partially soluble HAP compounds pursuant to the §63.1256(a)(1)(ii) of the 40 CFR, reason why they are not required to determine the annual average concentration or load for each wastewater stream designated for the purpose of Section 63.1256 of the 40 CFR. However, BSMC-Humacao will use the criteria established in Section 63.1256 (a)(1)(i) if at any moment decides to determine whether a wastewater stream is affected or not. A wastewater stream is affected if the annual average concentration and annual load exceed any of the criteria specified next, which are included in section 63.1256(a)(1)(i)(A) through (C) of the 40 CFR:

(A) The wastewater stream contains partially soluble HAP compounds at an annual average concentration greater than 1,300 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr. [40 CFR §63.1256(a)(1)(i)(A)]

(B) The wastewater stream contains partially soluble and soluble HAP compounds at an annual average concentration greater than 5,200 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 0.25 Mg/yr. [40 CFR §63.1256(a)(1)(i)(B)]

(C) The wastewater stream contains partially soluble and /or soluble HAP at an annual average concentration of greater than 10,000 ppmw, and the total partially soluble and/or soluble HAP load in all wastewater from the affected source is greater than 1 Mg/yr. [40 CFR §63.1256(a)(1)(i)(C)]

- (D) For new sources, a wastewater stream shall be subject to additional control requirements if the wastewater stream contains soluble HAP compounds at an annual average concentration greater than 110,000 ppmw, and the total soluble and partially soluble HAP load in all wastewater from the PMPU exceeds 1 Mg/yr. [40 CFR §63.1256(a)(1)(i)(D)]
 - ii. BMSMC shall use the provisions in §63.1257(e)(1) of the 40 CFR to determine the annual average concentration and the annual load of compounds of soluble and partially soluble HAPs.
 - iii. BMSMC-Humacao may use a combination of the methods in paragraphs from §§63.1256(a)(1)(i) and (ii) of the 40 CFR for the different affected wastewater in the facility.
- b. Requirements for affected wastewater [40 CFR §63.1256(a)(2)]
- i. BMSMC-Humacao shall comply with the applicable requirements for wastewater tanks, surface impoundments, containers, individual drain systems, and oil/water separators as specified in paragraphs (b) through (f) of section 63.1256 of the 40 CFR, except as provided in paragraph (g)(3) of section 63.1256 of the 40 CFR. [40 CFR §63.1256(a)(2)(i)]
 - ii. BMSMC-Humacao shall comply with the applicable requirements for control of soluble and partially soluble compounds as specified in paragraph (g) of section 63.1256 of the 40 CFR. Alternatively, BMSMC-Humacao may elect to comply with the treatment provisions specified in paragraph (a)(5) of section 63.1256 of the 40 CFR. [40 CFR §63.1256(a)(2)(ii)]
 - iii. BMSMC-Humacao shall comply with the applicable monitoring and inspection requirements specified in §63.1258. [40 CFR §63.1256(a)(2)(iii)]
 - iv. BMSMC-Humacao shall comply with the applicable recordkeeping and reporting requirements specified in sections 63.1259 and 63.1260 of the 40 CFR. [40 CFR §63.1256(a)(2)(iii)]
- c. Requirements for multiphase discharges [40 CFR §63.1256(a)(3)]- BMSMC-Humacao shall not discharge a separate phase that can be isolated through gravity separation from the aqueous phase to a waste management or treatment unit, unless the stream is discharged to a treatment unit in compliance with §63.1256(g)(13) of the 40 CFR.

- d. Maintenance wastewater requirements - Pursuant to the 40 CFR §63.1256(a)(4), BMSMC-Humacao shall comply with the following requirements for maintenance wastewater containing partially soluble or soluble HAP listed in Tables 2 and 3 of subpart GGG of the 40 CFR, part 63. Maintenance wastewater is exempt from all other provisions of this subpart GGG of the 40 CFR, part 63.
- i. According to §63.1256(a)(4)(i) of the 40 CFR, BMSMC-Humacao shall prepare a description of maintenance procedures for management of wastewater generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
 - (A) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities; and [40 CFR §63.1256(a)(4)(i)(A)]
 - (B) Specify the procedures that will be followed to properly manage the wastewater and minimize organic HAPs emissions to the atmosphere; and [40 CFR §63.1256(a)(4)(i)(B)]
 - (C) Specify the procedures to be followed when clearing materials from process equipment. [40 CFR §63.1256(a)(4)(i)(C)]
 - ii. BMSMC-Humacao shall modify and update the information required by §63.1256(a)(4)(i) of the 40 CFR as needed following each maintenance procedure based on the actions taken and the wastewater generated in the preceding maintenance procedure. [40 CFR §63.1256(a)(4)(ii)]
 - iii. BMSMC-Humacao shall implement the procedures described in §63.1256(a)(4)(i) and (ii) as part of the startup, shutdown, and malfunction plan required under §63.6(e)(3) of the 40 CFR. [40 CFR §63.1256(a)(4)(iii)]
 - iv. BMSMC-Humacao shall maintain a record of the information required by §63.1256(a)(4)(i) and (ii) as part of the SSMP required under §63.6(e)(3). [40 CFR §63.1256(a)(4)(iv)]
- e. Offsite treatment or onsite treatment not owned or operated BMSMC-Humacao [40 CFR §63.1256(a)(5)] - BMSMC-Humacao may elect to transfer affected wastewater streams or a residual removed from such

affected wastewater to an onsite treatment operation not owned or operated by BSMC-Humacao or to an offsite treatment operation. BSMC-Humacao shall follow the procedures included in the §63.1256(a)(5) of the 40 CFR while transferring wastewater or a residual removed from such affected wastewater for treatment onsite or offsite not owned or operated by BSMC-Humacao.

26. Wastewater tanks- Pursuant to section 63.1256(b) of the 40 CFR, for each wastewater tank that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, BSMC-Humacao shall comply with the requirements of either paragraph (b)(1) or (2) of section 63.1256 of the 40 CFR as specified in Table 6 of subpart GGG, which are included next.
- a. BSMC-Humacao shall operate and maintain a fixed roof except when the contents of the wastewater tank are heated, treated by means of an exothermic reaction, or sparged, during which time BSMC-Humacao shall comply with the requirements specified in §63.1256 (b)(2) of the 40 CFR. For the purposes of this paragraph, the requirements of §63.1256 (b)(2) are satisfied by operating and maintaining a fixed roof if BSMC-Humacao demonstrates that the total soluble and partially soluble HAP emissions from the wastewater tank are no more than 5 percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by an exothermic reaction, or sparged. [40 CFR §63.1256(b)(1)]
 - b. BSMC-Humacao shall comply with the requirements in §63.1256 (b)(3) through (9) of the 40 CFR and shall operate and maintain a fixed roof and a closed vent system that routes the organic HAP vapors vented from the wastewater tank to the thermal oxidizer, in compliance with §63.1256(b)(2) of the 40 CFR.
 - c. If complies with the requirements of §63.1256(b)(2)(i), the fixed roof shall meet the requirements of §63.1256 (b)(3)(i), the control device shall meet the requirements of paragraph §63.1256(b)(3)(ii), and the closed-vent system shall meet the requirements of §63.1256(b)(3)(iii), summarized next:
 - i. The fixed roof shall meet the following requirements [40 CFR §63.1256(b)(3)(i)]:
 - (A) Except as provided in §63.1256(b)(3)(iv), the fixed roof and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be maintained in accordance with the requirements in §63.1258(h) of the 40 CFR. [40 CFR §63.1256(b)(3)(i)(A)]

- (B) Each opening shall be maintained in a closed position (e.g., covered by a lid) at all times that the wastewater tank contains affected wastewater or residual removed from affected wastewater except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance, or repair. [40 CFR §63.1256(b)(3)(i)(B)]
 - ii. The control device shall be designed, operated, and inspected in accordance with the requirements of §63.1256(h) of the 40 CFR. [40 CFR §63.1256(b)(3)(ii)]
 - iii. Except as provided in §63.1256(b)(3)(iv), the closed-vent system shall be inspected in accordance with the requirements of §63.1258(h) of the 40 CFR. [40 CFR §63.1256(b)(3)(iii)]
 - iv. For any fixed roof tank and closed-vent system that is operated and maintained under negative pressure, BMSMC-Humacao is not required to comply with the requirements specified in §63.1258(h) of the 40 CFR. [40 CFR §63.1256(b)(3)(iv)]
- d. Except as provided in §63.1256(b)(6) of the 40 CFR, each wastewater tank shall be inspected initially, and semiannually thereafter, for improper work practices in accordance with §63.1258(g). For wastewater tanks, improper work practice includes, but is not limited to, leaving open any access door or other opening when such door or opening is not in use. [40 CFR §63.1256(b)(7)]
- e. Except as provided in §63.1256(b)(6) of the 40 CFR, each wastewater tank shall be inspected for control equipment failures as defined in paragraph (b)(8)(i) of section 63.1256 according to the schedule in paragraphs (b)(8)(ii) and (iii) of section 63.1256 in accordance with §63.1258(g) of the 40 CFR. [40 CFR §63.1256(b)(8)]
- i. Control equipment failures for wastewater tanks include, but are not limited to a gasket, joint, lid, cover, or door that has a crack or gap, or is broken. [40 CFR §63.1256(b)(8)(i)(I)]
 - ii. BMSMC-Humacao shall inspect for the control equipment failures mentioned previously initially and semiannually thereafter. [40 CFR §63.1256(b)(8)(iii)]
- f. Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 45 calendar days after identification. If a failure that is

detected during inspections required by this section cannot be repaired within 45 calendar days and if the tank cannot be emptied within 45 calendar days, BSMC-Humacao may utilize up to two extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the tank will be emptied as soon as practical. [40 CFR §63.1256(b)(9)]

27. Containers [40 CFR §63.1256(d)] - For each container that receives, manages, or treats affected wastewater or a residual removed from affected wastewater, BSMC-Humacao shall comply with the following requirements included in §63.1256(d)(1) through (5):
- a. BSMC-Humacao shall maintain a cover on each container used to handle, transfer, or store affected wastewater or a residual removed from affected wastewater in accordance with the following requirements [40 CFR §63.1256(d)(1)]:
 - i. Except as provided in section 63.1256(d)(3)(iv) of the 40 CFR, if the capacity of the container is greater than 0.42 m³, the cover and all openings (e.g., bungs, hatches, sampling ports, and pressure relief devices) shall be maintained in accordance with the requirements in §63.1258(h) of the 40 CFR. [40 CFR §63.1256(d)(1)(i)]
 - ii. If the capacity of the container is less than or equal to 0.42 m³, BSMC-Humacao shall comply with either of the following: [40 CFR §63.1256(d)(1)(ii)]
 - (A) The container must meet existing Department of Transportation (DOT) specifications and testing requirements under 49 CFR part 178; or [40 CFR §63.1256(d)(1)(ii)(A)]
 - (B) Except as provided in section 63.1256 (d)(3)(iv) of the 40 CFR, the cover and all openings shall be maintained without leaks as specified in §63.1258(h). [40 CFR §63.1256(d)(1)(ii)(B)]
 - iii. The cover and all openings shall be maintained in a closed position (e.g., covered by a lid) at all times that affected wastewater or a residual removed from affected wastewater is in the container except when it is necessary to use the opening for filling, removal, inspection, sampling, or pressure relief events related to safety considerations. [40 CFR §63.1256(d)(1)(iii)]

- b. Filling of large containers - As specified under section 63.1256(d)(2) of the 40 CFR, pumping affected wastewater or a residual removed from affected wastewater into a container with a capacity greater than or equal to 0.42 m³ shall be conducted in accordance with the conditions in paragraphs (d)(2)(i) and (ii) of section 63.1256 of the 40 CFR.
 - c. During treatment of affected wastewater or a residual removed from affected wastewater, including aeration, thermal or other treatment, in a container, whenever it is necessary for the container to be open, the container shall be located within an enclosure with a closed-vent system that routes the organic HAP vapors vented from the container to a control device, and shall comply with the requirements in §63.1256(d)(3)(i) through (iii). However, if the enclosure and the closed-vent system is operated and maintained under negative pressure, BMSMC-Humacao does not have to comply with §63.1258(h) of the 40 CFR. [40 CFR §63.1256(d)(3)]
 - d. Each container shall be inspected initially, and semiannually thereafter, for improper work practices and control equipment failures in accordance with §63.1258(g) of the 40 CFR. [40 CFR §63.1256(d)(4)]
 - i. For containers, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use. [40 CFR §63.1256(d)(4)(i)]
 - ii. For containers, control equipment failure includes, but is not limited to, any time a cover or door has a gap or crack, or is broken. [40 CFR §63.1256(d)(4)(ii)]
 - e. Except as provided in section 63.1256(i) of the 40 CFR, when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification. [40 CFR §63.1256(d)(5)]
28. Individual drain systems - Pursuant to section 63.1256(e) of the 40 CFR, for each individual drain system that receives or manages affected wastewater or a residual removed from affected wastewater, BMSMC-Humacao shall comply with the requirements of paragraphs (e) (1), (2), and (3) or with paragraphs (e) (4), (5), and (6) of section 63.1256 of the 40 CFR, as described next:
- a. If BMSMC-Humacao elects to comply with this paragraph, BMSMC-Humacao shall operate and maintain on each opening in the individual drain system a cover and if vented, route the vapors to a process or through a closed-vent system to a control device. BMSMC-Humacao shall

comply with the following requirements, described in §63.1256(e)(1)(i) through (v): [40 CFR §63.1256(e)(1)]

- i. The cover and all openings shall meet the following requirements: [40 CFR §63.1256(e)(1)(i)]
 - (A) Except as provided in §63.1256(e)(1)(iv) of the 40 CFR, the cover and all openings (e.g., access hatches, sampling ports) shall be maintained in accordance with the requirements specified in §63.1258(h) of the 40 CFR. [40 CFR §63.1256(e)(1)(i)(A)]
 - (B) The cover and all openings shall be maintained in a closed position at all times that affected wastewater or a residual removed from affected wastewater is in the drain system except when it is necessary to use the opening for sampling or removal, or for equipment inspection, maintenance, or repair. [40 CFR §63.1256(e)(1)(i)(B)]
 - ii. The control device shall be designed, operated, and inspected in accordance with §63.1256(h) of the 40 CFR. [40 CFR §63.1256(e)(1)(ii)]
 - iii. Except as provided in §63.1256(e)(1)(iv) of the 40 CFR, the closed-vent system shall be inspected in accordance with §63.1258(h) of the 40 CFR. [40 CFR §63.1256(e)(1)(iii)]
 - iv. For any cover and closed-vent system that is operated and maintained under negative pressure, BMSMC-Humacao is not required to comply with the requirements specified in §63.1258(h) of the 40 CFR. [40 CFR §63.1256(e)(1)(iv)]
 - v. The individual drain system shall be designed and operated to segregate the vapors within the system from other drain systems and the atmosphere. [40 CFR §63.1256(e)(1)(v)]
- b. Each individual drain system shall be inspected initially, and semiannually thereafter, for improper work practices and control equipment failures, in accordance with §63.1258(g) of the 40 CFR. [40 CFR §63.1256(e)(2)]
 - i. For individual drain systems, improper work practice includes, but is not limited to, leaving open any access hatch or other opening when such hatch or opening is not in use for sampling or removal, or for equipment inspection, maintenance, or repair. [40 CFR §63.1256(e)(2)(i)]

- ii. For individual drain systems, control equipment failure includes, but is not limited to, any time a joint, lid, cover, or door has a gap or crack, or is broken. [40 CFR §63.1256(e)(2)(ii)]
- c. Except as provided in §63.1256(i), when an improper work practice or a control equipment failure is identified, first efforts at repair shall be made no later than 5 calendar days after identification and repair shall be completed within 15 calendar days after identification. [40 CFR §63.1256(e)(3)]
- d. If BSMC-Humacao elects to comply with this compliance option, BSMC-Humacao shall comply with the requirements in §63.1256(e)(4) (i) through (iii), described next: [40 CFR §63.1256(e)(4)]
 - i. Each drain shall be equipped with water seal controls or a tightly fitting cap or plug. Besides, BSMC-Humacao shall comply with the requirements of §63.1256 (e)(4)(i)(A) and (B). [40 CFR §63.1256(e)(4)(i)]
 - ii. Each junction box shall be equipped with a tightly fitting solid cover (i.e., no visible gaps, cracks, or holes) which shall be kept in place at all times except during inspection and maintenance. If the junction box is vented, BSMC-Humacao shall comply with the requirements in §63.1256(e)(4)(ii) (A) or (B) of the 40 CFR. [40 CFR §63.1256(e)(4)(ii)]
 - iii. BSMC-Humacao shall operate and maintain sewer lines as specified in §63.1256 (e)(4)(iii)(A) and (B). [40 CFR §63.1256(e)(4)(iii)]
- e. Equipment used to comply with §63.1256(e)(4) (i), (ii), or (iii) shall be inspected as follows: [40 CFR §63.1256(e)(5)]
 - i. Each drain using a tightly fitting cap or plug shall be visually inspected initially, and semiannually thereafter, to ensure caps or plugs are in place and that there are no gaps, cracks, or other holes in the cap or plug. [40 CFR §63.1256(e)(5)(i)]
 - ii. Each junction box shall be visually inspected initially, and semiannually thereafter, to ensure that there are no gaps, cracks, or other holes in the cover. [40 CFR §63.1256(e)(5)(ii)]
 - iii. The unburied portion of each sewer line shall be visually inspected initially, and semiannually thereafter, for indication of cracks or gaps that could result in air emissions. [40 CFR §63.1256(e)(5)(iii)]

- f. Except as provided in §63.1256 (i), when a gap, hole, or crack is identified in a joint or cover, first efforts at repair shall be made no later than 5 calendar days after identification, and repair shall be completed within 15 calendar days after identification. [40 CFR §63.1256(e)(6)]
29. Performance standards for treatment processes managing wastewater and/or residuals removed from wastewater - 40 CFR §63.1256(g)
- a. Biological treatment processes, 40 CFR §63.1256(g)(3) – Biological treatment processes in compliance with section 63.1256 of the 40 CFR may be either open or closed biological treatment processes as defined in §63.1251. An open biological treatment process in compliance with section 63.1256 need not be covered and vented to a control device. An open or a closed biological treatment process in compliance with section 63.1256 and using sections 63.1257(e)(2)(iii)(E) or (F) to demonstrate compliance is not subject to the requirements of §63.1256 (b) and (c). A closed biological treatment process in compliance with §63.1256 and using §63.1257(e)(2)(iii)(G) to demonstrate compliance shall comply with the requirements of §63.1256(b) and (c). Waste management units upstream of an open or closed biological treatment process shall meet the requirements of §63.1256(b) through (f) of the 40 CFR, as applicable.
- b. Control device requirements - When gases are vented from the treatment process, BSMC-Humacao shall comply with the applicable control device requirements specified in §63.1256(h) and §63.1257(e)(3), and the applicable leak inspection provisions specified in §63.1258(h). This requirement is in addition to the requirements for treatment systems specified in §63.1256 (g)(8) through (14). This requirement does not apply to any open biological treatment process that meets the mass removal requirements. [40 CFR §63.1256(g)(5)]
- c. Residuals: general - Pursuant to section 63.1256(g)(6) of the 40 CFR, when residuals result from treating affected wastewater, BSMC-Humacao shall comply with the requirements for residuals specified in §63.1256(g)(14) of the 40 CFR.
- d. Treatment using a series of treatment processes - Pursuant to the provisions in section 63.1256(g)(7) of the 40 CFR, in all cases where the wastewater provisions in subpart GGG allow or require the use of a treatment process or control device to comply with emissions limitations, BSMC-Humacao may use multiple treatment processes or control devices, respectively. For combinations of treatment processes where the wastewater stream is conveyed by hard piping, BSMC-Humacao shall comply with either of the requirements in §63.1256(g)(7)(i) or (ii) of the 40 CFR. For combinations of treatment processes where the wastewater stream is not conveyed by hard piping, BSMC-Humacao shall comply

with the requirements of §63.1256(g)(7)(ii) of the 40 CFR. For combinations of control devices, BMSMC-Humacao shall comply with the requirements of §63.1256 (g)(7)(i) of the 40 CFR.

- e. Compliance option: 95-percent mass reduction, for biological treatment processes, 40 CFR §63.1256(g)(11)- As selected by BMSMC-Humacao as their compliance option, BMSMC-Humacao shall reduce the mass of total soluble and partially soluble HAPs sent to that biological treatment unit by at least 95%. To comply with this option, the affected wastewater shall be treated by air strippers and afterwards they will be treated by biological treatment. The gases from the air strippers shall be treated in the thermal oxidizers. All wastewater as defined in §63.1251 entering such a biological treatment unit from PMPU's subject to subpart GGG shall be included in the demonstration of the 95% mass removal. BMSMC-Humacao shall comply with the requirements in §§63.1256 (g)(11)(i) through (iv) of the 40 CFR, described next.
- i. Except as provided in §63.1256 (g)(11)(iv), BMSMC-Humacao shall ensure that all wastewater from PMPU's subject to subpart GGG entering a biological treatment unit are treated to destroy at least 95-percent total mass of all soluble and partially soluble HAP compounds. [40 CFR §63.1256(g)(11)(i)]
 - ii. For open biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(iii)(E) of the 40 CFR. For closed aerobic biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(ii), (iii)(E), or (iii)(G) of the 40 CFR. For closed anaerobic biological treatment processes, compliance shall be determined using the procedures specified in §63.1257(e)(2)(ii) or (iii)(G) of the 40 CFR. [40 CFR §63.1256(g)(11)(ii)]
 - iii. For each treatment process or waste management unit that receives, manages, or treats wastewater subject to §63.1256(g)(11)(ii) of the 40 CFR from the POD to the biological treatment unit, BMSMC-Humacao shall comply with paragraphs (b) through (f) of §63.1256 for control of air emissions. When complying with this paragraph, the term “affected wastewater” in §63.1256 (b) through (f) shall mean all wastewater from PMPU's, not just affected wastewater. [40 CFR §63.1256(g)(11)(iii)]
 - iv. If wastewater is in compliance with the requirements in the §63.1256 (g)(8), (9), or (12) before entering the biological treatment unit, the HAPs mass of that wastewater is not required to be included in the total mass flow rate entering the biological

treatment unit for the purpose of demonstrating compliance. [40 CFR §63.1256(g)(11)(iv)]

- f. Treatment in a RCRA unit option - In compliance with Section 63.1256(g)(13) of the 40 CFR, BSMC-Humacao may treat the affected wastewater or residual in any one of the RCRA permitted liquid waste incinerators (EU2CO-MACT, EU3COA-MACT, EU3COB-MACT). These units are exempt from the design evaluation or performance tests requirements specified in §63.1256(g)(4) and §63.1257(e)(2), and from the monitoring requirements specified in §63.1256 (a)(2)(iii), as well as recordkeeping and reporting requirements associated with monitoring and performance tests.
- g. Residuals - Pursuant to section 63.1256(g)(14) of the 40 CFR, for each residual removed from affected wastewater, BSMC-Humacao shall control for air emissions by complying with paragraphs (b) through (f) of section 63.1256 and by complying with one of the provisions in sections 63.1256(g)(14)(i) through (iv) of the 40 CFR, described next.
 - i. Recycle the residual to a production process or sell the residual for the purpose of recycling. Once a residual is returned to a production process, the residual is no longer subject to section 63.1256. [40 CFR §63.1256(g)(14)(i)]
 - ii. Return the residual to the treatment process. [40 CFR §63.1256(g)(14)(ii)]
 - iii. Treat the residual to destroy the total combined mass flow rate of soluble and/or partially soluble HAP compounds by 99% or more, as determined by the procedures specified in the §§63.1257(e)(2)(iii)(C) or (D). [63.1256(g)(14)(iii)]
 - iv. Comply with the requirements for RCRA treatment options specified in the 63.1256(g)(13) [40 CFR §63.1256(g)(14)(iv)]
- 30. Control devices - Pursuant to section 63.1256(h) of the 40 CFR, for each control device or combination of control devices used to comply with the provisions in §63.1256 (b) through (f) and (g)(5), BSMC-Humacao shall operate and maintain the control device or combination of control devices in accordance with the requirements of §63.1256(h)(1) through (5), described next.
 - a. Whenever organic HAP emissions are vented to a control device which is used to comply with the provisions of subpart GGG, such control device shall be operating. [40 CFR §63.1256(h)(1)]

- b. The control device shall be designed and operated in accordance with §63.1256 (h)(2) (i), (ii), (iii), (iv), or (v) of this section, as demonstrated by the provisions in §63.1257(e)(3). [40 CFR §63.1256(h)(2)]
 - c. If the control device is a combustion device, BMSMC-Humacao shall comply with the requirements in section 63.1252(g) of the 40 CFR to control halogenated vent streams. [40 CFR §63.1256(h)(3)]
 - d. Except as provided in §63.1256 (i) of the 40 CFR, if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect. [40 CFR §63.1256(h)(4)]
 - e. The provisions in sections 63.1256 (h)(1) through (4) of the 40 CFR apply at all times, except as specified in §63.1250(g). BMSMC-Humacao may not comply with the planned routine maintenance provisions in §63.1252(h) for vent streams from waste management units. [40 CFR §63.1256(h)(5)]
31. Delay of repair - According to section 63.1256 of the 40 CFR, delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the repair is technically infeasible without a shutdown, as defined in §63.1251 of the 40 CFR, or if BMSMC-Humacao determines that emissions of purged material from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of this equipment shall occur by the end of the next shutdown.
- a. Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified, is allowed if the equipment is emptied or is no longer used to treat or manage affected wastewater or residuals removed from affected wastewater. [40 CFR §63.1256(i)(1)]
 - b. Delay of repair of equipment for which a control equipment failure or a gap, crack, tear, or hole has been identified is also allowed if additional time is necessary due to the unavailability of parts beyond the control of BMSMC-Humacao. Repair shall be completed as soon as practical. If this provision is used, BMSMC-Humacao shall comply with the requirements of §63.1259(h) to document the reasons that the delay of repair was necessary. [40 CFR §63.1256(i)(2)]

Test methods and compliance procedures [40 CFR §63.1257]

32. General: Except as specified in paragraph (a)(5) of section 63.1257 of the 40 CFR, the procedures specified in paragraphs (c), (d), (e), and (f) of section

63.1257 are required to demonstrate compliance with the storage tanks, process vents, equipment leaks and wastewater standards. The provisions in paragraphs (a) (2) through (3) of section 63.1257 apply to performance tests that are specified in paragraphs (c), (d), and (e) of section 63.1257. The provisions in paragraph (a)(5) of section 63.1257 are used to demonstrate initial compliance with the alternative standards specified in sections 63.1253(d) and 63.1254(c) of the 40 CFR. The provisions in paragraph (a)(6) of §63.1257 are used to comply with the outlet concentration requirements specified in sections 63.1253(c), 63.1254(a)(2)(i) and (a)(3)(ii)(B), 63.1254(b)(i) and 63.1256(h)(2) of the 40 CFR.

- a. Design evaluation - To demonstrate that a control device meets the required control efficiency, a design evaluation must address the composition and organic HAPs concentration of the vent stream entering the control device. A design evaluation also must address other vent stream characteristics and control device operating parameters as specified in any one of paragraphs (a)(1)(i) through (iv) of section 63.1257 of the 40 CFR, depending on the type of control device that is used. If the vent stream is not the only inlet to the control device, the efficiency demonstration also must consider all other vapors, gases, and liquids, other than fuels, received by the control device. [40 CFR §63.1257(a)(1)]
- b. Calculation of TOC or total organic HAP concentration– Compliance based on TOC or in total organic HAPs shall be determined according to the procedures in section 63.1257(a)(2) of the 40 CFR.
- c. Outlet concentration correction for supplemental gases, combustion devices – Instead of correcting for supplemental gases, BSMC-Humacao may comply with the provisions in §63.1258(b)(5)(ii)(A)(2) of the 40 CFR. BSMC-Humacao shall maintain a minimum residence time of 0.75 seconds and a minimum temperature in the combustion chamber of 816°C in the thermal oxidizers. [40 CFR §63.1257(a)(3)(i)]
- d. Initial compliance with alternative standard - According to section 63.1257(a)(5) of the 40 CFR, BSMC-Humacao shall demonstrate initial compliance with the alternative standards in sections 63.1253(d) and 63.1254(c) of the 40 CFR for the thermal oxidizer when the outlet TOC concentration is 20 ppmv or less. BSMC-Humacao shall use Method 18 to determine the predominant organic HAP in the emission stream if the TOC monitor is calibrated on the predominant HAP.
- e. Initial compliance with the 20 ppmv outlet limit - According to section 63.1257 of the 40 CFR, initial compliance with the 20 ppmv TOC and hydrogen halide and halogen concentration is demonstrated when the outlet TOC concentration is 20 ppmv or less. To demonstrate initial compliance, the operator shall use test methods described in paragraph (b) of section 63.1257 of the 40 CFR. BSMC-Humacao shall comply with

the monitoring provisions in section 63.1258(b)(1) through (4) on the initial compliance date.

33. Test methods - When testing is conducted to measure emissions from an affected source, BMSMC-Humacao shall use the test methods specified in paragraphs (b)(1) through (10) of section 63.1257 of the 40 CFR, in compliance with section 63.1257(b) of the 40 CFR.
34. Initial compliance with storage tank provisions - BMSMC-Humacao shall demonstrate initial compliance with section 63.1253(b) or (c), as applicable, by fulfilling the requirements of paragraph (c)(1), or (c)(2), or (c)(3) of section 63.1257 of the 40 CFR. Initial compliance with the alternate standard of section 63.1253(d) shall be demonstrated according to requirements in paragraph (a)(5) of section 63.1257. BMSMC-Humacao shall demonstrate compliance with the requirements in §63.1253(e) of the 40 CFR by including the periods of planned routine maintenance specified by date and time in each periodic report required by §63.1260 del 40 CFR. [40 CFR §63.1257(c)]
35. Initial compliance with process vent provisions - Pursuant to section 63.1257(d) of the 40 CFR, BMSMC-Humacao shall demonstrate initial compliance with the process vent provisions in §63.1254 using the procedures described in paragraphs (d)(1) through (4) of section 63.1257, except for the following:
 - a. Process condensers (EUMISC-MACT)– Section 63.1257(d)(3)(iii)(B) of the 40 CFR requires a demonstration that the process condensers are properly operated. As approved by EPA-Caribbean Office on July 11, 2002, in response to the precompliance report submitted by BMSMC-Humacao to comply with Section 63.1260(e) of the 40 CFR, instead of performing the demonstration required by §63.1257(d)(3)(iii)(B) of the 40 CFR, BMSMC will continuously monitor the operation of the thermal oxidizer bypass systems, during periods when the facility uses the 98% control standard to comply with the process vent standard. This fact will be documented in the Notification of Compliance Status required by §63.1260(f) of the 40 CFR. This approval is subject to treating the HAP emissions from all condensers by the thermal oxidizers.
36. Compliance with wastewater provisions– Compliance with wastewater provisions shall be demonstrated according to the procedures of section 63.1257(e) of the 40 CFR. If at any moment BMSMC-Humacao decides to determine which wastewaters are affected, BMSMC-Humacao shall follow the procedures included in such section.

Monitoring requirements [40 CFR §63.1258]

37. BMSMC-Humacao shall provide evidence of continued compliance with the standard as specified in section 63.1258 of the 40 CFR.

38. Monitoring for control devices –

- a. BSMC-Humacao shall comply with the monitoring requirements included in the following table for the normal operating scenario.

Location	Device	Parameter	Value	Monitoring Frequency	Averaging Period	Requirements for the indicators or the monitors
Thermal Oxidizing Unit (TOU)	Oxidizer	Combustion Chamber Temperature	Greater than or equal to 1,500°F	Continuous	Daily	The temperature monitoring device must be accurate to within $\pm 0.75\%$ of the temperature measured in degrees Celsius or 2.5 °C, whichever is greater.
		Residence time	Greater than or equal to 0.75 seconds	N/A ⁹	N/A	N/A
Thermal Oxidizing Unit (TOU)	Scrubbers (located after the thermal oxidizer)	pH	Greater than or equal to 3.37 ¹⁰	Continuous (Every 15 minutes) ¹¹	24 hours	N/A
		Liquid flow rate	Greater than or equal to 551 gpm	Continuous	Daily	The monitoring device must be accurate within $\pm 10\%$ of the design scrubber liquid flowrate.
Thermal Oxidizing Unit (TOU)	CEM	TOC	20 ppmv or less	Continuous	Daily	The monitor must meet the requirements of Performance Specification (PS) 8 or 9 of appendix B of part 60. It must be installed, calibrated, and maintained, according to Sec. 63.8 of the 40 CFR Part 63. A monitor complying with PS 8 must also comply with Appendix F, Procedure A of the CFR Part 60.
Bypass	Bypass Valves	Valve position	Closed	Continuous	N/A	N/A

⁹ As approved by EPA-Caribbean Office on July 11, 2002, BSMC-Humacao was allowed to perform an initial demonstration to show that the design of the thermal oxidizer blowers does not allow that the residence time in the combustion chamber to be less than 0.75 seconds, as long as this parameter is verified during the performance test.

¹⁰ Average value obtained during the performance tests to demonstrate compliance with the 40 CFR Part 63, Subpart GGG

¹¹ As approved by EPA-Caribbean Office on July 11, 2002 and amended on October 7, 2002, instead of a daily reading, averaging the obtained pH value is allowed.

Location	Device	Parameter	Value	Monitoring Frequency	Averaging Period	Requirements for the indicators or the monitors
Wastewater treatment Plant (WWTP)	<i>Air Stripper</i>	Influent liquid flow rate ¹²	Less than or equal to 210 gpm	Continuous	Daily	N/A
	Treatment Plant ¹³	Effluent BOD ₅	Less than or equal to 250 mg/L	Quarterly	24-hour composite sample	---
		Effluent TSS	Less than or equal to 250 mg/L	Quarterly	24-hour composite sample	---
		MLVSS	Greater than or equal to 1 g/L	Twice per week	N/A	---

- b. Monitoring of the operating parameters of the control devices shall be done during the periods of time when they are functioning in achieving the HAPs removal required by Subpart GGG.
- c. The temperature indicators and the flow meters used to comply with the monitoring requirements on this permit shall be calibrated annually, as required by sections 63.1258(b)(1)(ii)(C) and 63.1258(b)(1)(viii)(B) of the 40 CFR. Records indicating the date, time and the results of the calibration shall be kept available for inspection by the Board's technical personnel.
- d. BMSMC-Humacao shall perform monthly visual inspections of each closed vent system as specified in section 63.1252(b) of the 40 CFR. [40 CFR §63.1258(b)(1)(xi)]
- e. Monitoring values taken during periods in which the control devices are not functioning in controlling HAP emissions, as indicated by periods of no flow, shall not be considered in the averages. Where flow to the device could be intermittent, BMSMC-Humacao shall install, calibrate and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow. [40 CFR §63.1258(b)(2)(iii)]
- f. A record identifying periods of no-flow shall be kept, readily accessible for inspection by the Board's technical personnel.
- g. Instead of monitoring the HCl concentration using a CEM to monitor halogenated vent stream that are controlled by a combustion equipment followed by a scrubber, BMSMC-Humacao shall monitor the scrubber

¹² As it was submitted in the compliance report and approved by EPA on July 11, 2002, only the influent wastewater flow rate is monitored, because the vapor flow rate will be maintained constant using fixed speed blowers.

¹³ EPA-Caribbean Office approved the monitoring for the treatment units on July 11, 2002. The company requested to monitor COD instead of BOD, and was approved. However, they requested again to monitor BOD as required in Section 63.1258(g)(2) in order to be consistent with their water discharge permit emitted by PRASA.

operating parameters as specified in the table included in condition 38 of section V.B. of this permit that demonstrate that the HCl emissions are reduced by at least 95% by weight, in compliance with §63.1258(b)(5)(i)(C) of the 40 CFR.

- h. Exceedances of operating parameters - According to section 63.1258(b)(6) of the 40 CFR, an exceedance of an operating parameter is defined as one of the following:
 - i. If the parameter, averaged over the operating day or block, is below a minimum value established during the initial compliance demonstration. [40 CFR §63.1258(b)(6)(i)]
 - ii. If the parameter, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration. [40 CFR §63.1258(b)(6)(ii)]
- i. Excursions - According to section 63.1258(b)(7) of the 40 CFR, excursions are defined by either of the two cases mentioned below:
 - i. When the period of control device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data, as defined in paragraph (b)(7)(iii) of §63.1258, for at least 75 percent of the operating hours. [40 CFR §63.1258(b)(7)(i)]
 - ii. When the period of control device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data. [40 CFR §63.1258(b)(7)(ii)]
 - iii. Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (b)(7)(i) and (ii) of section 63.1258 of the 40 CFR, if measured values are unavailable for any of the required 15-minute periods within the hour. [40 CFR §63.1258(b)(7)(iii)]
- j. Violations - Exceedances of parameters monitored according to the provisions of paragraphs (b)(1)(ii), (iv) through (ix), and (b)(5)(ii)(A) and (B) of section 63.1258, or excursions as defined by paragraphs (b)(7)(i) through (iii) of section 63.1258, constitute violations of the operating limit according to paragraphs (b)(8)(i), (ii), and (iv) of section 63.1258 of the 40 CFR. Exceedances of the temperature limit monitored according to the provisions of paragraph (b)(1)(iii) of section 63.1258 of the 40 CFR or exceedances of the outlet concentrations monitored according to the provisions of paragraph (b)(1)(x) of section 63.1258 of the 40 CFR constitute violations of the emission limit according to paragraphs

(b)(8)(i), (ii), and (iv) of section 63.1258 of the 40 CFR. Exceedances of the outlet concentrations monitored according to the provisions of paragraph (b)(5) of section 63.1258 constitute violations of the emission limit according to the provisions of paragraphs (b)(8)(iii) and (iv) of section 63.1258. [40 CFR §63.1258(b)(8)]

- i. Except as provided in paragraph (b)(8)(iv) of section 63.1258, for episodes occurring more than once per day, exceedances of established parameter limits or excursions will result in no more than one violation per operating day for each monitored item of equipment utilized in the process. [40 CFR §63.1258(b)(8)(i)]
- ii. Except as provided in paragraph (b)(8)(iv) of section 63.1258 of the 40 CFR, for control devices used for more than one process in the course of an operating day, exceedances or excursions will result in no more than one violation per operating day, per control device, for each process for which the control device is in service. [40 CFR §63.1258(b)(8)(ii)]
- iii. Except as provided in paragraph (b)(8)(iv) of section 63.1258 of the 40 CFR, exceedances of the 20 ppmv TOC outlet emission limit, averaged over the operating day, will result in no more than one violation per day per control device.
- iv. Periods of time when monitoring measurements exceed the parameter values as well as periods of inadequate monitoring data do not constitute a violation if they occur during a startup, shutdown, or malfunction, and the facility follows its startup, shutdown, and malfunction plan. [40 CFR §63.1258(b)(8)(iv)]

39. Monitoring for emission limits - When BMSMC-Humacao complies with the process based annual mass limit in the 40 CFR 63.1254(a)(2), continuous compliance with the 900 and 1,800 kg/yr emission limits shall be demonstrated by calculating daily 365-day rolling summations of emissions. During periods of planned routine maintenance when emissions are controlled as specified in section 63.1252(h), BMSMC-Humacao must calculate controlled emissions assuming the HAPs emissions are reduced by 93%. If BMSMC-Humacao opts to switch compliance strategy from the 93% control requirement to the annual mass emission limit method, as described in section 63.1254(a)(1)(i), the rolling summations, beginning with the first day after the switch, must include emissions from the past 365 days. [40 CFR §63.1258(c)]

- a. As approved by EPA-Caribbean Office on July 11, 2002 in the Precompliance Report evaluation, BMSMC-Humacao shall calculate the HAP emissions monthly (for each day of the month) in a 365-day rolling period of those process vents subject to the process based annual mass

limit. BMSMC-Humacao shall keep records with standard and non-standard production (as defined in Section 63.1251 of the 40 CFR) to allow the annual rolling emission calculations. The emissions will be calculated as the product of the standard emissions per batch and the number of batches produced.

40. Monitoring for equipment leaks - Pursuant to 63.1258(d) of the 40 CFR, BMSMC-Humacao shall meet the monitoring requirements of section 63.1255 of the 40 CFR for equipment leaks.
41. Inspection and monitoring of waste management units and treatment processes.
 - a. For each wastewater tank, surface impoundment, container, individual drain system, and oil/water separator that receives, manages, or treats wastewater, a residual removed from wastewater, a recycled wastewater, or a recycled residual removed from wastewater, BMSMC-Humacao shall comply with the inspection requirements specified in Table 7 of subpart GGG of Part 63 of the 40 CFR.
 - b. For each biological treatment unit used to comply with section 63.1256(g), BMSMC-Humacao shall monitor TSS, BOD, and the MVLSS according to the monitoring requirements of the table included in condition 38 of Section V.B. of this permit
 - c. BMSMC-Humacao shall monitor the operating parameters of the air strippers according to the table included in condition 38 of Section V.B. of this permit.
42. Leak inspection provisions for vapor suppression equipment, 40 CFR 63.1258(h)— Except as provided in paragraph (h)(9) and (10) of §63.1258, for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with section 63.1258 of the 40 CFR, BMSMC-Humacao shall comply with the requirements of paragraphs (h)(2) through (8) of section 63.1258(h) of the 40 CFR, described next: [40 CFR §63.1258(h)(1)]
 - a. Except as provided in paragraphs (h)(6) and (7) of section 63.1258, each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs the §63.1258(h)(2)(iii). [40 CFR §63.1258(h)(2)]
 - i. If the vapor collection system or closed-vent system is constructed of hard-piping, BMSMC-Humacao shall:

- (A) Conduct an initial inspection according to the procedures in §63.1258 (h)(3) of the 40 CFR, and [40 CFR §63.1258(h)(2)(i)(A)]
 - (B) Conduct visual annual inspections for visual, audible or olfactory indications. [40 CFR §63.1258(h)(2)(i)(B)]
- ii. The vapor collection systems and closed vent systems shall be inspected according to the requirements of §63.1258(h)(3) of the 40 CFR.
- iii. Leaks, as indicated by an instrument reading greater than 500 ppm above background or by visual inspections, shall be repaired as soon as practicable, except as provided in the §63.1258 (h)(5) of the 40 CFR. [40 CFR §63.1258(h)(4)]
 - (A) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. [40 CFR §63.1258(h)(4)(i)]
 - (B) Repair shall be completed no later than 15 calendar days after the leak is detected, except as provided in §63.1258 (h)(4)(iii). [40 CFR §63.1258(h)(4)(ii)]
 - (C) For leaks found in vapor collection systems used for transfer operations, repairs shall be completed no later than 15 calendar days after the leak is detected or at the beginning of the next transfer loading operation, whichever is later. [40 CFR §63.1258(h)(4)(iii)]
- iv. Delay of repair of a vapor collection system or closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in §63.1251, or if BMSMC-Humacao determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown. [40 CFR §63.1258(h)(5)]
- v. Any parts of the vapor collection system, closed-vent system or enclosure that are designated as unsafe to inspect are exempt from the inspection requirements of paragraphs (h)(2)(i), (ii), and (iii) section 63.1258 if it complies with the requirements in paragraphs (h)(6)(i) and (ii) of section 63.1258 of the 40 CFR. [40 CFR §63.1258(h)(6)]

- vi. Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect are exempt from the inspection requirements of paragraphs (h)(2)(i), (ii), and (iii)(A) of section 63.1258 if it complies with the requirements in paragraph (h)(7)(i) and (ii) of section 63.1258 of the 40 CFR. [40 CFR §63.1258(h)(7)]
 - vii. Records shall be maintained as specified in §63.1259(i) (4) through (9). [40 CFR §63.1258(h)(8)]
 - viii. If a closed-vent system subject to section 63.1258 is also subject to the equipment leak provisions of section 63.1255 of the 40 CFR, then BMSMC-Humacao shall comply with the provisions of §63.1255 and is exempt from the requirements of section 63.1258 of the 40 CFR. [40 CFR §63.1258(h)(9)]
43. Planned routine maintenance periods- During periods of planned routine maintenance when organic HAP emissions are controlled as specified in §63.1252(h)(2), BMSMC-Humacao must monitor the condenser outlet gas temperature according to the procedures specified in paragraph (b)(1)(iii) of section 63.1258 of the 40 CFR. During periods of planned routine maintenance when HCl emissions are controlled as specified in §63.1252(h)(3), BMSMC-Humacao must monitor the pH of the scrubber effluent once per day. [40 CFR §63.1258(i)]

Recordkeeping requirements [40 CFR §63.1259]

44. According to section 63.1259(a) of the 40 CFR, BMSMC-Humacao shall comply with the recordkeeping requirements in subpart A of the 40 CFR Part 63 as specified in Table 1 of subpart GGG and in paragraphs (a)(1) through (5) of section 63.1259 of the 40 CFR.
- a. Data retention - BMSMC-Humacao shall keep copies of all records and reports required by subpart GGG for at least 5 years, as specified in §63.10(b)(1). [40 CFR §63.1259(a)(1)]
 - b. Startup, Shutdown and malfunction plan- See requirements for the alternate scenario EUSSM-MACT.
 - c. Recordkeeping requirements for sources with continuous monitoring systems - BMSMC-Humacao shall maintain records specified in §63.10(c)(1) through (14) for the continuous monitoring systems. [40 CFR §63.1259(a)(4)]

- d. Application for approval of construction or reconstruction - For new affected sources, BMSMC-Humacao shall comply with Rule 203 of the RCAP and with the provisions in §63.5 regarding construction and reconstruction, excluding the provisions specified in §63.5(d)(1)(ii)(H), (d)(2), and (d)(3)(ii) of the 40 CFR.
45. Records of equipment operation - According to section 63.1259 (b) of the 40 CFR, BMSMC-Humacao must keep the following records up-to-date and readily accessible:
- a. Each measurement of a control device operating parameter monitored in accordance with §63.1258 of the 40 CFR and each measurement of a treatment process parameter monitored in accordance with §63.1258(g)(2) and (3). [40 CFR §63.1259(b)(1)]
 - b. For each continuous monitoring system used to comply with subpart GGG, records documenting the completion of calibration checks and maintenance of continuous monitoring systems. [40 CFR §63.1259(b)(3)]
 - c. For purposes of compliance with the annual mass limits of §63.1254(a)(2) monthly records (instead of daily) of the rolling annual total emissions, because, as approved by EPA-Caribbean Office on July 11, 2002 in the precompliance report evaluation, the emissions will be calculated monthly instead of daily.
 - d. Records of the following, as appropriate:
 - i. For processes in compliance with the annual mass limits of §63.1254(a)(2) or (b)(2), the following records are required:
 - (A) the number of batches per year for each batch process; [40 CFR §63.1259(b)(5)(ii)(A)]
 - (B) standard batch uncontrolled and controlled emissions for each process; [40 CFR §63.1259(b)(5)(ii)(C)]
 - (C) Actual controlled emissions for each batch operated during periods of planned routine maintenance of a CCCD, calculated according to §63.1258(c). [40 CFR §63.1259(b)(5)(ii)(D)]
 - (D) Actual uncontrolled and controlled emissions for each nonstandard batch; [40 CFR §63.1259(b)(5)(ii)(E)]

- (E) A record whether each batch operated was considered a standard batch. [40 CFR §63.1259(b)(5)(ii)(F)]
 - ii. Wastewater concentration per POD or process, except if they are designed as affected wastewater, according to §63.1256(a)(1)(ii). [40 CFR §63.1259(b)(6)]
 - iii. A schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation. [40 CFR §63.1259(b)(8)]
 - iv. Description of worst-case operating conditions as required in sections §63.1257(b)(8). [40 CFR §63.1259(b)(9)]
 - v. Periods of planned routine maintenance as described in sections 63.1252(h) and 63.1257(c)(5) of the 40 CFR. [40 CFR §63.1259(b)(10)]
 - vi. All maintenance performed on the air pollution control equipment. [40 CFR §63.1259(b)(13)]
46. Records of operating scenarios - BMSMC-Humacao shall keep records of each operating scenario which demonstrates compliance with subpart GGG of the 40 CFR, Part 63. [40 CFR §63.1259(c)]
47. Records of equipment leak detection and repair programs - BMSMC-Humacao shall implement the recordkeeping requirements in section 63.1255 of subpart GGG of the 40 CFR, Part 63. [40 CFR §63.1259(d)]
48. Records of delay of repair - Documentation of a decision to use a delay of repair due to unavailability of parts, as specified in §63.1256(i), shall include a description of the failure, the reason additional time was necessary (including a statement of why replacement parts were not kept onsite and when delivery from the manufacturer is scheduled), and the date when the repair was completed. [40 CFR §63.1259(f)]
49. Record of wastewater stream or residual transfer - BMSMC-Humacao shall keep a record of the notice sent to the treatment operator when transferring affected wastewater or a residual removed from affected wastewaters in accordance with the §63.1256(a)(5). The notice shall indicate that the wastewater stream or residual contains organic HAP which is required to be managed and treated in accordance with the provisions of subpart GGG. [40 CFR §63.1259(g)]
50. Records of extensions - BMSMC-Humacao shall keep documentation of a decision to use an extension, as specified in §63.1256(b)(6)(ii) or (b)(9) of the 40

CFR, in a readily accessible location. The documentation shall include a description of the failure, documentation that alternate storage capacity is unavailable, and specification of a schedule of actions that will ensure that the control equipment will be repaired and the tank will be emptied as soon as practical. [40 CFR §63.1259(h)]

51. Records of inspections - BMSMC-Humacao shall keep the following applicable records specified in paragraphs (i)(1) through (9) of section 63.1259 of the 40 CFR:
- a. A record that each waste management unit inspection required by §63.1256(b) through (f) of the 40 CFR was performed. [40 CFR §63.1259(i)(1)]
 - b. A record that each inspection for control devices required by §63.1256(h) was performed. [40 CFR §63.1259(i)(2)]
 - c. Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect in accordance with §63.1258(h)(6) of the 40 CFR, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment. [40 CFR §63.1259(i)(4)]
 - d. Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as difficult to inspect in accordance with §63.1258(h)(7) of the 40 CFR, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment. [40 CFR §63.1259(i)(5)]
 - e. For each vapor collection system or closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, BMSMC-Humacao shall keep an hourly records of whether the flow indicator specified under §63.1252(b)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the flow indicator is not operating. [40 CFR §63.1259(i)(6)(i)]
 - f. For each inspection conducted in accordance with §63.1258(h)(2) and (3) during which a leak is detected, a record of the information specified in paragraphs (i)(7)(i) through (ix) of the §63.1259 of the 40 CFR:
 - i. Identification of the leaking equipment. [40 CFR §63.1259(i)(7)(i)]
 - ii. The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in

- §63.1258(h)(3); or a record that the leak was detected by sensory observations. [40 CFR §63.1259(i)(7)(ii)]
- iii. The date the leak was detected and the date of the first attempt to repair the leak. [40 CFR §63.1259(i)(7)(iii)]
 - iv. Maximum instrument reading measured by the method specified in §63.1258(h)(4) after the leak is successfully repaired or determined to be nonrepairable. [40 CFR §63.1259(i)(7)(iv)]
 - v. “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak. [40 CFR §63.1259(i)(7)(v)]
 - vi. The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown. [40 CFR §63.1259(i)(7)(vi)]
 - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days [40 CFR §63.1259(i)(7)(vii)]
 - viii. Dates of shutdowns that occur while the equipment is unrepaired. [40 CFR §63.1259(i)(7)(viii)]
 - ix. The date of successful repair of the leak. [40 CFR §63.1259(i)(7)(ix)]
- g. For each inspection conducted in accordance with §63.1258(h)(3) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [40 CFR §63.1259(i)(8)]
 - h. For each visual inspection conducted in accordance with §63.1258(h)(2)(i)(B) or (h)(2)(iii)(B) of the 40 CFR during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected. [40 CFR §63.1259(i)(9)]

Reporting Requirements [40 CFR §63.1260]

- 52. BMSMC-Humacao shall comply with the reporting requirements of paragraphs (b) through (l) of the §63.1260 of the 40 CFR. Applicable reporting requirements of sections 63.9 and 63.10 of the 40 CFR are also summarized in Table 1 of this subpart GGG. [40 CFR §63.1260(a)]

53. Periodic reports - BSMC-Humacao shall prepare periodic reports in accordance with paragraphs (g)(1) and (2) of §63.1260 and submit them to the Board. [40 CFR §63.1260(g)]
- a. Submittal schedule - Except as provided in paragraphs (g)(1)(i), (ii), and (iii) of section 63.1260 of the 40 CFR mentioned below, BSMC-Humacao shall submit periodic reports semiannually. The first report shall be submitted no later than 240 days after the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period. [40 CFR §63.1260(g)(1)]
 - i. The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source; or [40 CFR §63.1260(g)(1)(i)]
 - ii. Quarterly reports shall be submitted when the source experiences an exceedance of a temperature limit monitored according to the provisions of §63.1258(b)(1)(iii) or an exceedance of the outlet concentration monitored according to the provisions of §63.1258(b)(1)(x) or (b)(5). Once an affected source reports quarterly, the affected source shall follow a quarterly reporting format until a request to reduce reporting frequency is approved. If BSMC-Humacao submits a request to reduce the frequency of reporting, the provisions in §63.10(e)(3)(ii) and (iii) shall apply, except that the phrase “excess emissions and continuous monitoring system performance report and/or summary report” shall mean “periodic report” for the purposes of section 63.1260 of the 40 CFR. [40 CFR §63.1260(g)(1)(ii)]
 - iii. When a new operating scenario has been operated since the last report, quarterly reports shall be submitted. [40 CFR §63.1260(g)(1)(iii)]
 - b. Content of periodic report [40 CFR §63.1260(g)(2)] - BSMC-Humacao shall include the information in paragraphs (g)(2)(i) through (vii) of the 40 CFR §63.1260, as applicable.
54. Notification of Process Change [40 CFR §63.1260(h)]
- a. Except as specified in paragraph (h)(2) of section 63.1260, whenever a process change is made, or a change in any of the information submitted in the Notification of Compliance Status Report, BSMC-Humacao shall submit the information specified in paragraphs (h)(1)(i) through (iv) of

section 63.1260 with the next Periodic report required under paragraph (g) of section 63.1260. [40 CFR §63.1260(h)(1)]

- i. A brief description of the process change. [40 CFR §63.1260(h)(1)(i)]
 - ii. A description of any modifications to standard procedures or quality assurance procedures. [40 CFR §63.1260(h)(1)(ii)]
 - iii. Revisions to any of the information reported in the original Notification of Compliance Status Report under paragraph (f) of section 63.1260. [40 CFR §63.1260(h)(1)(iii)]
 - iv. Information required by the Notification of Compliance Status Report under paragraph (f) of section 63.1260 for changes involving the addition of processes or equipment. [40 CFR §63.1260(h)(1)(iv)]
- b. BMSMC-Humacao must submit a report 60 days before the scheduled implementation date of either of the following: [40 CFR §63.1260(h)(2)]
- i. Any change in the activity covered by the Precompliance report. [40 CFR §63.1260(h)(2)(i)]
 - ii. A change in the status of a control device from small to large. [40 CFR §63.1260(h)(2)(ii)]
55. Reports of startup, shutdown, and malfunction [40 CFR §63.1260(i)]– See requirements for the alternate scenario EUSSM-MACT.
56. Reports of Leak Detection & Repair Programs [40 CFR §63.1260(j)]– BMSMC-Humacao shall implement the reporting requirements in §63.1255 of the 40 CFR. Copies of all reports shall be retained as records for a period of 5 years, in accordance with the requirements of §63.10(b)(1) of the 40 CFR.
57. Notification of Performance Test and Test Plan [40 CFR §63.1260(l)] - Pursuant to §63.1260(l), BMSMC-Humacao shall notify the Board of the planned date of a performance test at least 60 days before the test in accordance with §63.7(b). BMSMC-Humacao also must submit the test plan required by §63.7(c) and the emission profile required by §63.1257(b)(8)(ii) with the notification of the performance test. Testing shall be done according to the requirements of subpart GGG and in compliance with Rule 106 of the RCAP.

C. Alternate Operating Scenarios

Under this permit, the following alternate scenarios are authorized:

a. EUTF1-Alt

This scenario contemplates changes in the materials stored in the tanks that could activate the applicability requirements in the 40 CFR Part 60 Subpart Kb or the construction of new tanks subject to such regulation. BMSMC-Humacao shall obtain a construction permit under Rule 203 of the RCAP before constructing, reconstructing or modifying a storage tank, unless it is exempt by Rule 206 of the RCAP. The requirements of the 40 CFR Part 63 Subpart Kb are summarized next.

- i. Storage tanks with a design capacity greater than or equal to 151 m³ that store a volatile organic liquid with a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or tanks with a design capacity greater than or equal to 75 m³ but less than 151 m³ that store a volatile organic liquid with a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall be equipped with a closed vent system and a control device. This equipment shall comply with the following specifications:
 - (A) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b). [40 CFR §60.112b(a)(3)(i)]
 - (B) The control device shall be designed and operated to reduce inlet VOC emissions by 95% or greater. [40 CFR §60.112b(a)(3)(ii)]
- ii. Storage vessels with a design capacity greater than or equal to 75 m³ which contains a volatile organic liquid with a maximum true vapor pressure greater than or equal to 76.6 kPa shall be equipped with a closed vent system as specified in §60.112b(a)(3) of the 40 CFR.
 - (A) The tank that is equipped with a closed vent system and control device as required in §60.112b (a)(3) or (b)(2) (other than a flare) is exempt from §60.8 of the General

Provisions and shall meet the requirements in section 60.113b(c) of the 40 CFR.

- (B) After installing control equipment in accordance with §60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), BMSMC-Humacao shall keep the following records.
 - (1) a copy of the operating plan.
 - (2) a record of the measured values of the parameters monitored in accordance with §60.113b(c)(2) of the 40 CFR.
- iii. Monitoring of operations, 40 CFR 60.116b – For those tanks that are subject to the requirements of subpart Kb, BMSMC-Humacao shall comply with the monitoring requirements in Section 60.116b of the 40 CFR.

b. EUVO1-MACT-Alt1

This scenario contemplates the implementation of the percent reduction standard for process vents under the 40 CFR §63.1254(a)(1) and (3), instead of the alternate standard (for vent streams routed to the thermal oxidizers) and the annual mass limit on §63.1254(a)(2) of the 40 CFR (for vent streams that are not routed to the thermal oxidizers). For this scenario, BMSMC-Humacao shall comply with the following conditions:

- i. The uncontrolled HAP emissions from the sum of all vents within a process operating under this alternate scenario will be reduced by 98% or more.
- ii. In order to achieve the percent reduction required by the previous condition, BMSMC-Humacao shall use the thermal oxidizers of emission units EUCO6, EUCO7 and EUCO8, followed by scrubbers.
- iii. The scrubbers that are located after the thermal oxidizers shall control the emissions of hydrogen halides and halogens from the oxidation of the flue gases in the thermal oxidizer by 95% or more.
- iv. Notification of a change in the compliance method shall be reported according to the procedures in section 63.1260(h) of the 40 CFR. [40 CFR §63.1254(a)(2)(iv)]

- v. Pursuant to section 63.1254 (a)(1)(ii) of the 40 CFR, any vent within a process may be controlled to an outlet concentration less than or equal to 20 ppmv as TOC and by the alternate standard of section 63.1254(a)(2) of the 40 CFR. All other vents shall be controlled using the percent reduction contemplated by this alternate scenario.
- vi. BMSMC-Humacao shall comply with all other provisions of the 40 CFR Part 63 Subpart GGG including general standards, reports, records and other, included in section V.B of this permit. For this alternate scenario, only changes the strategy to demonstrate compliance with subpart GGG. BMSMC-Humacao shall comply with the monitoring requirements of condition 38 of section V.B. of this permit except that under this alternate scenario, the TOC emissions monitoring at the outlet of the thermal oxidizers is not required.
- vii. While operating under this alternate scenario, all process vents that are routed to the thermal oxidizers will comply with a 98% reduction included in the section 63.1254(a)(3) of the 40 CFR. All other vents not routed to the thermal oxidizers shall comply with the annual mass limit specified in section 63.1254(a)(2) of the 40 CFR.

c. EUTF1-MACT-Alt

Under this alternate scenario, BMSMC-Humacao will comply with the reduction percent standards included in the 40 CFR §63.1253(c)(1) instead of §63.1253(d). The conditions for this scenario are the following:

- i. The storage tanks shall be equipped with a closed vent system and a control device, which will control HAP emissions by 95% or more.
- ii. To achieve the percent reduction required by the previous condition, BMSMC-Humacao shall use the thermal oxidizers of the emission units EUCO6, EUCO7 and EUCO8, followed by scrubbers.
- iii. The scrubbers that are located after the thermal oxidizers will control the hydrogen halide and halogens emissions from the oxidation of gases in the thermal oxidizer by 95% or more.
- iv. The notification of change in the method of compliance will be done according to the procedures of section 63.1260(h) of the 40 CFR. [40 CFR §63.1254(a)(2)(iv)]

- v. BMSMC-Humacao shall comply with all other provisions of the 40 CFR Part 63 Subpart GGG including general standards, reports, records and other, included in section V.B of this permit. For this alternate scenario, only changes the strategy to demonstrate compliance with subpart GGG. BMSMC-Humacao shall comply with the monitoring requirements of condition 38 of section V.B. of this permit except that under this alternate scenario the TOC emissions monitoring at the outlet of the thermal oxidizers is not required.

d. EUVO1-MACT-Alt2

Under this scenario, BMSMC-Humacao will comply with Rule 419 of the RCAP, for those processes that do not emit HAPs. The process emissions will be controlled with scrubbers and condensers.

i. Rule 419 of the RCAP [State enforceable only]

- (A) According to Rule 419 of the RCAP, the permittee shall not cause or permit the emission of 3 pounds per hour or 15 pounds of VOC in any one day from any article, machine, equipment or any other contrivance unless it is provided with a control system, pollution prevention and reduction mechanism or programs or both, as approved or required by the Board.
- (B) To comply with the previous condition, BMSMC-Humacao shall control the VOC emissions using scrubbers and condensers.
- (C) BMSMC-Humacao shall operate the control devices at all times while emissions are generated or could be generated during the manufacturing processes in excess of the limits established by Rule 419 of the RCAP.
- (E) No process subject to the 40 CFR Part 63 Subpart GGG can be operated under this scenario.

e. EUSSM-MACT

Under this scenario are included the provisions that BMSMC-Humacao shall follow during startup, shutdown and malfunction periods, as defined in Section 63.1251 of the 40 CFR, during which the emission limitations under subpart GGG does not apply. The alternate scenario allows BMSMC-Humacao to operate in compliance with Subpart GGG during startup, shutdown and malfunction periods.

- i. BMSMC-Humacao shall develop and implement a written startup, shutdown, and malfunction plan (SSMP) as specified in section 63.6(e) of the 40 CFR. This plan shall describe, in detail, procedures for operating and maintaining the affected source during periods of SSM and a program for corrective action for malfunctioning process, control devices, and monitoring equipment used to comply with subpart GGG. BMSMC-Humacao shall keep the current and superseded versions of this plan onsite, as specified in §63.6(e)(3)(v). BMSMC-Humacao shall keep the startup, shutdown, and malfunction records specified in paragraphs (b)(3)(i) through (iii) of section 63.1259 of the 40 CFR. Reports related to the plan shall be submitted as specified in §63.1260(i) of the 40 CFR. [40 CFR §63.1259(a)(3)]

- ii. The requirements in section 63.6 of the 40 CFR are detailed next:
 - (A) (1) At all times, including periods of startup, shutdown, and malfunction¹⁴, BMSMC-Humacao must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that BMSMC-Humacao reduce emissions from the affected source to the greatest extent, which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require BMSMC-Humacao to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require BMSMC-Humacao to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to EQB and EPA which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of section 63.6), review of operation and

¹⁴ According to 40 CFR §63.2, a malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

maintenance records, and inspection of the source. [40 CFR §63.6(e)(1)(i)]

- (2) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of section 63.6 of 40 CFR. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, BSMC-Humacao must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR §63.6(e)(1)(ii)]
 - (3) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.¹⁵ [40 CFR §63.6(e)(1)(iii)]
- (B)
- (1) Startup, Shutdown, and Malfunction Plan - BSMC-Humacao must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. This plan must be developed by the source's compliance date for that relevant standard. [40 CFR §63.6(e)(3)(i)]
 - (2) During periods of startup, shutdown, and malfunction, BSMC-Humacao must operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of section 63.6. [40 CFR §63.6(e)(3)(ii)]

¹⁵ According to 40 CFR §63.2, a relevant standard means an emission standard; an alternative emission standard; an alternative emission limitation; or an equivalent emission limitation established pursuant to section 112 of the Act that applies to the stationary source, the group of stationary sources, or the portion of a stationary source regulated by such standard or limitation. A relevant standard may include or consist of a design, equipment, work practice, or operational requirement, or other measure, process, method, system, or technique (including prohibition of emissions) that EPA (or a State) establishes for new or existing sources to which such standard or limitation applies. Every relevant standard established pursuant to section 112 of the Act includes subpart A of part 63 and all applicable appendices of part 63 or of other parts of chapter I that are referenced in that standard.

- (3) When actions taken by BMSMC-Humacao during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, BMSMC-Humacao must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a checklist, or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, BMSMC-Humacao must keep records of these events as specified in section 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, BMSMC-Humacao shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in section 63.10(d)(5). [40 CFR §63.6(e)(3)(iii)]
- (4) If an action taken by BMSMC-Humacao during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then BMSMC-Humacao must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with section 63.10(d)(5) (unless BMSMC-Humacao makes alternative reporting arrangements, in advance, with EQB and EPA). [40 CFR §63.6(e)(3)(iv)]
- (5) BMSMC-Humacao must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by EQB or EPA. In addition, if the startup, shutdown, and malfunction plan is subsequently revised, BMSMC-Humacao must maintain at the affected source each previous (i.e., superseded) version of the startup,

shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by EQB or EPA for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of part 63, BSMC-Humacao must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to part 63 and must make the plan available upon request for inspection and copying by EQB or EPA. EQB or EPA may at any time request in writing that BSMC-Humacao submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of BSMC-Humacao. Upon receipt of such a request, BSMC-Humacao must promptly submit a copy of the requested plan (or a portion thereof) to EQB and EPA. EQB or EPA must request BSMC-Humacao submit a particular startup, shutdown, or malfunction plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of that plan or portion of a plan. BSMC-Humacao may elect to submit the required copy of any startup, shutdown, and malfunction plan to EQB and EPA in an electronic format. If BSMC-Humacao claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission. [40 CFR §63.6(e)(3)(v)]

- (6) To satisfy the requirements of section 63.6 to develop a startup, shutdown, and malfunction plan, BSMC-Humacao may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of section 63.6 and are made available for inspection when requested by EQB or EPA. [40 CFR §63.6(e)(3)(vi)]
- (7) According to 40 CFR §63.6(e)(3)(vii), and based on the results of a determination made under paragraph (e)(1)(i) of section 63.6, EQB or EPA may require that BSMC-Humacao make changes to the startup, shutdown, and

malfunction plan for that source. EQB or EPA may require reasonable revisions to a startup, shutdown, and malfunction plan, if EQB or EPA finds that the plan:

- (a) Does not address a startup, shutdown, or malfunction event that has occurred;
 - (b) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by paragraph (e)(1)(i) of section 63.6;
 - (c) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or
 - (d) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in Sec. 63.2.
- (8) BMSMC-Humacao may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of part 63 or to reflect changes in equipment or procedures at the affected source. Unless EQB or EPA provides otherwise, BMSMC-Humacao may make such revisions to the startup, shutdown, and malfunction plan without prior approval by EQB or EPA. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by §63.10(d)(5) of the 40 CFR. If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the BMSMC-Humacao developed the plan, BMSMC-Humacao must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that BMSMC-Humacao makes any revision to the startup, shutdown, and

malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under part 63, the revised plan shall not take effect until after BMSMC-Humacao has provided a written notice describing the revision to EQB and EPA. [40 CFR §63.6(e)(3)(viii)]

- ii. This title V permit require that BMSMC-Humacao adopt a startup, shutdown, and malfunction plan which conforms to the provisions of part 63, and that BMSMC-Humacao operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by part 63 shall not be deemed to constitute permit revisions under part 70 or part 71 of chapter I of 40 CFR. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act. [40 CFR, §63.6(e)(3)(ix)]
- iii. Reports of startup, shutdown, and malfunction - BMSMC-Humacao shall prepare startup, shutdown, and malfunction reports as specified in paragraphs (i)(1) and (2) of section 63.1260 of the 40 CFR as follows:
 - (A) If actions taken by BMSMC-Humacao during a startup, shutdown, or malfunction of the affected source (including actions to correct a malfunction) are consistent with the procedures specified in the source's SSMP, BMSMC-Humacao shall state this fact in a startup, shutdown, or malfunction report. The report shall also include the information specified in §63.1259(a)(3)(i) and (ii) and shall contain the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy. For the purposes of subpart GGG, the startup, shutdown, and malfunction reports shall be submitted on the same schedule as the periodic reports required under paragraph (g) of section 63.1260 instead of the schedule specified in §63.10(d)(5)(i). Reports are only required if a startup, shutdown, or malfunction occurred during the reporting period. [40 CFR §63.1260(i)(1)]

- (B) Any time BMSMC-Humacao takes an action that is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, BMSMC-Humacao shall submit immediate startup, shutdown, and malfunction reports as specified in §63.10(d)(5)(ii). [40 CFR §63.1260(i)(2)]

f. EUPH-MACT

Under this alternate scenario BMSMC-Humacao is authorized to comply with the pH monitoring requirements included in the 40 CFR §63.1258(b)(ii) instead of the optional method identified in the precompliance report, as described next.

- i. BMSMC-Humacao shall monitor the minimum scrubber solution pH at least once per day. This value shall be maintained at 3.37 or above.

D. Changes after the TV permit is issued.

- 1. Source Modifications without a permit revision:** According to Rule 607 of the RCAP, BMSMC-Humacao 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.
2. (a) BSMC-Humacao 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 V.D.1.(a)(1)(i) refers to changes covered under condition V.D.1.(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 V.D.1.(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 BMSMC-Humacao 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.

E. Management of change under the 40 CFR part 63, Subpart GGG (This section is only applicable to those emission units subject to Subpart GGG)

BMSMC-Humacao is authorized to make changes to the permit, change the array of the equipment and control devices from the baseline scenario presented in Appendix V of this permit and in the compliance report required by Subpart GGG provided that the changes will guarantee compliance with the 40 CFR Part 63 Subpart GGG and comply with all requirements established in this Section V.E.

1. The changes include, but are not limited to:
 - a. reconfiguration of existing equipment.
 - b. operate a process in different sets of equipments.
 - c. operate various processes in any given set of equipment.
 - d. add new solvents or other raw materials.
 - e. add new processes.
 - f. change the applicable compliance alternatives of the 40 CFR Part 63 Subpart GGG.
 - g. eliminate equipment within the same process.
 - h. change the amount of solvent or other raw material in order to improve an existing process.
 - i. add new processes or new equipment in HAP service, as long as they are not modifications under Title I of the Clean Air Act.
 - j. modification of an existing process so one of the following occurs:
 - i. an increase in the uncontrolled emissions flow (in pounds per hour) of any HAP for any emission episode in the process.
 - ii. an increase in the uncontrolled total emissions of any HAP per batch.
2. Limitations - BMSMC-Humacao may make changes in the facility provided that:
 - i. the emissions resulting from the change in the process must not exceed the capacity of the control and process equipment as set out in this permit.

- ii. the changes do not trigger any new applicable requirement or changes an existing one.
 - iii. as a consequence of the change, there is no increase in the allowable emissions.
 - iv. a HAP that has not been emitted previously is not emitted.
 - v. the changes are limited to replicable operating procedures as defined in section in the section V.E of this permit
 - vi. obtains a construction permit under Rule 203 of the RCAP for those changes that constitute a construction or modification as defined in Rule 102 of the RCAP, unless it is exempt by Rule 206 of the RCAP.
 - vii. the change that will be done shall comply always with the permit and with all applicable requirements.
3. Use of the proposed management of change strategy - Unless EQB indicates otherwise, BMSMC-Humacao will realize operational changes according to the proposed management of change strategy defined in this section V.E of this permit including the proposed replicable operating procedures.
4. At the time a source wishes to undertake a change that could trigger different obligations under subpart GGG, the source will evaluate first whether the change is within the scope of a preapproved alternative operating scenario in the permit. If so, the source will select the appropriate compliance options from the alternatives approved in the permit and implement the change consistent with the terms of the permit governing such selection. The alternatives included in this section V.E will allow BMSMC-Humacao to shift to their compliance obligations governing the change and where applicable, to select among the control devices at the facility that have been approved as capable of achieving compliance.
- i. The source will determine if the initial emissions profile of the baseline scenario changes and to what extent. For this, the uncontrolled emissions will be calculated using the equations in the Control Techniques Guidelines of 1978 included in the CAIMS System (Clean Air Information Management Systems), as approved by EPA-Caribbean Office on July 11, 2002.
 - ii. BMSMC-Humacao must ensure that under the new emissions profile, the control device will be capable of guaranteeing compliance with subpart GGG.

- iii. BMSMC-Humacao will compare the emissions in the worst case with the new emissions. If the worst-case emissions will not be exceeded, the process change can be realized and the permit does not have to be revised (unless required to assure compliance with applicable requirements other than those of subpart GGG).
 - iv. If during the evaluation of the change, BMSMC-Humacao finds out that a new worst case has been created by the change, the permit must be revised to determine whether the change can be made. In order to support the revision, BMSMC-Humacao will have to perform additional testing to determine if the equipment has sufficient capacity to control the new scenario to comply with Subpart GGG.
 - v. BMSMC-Humacao shall keep records of all calculations performed to determine the emissions of the new process step and the total emissions of the improved process and the comparison of emissions from the improved process with the previously established worst-case emissions analysis. If the change can be made without permit revision, BMSMC-Humacao is required to maintain records in the OSIL showing when the change was made and how the new vent is controlled.
5. BMSMC-Humacao will use the compliance matrix included in this section to select the appropriate compliance options of the approved alternatives in this permit and will implement the change consistent with the permit terms governing such selection.
6. The capacity of BMSMC-Humacao to accommodate a change in the preapproved alternate operating scenario using the compliance matrix will depend on:
- a. the performance capabilities and any capacity limitations on control devices as approved in this permit;
 - b. subpart GGG's provisions governing that change are limited to replicable operating procedures (ROPs) for determining emissions and applicable emissions limits;
 - c. the changed emissions fall within the performance limits of the control device;
 - d. there are no changes in the monitoring requirements for the control device;
 - e. the changes in scenario are recorded;
 - f. the change does not constitute a modification under Title I of the Clean Air Act;

9. The OSIL, in conjunction with the information contained in the permit, monitoring records, and any other available information and belief formed after reasonable inquiry, will provide the basis for making annual compliance certifications. The Board will use this record to verify when processes were being operated, to identify which emissions points from each process were controlled and how, and to determine whether the control devices were operated at performance levels that assured compliance with subpart GGG.
10. The source must operate consistently with the emission calculations performed for the operating scenario described in the OSIL.
11. Preapproval of changes
 - a. Like-kind replacement of permitted process equipment which is functionally equivalent to and provides no greater production capacity than the equipment being retired is allowed. The replacement transaction, and identification of the new process equipment, must be recorded in the OSIL along with other information necessary to reflect the changed operating scenario. The preapproval approach does not allow the substitution of new process equipment for permitted equipment that will remain in service elsewhere at the source.
12. The Board reserves the right to require that the source registers additional information and compliance information in the OSIL thus assuring compliance with subpart GGG.
13. BMSMC-Humacao will use the following replicable procedure for management of changes authorized under this section V.E for the units subject to the 40 CFR Part 63 Subpart GGG:

Table 1 - Procedures that are Replicable as Written in Subpart GGG

Procedure	Citation (40 CFR Part 63)
Calculating uncontrolled emissions from process vents - equations for eight types of operations. ¹⁶	§63.1257 (d)(2)(i)(A) through (H)
Calculating controlled emissions from process vents discharged through a condenser- equations for eight types of operations	§63.1257 (d)(3)(i)(B)(1) through (8)
Equations for determining whether an existing vent is subject to 98% control	§63.1254(a)(3)(i)

¹⁶ According to the precompliance report, and as authorized by EPA-Caribbean Office on July 11, 2002, BMSMC-Humacao will use the *1978 Control Techniques Guidelines* equations for pharmaceutical operations, included in the CAIMS (*Clean Air Information Management Systems*) system.

Procedure	Citation (40 CFR Part 63)
Maximum true vapor pressure for determining storage tank applicability	§63.1251 (Definitions)
Performance test methods and calculations required by EPA	§63.1257(a)(2), (a)(3), (b)(1) through (8), and (b)(10)(i) through (iii)
Evaluation of an air pollution control device capability for new scenario (not subject to testing)	§63.1257(b)(8)(ii)
Capacity threshold for determining if continuous monitoring of a control device is required or if periodic monitoring is sufficient	§63.1258(b)(1)(i)
LDAR requirements for all components in HAPs service	§63.1255
Capacity threshold for determining if a control device performance test is required.	§63.1257(d)(3)(ii)

Table 2 - Procedures that are replicable as written in this permit

Procedure	40 CFR Part 63 Citation or Other Basis
Uncontrolled halogen and halide emissions shall be determined by mass balance assuming the chlorine content of all chlorinated solvents introduced to a thermal oxidizer is converted to HCl	§63.1257 and the Compliance report
MACT affected process wastewaters shall be designated as “affected”	§63.1256(a)(1)(ii) and the Compliance Report
No floor drain system shall receive any MACT affected wastewaters	Compliance Report
For the purpose of demonstrating compliance with 40 CFR §63.1256(g)(11), BMSMC-Humacao shall assume 0% removal efficiency for all compounds except 1,4-Dioxane, Acetonitrile, Methanol, Methyl Isobutyl Ketone (MIBK), Methylene Chloride, Methyl-Tert-Butyl-Ether (MTBE), Toluene and Triethylamine	Box Test submitted as part of the Compliance Report
Reactor heat exchange systems shall comply with 21 CFR Part 211 GMP requirements and need not otherwise monitor for leaks.	§63.1252(c)(2)
Other heat exchange systems shall satisfy MACT requirements by maintaining supply side pressure at the proper differential.	§63.1252(c)(1) §63.104
The thermal oxidizer design ensures ¾ second retention time.	§63.1258(b)(5)(ii)(A)(2) and the Precompliance report
PBAML calculations shall be performed once per month for each operating day of the prior month in lieu of performing the calculations each operating day.	Precompliance report

14. Management of Change Strategy Implementation - BMSMC-Humacao will use the following tables to determine the applicable requirements when making changes in the emission units of the facility subject to the requirements of subpart GGG. If the change could not be accommodated within the procedures established in these tables, and there is no other provision in this permit or in the applicable regulations authorizing such change, BMSMC-Humacao will request for a modification of this permit before making the change, according to Part VI of the RCAP.

Table 3 -GENERAL STANDARDS COMPLIANCE MATRIX [40 CFR §63.1252]

Affected Source & Emission Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
Heat exchange systems used in pharmaceutical manufacturing operations §63.1252(c)	Ensure HAPs do not leak §63.1252(c)	<p>Comply with §63.104 by maintaining the cooling waste-side pressure at least 35 kilopascals greater than the maximum pressure on the process side §63.104(a)(1), or</p> <p>Ensure there is an intervening cooling fluid containing less than 5 percent by weight of total HAP §63.104(a)(2), or</p> <p>Monitor each heat exchange system and repair as soon as practical but not later than 45 calendar days after discovering the leak or demonstrate that the results are not due to a leak and confirm that the leak has been repaired within 7 calendar days or follow delay of repair procedures §63.104(a), §63.104(d), or</p> <p>For identifying leaking equipment, BSMC-Humacao may use the physical integrity of any reactor complying with good manufacturing practice requirements as the surrogate indicator of heat exchange system leaks around the reactor §63.1252(c)(2)</p>	<p>Notification of process change</p> <p>Quarterly Monitoring</p>	<p>NA</p> <p>Presence of HAPs §63.104(b)</p>	<p>General Recordkeeping Requirements §63.10(b)(1) SSM Records §63.1259(a)(3)</p>	<p>Periodic Report 63.1260(g) Notification of Process change §63.1260(h) SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 3 -GENERAL STANDARDS COMPLIANCE MATRIX [40 CFR §63.1252] (continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Closed-vent systems that contain bypass lines that could divert a vent stream away from a control device used to comply with Subpart GGG §63.1252(b)</p>	<p>Do not open the bypass unless for safety reasons §63.1252(a)</p>	<p>Install, calibrate and maintain a flow indicator that determines whether flow is present §63.1252(b)(1), or</p> <p>Secure the bypass line in the closed position with a car seal or lock and key type §63.1252(b)(2)</p>	<p>Notification of Process Change</p>	<p>Flow indicator reading every 15 minutes, or</p> <p>Inspect once per month §63.1252(b)(2)</p>	<p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>SSM Records §63.1259(a)(3)</p> <p>General recordkeeping §63.10(b)(1)</p> <p>Hourly records of whether the flow indicator specified in §63.1252(b)(1) was operating and whether a diversion was detected, as well as records of the times and durations of all diversions or when the flow indicator is not working §63.1259(i)(6)(i), or</p> <p>Records that the monthly inspections have been performed and records of the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed or the key for a lock and key type lock has been checked out §63.1259(i)(6)(ii)</p>	<p>Periodic Reports §63.1260(g)</p> <p>Notification of process change, §63.1260(h)</p> <p>SSM Reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 3 - GENERAL STANDARDS COMPLIANCE MATRIX [40 CFR §63.1252] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Combustion devices used to comply with Subpart GGG for a halogenated vent stream §63.1252(g)</p>	<p>A halogen reduction device after the combustion device must reduce overall emissions of hydrogen halides and halogens by 95 percent (daily average) or to concentration less than or equal to 20 ppmv §63.1252(g)(1)</p> <p>A halogen reduction device located before the combustion device must reduce the halogen atom content of the vent stream to a concentration less than or equal to 20 ppmv (daily average) §63.1252(g)(2)</p>	<p>Post combustion device scrubber (any one of three scrubbers operating in parallel)</p>	<p>Initial compliance demonstration per Method 26 or 26A §63.1257(b)(iii)</p> <p>Worst-case test conditions §63.1257(b)(8)</p>	<p>Monitor liquid flow rate and record every 15 minutes §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy \pm 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day §63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report Alternative)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)(6)</p>	<p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>SSM Records §63.1259(a)(3)</p> <p>General recordkeeping §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Description of worst-case operating conditions §63.1259(b)(9)</p> <p>Records of all maintenance performed on air pollution control equipment §63.1259(b)(11)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 4 –STORAGE TANKS COMPLIANCE MATRIX [40 CFR §63.1253]

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Storage tanks with a design capacity greater than or equal to 38 m³ but less than 75 m³ storing an organic liquid for which the maximum true vapor pressure of total HAP is greater than or equal to 13.1 kPa §63.1253(a)(1)</p>	<p>Equip the storage tank with a closed-vent system that reduces inlet emissions of total HAP by 90 percent by weight or greater (daily average) §63.1253(b)(1), or</p> <p>Equip the storage tank with an enclosed combustion device that provides a minimum residence time of 0.5 seconds at a minimum temperature of 760°C §63.1253(b)(3), or</p> <p>Alternative Standard – route storage tank vents to a combustion device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less and an outlet concentration of hydrogen halides and halogens of 20 ppmv or less §63.1253(d)</p> <p>The control requirement for storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance shall not exceed 240 hours in any 365-day period §63.1253(e)</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical treatment trains)</p>	<p>Performance test requirements §63.1257(c)(1), or</p> <p>Exemption from performance test requirements if the control device is also used to comply with the Process Vent standards §63.1257(c)(1)(iii), or</p> <p>Design evaluation §63.1257(c)(2)</p> <p>Initial compliance demonstration per Method 25 or 25A and Method 26 or 26A if the Performance test option is selected §63.1257(b)(iii)</p> <p>Alternative Standard §63.1257(a)(5) §63.1257(c)(4)</p>	<p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b) (1) (vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b) (1) (vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b) (1) (vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes. §63.1258(b) (1) (ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate 63.1258(b) (1) (ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b) (1) (ii)(C)</p> <p>Monitor pH once per day §63.1258(b) (1) (ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Alternative Standard – §63.1258(b)(5)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records §63.1259(a)(3)</p> <p>General recordkeeping §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Records of periods of planned routine maintenance §63.1258(b)(10)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 4 –STORAGE TANKS COMPLIANCE MATRIX [40 CFR §63.1253] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Storage tanks with a design capacity greater than or equal to 75 m³ storing an organic liquid for which the maximum true vapor pressure of total HAP is greater than or equal to 13.1 kPa §63.1253(a)(2)</p>	<p>Equip the storage tank with a closed-vent system that reduces inlet emissions of total HAP by 95 percent by weight or greater (daily average) §63.1253(c)(1)(i), or</p> <p>Equip the storage tank with an enclosed combustion device that provides a minimum residence time of 0.5 seconds at a minimum temperature of 760°C §63.1253(b)(3), or</p> <p>Alternative Standard – route storage tank vents to a combustion device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less and an outlet concentration of hydrogen halides and halogens of 20 ppmv or less</p> <p>The control requirement for storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance shall not exceed 240 hours in any 365-day period</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical treatment trains)</p>	<p>Performance test requirements §63.1257(c)(1), or</p> <p>Exemption from performance test requirements if the control device is also used to comply with the Process Vent standards §63.1257(c)(1)(iii), or</p> <p>Design evaluation §63.1257(c)(2)</p> <p>Initial compliance demonstration per Method 25 or 25A and Method 26 or 26A if the Performance test option is selected §63.1257(b)(iii)</p> <p>Alternative Standard §63.1257(a)(5) §63.1257(c)(4)</p>	<p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b)(1)(vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b)(vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b)(1)(vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes. §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day 63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Alternative Standard – §63.1258(b)(5)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records §63.1259(a)(3)</p> <p>General recordkeeping §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Records of periods of planned routine maintenance §63.1258(b)(10)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5 – PROCESS VENTS COMPLIANCE MATRIX [40 CFR §§63.1254]

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>At an existing source, process vents within a process subject to Subpart GGG that are not subject to the individual emission vent reduction requirements of §63.1254(a)(3) or the process based annual mass limit of §63.1254(a)(2)</p>	<p>Uncontrolled HAP emissions shall be reduced by 93 percent by weight or greater (daily average) §63.1254(a)(1)(i)</p> <p>Any one or more vents within a process may be controlled by any of the following procedures.</p> <ul style="list-style-type: none"> - To outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens §63.1254(1)(i)(A) - In accordance with the Alternative Standard §63.1254(a)(1)(i)(D) <p>All other vents within the process must be controlled as specified at §63.1254(a)(1)(i) §63.1254(a)(1)(ii)</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical)</p>	<p>Performance test §63.1257(d)(1)</p> <p>Initial compliance demonstration per Method 25 or 25A and Method 26 or 26A for the percent reduction standards §63.1257(b)(iii)</p> <p>Worst-case test conditions §63.1257(b)(8)</p> <p>Initial compliance with process vent provisions for the percent reduction requirements of §63.1257(a)(1) & (3) §63.1257(d)(i)(ii)</p> <p>Initial compliance demonstration for process condensers not followed by an air pollution control device that complies with the Alternative Standard or a condenser §63.1257(d)(3)(iii) as modified by the Precompliance Report</p> <p>Initial compliance with the process vent provisions for the process based annual mass limits of §63.1254(a)(2) §63.1257(d)(1)(i)</p> <p>Initial compliance demonstration for the Alternative Standard §63.1257(a)(5)</p> <p>Design evaluation §63.1257(c)(2), §63.1257(c)(4)</p>	<p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b)(1)(vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b) (1) (vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b)(1)(vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes. §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day §63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Alternative Standard – §63.1258(b)(5)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records §63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Descriptions of worst-case operating conditions §63.1258(b)(9)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5– PROCESS VENTS COMPLIANCE MATRIX [40 CFR §63.1254] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>At an existing source, process vents within a process subject to Subpart GGG §63.1254(a)(2)</p>	<p>PBAML</p> <p>Actual HAP emissions from the sum of all process vents within a process must not exceed 900 kg in any 365 day period §63.1254(a)(2)(i), and</p> <p>Actual HAP emissions from the sum of all process vents within processes complying with the Process-based annual mass limit are limited to 1,800 kg in any 365-day period §63.1257(d)</p> <p>Emissions from process vents that are subject to the requirements of §63.1254(a)(3) or §63.1254(c) may be excluded from the sums calculated to determine compliance with the 900 kg per process and 1800 kg per site annual mass limits §63.1254(a)(2)(iii)</p>	<p>Process-based annual mass limit for process vent streams that are not amenable to control by the TOU complex limiting emissions per process and per the plant</p>	<p>Initial compliance with the PBAML §63.1257(d)(1)(i)</p> <p>Initial compliance demonstration for process condensers not followed by an air pollution control device that complies with the Alternative Standard or a condenser §63.1257(d)(3)(iii) as modified by the Precompliance Report</p>	<p>Monitoring for emission limits per §63.1257(c) – daily calculation of 365-day rolling summaries of emissions</p> <p>Calculations to be performed once per month for each day of the month per Precompliance Report</p>	<p>SSM Records §63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>The number of batches per year for each batch process §63.1258(b)(5)(ii)(A)</p> <p>Actual controlled and uncontrolled emissions for each nonstandard batch §63.1259(b)(5)(ii)(E)</p> <p>A record whether each batch was considered a standard batch §63.1258(b)(5)(ii)(F)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5 - PROCESS VENTS COMPLIANCE MATRIX [40 CFR §63.1254] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Any individual process vent at an existing source that has uncontrolled HAP emissions of more than 25 tons per year and whose flow-weighted average flow rate (Fra) calculated using equation 1 of Subpart GGG is less than or equal to the flow rate index calculated using equation 2 of Subpart GGG §63.154(a)(3)</p>	<p>Uncontrolled HAP emissions must be reduced by 98 percent, daily average or</p> <p>- To outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens §63.1254(1)(i)(A)</p> <p>- In accordance with the Alternative Standard §63.1254(a)(1)(i)(D), §63.1254(a)(3)</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical)</p>	<p>Performance test §63.1257(d)(1)</p> <p>Initial compliance demonstration per Method 25 or 25A and Method 26 or 26A for the percent reduction standards §63.1257(b)(iii)</p> <p>Worst-case test conditions §63.1257(b)(8)</p> <p>Initial compliance with process vent provisions for the percent reduction requirements of §63.1257(a)(1) & (3) §63.1257(d)(i)(ii)</p> <p>Initial compliance demonstration for process condensers not followed by an air pollution control device that complies with the Alternative Standard or a condenser §63.1257(d)(3)(iii) as modified by the Precompliance Report</p> <p>Initial compliance demonstration for the Alternative Standard §63.1257(a)(5) §63.1257(c)(4)</p>	<p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b)(1)(vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b) (1) (vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b)(1)(vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day §63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Alternative Standard §63.1258 (b)(5)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records §63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Descriptions of worst-case operating conditions §63.1258(b)(9)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5 – PROCESS VENTS COMPLIANCE MATRIX [40 CFR §63.1254] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
Any Process Vents	Alternative Standard – Route process vents to a combustion device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less and an outlet concentration of hydrogen halides and halogens of 20 ppmv or less	Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical)	Alternative Standard §63.1257(d)(1)(iv) §63.1257(a)(5)	<p>Alternative Standard TOC CEMS meeting PS 8 or 9 §63.1258(b)(5)</p> <p>Alternative Standard provisions for combustion devices §63.1258(b)(5)(ii)(A)(2)</p> <p>Alternative Standard – scrubber option for HCl control §63.1258(b)(5)(i)(C)</p> <p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b)(1)(vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b) (1) (vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b)(1)(vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes, §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day §63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Alternative Standard – §63.1258(b)(5)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records 63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems 63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5 – PROCESS VENTS COMPLIANCE MATRIX [40 CFR §63.1254] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>New source process vents</p> <p>The sum of all process vents within a process at a new affected source</p>	<p>Reduce uncontrolled HAP emissions by 98 percent (daily average) or</p> <p>- To outlet concentrations less than or equal to 20 ppmv as TOC and less than or equal to 20 ppmv as hydrogen halides and halogens §63.1254(1)(i)(A)</p> <p>- In accordance with the Alternative Standard §63.1254(b)(1)</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical)</p>	<p>Performance test §63.1257(d)(1)</p> <p>Initial compliance demonstration per Method 25 or 25A and Method 26 or 26A for the percent reduction standards §63.1257(b)(iii)</p> <p>Worst-case test conditions §63.1257(b)(8)</p> <p>Initial compliance with process vent provisions for the percent reduction requirements of §63.1257(a)(1) & (3) §63.1257(d)(i)(ii)</p> <p>Initial compliance demonstration for process condensers not followed by an air pollution control device that complies with the Alternative Standard or a condenser §63.1257(d)(3)(iii) as modified by the Precompliance Report</p> <p>Initial compliance demonstration for the Alternative Standard §63.1257(a)(5) §63.1257(c)(4)</p>	<p>Monitor the minimum temperature of the gases exiting the combustion chamber which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is functioning in achieving the required HAP removal §63.1258(b)(1)(vii)</p> <p>The temperature monitoring device must be accurate to within +/- 0.75 percent of the temperature measured in degrees Celsius or +/- 2.5°C, whichever is greater. §63.1258(b)(1)(vii)(A)</p> <p>The temperature monitoring device must be calibrated annually §63.1257(b)(1)(vii)(B)</p> <p>Monitor liquid flow rate and record every 15 minutes §63.1258(b)(1)(ii)</p> <p>Monitoring device accuracy ± 10 percent of design flow rate §63.1258(b)(1)(ii)(B)</p> <p>Calibrate flow rate monitor annually §63.1258(b)(1)(ii)(C)</p> <p>Monitor pH once per day §63.1258(b)(1)(ii)</p> <p>Monitor pH at least once every 15 minutes and calculate daily average (Precompliance Report alternative)</p> <p>Leak inspection requirements for vapor suppression equipment §63.1256(h)</p>	<p>SSM Records §63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Descriptions of worst-case operating conditions §63.1258(b)(9)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 5 – PROCESS VENTS COMPLIANCE MATRIX [40 CFR §63.1254] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>New Sources</p> <p>Any process vents not complying with §63.1254(b)(1)</p>	<p>The sum of all process vents shall not exceed 900 kg in any 365-day period §63.1254(b)(2)</p>	<p>Maintain emissions within PBAML allowance</p>	<p>Initial compliance with the PBAML §63.1257(d)(1)(i)</p> <p>Initial compliance demonstration for process condensers not followed by an air pollution control device that complies with the Alternative Standard or a condenser §63.1257(d)(3)(iii) as modified by the Precompliance Report</p>	<p>Monitoring for emission limits per §63.1257(c) – daily calculation of 365-day rolling summaries of emissions</p> <p>Calculations to be performed once per month for each day of the month per Precompliance Report</p>	<p>SSM Records §63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>The number of batches per year for each batch process §63.1258(b)(5)(ii)(A)</p> <p>Actual controlled and uncontrolled emissions for each nonstandard batch §63.1259(b)(5)(ii)(E)</p> <p>A record whether each batch was considered a standard batch §63.1258(b)(5)(ii)(F)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 6 –EQUIPMENT LEAKS COMPLIANCE MATRIX [40 CFR §63.1255]

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
Pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, control devices, and closed-vent systems that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year at a source subject to Subpart GGG	LDAR program codified at §63.1255 of the 40 CFR	Leak detection and repair per §63.1255 of the 40 CFR	See §63.1255 of the 40 CFR	See §63.1255 of the 40 CFR	See §63.1255 of the 40 CFR	See §63.1255 of the 40 CFR

Table 7 –WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256]

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Wastewater streams at each MACT affected process point of determination (POD) are designated as subject to Subpart GGG §63.1256(a)(1)(ii)</p>	<p>From each POD where BMSMC-Humacao has designated a wastewater stream as an affected wastewater stream, such wastewater stream shall be managed in accordance with all applicable emission suppression techniques as described in this permit and §63.1256 paragraphs (b) through (f) and the treatment standards of paragraph (g) §63.1256 (a)(1)(ii)(B)</p> <p>For each wastewater control device, if gaps, cracks, tears, or holes are observed in ductwork, piping or connections to covers and control devices during an inspection a first effort to repair shall be made as soon as practical but not later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification of the defect unless the delay of repair provisions at §63.1256(i) are satisfied §63.1256(h)(4)</p>	<p>Air Stripper</p> <p>Biological Treatment Unit</p> <p>Liquid Waste Incinerator</p> <p>Offsite Treatment</p> <p>Hard-pipe conveyance system</p>	<p>Open biological treatment units §63.1257(e)(2)(iii)(E)</p> <p>Treatment using a series of treatment devices §63.1257(e)(2)(iii)(A)(5)</p> <p>Compliance with control device provisions §63.1257(e)(3)</p> <p>RCRA units exempt from initial compliance demonstration §63.1257(a)(4)</p>	<p>Monitor biological treatment unit for TSS, BOD and the biomass concentration as described in the Precompliance Report §63.1258(g)(2)</p> <p>Monitor air stripper liquid flow rate as described in the Precompliance Report §63.1258(g)(2)</p> <p>Monitoring for control devices per §63.1258(b)(vii) for the thermal incinerators and §63.1258(b)(ii) for the scrubbers</p> <p>Inspection and monitoring of waste management units and treatment processes §63.1258(g)</p>	<p>SSM Records 63.1259(a)(3)</p> <p>Data retention for at least 5 years §63.10(b)(1)</p> <p>Records of equipment operation including each measurement of a control device operating parameter §63.1259(b)(1)</p> <p>Recordkeeping requirements for sources with continuous monitoring systems §63.10(c)(1) through §63.10(c)(14) §63.1259(a)(4)</p> <p>For each CMS, records documenting the completion of calibration checks and maintenance of continuous monitoring systems §63.1259(b)(3)</p> <p>Descriptions of worst-case operating conditions §63.1258(b)(9)</p> <p>Records of delay of repair §63.1259(f)</p> <p>Records of Inspections §63.1259(i)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 8 - WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/ Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
Maintenance wastewater	BMSMC-Humacao shall prepare a description of maintenance procedures for management of wastewater generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance and repair. As described in EUWW1-MACT, this maintenance wastewater plan is part of the SSMP §63.1256(a)(4)(I)	Maintenance wastewater is exempt from all provisions of Subpart GGG and Subpart A except for the need to prepare and follow or update the maintenance wastewater plan §63.1256(a)(4)	NA	Follow SSMP	Maintain a record that the maintenance wastewater plan was followed as part of the SSMP §63.1256(a)(4)(iv), Update the information in the maintenance wastewater plan as needed following each maintenance procedure based on the actions taken and the wastewater generated in the preceding maintenance procedure §63.1256(a)(4)(ii)	Follow SSMP
MACT affected wastewater streams not treated onsite	BMSMC-Humacao may elect to transfer MACT affected wastewater streams or a residual from a MACT affected wastewater stream to an offsite treatment operation §63.1256(a)(5)	<p>Prior to shipping the wastewater stream of residual offsite, BMSMC-Humacao shall comply with provisions in §63.1256(b) through (f) for each waste management unit that receives or manages affected wastewater §63.1256(a)(5)(i)(A)</p> <p>BMSMC-Humacao shall include a notice with each shipment of wastewater or residual that the affected wastewater stream contains organic HAP to be treated in accordance with Subpart GGG §63.1256(a)(5)(i)(B)</p> <p>BMSMC-Humacao shall not transfer the affected wastewater or residual unless the transferee has submitted to the EPA a written certification that the transferee will manage and treat any affected wastewater or residual in accordance with the requirements of §63.1256</p>	NA	NA	Keep a notice of each notification to an offsite treatment operation §63.1259(g)	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7 – WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>MACT affected wastewater tanks §63.1256(b) except those tanks whose contents are heated, treated by means of an exothermic reaction, or sparged §63.1256(b)(1)</p> <p>MACT affected wastewater tanks whose contents are heated, treated by means of an exothermic reaction, or sparged provided that the total HAP emissions from the tank are no more than 5 percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by means of an exothermic reaction, or sparged §63.1256(b)(1)</p>	<p>Maintain a fixed roof §63.1256(b)(1)</p>	<p>Fixed Roof</p>	<p>NA</p>	<p>Inspections per §63.1258(h)</p> <p>Inspect each Wastewater tank initially and semiannually thereafter for improper work practices §63.1258(g)</p> <p>Comply with inspection requirements of Table 7 of Subpart GGG</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7 –WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>MACT affected wastewater tanks whose contents are heated, treated by means of an exothermic reaction, or sparged and whose total HAP emissions from the tank are more than 5 percent higher than the emissions would be if the contents of the wastewater tank were not heated, treated by means of an exothermic reaction, or sparged §63.1256(b)(1)</p>	<p>Install and operate a fixed roof and closed-vent system that routes the organic HAP vapors to a control device §63.1256(b)(2)(i)</p> <p>The fixed roof and all opening shall be maintained in a closed position at all times that the tank contains affected wastewater or residual removed from affected wastewater except when it is necessary to use the opening for wastewater sampling, removal, or for equipment inspection, maintenance or repair §63.1256(b)(3)(B)</p> <p>If an improper work practice is identified, first efforts at repair shall be made within 5 calendar days after identification and repair shall be completed within 45 days after identification 63.1256(b)(9)</p>	<p>Thermal Oxidizer and Scrubber Operating in Series (any one or more of three identical treatment trains).</p> <p>Each system assures compliance by reducing organic HAP emissions by 95 percent §63.1256(h)(2)(i)</p>	<p>Initial Performance Test</p>	<p>Inspections per §63.1258(h)</p> <p>Inspect each Wastewater tank initially and semiannually thereafter for improper work practices §63.1258(g)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>
<p>Containers that receive, manage or treat MACT affected wastewater or a residual from affected wastewater and that are less than or equal to 0.42 m³ in capacity §63.1256(d)(1)(ii)</p>	<p>Maintain a cover on all containers §63.1256(d)(1)</p> <p>If an improper work practice is identified, first efforts at repair shall be made within 5 calendar days after identification and repair shall be completed within 45 days after identification unless the repair is delayed per §63.1256(i) §63.1256(d)(5)</p>	<p>Meet DOT specifications at 49 CFR 178 §63.1256(d)(1)(ii) (A)</p>	<p>NA</p>	<p>Inspect initially and semiannually thereafter for improper work practices and control equipment failures §63.1258(g)</p> <p>Maintain no leaks per §63.1258(h)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7– WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>Containers that receive, manage or treat MACT affected wastewater or a residual from affected wastewater and that are greater than 0.42 m³ in capacity §63.1256(d)(1)(ii)</p>	<p>Maintain a cover on all containers §63.1256(d)(1)</p> <p>Maintain in accordance with the inspection requirements of §63.1258(h)</p> <p>If an improper work practice is identified, first efforts at repair shall be made within 5 calendar days after identification and repair shall be completed within 45 days after identification unless the repair is delayed per 63.1256(i) §63.1256(d)(5)</p> <p>Use a submerged fill pipe whenever pumping affected wastewater into a container with a capacity greater than 0.42m³ §63.1256(d)(2)(i)(A)</p>	<p>NA</p>	<p>NA</p>	<p>Inspect initially and semiannually thereafter for improper work practices and control equipment failures §63.1258(g)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7 –WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>MACT affected individual drain systems §63.1256(e)</p>	<p>BMSMC-Humacao shall operate and maintain a cover on each opening in any drain system and route the vapors through a closed-vent system to a control device §63.1256(e)(1)</p> <p>The cover and all openings shall meet the following requirements</p> <ul style="list-style-type: none"> - Maintain in accordance with §63.1258(h) -Maintain in the closed-position except as allowed at 63.1256(e)((1)(B) -The control device shall be at least 95 percent efficient per §63.1256(h) - If an improper work practice is identified, first efforts at repair shall be made within 5 calendar days after identification and repair shall be completed within 45 days after identification unless the repair is delayed per §63.1256(i) <p>§63.1256(e)(3)</p>	<p>Hard-piped system. All emissions routed to the TOU complex</p>	<p>NA</p>	<p>Inspect initially and semiannually thereafter for improper work practices and control equipment failures §63.1258(g)</p> <p>Inspect initially and semiannually thereafter to verify sufficient water is present to properly maintain integrity of water seals. §63.1256(e)(4)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7 –WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>“Bio-waste” streams designated as MACT affected including existing and new sources §63.1256(g)(1), §63.1256(g)(2)</p> <p>For the purposes of §63.1256(g)(11), the term “affected wastewater” means all wastewater streams from PMPUs as defined at §63.1251. §63.1256(g)(11)(iii)</p> <p>For combinations of treatment processes, the wastewater stream shall be conveyed by hard piping between the treatment processes §63.1256(g)(7)(i)(A)</p>	<p>95-percent mass reduction option, for biological treatment processes §63.1256(g)(11)</p> <p>All wastewater is hard piped</p>	<p>Air Stripper TOUs Open Biological Treatment Unit</p> <p>Hard piping between the Air Strippers and the biological treatment units.</p>	<p>§63.1257(e)(2)(iii)(E)</p>	<p>Air stripper:</p> <p>Liquid flow rate - ≤ 210 gpm</p> <p>Biological treatment plant:</p> <p>BOD₅ - ≤ 250 mg/L</p> <p>TSS - ≤ 250 mg/L</p> <p>MLVSS - ≥ 1 g/L</p>	<p>Keep record of treatment of the combination of treatment processes §63.1256(g)(7)(iii)(C)</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>
<p>Wastewater streams treated in the RCRA Trane or Caloric I or Caloric II liquid waste incinerators §63.1256(g)(13)</p>	<p>Treat affected wastewater streams in a RCRA permitted unit §63.1256(g)(13)(i)</p>	<p>Trane Unit EUCO2 Caloric Unit I Caloric Unit II EUCO3A EUCO3B</p>	<p>Exempt §63.1256(g)(13)</p>	<p>Exempt §63.1256(g)(13)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 7 - WASTEWATER COMPLIANCE MATRIX [40 CFR §63.1256] (Continued)

Affected Source & Emissions Point	Standard	Compliance Options	Performance Testing/Compliance Demonstration	Monitoring	Recordkeeping	Notifications and Reporting
<p>For each residual removed from affected wastewater, BMSMC-Humacao shall control for air emissions §63.1256(g)(14)</p>	<p>Comply with the RCRA treatment option in paragraph §63.1256(g)(13)</p> <p>§63.1256(g)(14)(iv)</p>	<p>Trane Unit EUCO2-MACT</p> <p>Caloric Unit I Caloric Unit II EUCO3A-MACT EUCO3B-MACT</p>	<p>Exempt §63.1256(g)(13)</p>	<p>Exempt §63.1256(g)(13)</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>
<p>Air Stripper exhaust gases</p>	<p>The control device shall be operating whenever organic HAP emissions are vented from the Air Stripper §63.1256(h)(1)</p> <p>An enclosed combustion device shall reduce the organic HAP emissions vented to the control device by 95% §63.1256(h)(2)(i)(A), or</p> <p>An enclosed combustion device shall provide a minimum residence time of 0.5 seconds at a minimum temperature of 760°C §63.1256(h)(2)(i)(C)</p> <p>Comply with §63.1252(g) to control halogenated vent stream emissions exhausted from a combustion device §63.1256(h)(3)</p>	<p>TOU Complex</p>	<p>§63.1257(e)(3)</p>	<p>Combustion Chamber Temperature 816°C</p> <p>Residence Time – One time in NOCSR</p> <p>Temperature - continuously</p>	<p>General recordkeeping requirements</p>	<p>Periodic report §63.1260(g)</p> <p>Notification of process change §63.1260(h)</p> <p>SSM reports §63.1260(i) and §63.10(d)(5)(ii)</p>

Table 8 - MACT Air Pollution Control Devices and Associated Monitoring Parameters

Control device	Requirement	Upper Testing Limit/Operation Condition	Monitoring Parameters
TOUs	98% reduction of HAPs from uncontrolled process vents [40 CFR §63.1254(a)(1) & (a)(3)]	Worst case condition [40 CFR §63.1257(b)(8)(ii)(C)] (4,266 lb/hr TOC loading)	Combustion chamber temperature - $\geq 1500^{\circ}$ F daily average [40 CFR §63.1258(b)(3)(ii)(C)]
	20 ppmv TOC [40 CFR §63.1254(c), Alternative Standard]	RATA Testing	Continuous Emissions Monitor - ≤ 20 ppmv daily average [40 CFR §63.1254(c)] Combustion chamber temperature - $\geq 1500^{\circ}$ F daily average [40 CFR §63.1258(b)(3)(ii)(C)] Retention time in combustion chamber - $\geq \frac{3}{4}$ second [40 CFR §63.1258(b)(5)(ii)(A)(2) as demonstrated in Precompliance Report]
	Continuous flow monitoring [40 CFR §63.1258(b)(5)(ii)(A)]	Design Evaluation and Performance test Residence time ≥ 0.75 Second	Recordkeeping
Post TOU Scrubbers	95% Control for Hydrogen Halides and Halogens or 20 ppmv outlet concentration [40 CFR §63.1252(g)]	Worst case condition [40 CFR §63.1257(b)(8)(ii)(C)] (1,839 lb/hr TOC loading)	Daily average of pH - ≥ 3.37 , or
			Once per day pH - ≥ 3.37 Flow rate into or out of scrubber - ≥ 551 gpm daily average
Air Strippers/ Biological Treatment Unit	95% HAP reduction from wastewater system [40 CFR §63.1256(g)(11)]	Performance test [40 CFR §63.1257(e)] <u>Box Test</u> 1,4-Dioxane – 3.7 mg/L Acetonitrile – 1 mg/L Methanol – 24.9 mg/L MIBK – 31.2 mg/L Methylene Chloride – 120 mg/L MTBE – 31.2 mg/L Toluene – 0.01 mg/L Triethylamine – 1 mg/L	Air stripper influent flow rate - ≤ 210 gpm Biological treatment plant: BOD ₅ - ≤ 250 mg/L TSS - ≤ 250 mg/L MLVSS - ≥ 1 g/L
Liquid Waste Incinerators	Treatment in a RCRA unit [40 CFR §63.1256(g)(13)]	Exempt (For purposes of the Pharmaceutical MACT)	Exempt (For purposes of the Pharmaceutical MACT)

Table 9- Typical Equipment List

Requirements	Equipment Description
Process Vents	<p>Process vessels, reactors, tanks, centrifuges, stills, process condensers, inline filters, mixers, receivers, dryers, filter presses, sumps, columns, hydrogenators, crystallizers, heat exchanger systems, etc.</p> <p>(See Appendix V for a complete list of existing equipment)</p>
Storage Tanks	<p>Fixed roof metallic tanks, fixed roof fiberglass tank, internal floating roof tanks, external floating roof tanks, and etc.</p> <p>(See Appendix V for a complete list of existing equipment)</p>
Equipment Leaks	<p>Pumps, agitators, compressors, open-ended valves and lines, valves, connectors, sampling connection systems, pressure relief devices, and etc.</p>
Wastewater	<p>Air strippers, steam strippers, storage tanks, neutralization tanks, biological treatment units, liquid waste incinerators, surface impoundments, containers, oil and water separators, conveyance system, drain systems, and etc.</p> <p>(See Appendix V for a complete list of existing equipment)</p>
Heat Exchange Systems	Heat exchangers and chillers
Condensers	<p>Condensers as a control device for Rule 419 compliance</p> <p>(See Appendix V for a complete list of existing equipment)</p>

14. The addition of new equipment without the necessity to reopen the permit will be allowed if:
 - i. the emissions are routed to the existing control device used to comply with the pharmaceutical MACT and BSMC-Humacao demonstrate that the capacity of the control device is not exceeded.
 - ii. for the new equipment a new control device is not necessary.
 - iii. The new equipment is subject to applicable requirements within the permit and can be determined using the compliance matrix.

F. Additional Recordkeeping & Reporting Requirements

Under this section are summarized some of the applicable requirements for recordkeeping and reporting required by this permit, as well as additional requirements.

1. BSMC-Humacao shall prepare and keep a monthly record with the following information about the batches manufactured at the facility:
 - a. Name of the Process
 - b. Batch size and amount of batches manufactured
 - c. Identification and amount of atmospheric pollutants emitted, controlled and uncontrolled per batch for each process.
2. BSMC-Humacao shall keep records demonstrating the annual production and the use of raw material in the facility, available for inspection by EQB's technical personnel.
3. Semi-annual reports [Rule 603(A)(5)(i) of the RCAP]
 - a. BSMC-Humacao shall submit semi-annual reports beginning with the six-month period after the effective date of the permit and for every six-month period thereafter. Semi-annual reports must be submitted within 90 days after the end of each six-month period.
 - b. All instances of deviations from permit requirements must be clearly identified in the semi-annual reports required by this permit.

Section VI - Insignificant Emission units

The following list of insignificant activities was provided by the permittee for a better understanding of its operations. Since there is no requirement to update this list, activities may have changed since this filing.

Emission Unit ID	Description (Criteria for exemption)
40 hp emergency generator (Building 29)	Appendix B.3.vi. of the RCAP (operates less than 500 hours)
Emergency generator for the Utilities Area	Appendix B.3.ii. (O) (operates less than 500 hours)
Emergency generator used for the solid waste incinerator	Appendix B.3.ii. (O) (operates less than 500 hours)
Three 1850 hp emergency generators	Appendix B.3.ii.(O) (operate less than 500 hours)
535 hp emergency generator	Appendix B.3.ii.(O) (operates less than 500 hours)
Two 2000 hp emergency generators	Appendix B.3.ii.(O) (operate less than 500 hours)
200 hp emergency generator	Appendix B.3.ii.(O) (operates less than 500 hours)
Two 10,000 gallons mineral oil tanks in Building 4	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Kerosene Tank T-951A (20,000 gallons)	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Kerosene Tank T-951B (20,000 gallons)	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Sodium hydroxide storage tanks	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Sulfuric acid storage tank	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Phosphoric acid storage tanks	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Wastewater nutrient tanks	Appendix B.3.ii.P. (Emit less than 1 ton/year)
QC Tank (T-17)	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Renessa Tanks - 20,000 gal/kerosene each V-2403, V-2413, V-4500	Appendix B.3.ii.P. (Emit less than 1 ton/year)
Tank T-102 (2,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-303 (200 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)

Emission Unit ID	Description (Criteria for exemption)
Tank V-3055 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-871 (7,500 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-856 (7,500 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank V-2664 (7,500 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-2668 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-2669 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-955 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-956 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-983 (5,800 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Tank T-965 (6,000 gallons)	Appendix B.3.ii.N (Capacity less than 10,000 gallons)
Pilot Plants and laboratories which engage in research development and quality control activities.	Appendix B.3.ii. (m) of the RCAP
Research trials that will last for 30 days or less, prior a 15 day notice and which will result in VOC emissions of less than 3 pounds per hour or 15 pounds per day.	Appendix B.3.ix of the RCAP
Emergency Response Training Activities	Appendix B.3.xvi of the RCAP
Laboratories used solely for the purpose of quality control or environmental compliance testing that are associated with manufacturing, or production.	Appendix B.3.xxi. of the RCAP
Non-routine clean out of tanks and equipment for the purposes of worker entry or in preparation for maintenance or decommissioning (except those equipments subject to the 40 CFR Part 63 Subpart GGG).	Appendix B.3.xxvi. of the RCAP
Sampling connections and systems used exclusively to withdraw materials for testing and analysis, including air contaminant detectors and vent lines.	Appendix B.3.xxvii of the RCAP
Pump Seals (except those covered by the 40 CFR Part 63, Subparts H, I and GGG).	Appendix B.3.xxxx
Manufacture of batches for validation and tests	<2 tons/year, Appendix B.2 of the RCAP

Section VII - Permit Shield

As specified under Rule 603(d) of the RCAP, compliance with the conditions of the permit 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 “Non Applicable”. However, according to the 40 CFR §63. 6(e)(3)(ix) none of the procedures specified by the startup, shutdown and malfunction plan for an affected source will be considered within the permit shield of Section 504(f) of the Act. All changes that BMSMC-Humacao performs that are only recorded in the OSIL and that are not expressly mentioned in the permit are not either within the permit shield cover.

A. Non-Applicable Requirements

Non-Applicable Requirements		
State	Federal	Reason
	Hazardous air pollutants Limitations	See Section VII, Part (B) of the Permit
	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60 Subpart Dc)	See Section VII, Part (B) of the permit
	National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing (40 CFR Part 63 Subpart FFFF)	See Section VII, Part (B) of the permit
	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters (40 CFR Part 63 Subpart DDDDD)	See Section VII, Part (B) of the permit

B. Reasons for Non Applicability

Coding for Non-Applicability Determination	
Code	Reason
Hazardous Air Pollutant Limits	No applicable requirements
40 CRF Part 60 Subpart Dc	It is not applicable at the time of permit issuance because the boilers were not constructed, modified or reconstructed after June 9, 1989.
40 CFR Part 63 Subpart FFFF	It is not applicable at the time of the permit issuance because BMSMC-Humacao does not manufacture SOCFI chemicals, nor operates chemical manufacturing units. Also, process vents are regulated by the §63.1254 of the 40 CFR.

Coding for Non-Applicability Determination	
Code	Reason
40 CFR Part 63 Subpart DDDDD	It is not applicable at the time of the permit issuance because it does not comply with the applicable requirements of section 63.7505 of the 40 CFR. It only requires initial notification, according to section 63.7506(b) of the 40 CFR.

Section VIII - Permit Approval

By virtue of the authority conferred upon the Environmental Quality Board by the Public Policy Environmental Act, Law No. 416, September 22, 2004, and after verifying the administrative record and compliance with the Uniform Administrative Procedure Act, Law No. 170, August 12, 1988, as amended, the 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, February 15, 2006.

ENVIRONMENTAL QUALITY BOARD

/s/
Julio I. Rodríguez Colón
Alternate Member

/s/
Ángel O. Berríos Silvestre
Associate Member

/s/
Carlos W. López Freytes, Esq.
President

APPENDIXES

Appendix I - Definitions and Abbreviations

A. Definitions:

1. Act -Clean Air Act, as amended, 42 U.S.7401, et seq.
2. Calendar Day - a day reckoned from midnight to midnight
3. Calendar Year – From January 1 to December 31.
4. Responsible Officer -See definition for Responsible Officer in the Regulation for the Control of Atmospheric Pollution of the Environmental Quality Board (1995)
5. Regulation - Regulation for the Control of Atmospheric Pollution for the Environmental Quality Board.
6. State-Enforceable Only – Relates to those requirements that are not federally enforceable
7. Permittee - Person and/or entity to which the Puerto Rico Environmental Quality Board has emitted an Operating Permit for an Emission Source under Title V.
8. Title V - Title V of the Clean Air Act (42 U.S.C. 7661).
9. Working Day – A day on which the Environmental Quality Board works

B. Abbreviations

1. BOD – Biochemical Oxygen Demand
2. Btu - British Thermal Unit
3. CCCD – Centralized Combustion Chamber Device
4. CERCLA- Comprehensive Environmental Emergency Compensation and Liability Act
5. CFR - Code of Federal Regulations
6. cGMP –Current Good Manufacturing Practices

7. CMS - Continuous Monitoring Systems
8. CO - Carbon Monoxide
9. COD – Chemical Oxygen Demand
10. CPTP- Comprehensive Performance Test Plan
11. DRE- Destruction and Removal Efficiency
12. EQB - Puerto Rico Environmental Quality Board
13. EPA - Environmental Protection Agency
14. HAP - Hazardous air pollutants
15. HCl – Hydrochloric Acid
16. HWC - Hazardous Waste Combustor
17. LDAR - Leak detection and Repair
18. MACT – Maximum Achievable Control Technologies
19. MeCL₂ – Methylene Chloride
20. MMBtu – Millions British Thermal Units
21. MVLSS – Mixed Liqueurs Volatile Suspended Solids
22. NAAQS - National Ambient Air Quality Standards
23. NESHAP - National Emission Standards for Hazardous Air Pollutants
24. NOC – Notification of Compliance
25. NO_x - Nitrogen Oxides
26. NSPS - New Source Performance Standards
27. OSHA – Occupational Safety and Health Office
28. OSIL – Onsite Implementation Log
29. PBAML – Process Based Annual Mass Limit
30. PM₁₀ - Particulate Matter whose particulate diameter has a size of aerodynamic mass equal or less than ten microns.
31. PMPU – Pharmaceutical Manufacturing Process Unit
32. PSD- Prevention of Significant Deterioration

33. POD – Point of Determination
34. ppm – parts per million
35. ppmv - parts per million by volume
36. ppmw – parts per million by weight
37. PRASA – Puerto Rico Aqueduct and Sewer Authority
38. RATA – Relative accuracy test audit
39. RCAP - Regulations for the Control of Atmospheric Pollution
40. RCRA - Resource Recovery & Conservation Act
41. SIC - Standard Industrial Classification
42. SO₂ - Sulfur Dioxide
43. SOP – Standard Operating Procedure
44. SSM - Startup, shutdown & malfunction
45. SSMP – Startup, Shutdown & Malfunction plan
46. TOC – Total Organic Carbon
47. TPY- Tons per year
48. TSS - Total Suspended Solids
49. VOC - Volatile Organic Compound
50. WWTP - Wastewater treatment plant

Appendix II - List of Hazardous Air Pollutants authorized in BSMC- Humacao at the time of the permit application.

1,1,2 Trichloroethane	Vinyl Acetate
1,1,2,2-tetracloroethane	Vinyl chloride
2-butanone (MEK)	Xylene (o-, m- and p-)
Acetonitrile	
Acrolein	
Antimony (Compounds)	
Arsenic	
Benzene	
Beryllium	
Cadmium (Compounds)	
Carbon tetrachloride	
Chloroform	
Chloromethane	
Chromium (Compounds)	
<i>cis</i> 1,3-dichloropropene	
Chlorobenzene	
Cobalt (Compounds)	
Dimethyl formamide	
Dioxane	
Epichlorohydrin	
Ethylbenzene	
Formaldehyde	
Hexane	
Hydrochloric Acid	
Lead (Compounds)	
Manganese (Compounds)	
Mercury	
Methanol	
Methylene chloride	
Metil Isobutil ketone (MIK)	
Metil-tert-butyl-eter (MTBE)	
Nickel (Compounds)	
Phosphorus	
Polycyclic Organic Matter (POM)	
Selenium (Compounds)	
Styrene	
tetrachloroetene	
Toluene	
<i>trans</i> 1,3-dicloropropene	
Trichloroetene	
Triethylamine	

Appendix III - Calculation Methodology

BMSMC-Humacao will calculate the annual emissions of the facility using the calculation methodology included in this Appendix.

1. Process Vents

BMSMC-Humacao will calculate the emissions using the models published by EPA (*Control of Volatile Organic Emissions from Manufacture of Synthesized Pharmaceutical Products*; EPA-450/2-78-029, December 1978) and the removal efficiencies of the control systems, determined by stack tests approved by the Board guarantees provided by the manufacturer. BMSMC-Humacao shall obtain all the variables that are necessary to carry out the calculations, from the process descriptions, documents and batch manufacturing procedures. BMSMC-Humacao shall keep records of these calculations for each step of the manufacturing process. The variables shall include, but will not be limited to the amount of raw material loaded, process temperature and purge time. The VOC or HAP emissions that result from routine cleaning, rinsings, washings or heating of equipment in batch manufacturing operations must be included in this emissions calculations independently of the product that will be manufactured in the next batch.

Unless a new stack test is carried out where new values are determined, BMSMC-Humacao will use the following control efficiency to determine controlled emissions:

- i. 98% destruction efficiency for VOC and HAPs for the thermal oxidizers.
- ii. 95% removal for SO₂ and hydrogen halides and halogens, in the scrubbers.
- iii. If actual monitoring data indicate that the control equipment is outside of the range assumed in the controlled emissions calculations, the emissions will be recalculated using actual monitoring data. It shall be documented in the OSIL.

The process parameters, control device parameters, controlled and uncontrolled emissions shall be recorded for each activity of emission. The emissions profile for each batch will be multiplied by the amount of batch manufactured during the month to obtain the emissions from the process vents.

2. Storage tanks

- a. BMSMC-Humacao will calculate the uncontrolled emissions from each tank using the equations in Chapter 7.1 of the AP-42. BMSMC-Humacao will use the monthly data and the characteristics of the liquid stored for each tank to perform the calculations. All relevant information like diameter, type of tank, operating volume, shell color, if the tank operates in a vacuum or under pressure, etc. will be

used to perform the emission calculations. BMSMC-Humacao will keep records with all the information used to calculate uncontrolled tank emissions.

- b. When the uncontrolled emissions are routed to a control device, BASF will use the procedures described in the previous process vents section to calculate controlled emissions in the storage tanks. If no control device is used, the uncontrolled emissions will be considered actual emissions.
- c. To obtain emissions in pounds per tank per month, the uncontrolled and controlled emissions will be added in all storage tanks. To obtain the storage tanks monthly emissions, the VOC and HAP emissions per month in each tank will be added.
- d. Meteorological data from Puerto Rico will be used in the tank's emission calculations.

3. Equipment leaks

- a. BMSMC-Humacao will calculate the emissions from equipment leaks using average component count and the percent leak rate data obtained from field studies for the leak detection and repair program and the emission factors for SOCFI sources published by EPA in 1993 (*Protocol for Equipment Leak Emission Estimates*; EPA-453/R-93-026, June 1993).
- b. For each process step, the following procedure was established in the database to estimate equipment leaks:
 - i. Assign average component counts and a percent leak rate to each process equipment used in the step.
 - ii. Multiply the equipment cycle time with the potential batches per year to determine the total annual time that components are exposed to chemical solvents.
 - iii. Use the emission factors from the screen value-range method published in the SOCFI fugitive emission estimate protocol (EPA-453/R-93-026, Table 2-5) to estimate equipment fugitives.
- b. The equipment leak emissions for each component will be obtained by multiplying the emission rate obtained from the following equation by the exposure time of the equipment (which is obtained by multiplying the cycle time of the equipment and the batches manufactured).

Total emission rate per type of component

$$Se = GEF \times N_{ge} + LEF \times N_{le}$$

where:

Se = Total emission rate for a component type, kg/hr.

GEF = Applicable emission factor for sources with screening values greater than or equal to 10,000 ppmv, kg/hr/source.

N_{ge} = Component count (for specific component type) for sources with screening values greater than or equal to 10,000 ppmv

LEF = Applicable emission factor for sources with screening values less than 10,000 ppmv, kg/hr/source.

N_{le} = Component count (for specific component type) for sources with screening values less than 10,000 ppmv.

- c. The following table presents the emission factors applicable to BMSMC-Humacao from Table 2-5 of the document EPA-453/R-93-026. These factors will be used to calculate the emission rate in the equation that was included in the previous condition:

Type of equipment	Service	≥10,000 ppmv Emission factors (kg/hr/sources) ^a	<10,000 ppmv Emission factors (kg/hr/sources) ^a
Valves	Light Liquid	0.0892	0.000165
Pump seals and agitators	Light Liquid	0.243	0.00187
Pressure relief valves	Gas	1.691	0.0447
Connectors	All	0.113	0.0000810

a These emission factors are for total organic compound emission rates

- d. BMSMC-Humacao will keep the batch cycles and the amount of components for each process in the OSIL
4. Combustion Sources
- a. BMSMC-Humacao will use the AP-42 emission factors to calculate the emissions from the use of fuel, unless a stack test is carried out and emission factors obtained from the stack test are used.

- b. For the incinerators BSMC-Humacao will use emission factors that were developed during a stack test in 1998, unless a new stack test is realized and new emission factors are developed for these equipments.

5. Other areas

- a. BSMC-Humacao will determine and record the atmospheric pollutants emissions in areas not classified above in a monthly basis. Will keep in their records all the information used to perform the calculations.
 - b. The emission calculations will include the specific reference of the emission factor used. The necessary data to reproduce the emission calculations, such as fuel consumption, batches manufactured, among others, will be included.
 - c. The HAPs will be detailed in the emissions calculated as part of the annual emissions calculations report.
-

Appendix IV – List of Existing Processes at the time of the permit application

Amphotericin	Photobromination HBr SR-47563
Amphotericin B Type II (Oral Grade)	Mycostatin
Amphotericin B Type II Micropulverized	Acetone fr Myco & Amp
Apmphotericin B Type I	MeOH Rec fr Mycostatin
Aztreonam NSB	MeCl ₂ Rec Myc/Thi
Aztreonam NSA	Mycostatin Micropulverized
Aztreonam NSA RX	Nadolol
Keto Amide	Cistriol Acetonide
LZWIT	Nadolol 2nd Crop
Aztreonam for Injection	Nefazodone HCl
L-Arginine Base, Sterile	MJ-13701
Aztreonam 2 Crys Frac	Nefazodone Hydrochloric Crude
Aztreonam Sterile	Nefazodone Final Product
MeCl ₂ Rec Azt	Nefazodone Hydrochloride RX
Captopril	IPA recovery from Nefazodone HCl
Captopril DIP	n-Butyl Acetate Recovery from Nefazodone HCl
Captopril (4N)	Omipatrilat
Captopril Recovery	BMS-196099-02
Proline Thioester	BMS-207873
D4T	Pravastatin Sodium
D4T-NMPO	Triamcinolone
D4T-NMPO 2nd crop	Triamcinolone Acetonide
D4T-FP	Triamcinolone Diacetate Sterile
D4T Acetyl	Triamcinolone Diacetate Crude
Fosinopril	Triamcinolone Hexatonide Primary
SQ-28355	Triamcinolone Hexatonide Sterile
SQ-32034	Triamcinolone Acetonide Sterile
SQ-27616	MeCl ₂ recovery in Building 29
SQ-28303	Butanol recovery in Building 29
Halcinonide	Acetic Acid Recovery in Building 29
F3-Acetonide	
F3,21-Mesyate	
Halcinonide RX	
Halcinonide Crude	
Halcinonide Micro	
HIV Protease Inhibitor	
HIV Protease BMS-233101-01	
HIV Protease BMS-232632-05	
Irbesartan	
SR-47436 Irbesartan Purified	
SR-47563	
SR-47563 Coupling Step	

Appendix V - Process Equipments and Control Devices

A. Emission unit EUVO1

1. Building 2

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Amphotericin	D-102	Dryer	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	F-303A	Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	F-303C	Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-303A	Sump F-303A	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-303C	Sump F-303C	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-1236	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-307A	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-307B	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	D-104	Dryer	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
Previous Captopril	CE-3000	Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3000A	Sump CE-3000	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	CE-3001	Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-3057	100 gallons	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-3061	100 gallons	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	DB-3000	Dryer	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	TK-3001	Rec. DB-3000	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	RE-3000	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3003	Rec. RE-3000	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	RE-3001	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	RE-3002	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	RE-3003	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3002	Distillate receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3005	HCl Storage	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3006	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3007	Storage Captopril ML	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	RE-3004	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3012	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3011	MeCl ₂ receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3001A	Sump CE-3001	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3013		CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3014	Distillate receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3015	Distillate receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3016	Distillate receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Previous Captopril	T-3004	NaOH Storage	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-3053	Water Storage	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-3056	NaOH Storage	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-3059	Hot Water for DB-3000	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
Mycostatin	D-103	Dryer	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-203B	Sump F-202B	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	F-202B	Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-101A	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-101B	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-101C	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-201A	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-201B	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-202A	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-202B	Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-303	Storage TEA	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-303A	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-303B	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-305A	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-305B	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-120A	Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	T-303	35 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-307A	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	V-307B	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
	Previous Proline Thioester	D-3051	Dryer
F-3050		Centrifuge	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
R-3050		Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
R-3051		Reactor	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3050		Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3051		Storage HCl	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3062		Storage NaOH	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-102		Storage HCl (1,000 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-3054		Distillate receiver	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3055		Storage NaOH	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3056		6000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-3061		Fest Filter Sump (30 gal.)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3090		Salty waste	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-3091		Storage tank	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
Common	T-156	Salty waste	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Common	T-161	Salty waste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-102	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-119	Biowaste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

2. Building 3

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
CE-1202	5.53 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DR-1202	42.7 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DR-1201	42.7 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
FE-1201	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1201	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1202	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1203	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1205	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1206	50 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1207	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1239	600 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1246	Pyridine (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1214	Rec. CE-1202 (15 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
FD-1202	0.2 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-1201	10 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1203	50 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1205	25 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1206	25 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1207	200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1208	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1200	Condensate	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1211	15 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1212	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1213	Salty waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1215	Salty waste (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1218	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1221	Salty waste (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1233A	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1233B	Process (10 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1235	Salty waste (6000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1237	Salty waste (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
TK-1245	Not in use (3000 gal)	None
TK-1246	Biowaste (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1247	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1248	Salty waste (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1201	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1204	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1245	Salty waste (3000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1234	Not in use (650 gal)	None
TK-1200	TOUs Header Drip Tank	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

3. Building 4

ID	DESCRIPTION	CONTROL DEVICE
G-301	Mixer	None
G-302	Mixer	None
G-303	Mixer	None
G-304	Mixer	None
RE-4230	Mixer	None
RE-4231	Mixer	None
RE-4232	Mixer	None
RE-4233	Mixer	None

4. Building 5

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan	D-822	not in use (20 ft ³)	N/A
	CE-8101A	not in use (8.5 ft ³)	N/A
	CE-8102A	not in use (8.5 ft ³)	N/A
	RE-8204A	not in use (300 gal)	N/A
	RE-8206A	not in use (100 gal)	N/A
	RE-8207A	not in use (100 gal)	N/A
	RE-8210A	not in use (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8211A	not in use (750 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8213A	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8222	Hazardous Waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8223	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-814	not in use (2000 gal)	N/A
	T-816	not in use (750 gal)	N/A

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan	T-869	Salty (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-886	Hazardous Waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-889	Hazardous Waste (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	TK-1227	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8101A	not in use (500 gal)	None
	T-8201	not in use (50 gal)	None
	T-8102	not in use (2 gal)	None
	T-8219	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8102A	not in use (2 gal)	None
Irbesartan FP	FD-8519	3 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	FD-8520	3 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8521	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8514	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8515	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8517	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8518	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8519	Rec. FD-8519 (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8520	Rec. FD-8520	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8516	not in use (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Irbesartan Photobromination	CE-8512	10 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	DBL-821	125 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8501	3000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8502	3000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8503	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8505	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8506	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8507	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8501	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8511	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8513	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8523	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	D-8101A	24 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-870	not in use (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8509	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8510	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8511	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8522	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan Photobromination	T-835	60 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-870A	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Sterile	FD-841	3022 kg/week	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	FD-842	3022 kg/week	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-841	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844A	380 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844B	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844C	420 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-845	350 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848A	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848B	540 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848C	400 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-849A	39 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-859	400 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-890	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Common	T-834	Salty waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-837	Biowaste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-867	Salty waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-871	Storage HCl (7500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8216	8500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8217	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8221	7500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-856	not in use (7500 gal)	None
	T-872	not in use (7000 gal)	None
	T-873	condensate receiver (1500 gal)	None
	F-303B	Centrifuge	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-303B	Sump F-303B	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8215	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8216	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

5. Building 29

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
CE-2601	48x30/30 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2601	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2650	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2651	750 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2652	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-2650	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2601	Rec. R-2601 (5000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2605	Rec. R-2651 (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2606	Acetic Acid (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2607	Condensate (210 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2607A	210 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2608	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2609	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2654	MeCl ₂ Distillate (250 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2655	ML Nadolol (Acetone) (3700 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2656	Rec. R-2650 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2658	Rec. R-2650/2651 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2659	Rec. R-2652 (TBA, Methanol) (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2667	ML(450 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CE-2301	Hazardous Waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-2301	30 ft ³ /1700 cfm/680 cfm	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-2302	100 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2301	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2302	600 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2303	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2304	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2305	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2306	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2307	NaOH (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2308	Aq. Solution (26 gal)	None
E-2314	Dist. Column (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2302	(250 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2304	Rec. E-2314	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2301	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2303	Retention Tank (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2305	Rec. R-2652	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2306	Rec. R-2305 (400 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2307	ML Tank (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2308	MeCl ₂ Dist.(5500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2309	Cooling Tank (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2314A	Rec. E-2314 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2340	MeCl ₂ (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
V-2343	200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2346	80 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2348	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2321	60 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2603	260 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2611	45 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2318	8000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2405	HCl (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2406	NaOH (19,000 gal)	None
T-4501	NaOH	None
V-2668	Acetic Acid(1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2669	Acetic Anhydride (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2652	Acetone receiver (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2664	Epi Storage (7500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2666	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2668	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2669	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2328	Condensate	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2654	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2321	R-2651 Condensate (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2665	Epi Overflow (3500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2516	Salty waste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2515	Biowaste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2602	Condensate(210 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2610	Condensate (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2323	Condensate (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

6. Solvent Recovery

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-2404	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2417	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2418	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-701C	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-711	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-702	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2408	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2410	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-2415	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2416	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2419	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
C-402	Acetone Column (34"x60')	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-402	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-401	5000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8033	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-1516	211 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8032	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1518	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8031	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-411	Salty waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8030	Biowastes (900 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8005	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-621	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-622	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8022	Not in use (12"x37')	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8022	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8023	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8002A	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8002B	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8023A	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8023B	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8026	4000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8029	Salty waste (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8025	MeCl ₂ (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EV-1514	2700 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1512B	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1512C	5000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1512A	5000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
C-401	30"x27'	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-401A	Methanol (700 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-401B	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8100	Glycol (not in use) (3000 gal)	None
T-863	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8028	Salty waste (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-721	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-725	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-865	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-720	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-501	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-708	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-710	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-707	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-705	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-703	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-712	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-704	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8021	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-862	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-709	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-701B	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-866	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-706	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-701A	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-4001	Glycol refrigeration system (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-4002	Glycol refrigeration system (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740A	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740B	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741A	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741B	MeCl ₂ (6200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741C	MeCl ₂ (6200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-702	Used Methanol (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EV-750	MeCl ₂ Evap. 1100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-750A	MeCl ₂ (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-750B	MeCl ₂ (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EV-8006	IPA Evap.(8000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8001	24"x38'	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8007	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8008A	4868 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8008B	4868 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8009A	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8009B	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-8010	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8011	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8012A	Fresh Acetonitrile (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8012B	Fresh n Butyl Acetate (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8013	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1510	Glitsch Feed Tank (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8024	Glitsch C-1	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8025	Glitsch C-2	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8026	Glitsch C-3	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
D-1512A	Not in use (5 gpm)	None
D-1512B	Not in use (5 gpm)	None
V-401	MeCl ₂	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8033	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8032	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8031	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-411	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8030	900 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8022	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8023	IPA Column (24"x38')	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

B. Emission unit EUTF1

TANK TYPE	TANK NUMBER	CAPACITY (GALLONS)	CONTROL DEVICE
RCRA Tanks	T- 901	16,500	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 902	16,500	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 952	76,800	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 953A	30,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 953B	30,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 994	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Renasa Tank Farm	T- 2404	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2408	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2410	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2415	15,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2416	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2417	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2418	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2419	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Building 5 Storage tanks	T- 8219	10,575	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

TANK TYPE	TANK NUMBER	CAPACITY (GALLONS)	CONTROL DEVICE
New Tank Farm	T- 501	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 703	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 704	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 705	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 712	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 720	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 721	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

C. Emission unit EUTF1-NSPS

TANK TYPE	TANK NUMBER	CAPACITY (GALLONS)	CONTROL DEVICE
RCRA Tanks	T- 903	77,200	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
New Tank Farm	T- 701A	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 701B	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 701C	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 702	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 706	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 707	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 708	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 709	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 710	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 711	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 725	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 726	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 862	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 865	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 866	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 8012A	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 8012B	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T- 8021	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S	

D. Emission unit EUVO1-MACT

1. Building 2

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Amphotericin	D-102	Dryer(165 ft ²)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	F-303A	Centrifuge (17 ft ³)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	F-303C	Centrifuge(17 ft ³)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-303A	Sump F-303A (35 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-303C	Sump F-303C (35 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-1236	Storage tank (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-307A	Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-307B	Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	D-104	Dryer (14 ft ³)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Previous Captopril	CE-3000	Centrifuge 40" x 24 "	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3000A	Sump CE-3000 (50 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	CE-3001	Centrifuge (20 kg/load)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-3057	Tank 100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-3061	Tank 100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	DB-3000	Dryer (40 ft ³)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	TK-3001	Rec. DB-3000 (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-3000	Reactor (1200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3003	Rec. RE-3000 (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-3001	Reactor (1250 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-3002	Reactor (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-3003	Reactor (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3002	Distillate Receiver (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3005	HCl Storage (150 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3006	Storage tank (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3007	Captopril ML Storage (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-3004	Reactor (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3012	Storage tank (1200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3011	MeCl ₂ Receiver(1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3001A	Sump CE-3001 (250 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3013	200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3014	Distillate Receiver (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3015	Distillate Receiver (50 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3016	Distillate Receiver (50 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3004	Storage NaOH (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Previous Captopril	V-3053	Water Storage (750 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-3056	NaOH Storage (6000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-3059	Hot Water for DB-3000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Mycostatin	D-103	Dryer (66 ft ²)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-203B	Sump F-202B (50 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	F-202B	Centrifuge (27.27 ft ³)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-101A	Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-101B	Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-101C	Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-201A	Reactor (5000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-201B	Reactor (5000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-202A	Reactor (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-202B	Reactor (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-303	Storage TEA (150 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-303A	Storage tank (150 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-303B	Storage tank (150 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-305A	Storage tank (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-305B	Storage tank (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-120A	Storage tank (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-303	7500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-307A	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-307B	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	Previous Proline Thioester	D-3051	Dryer
F-3050		Centrifuge	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-3050		Reactor(1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-3051		Reactor (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3050		Storage tank (450 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3051		Storage HCl (350 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3062		Storage NaOH (125 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-102		Storage HCl (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-3054		Distillate Receiver (125 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3055		Storage NaOH (6000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3056		6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-3061		Fest Filter Sump (30 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3090		Salty waste (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-3091		Storage tank (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Common	T-156	Salty waste (156 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-161	Salty waste (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-102	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-119	Biowaste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

2. Building 3

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
CE-1202	5.53 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DR-1202	42.7 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DR-1201	42.7 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
FE-1201	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1201	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1202	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1203	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1205	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1206	50 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1207	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
RE-1239	600 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1246	Pyridine (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1214	Rec. CE-1202 (15 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
FD-1202	0.2 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-1201	10 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1203	50 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1205	25 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1206	25 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1207	200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1208	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1200	Condensate	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1211	15 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1212	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1213	Salty waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1215	Salty waste (200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1218	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1221	Salty waste (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1233A	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1233B	Process (10 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1235	Salty waste (6000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
TK-1237	Salty waste (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1245	Not in use (3000 gal)	None
TK-1246	Biowaste (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1247	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1248	Salty waste (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1201	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1204	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1245	Salty waste (3000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
TK-1234	Not in use (650 gal)	None
TK-1200	TOUs Header Drip Tank	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

3. Building 4

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
G-301	Mixer	None
G-302	Mixer	None
G-303	Mixer	None
G-304	Mixer	None
RE-4230	Mixer	None
RE-4231	Mixer	None
RE-4232	Mixer	None
RE-4233	Mixer	None

4. Building 5

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan	D-822	not in use (20 ft ³)	None
	CE-8101A	not in use (8.5 ft ³)	None
	CE-8102A	not in use (8.5 ft ³)	None
	RE-8204A	not in use (300 gal)	None
	RE-8206A	not in use (100 gal)	None
	RE-8207A	not in use (100 gal)	None
	RE-8210A	not in use (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8211A	not in use (750 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8213A	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8222	Hazardous waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8223	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan	T-814	not in use (2000 gal)	None
	T-816	not in use (750 gal)	None
	T-869	Salty (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-886	Hazardous waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-889	Hazardous waste (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	TK-1227	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8101A	not in use (500 gal)	None
	T-8201	not in use (50 gal)	None
	T-8102	not in use (2 gal)	None
	T-8219	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8102A	not in use (2 gal)	None
Irbesartan FP	FD-8519	3 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	FD-8520	3 m ²	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8521	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8514	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8515	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	R-8517	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8518	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8519	Rec. FD-8519 (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8520	Rec. FD-8520	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	V-8516	not in use (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	Irbesartan Photobromination	CE-8512	10 ft ³
DBL-821		125 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8501		3000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8502		3000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8503		2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8505		2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8506		2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8507		2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8501		300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8511		300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-8513		300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8523		250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
D-8101A		24 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-870		not in use (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-8509		1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-8510		500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-8511		1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

PROCESS	EQUIPMENT	DESCRIPTION	CONTROL DEVICE
Irbesartan Photobromination	V-8522	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-835	60 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-870A	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Sterile	FD-841	3022 kg/week	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	FD-842	3022 kg/week	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-841	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844A	380 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844B	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-844C	420 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-845	350 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848A	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848B	540 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-848C	400 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-849A	39 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-859	400 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-890	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Common	T-834	Salty waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-837	Biowaste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-867	Salty waste (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-871	Storage HCl (7500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8216	8500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8217	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-8221	7500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-856	not in use (7500 gal)	N/A
	T-872	not in use (7000 gal)	N/A
	T-873	condensate receiver (1500 gal)	N/A
	F-303B	Centrifuge	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T-303B	Sump F-303B	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8215	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	RE-8216	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

5. Building 29

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
CE-2601	48x30/30 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2601	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2650	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
R-2651	750 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2652	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2650	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2601	Rec. R-2601 (5000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2605	Rec. R-2651 (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2606	Acetic acid (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2607	Condensate (210 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2607A	210 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2608	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2609	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2654	MeCl ₂ Distillate(250 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2655	ML Nadolol (Acetone) (3700 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2656	Rec. R-2650 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2658	Rec. R-2650/2651 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2659	Rec. R-2652 (TBA, Methanol) (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2667	ML(450 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CE-2301	Hazardous waste (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-2301	30 ft ³ /1700 cfm/680 cfm	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
DB-2302	100 ft ³	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2301	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2302	600 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2303	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2304	1500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2305	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2306	2000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2307	NaOH (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2308	Aq. Solution (26 gal)	None
E-2314	Dist. Column (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2302	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2304	Rec. E-2314	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2301	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2303	Holding tank (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2305	Rec. R-2652	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2306	Rec. R-2305 (400 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2307	ML Tank (300 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
V-2308	MeCl ₂ Dist.(5500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2309	Cooling tank (600 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2314A	Rec. E-2314 (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2340	MeCl ₂ (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2343	200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2346	80 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2348	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2321	60 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2603	260 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2611	45 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2318	8000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2405	HCl (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2406	NaOH (19,000 gal)	None
T-4501	NaOH	None
V-2668	Acetic Acid (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2669	Acetic Anhydride (1000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2652	Acetone Receiver (1500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2664	Storage Epi (7500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2666	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2668	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2669	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2328	Condensate	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
R-2654	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2321	Condensate del R-2651 (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2665	Epi Overflow (3500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2516	Salty waste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2515	Biowaste	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2602	Condensate (210 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2610	Condensate (100 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
V-2323	Condensate (60 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

6. Solvent Recovery

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-2404	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-2417	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
T-2418	10,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-701C	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-711	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-702	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-2408	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-2410	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-2415	10,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-2416	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-2419	20,000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
C-402	Acetone Column (34"x60')	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-402	500 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-401	5000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8033	150 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-1516	211 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8032	6000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-1518	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8031	6000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-411	Salty waste (1000 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8030	Biowastes (900 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8005	150 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-621	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-622	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
CL-8022	Not in use (12"x37')	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8022	100 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
CL-8023	150 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8002A	500 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8002B	500 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8023A	500 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8023B	500 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8026	4000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8029	Salty waste (800 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-8025	MeCl ₂ (500 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
EV-1514	2700 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-1512B	2000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-1512C	5000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
T-1512A	5000 gal	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
C-401	30"x27'	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S
V-401A	Methanol (700 gal)	CDC06/CDC06S, CDC07/CDC07S, CDC08/CDC08S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
V-401B	250 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8100	Glycol (not in use) (3000 gal)	None
T-863	300 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8028	Salty waste (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-721	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-725	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-865	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-720	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-501	10,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-708	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-710	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-707	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-705	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-703	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-712	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-704	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8021	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-862	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-709	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-701B	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-866	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-706	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-701A	20,000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-4001	Glycol refrigeration system (2000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-4002	Glycol refrigeration system (10,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740A	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-740B	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741A	MeCl ₂ (2500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741B	MeCl ₂ (6200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-741C	MeCl ₂ (6200 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-702	Used Methanol (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EV-750	MeCl ₂ Evap. 1100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-750A	MeCl ₂ (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-750B	MeCl ₂ (500 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
EV-8006	IPA Evap.(8000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

EQUIPMENT	DESCRIPTION	CONTROL DEVICE
CL-8001	24''x38'	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8007	500 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8008A	4868 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8008B	4868 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8009A	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8009B	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8010	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8011	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8012A	Fresh Acetonitrile (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8012B	Fresh nButyl Acetate (20,000 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8013	4200 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-1510	Glitsch Feed Tank (800 gal)	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8024	Glitsch C-1	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8025	Glitsch C-2	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8026	Glitsch C-3	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
D-1512A	Not in use (5 gpm)	None
D-1512B	Not in use (5 gpm)	None
V-401	MeCl ₂	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8033	150 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8032	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8031	6000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-411	1000 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8030	900 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T-8022	100 gal	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
CL-8023	IPA Column (24''x38')	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

E. Emission unit EUTF1-MACT

LOCATION	TANK NUMBER	CAPACITY (GALLONS)	CONTROL DEVICE
Renasas tank farm	T- 2404	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2408	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2410	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2415	15,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2416	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2417	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S

LOCATION	TANK NUMBER	CAPACITY (GALLONS)	CONTROL DEVICE
Renessa Tank Farm	T- 2418	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 2419	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
Building 5 Storage tanks	T- 8219	10,575	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
New Tank Farm	T- 501	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 701A	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 701B	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 701C	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 702	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 703	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 704	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 705	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 706	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 707	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 708	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 709	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 710	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 711	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 712	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 720	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 721	10,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 725	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 726	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 862	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 865	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 866	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
	T- 80121A	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S
T- 8012B	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S	
T- 8021	20,000	CDCO6/CDCO6S, CDCO7/CDCO7S, CDCO8/CDCO8S	

F. Emission unit EUWW1-MACT

PHARMACEUTICAL MACT AFFECTED EQUIPMENT	NO. OF UNITS	COMPLIANCE APPROACH/CONTROL EQUIPMENT
Process WW Equalization tanks T-906A/B, T907, T-908	4	Fixed roof and closed vent system to TOU
Emergency Spill Tanks T-966, T969	2	Fixed roof and closed vent system to TOU
Service WW Equalization Tanks T-904 and T-905	2	Utility wastewater, exempt per 63.1256 (a)(3), not MACT affected

PHARMACEUTICAL MACT AFFECTED EQUIPMENT	NO. OF UNITS	COMPLIANCE APPROACH/CONTROL EQUIPMENT
WW Blend Tanks T-957A/B	2	Fixed roof and closed vent system to TOU
Bldg.2 Biowaste Tanks	1	Fixed roof and closed vent system to TOU
Bldg.29 Biowaste Tank	1	Fixed roof and closed vent system to TOU
Bldg. SR Biowaste Tank	1	Fixed roof and closed vent system to TOU
Bldg.2 Salty Waste Tank	6	Fixed roof and closed vent system to TOU
Bldg.3 Salty Waste Tank	7	Fixed roof and closed vent system to TOU
Bldg.3 Biowaste tank	1	Fixed roof and closed vent system to TOU
Bldg.5 Salty Waste Tank	6	Fixed roof and closed vent system to TOU
Bldg.5 Biowaste Tank	1	Fixed roof and closed vent system to TOU
Bldg.29 Salty Waste Tank	2	Fixed roof and closed vent system to TOU
Bldg. SR Salty Waste Tank	3	Fixed roof and closed vent system to TOU
Bldg.41 Biowaste Tank	1	Fixed roof and closed vent system to TOU
RCRA Tanks	7	Fixed roof and closed vent system to TOU
<i>Air Strippers AS-1001 A/B</i>	2	Operate in alternate (normal) or parallel vent to TOU
Liquid Waste Incinerators	3	On-site treatment of affected wastewater
Aeration tanks T-960A, T-960B	2	Open top, no control (control not required)
Final clarifier T-962B	1	Open top, no control (control not required)
Final clarifier T-1020	1	Open top, no control (control not required)
Thickeners T-919, T-920	2	Open top, no control (control not required)
Blowdown cooling tank T-962A	1	Open top, no control (control not required)
Aeration influent splitter box T-959	1	Open top, no control (control not required)
Biomass recycling splitter box T-958	1	Open top, no control (control not required)
Aeration effluent splitter box T-961	1	Open top, no control (control not required)
Clarifier effluent splitter box T-963	1	Open top, no control (control not required)

G. Location of bypass stacks

Location	DESCRIPTION
Building 2	Located at the vent line outlet of the scrubber.
Building 3	Located at the vent line outlet of the scrubber.
Building 5	Located at the vent line outlet of the scrubber.
Building 29	Located at the vent line outlet of the scrubber.
WWTP	Vent valve located at the vent line of the air strippers.
Renasa Tank Farm	Vent valve located at the main vent line from tank farm.
Solvent Recovery	Vent valve located at the main vent line from solvent recovery.
Solvent Tank Farm	Vent valve located at the main vent line from tank farm.
RCRA Tank Farm	Vent valve located at the main vent line from tank farm.

Location	DESCRIPTION
TOUs Header	Located at the main vent line into the TOU complex.
EUCO6	Located between the thermal oxidizer and scrubber.
EUCO7	Located between the thermal oxidizer and scrubber.
EUCO8	Located between the thermal oxidizer and scrubber.

H. Control devices for alternate scenario EUVO1-MACT-ALT2

CONTROL DEVICE	TYPE OF CONTROL	EMISSION POINT
CDSC0201	Scrubber	EPSC0201
CDSC0301	Scrubber	EPSC0301
CDSC0501	Scrubber	EPSC0501
CDSC2901	Scrubber	EPSC2901
CDV02	Condenser	EPV02
CDV03	Condenser	EPV03
CDV04	Condenser	EPV04
CDV05	Condenser	EPV05
CDV06	Condenser	EPV06
CDV07	Condenser	EPV07
CDV08	Condenser	EPV08
CDV09	Condenser	EPV09
CDV10	Condenser	EPV10
CDV11	Condenser	EPV11
CDV12	Condenser	EPV12
CDV13	Condenser	EPV13
CDV14	Condenser	EPV14
CDV15	Condenser	EPV15
CDV16	Condenser	EPV16
CDV17	Condenser	EPV17
CDV18	Condenser	EPV18
CDV19	Condenser	EPV19
CDV20	Condenser	EPV20
CDV21	Condenser	EPV21
CDV22	Condenser	EPV22
CDV23	Condenser	EPV23
CDV24	Condenser	EPV24
CDV25	Condenser	EPV25
CDV26	Condenser	EPV26
CDV27	Condenser	EPV27

CONTROL DEVICE	TYPE OF CONTROL	EMISSION POINT
CDV28	Condenser	EPV28

I. Combustion equipment with a heat input capacity exceeding 8 MM Btu/hr

COMBUSTION UNIT	CAPACITY
3 Thermal Oxidizers (EUCO6, EUCO7, EUCO8)	49.0 MM Btu/hr
Boiler H1001-A (EUCO1)	500 hp (16.7 MM Btu /hr)
Boiler H1001-C (EUCO1)	800 hp (26.8 MM Btu /hr)
Liquid Waste Incinerator (EUCO2-MACT)	22.2 MM Btu /hr
Liquid Waste Incinerator (EUCO3A-MACT)	22.2 MM Btu /hr
Liquid Waste Incinerator (EUCO3B-MACT)	22.2 MM Btu /hr

Appendix VI –Control Devices Description

Emission point	Control device ID	Regulated pollutant	Control device				Basis of Estimate ¹⁷
			Type ¹⁸	Manufacturer/ Model	Efficiency (%)		
					Design	Actual	
EPCO2	CDCO2	PM, PM ₁₀	7a	ND	ND ¹⁹	ND	NA
EPCO2	CDCO2-PM*		8	Andersen CHEAF M-4.0-200	ND	ND	E-Mfg
EPCO3A	CDCO3A	PM, PM ₁₀	7b	AirPol	ND	ND	NA
EPCO3A	CDCO3A-PM*		8	Andersen CHEAF M-4.0-120	ND	ND	E-Mfg
EPCO3B	CDCO3B	PM, PM ₁₀	7b	AirPol/6653-A-1-C-1-2	ND	ND	NA
EPCO3B	CDCO3B-PM*		8	Andersen CHEAF M-4.0-120	ND	ND	E-Mfg
EPCO6	CDCO6	VOCs, HAPs	99a	Anderson 2000 Model H-12.5-49	98	98	A
EPCO6	CDCO6S	HCl, SO ₂	13a	Anderson 2000 Model 1180 BLE	95	98.2 -HCl	A
EPCO7	CDCO7	VOCs, HAPs	99a	Anderson 2000 Model H-12.5-49	98	98	A

¹⁷ Basis of Estimate

- A Stack Test
- B Engineering Estimate
- C Manufacturer's Design Specification

¹⁸ Codes – Type of Control Device

- | | | | | |
|----------------------------|--------------------|------------------------|---------------|-------------------------------|
| 7. Venturi Scrubber | 8. Mist Eliminator | 13. Absorber | 15. Condenser | 99. Other |
| (a) <i>fixed throat</i> | (a) Packed Column | (b) <i>Spray tower</i> | | (a) Thermal Oxidizer |
| (b) <i>variable throat</i> | | | | (b) <i>Air Stripper</i> |
| | | | | (c) Biological Treatment Unit |

¹⁹ ND – Not Available. Efficiency of the control equipment for the incinerators will be determined during the stack tests required by the 40 CFR Part 63 Subpart EEE, which will commence before March 30, 2005.

Emission point	Control device ID	Regulated pollutant	Control device				Basis of Estimate ¹⁷
			Type ¹⁸	Manufacturer/ Model	Efficiency (%)		
					Design	Actual	
EPC07	CDC07S	HCl, SO ₂	13a	Anderson 2000 Model 1180 BLE	95	98.2 -HCl	A
EPC08	CDC08	VOCs, HAPs	99a	Anderson 2000 Model H-12.5-49	98	98	A
EPC08	CDC08S	HCl, SO ₂	13a	Anderson 2000 Model 1180 BLE	95	98.2 -HCl	A
EPC06, EPC07, EPC08	CDAS1001A	VOCs, HAPs	99b	QED – Low profile	ND ²⁰	ND	A
EPC06, EPC07, EPC08	CDAS1001B	VOCs, HAPs	99b	QED – Low profile	NA ¹⁶	ND	A
Fugitive	CDBIO	VOCs, HAPs	99c	Activated Sludge	95 ²¹	95	A
EPSC0201	CDSC0201	VOCs	13a	Andersen 2000	ND ²²	ND	---
EPSC0301	CDSC0301	VOCs	13a	Andersen 2000	ND ¹⁸	ND	---
EPSC0501	CDSC0501	VOCs	13a	Andersen 2000	ND ¹⁸	ND	---
EPSC2901	CDSC2901	VOCs	13a	Andersen 2000	ND ¹⁸	ND	---
EPV02	CDV02	VOC, HAP	15	E-1609	ND ¹⁸	ND	---
EPV03	CDV03	VOC, HAP	15	E-1601	ND ¹⁸	ND	---
EPV04	CDV04	VOC, HAP	15	E-1602	ND ¹⁸	ND	---
EPV05	CDV05	VOC, HAP	15	E-1605	ND ¹⁸	ND	---
EPV06	CDV06	VOC, HAP	15	E-1607	ND ¹⁸	ND	---
EPV07	CDV07	VOC, HAP	15	E-1664	ND ¹⁸	ND	---
EPV08	CDV08	VOC, HAP	15	E-8101	ND ¹⁸	ND	---
EPV09	CDV09	VOC, HAP	15	E-828	ND ¹⁸	ND	---
EPV10	CDV10	VOC, HAP	15	E-1519	ND ¹⁸	ND	---

20 The air strippers, in combination with biological treatment achieve a global efficiency of 95%

21 Global efficiency for the Wastewater Treatment System, including the air strippers.

22 Control devices used to comply with Rule 108 and 419 of the RCAP.

Emission point	Control device ID	Regulated pollutant	Control device				Basis of Estimate ¹⁷
			Type ¹⁸	Manufacturer/ Model	Efficiency (%)		
					Design	Actual	
EPV11	CDV11	VOC, HAP	15	E-1613	ND ¹⁸	ND	---
EPV12	CDV12	VOC, HAP	15	E-607	ND ¹⁸	ND	---
EPV13	CDV13	VOC, HAP	15	E-608	ND ¹⁸	ND	---
EPV14	CDV14	VOC, HAP	15	E-1640	ND ¹⁸	ND	---
EPV15	CDV15	VOC, HAP	15	E-1652	ND ¹⁸	ND	---
EPV16	CDV16	VOC, HAP	15	Condenser Captopril	ND ²³	ND	---
EPV17	CDV17	VOC, HAP	15	Condenser	ND ¹⁹	ND	---
EPV18	CDV18	VOC, HAP	15	Condenser	ND ¹⁹	ND	---
EPV19	CDV19	VOC, HAP	15	Condenser	ND ¹⁹	ND	---
EPV20	CDV20	VOC, HAP	15	E-8101	ND ¹⁹	ND	---
EPV21	CDV21	VOC, HAP	15	2 condenser – A&B	ND ¹⁹	ND	---
EPV22	CDV22	VOC, HAP	15	Glycol condenser E-750	ND ¹⁹	ND	---
EPV23	CDV23	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---
EPV24	CDV24	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---
EPV25	CDV25	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---
EPV26	CDV26	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---
EPV27	CDV27	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---
EPV28	CDV28	VOC, HAP	15	Glycol condensate	ND ¹⁹	ND	---

23 Control devices used to comply with Rule 108 and 419 of the RCAP.