

#AOP-22-051

DEC#RU95-0193

Operating Permit Expiration Date: February 13, 2028

State of Vermont
Agency of Natural Resources
Department of Environmental Conservation



Air Quality & Climate Division
Montpelier, Vermont

TITLE V
AIR POLLUTION CONTROL PERMIT
TO CONSTRUCT AND OPERATE

Date Permit Issued: February 13, 2023

Owner/Operator: Omya, Inc.
PO Box 10
Florence, Vermont 05744

Source: East Plant
Verpol Plant
Cogeneration Plant
Florence Road
Florence, Vermont 05744

FINDINGS OF FACT

(A) FACILITY DESCRIPTION

Omya, Incorporated (also referred to herein as "Permittee") owns and operates the East Plant and Verpol Plant which are involved in the production of finely ground calcium carbonate materials. Various non-metallic mineral processing operations are employed in the production of the ground calcium carbonate materials. Additionally, located adjacent to the Verpol Plant is the Cogeneration Plant consisting of two combustion turbines that have been utilized for the generation of electrical power. Exhaust heat from the combustion turbines was used in the production of dried calcium carbonate materials at the Verpol Plant. The East Plant, Verpol Plant, and Cogeneration Plant (also referred to herein as "Facility") are located in the town of Pittsford, Vermont. For this air pollution control permit, these three plants are regulated as one facility.

Omya has proposed to install a new exhaust fan on the Product Reclaim Silo (formerly known as the 40 Mesh Unloading) at the Facility. Installation will also include more efficient dust collection bags.

Upon issuance of this Permit (#AOP-22-051), the approved regulated operations at the Facility include the following air pollution related operations, equipment, and emission control devices:

Facility Wide: Equipment Specifications - Combustion			
Combustion Equipment	Capacity (MMBtu/hr)¹	Fuel Type	Date of Manufacture (installation)
East Plant – Boiler #1	10.5	Natural gas or ULSD	1987
East Plant – Flash Dryer #5	11	Natural gas or ULSD	Prior to 1977
Verpol Plant – Boiler #1	19.7	Natural gas or ULSD	1991
Verpol Plant – Boiler #2	24	Natural gas or ULSD	1997
Verpol Plant – Spray Dryer #1	45	Natural gas or ULSD	1978
Verpol Plant – Spray Dryer #2	45	Natural gas or ULSD	1990
Verpol Plant – Flash Dryer #1	16	Natural gas or ULSD	1996 (installed)
Verpol Plant – Flash Dryer #2	16	Natural gas or ULSD	1996 (installed) upgraded in 1998
Verpol Plant – Flash Dryer #3	14	Natural gas or ULSD	1998 (installed)

Facility Wide: Equipment Specifications - Combustion			
Combustion Equipment	Capacity (MMBtu/hr)¹	Fuel Type	Date of Manufacture (installation)
Cogen Plant – Turbine #1	56 (3.8 MWe) ²	Natural gas or ULSD	1992 (installed)
Cogen Plant – Turbine #2	56 (3.8 MWe)	Natural gas or ULSD	1992 (installed)
Cogen Plant – Diesel engine #1 Detroit Diesel Model 4-53	136 bhp ³	ULSD	1992 (installed)
Cogen Plant – Diesel engine #2 Detroit Diesel Model 4-53	136 bhp	ULSD	1992 (installed)
Cogen Plant – Emergency Only Diesel genset Detroit Diesel Model 4-71	145 bhp	ULSD	1992 (installed)
East Plant GM 37IRC	80 hp	ULSD	1958
Aurora Fire Pump (6.6 L/cylinder)	116 bhp	ULSD	2002
CAT D175-2 – Emergency Only At the Tailings Dewatering Facility (TDF)	234 hp	ULSD	2008
LNG Facility Generac SD030	30 kW	LPG	2013
Patterson Fire Pump (144 hp, 4.5 L /cylinder)	128.9 bhp	ULSD	2011
LNG Containment Snow Melt boiler	1 MMBtu/hr	Natural gas	2014

¹ MMBtu/hr - Million British Thermal Units per hour maximum rated heat input.

² MWe – megawatts of electrical output.

³ bhp – brake horsepower rated output as specified by the manufacturer.

East Plant: Equipment with Particulate Matter Control Equipment			
East Plant Dust Sources	Exhaust (dscfm)¹	Control Equipment	Installation Date
Flash Dryer #4 (no combustion – this unit is used as a surface treater)	9,000	Fabric Filter	2006
Flash Dryer #4 Recycle Collector	2,900	Fabric Filter	Prior to 1977
Flash Dryer #5	8,310	Fabric Filter	Prior to 1977
Silo 110 (formerly Silo #1)	1,700	Fabric Filter	Prior to 1977
Silo 120 (formerly Silo #2)	1,700	Fabric Filter	Prior to 1977
Silo 106 formerly Silo #3)	1,700	Fabric Filter	Prior to 1977
Silo 103 (formerly Silo #4)	1,700	Fabric Filter	Prior to 1977
Bin 113 (formerly Bin A)	1,700	Fabric Filter	Prior to 1977
Bin 112 (formerly Bin C)	1,700	Fabric Filter	1985

East Plant: Equipment with Particulate Matter Control Equipment			
East Plant Dust Sources	Exhaust (dscfm) ¹	Control Equipment	Installation Date
Bin 111 (formerly Bin D)	1,700	Fabric Filter	1985
Bin 114 (formerly Bin C & D Receiver)	800	Fabric Filter	1985
Manual Packaging dust relief	1,400	Fabric Filter	Prior to 1977
Automatic Packaging dust relief	2,700	Fabric Filter	Prior to 1977
Product Reclaim Silo (formerly 40 Mesh Unloading)	1,200	Fabric Filter	Prior to 1977 ²

¹ dscfm – dry standard cubic feet per minute.

² Agency approval was granted (#AOP-22-051) to replace Product Reclaim Silo's existing exhaust fan (900 cfm) with a new exhaust fan (1,200 cfm) and more efficient dust collection bags (from 0.02 to 0.01 gr/dscf).

Verpol Plant: Equipment with Particulate Matter Control Equipment			
Verpol Plant Dust Sources	Exhaust (dscfm)	Control Equipment	Installation Date
Spray Dryer #1	-	ESP	1978
Spray Dryer #2	-	Cyclone & ESP	1990
Flash Dryer #1	10,000	Fabric Filter	1996
Flash Dryer #2	10,000	Fabric Filter	1996
Flash Dryer #3	10,000	Fabric Filter	1998
Flash Dryer #1 product conveying	2,700	Finished Product Silo	1996
Flash Dryer #2 product conveying	2,700	Finished Product Silo	1996
Flash Dryer #3 product conveying	2,700	Finished Product Silo	1998
Surface Treater A	10,000	Fabric Filter	2006
Surface Treater B	24,400 ¹	Fabric Filter	1986
Surface Treater C	10,000	Fabric Filter	2006
Deagglomerator C	16,200	Fabric Filter	1990
Surface Treater A Product conveying	1,200	Finished Product Silo	2006
Surface Treater B Product conveying	1,200	Finished Product Silo	1986
Surface Treater C Product conveying	1,200	Finished Product Silo	2006
Deagglomerator C Product conveying	3,000	Finished Product Silo	1990
Treated bulk bag dust collector Z	3,300	Fabric Filter	1992
Treated bulk bag dust collector W, X & TS	3,300	Fabric Filter	1992
Untreated bulk bag dust collector (R & U)	3,300	Fabric Filter	1978
Tailings Conveyor System ²	NA	Filter Press	2010, 2012
Finished Product silos 1 – 8	NA ³	Fabric Filter	1978
Finished Product silos 9 – 16	NA ³	Fabric Filter	1990

- ¹ STB fan currently operates at 17,500 cfm. It is allowed to operate at a flow rate of up to 24,400 cfm and is designed for 35,000 cfm.
- ² The tailings conveyor system consists of five (5) conveyors equipped with wet suppression controls. Conveyors 1-3 installed in 2010 and 4-5 installed in 2012.
- ³ The product conveying systems deliver product to the finished product silos; the flow rate through the silos vent fabric filter dust collector is determined by the flow rate of the product conveying system. There is flexibility on which product conveying system feeds to which silos.
- ⁴ The tailings dewatering filter press manages the moisture content of the tailings as a dust suppression control.

(B) FACILITY CLASSIFICATION

The Facility is classified as a source of air contaminants pursuant to Title 10 of the *Vermont Statutes Annotated* ("10 VSA") §555 and §5-401 (3) [Electric power generation facilities], (5) [Mineral product industries, including mining, quarrying and crushing operations], (6)(a) [Fossil fuel-burning equipment], and (12) [Operations involving the handling or transferring of sand or dust producing materials] of the *Vermont Air Pollution Control Regulations* (hereinafter "*Regulations*"). In addition, §5-101 of the *Regulations* defines a *stationary source* as any structure(s), equipment, installation(s), or operation(s), or combination thereof, which emit or may emit any air contaminant, which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person or persons under common control. Based on this definition, all of the equipment, operations, and structures at the Facility are grouped together by the Agency of Natural Resources, Department of Environmental Conservation, Air Quality & Climate Division (hereinafter "Agency") as one stationary air contaminant source for purposes of review under the *Regulations*.

(C) PRIOR AGENCY ACTIONS/APPROVALS

The Facility has been issued the following "Permit to Construct" approvals pursuant to 10 VSA §556 and §§5-501 and/or 5-502 of the *Regulations* and the following "Permit to Operate" approvals pursuant to 10 VSA §556a and Subchapter X of the *Regulations*.

Prior Agency Permit Approvals and Actions	
Date of Action	Description of Agency Approval/Action
March 7, 1986	The Agency granted approval for the modification and operation of the Verpol Plant on March 7, 1986. This approval was granted pursuant to the requirements of Title 10 <i>Vermont Statutes</i> . This approval was granted pursuant to the requirements of Title 10 <i>Vermont Statutes Annotated</i> ("V.S.A.") §556 and §5-501 of the <i>Regulations</i> , and allowed the installation and operation of Surface Treater B, and associated product storage silo and bagging equipment, and an increase in production through existing Spray Dryer A (now called SD #1).
January 14, 1987	The Agency reopened the existing Air Pollution Control Permit to impose restrictions on the production rate through Surface Treater B, Spray Dryer #1, Deagglomerator A, and the Bagging Station based upon the results of compliance emission testing.

Prior Agency Permit Approvals and Actions	
Date of Action	Description of Agency Approval/Action
March 8, 1988	The Air Pollution Control Permit was amended in order to allow for the modification of Ball Mill A, reactivation of a cone crusher, the Roller Mill Feed Silo, Roller Mills A and B, and the installation and operation of a new pneumatic product conveying system.
July 27, 1990 AP-89-049	The Agency approved the modification of Facility operations to include a second spray dryer (Spray Dryer #2), Deagglomerator C, associated pneumatic product conveying equipment, two (2) Allison Model 501-KB5 combustion turbines ("CTs"), two DDC Model 4-53 turbine starting engines, and a backup diesel generator. This Air Pollution Control Permit was the first document which included the three plants operated by the Permittee as one stationary source.
July 18, 1991 AP-89-049A	The Agency granted a waiver from state imposed continuous emission monitoring system ("CEMS") requirements for NOx, CO, and Opacity originally contained in the Air Pollution Control Permit issued on July 27, 1990.
July 12, 1993 AP-89-049B	Agency approval was granted for the following minor modifications at the East Plant: (1) addition of a dust collector on Silo #1 and extension of the pneumatic conveying system feeding Silos #3 and #4 to also service Silos #1 and #2; and (2) provide the ability to convey product from the Roller Mill to either Bins A through D or the 40 Mesh Feed Silo.
March 29, 1996 AP-89-049C	The Agency approved an increase in the permitted level of distillate fuel oil usage at the East Plant (increase from 445,000 gallons annually to 600,000 gallons). As part of its application, the Permittee also requested that several pieces of process equipment at the Verpol Plant be eliminated from the Air Pollution Control Permit, because the equipment had been deactivated since July 1994. The list of deactivated process equipment included: Cone Crusher, Roller Mill Feed Silo, Roller Mills A and B, and Ball Mill A.
Sept. 13, 1996 AP-89-049D	The Agency granted approval for the installation and operation of two new flash dryer systems (FD#1 & FD#2) at the Verpol Plant.
December 2, 1997 AP-89-049E	The Agency approved the installation of a replacement boiler at the Verpol Plant, transferred approved fuel use for the Facility (i.e., 480,000 gallons per year) from the flash dryers to the boilers at the Verpol Plant, eliminated the production rate limitations on Spray Dryer #1 and Surface Treater B (based upon emission testing results at the higher production rates), and increased the allowable particulate matter emission rate from Spray Dryer #1; this was to correct the MSER determination for Spray Dryer #1 established on July 27, 1990.
Nov. 16, 1998 AOP-98-015	The Agency issued the first operating permit for the Facility in conjunction with its approval for the installation of a third flash dryer system (FD#3) and associated equipment at the Verpol Plant.

Prior Agency Permit Approvals and Actions	
Date of Action	Description of Agency Approval/Action
October 26, 1999 AOP-98-015a	The Agency approved the installation of <i>new steel product silos, replacement of the bulk baggers, new pneumatic conveyer from silos to bulk baggers, new vacuum system for cleanup of spilled product,</i> and replacement of #2 Spray Dryer burner with a larger burner to increase production. Note that the equipment identified with italics were never installed.
May 24, 2013 AP-13-010	The Agency approved the installation of a liquefied natural gas (LNG) unloading and storage system as well as dual fuel (No.2 fuel oil and natural gas) capability on fuel burning equipment, and a reduction in the fuel oil sulfur content limit from 0.3% to 0.0015%.
August 8, 2017 AOP-14-029	The Agency renewed the Title V Operating Permit and included approval of the addition of LNG as permitted in AP-13-010.
February 23, 2022 AOP-21-051	Agency approval for Title V renewal and installation of additional bulk baggers.

(D) FACILITY PERMIT APPLICABILITY

As noted above, the Facility is classified as a source of air contaminants under §5-401 of the *Regulations*. Pursuant to 10 VSA §556 and §5-501 of the *Regulations* a Permit to Construct, or an amendment to any existing Permit to Construct, must be obtained before commencing the construction, installation, modification or operation of an air contaminant source. The proposed installation of a new exhaust fan on the Product Reclaim Silo (formerly known as the 40 Mesh Unloading), as described in the Findings of Facts above, is considered a modification to the Facility under the *Regulations* and consequently a Permit to Construct must be obtained.

Pursuant to 10 VSA §556a and Subchapter X of the *Regulations* a Permit to Operate is required for any air contaminant source with allowable emissions of all air contaminants combined of ten (10) tons per year ("tpy") or more or that is otherwise subject to Title 40 *Code of Federal Regulations* ("40 CFR") Part 70.

In addition, an existing Permit to Operate must also be amended to incorporate any modifications to the Facility. The proposed changes to the Facility are considered a modification under the *Regulations* and consequently an amendment to the Permit to Operate must be obtained consistent with the requirements of Subchapter X of the *Regulations*. Allowable emissions from the Facility are estimated to be greater than the ten (10) tpy combined threshold for applicability with Subchapter X of the *Regulations*, and emissions of particulate matter (PM/PM₁₀), nitrogen oxides (NO_x), and carbon monoxide (CO), are estimated to be in excess of the one-hundred (100) tpy threshold for applicability to Title V of the federal Clean Air Act. Therefore, pursuant to §§5-1002, 5-1003, and 5-1005 of the *Regulations* the Facility is classified as a "Title V Subject Source" and must

obtain a Permit to Operate consistent with the requirements of Subchapter X of the *Regulations* and Title 40 *Code of Federal Regulations* ("40 CFR") Part 70.

In accordance with 10 VSA §556(e) the Agency has combined the previous Permit to Construct modification and the Permit to Operate modification for this Facility into one combined Permit to Construct and Operate. The Allowable Emissions for the Facility are summarized below:

Allowable Air Contaminant Emissions (tons/year) ¹					
PM/PM ₁₀ /PM _{2.5}	CO	NO _x	SO ₂	VOCs	HAPs
110.8	123	156	1.0	38	<8/20 ²

¹ PM/PM₁₀/PM_{2.5} – total particulate matter, total particulate matter of 10 micrometers in size or smaller and total particulate matter of 2.5 micrometers in size or smaller, respectively. Unless otherwise specified, all PM is assumed to be PM_{2.5}; SO₂ - sulfur dioxide; NO_x - oxides of nitrogen measured as NO₂ equivalent; CO - carbon monoxide; VOCs - volatile organic compounds; HAPs - hazardous air pollutants as defined in §112 of the federal Clean Air Act.

² Potential emissions of each individual HAPs are less than 8 tons per year and total combined HAP emissions are less than 20 tons per year.

(E) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO CONSTRUCT

(a) New Source Review Designation

The Facility, prior to the construction of the proposed modification, is designated as a major stationary source of air contaminants since it has allowable emissions of a single air contaminant of fifty (50) tons per year or greater. Consequently, any *modification* of the source that would result in a significant increase in emissions of any air contaminant, as defined in §5-101 of the *Regulations*, is designated as a major modification and is subject to review under §5-501 and §5-502 of the *Regulations*. The proposed project identified in Findings of Fact (A) above together with all previous minor modifications constructed at the Facility since July 1, 1979, and which have not been previously reviewed under §5-502 of the *Regulations*, will not result in a significant increase in emissions. Consequently, the proposed modification is designated as a non-major modification and is not subject to the requirements of §5-502 of the *Regulations*.

(b) Most Stringent Emission Rate

Pursuant to §5-502 of the *Regulations*, the owner/operator of each new major stationary source or major modification must apply control technology adequate to achieve the Most Stringent Emission Rate ("MSER") with respect to those air contaminants for which there would be a major or significant actual emissions increase, respectively, but only for those currently proposed physical or operational changes which would contribute to the increased emissions.

The proposed project is designated as a non-major modification of a stationary source and therefore is not subject to review under the MSER requirements in §5-

502 of the *Regulations*.

Prior MSER Evaluations: The Facility was previously reviewed under §5-502 of the *Regulations* for modifications to the Facility approved October 26, 1999. The following MSER determinations have been made at this Facility:

Most Stringent Emission Rate Determinations		
Date of Determination / Permit #	Pollutant	Description/Emission limit
July 27, 1990 AP-89-049	PM	<p><u>Non-metallic Mineral Processing Equipment</u> ((including: Surface Treater B, Product Silos # 9, 10, 11, 12, 13, 14, 15 and 16, bagging station, Cone Crusher, Roller Mill Feed Silo, Roller Mills A and B, Dry Ball Mill A, Deagglomerator C, Raw Product Silos, Bin C, Bin D, and Bin C & D Receiver). MSER is the use of a fabric filter collector achieving an emission limit of 0.01 gr/dscf.</p> <p><u>Spray Dryer A (now called Spray Dryer #1)</u>: MSER is the use of an electrostatic precipitator and emission limits of 0.060 lb/short ton and 1.32 lb/hr. <i>Based on additional emission data, this MSER emission rate was corrected on 12/2/1997 with the issuance of AP-89-049e. The new MSER was determined to be 0.07 lb/short ton and 1.7 lb/hr.</i></p> <p><u>Spray Dryer B (now called Spray Dryer #2)</u>: MSER is the use of two cyclones in series with an electrostatic precipitator and emission limits of 0.060 lb/short ton and 1.32 lb/hr. <i>Based on additional emission data, and an increase in the throughput (30 metric ton/hr), this MSER emission rate was changed on October 26, 1999 with the issuance of AOP-98-015a. The new MSER was determined to be 0.070 lb/short ton and 2.3 lb/hr</i></p> <p><u>Combustion Turbines (2)</u>: MSER is the use of distillate fuel oil with a maximum sulfur content of 0.3% by weight or natural gas, and an emission rate in the range of 0.03 to 0.06 lb/MMBtu and 1.5 to 3.0 lb/hr (each turbine).</p> <p><u>Diesel Starting Engines (2)</u>: MSER is the use of distillate fuel oil with a maximum sulfur content of 0.3% by weight or natural gas, and an emission rate of 0.13 lb/hr (each engine).</p> <p><u>Backup Diesel Engine Generator</u>: MSER is the use of distillate fuel oil with a maximum sulfur content of 0.3% by weight or natural gas, and an emission rate of 0.13 lb/hr.</p>

Most Stringent Emission Rate Determinations		
Date of Determination / Permit #	Pollutant	Description/Emission limit
July 27, 1990 AP-89-049	SO ₂	<p><u>Spray Dryer A & B (now called Spray Dryer #1 & #2):</u> MSER is the use of exhaust gas from the combustion turbines to dry material with limited supplemental firing of distillate oil containing a sulfur content of 0.3% by weight in each spray dryer.</p> <p><u>Combustion Turbines (2):</u> Vermont Marble Company shall convert its combustion turbines to fire primarily natural gas when a supply is available. Until such time, the Agency concludes that the use of distillate oil with a maximum sulfur content of 0.3% by weight achieves MSER. Emission limits include 0.30 lb/MMBtu and 16.3 lb/hr (each turbine).</p> <p><u>Diesel Starting Engines (2):</u> MSER is the use of distillate fuel oil with a maximum sulfur content of 0.3% by weight or natural gas, and an emission limits of 0.4 lb/MMBtu and 0.35 lb/hr (each engine)</p> <p><u>Backup Diesel Engine Generator:</u> MSER is the use of distillate fuel oil with a maximum sulfur content of 0.3% by weight or natural gas, and an emission rate of 0.4 lb/MMBtu and 0.35 lb/hr.</p>

Most Stringent Emission Rate Determinations		
Date of Determination / Permit #	Pollutant	Description/Emission limit
July 27, 1990 AP-89-049	NO _x	<p><u>Spray Dryer A & B (now called Spray Dryer #1 & #2):</u> MSER is the use of exhaust gas from the combustion turbines to dry material with limited supplemental firing of the dryer burners and an emission limit of 0.14 lb/MMBtu.</p> <p><u>Combustion Turbines (2):</u> Vermont Marble Company shall convert its combustion turbines to fire primarily natural gas when a supply is available. When firing gas, MSER will be a range of 34 to 42 ppmvd at ISO operating conditions and corrected to 15% O₂ and ISO standard day conditions and 6.8 to 9.2 lbs/hr (1-hour averages) using water injection. Until such time as a supply of gas can be arranged, the Agency concludes that the use of water injection at a water to fuel ratio of 1.0 achieves MSER when firing distillate oil.</p> <p>MSER (oil): range of 42 to 60 ppmvd at ISO operating conditions and corrected to 15% O₂ and ISO standard day conditions and 6.8 to 11.8 lbs/hr (each turbine)</p> <p>MSER (gas): range of 34 to 42 ppmvd at ISO operating conditions and corrected to 15% O₂ and ISO standard day conditions and 6.8 to 9.2 lbs/hr (each turbine)</p> <p><u>Diesel Starting Engines (2):</u> The Agency concludes that proper design, maintenance and operation of the starting engines achieves MSER.</p> <p>MSER: 4 lbs/MMBtu and 3.6 lbs/hr (each engine)</p> <p><u>Backup Diesel Engine Generator:</u> The Agency concludes that proper design, maintenance and operation of the backup diesel engine generator achieves MSER.</p> <p>MSER: 4 lbs/MMBtu and 4.3 lbs/hr</p>

Most Stringent Emission Rate Determinations		
Date of Determination / Permit #	Pollutant	Description/Emission limit
July 27, 1990 AP-89-049	CO	<p><u>Spray Dryer A & B (now called Spray Dryer #1 & #2):</u> MSER is the use of exhaust gas from the combustion turbines to dry material with limited supplemental firing of the dryer burners and an emission limit of 0.04 lb/MMBtu.</p> <p><u>Combustion Turbines (2):</u> Vermont Marble Company shall convert its combustion turbines to fire primarily natural gas when a supply is available. When firing gas, MSER will be a range of 26 to 36 ppmvd at ISO operating conditions and 3.2 to 4.4 lbs/hr (1-hour averages) based on the optimization of NOx reduction using water injection but minimizing CO formation. Until such time as a supply of gas can be arranged, the Agency concludes that MSER is a range of 60 to 83 ppmvd at ISO operating conditions and corrected to 15% O2 and ISO standard day conditions and 7.6 to 10.5 lbs/hr (1-hour averages) based on the optimization of NOx reduction using water injection, but minimizing CO formation.</p> <p>MSER (oil): range of 60 to 83 ppmvd at ISO operating conditions and corrected to 15% O2 and ISO standard day conditions and 7.6 to 10.5 lbs/hr</p> <p>MSER (gas): range of 26 to 36 ppmvd at ISO operating conditions and corrected to 15% O2 and ISO standard day conditions and 3.2 to 4.4 lbs/hr</p> <p><u>Diesel Starting Engines (2):</u> The Agency concludes that proper design, maintenance and operation of the starting engines achieves MSER.</p> <p>MSER: 1.4 lbs/MMBtu and 1.3 lbs/hr (each engine)</p> <p><u>Backup Diesel Engine Generator:</u> The Agency concludes that proper design, maintenance and operation of the backup diesel engine generator achieves MSER.</p> <p>MSER: 8 lbs/MMBtu and 8.3 lbs/hr</p>

Most Stringent Emission Rate Determinations		
Date of Determination / Permit #	Pollutant	Description/Emission limit
October 26, 1999 AOP-98-015a	PM	<p>MSER was established as the application of a fabric filter achieving an emission concentration of 0.01 grains per dry standard cubic foot (gr/dscf) of undiluted exhaust air from the following equipment processing dry calcium carbonate product at the Verpol Plant:</p> <ul style="list-style-type: none"> • Flash Dryers #1, #2, and #3 and their associated product conveying systems; • New steel storage silos; • Bulk bagging stations/silos; • House vacuum system; • New product transfer conveyor; • Rotopackers, and • Spray dryer #2 (the limit is expressed as 0.070 lb/short ton). <p>MSER for Boiler #2 (24 MMBtu/hr) is the use of low sulfur distillate oil (0.3% sulfur content) and proper operation and maintenance of the boiler achieving an emission limit of 0.35 lb/MMBtu of heat input.</p>

(c) Ambient Air Quality Impact Evaluation

An ambient air quality impact evaluation is performed to demonstrate whether or not a proposed project will cause or contribute to violations of the ambient air quality standards and/or significantly deteriorate existing air quality.

Based on the level of emissions from recent changes noted in Findings of Fact section (A), this Facility is not expected to cause or contribute to a violation of any ambient air quality standard or significantly deteriorate air quality. Therefore, an air quality impact evaluation was not required by the Agency.

Prior Air Quality Impact Evaluations:

The Permittee performed an air quality impact evaluation in 1990 in support of its proposal to construct a combustion turbine project and add a second spray dryer. This AQIE included PM₁₀, NO₂, and SO₂.

The plant expansion permitted in 1998 required another air quality impact evaluation for PM₁₀ and NO₂.

The results of these AQIEs are summarized in the Technical Support Document for this Permit.

(F) REVIEW OF CRITERIA POLLUTANT EMISSIONS FOR THE PERMIT TO OPERATE

(a) Applicable Requirements

The operations at the Facility are subject to the following state and federal laws and regulations, the requirements of which are embodied in the conditions of this Permit.

(i) *Vermont Air Pollution Control Regulations:*

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-201 – Prohibition of Open Burning
Section 5-211(1) - Prohibition of Visible Air Contaminants, Installations Constructed Prior to April 30, 1970.
Section 5-211(2) - Prohibition of Visible Air Contaminants, Installations Constructed Subsequent to April 30, 1970.
Section 5-221(1) - Prohibition of Potentially Polluting Materials in Fuel, Sulfur Limitation in Fuel.
Section 5-231(1) - Prohibition of Particulate Matter; Industrial Process Emissions.
§5-231(3)(a)(i) - Prohibition of Particulate Matter; Combustion Contaminants.
§5-231(3)(a)(ii) - Prohibition of Particulate Matter; Combustion Contaminants.
Section 5-231(4) - Prohibition of Particulate Matter; Fugitive Particulate Matter.
Section 5-241 – Prohibition of Nuisance and Odor.
Section 5-253.14 - Control of Volatile Organic Compounds from Solvent Metal Cleaning.
Section 5-253.17 – Industrial Cleaning Solvents.
Section 5-261(2) – Control of Hazardous Air Contaminants - Hazardous Most Stringent Emission Rate.
Section 5-271 – Control of Air Contaminants from Stationary Reciprocating Internal Combustion Engines.
Section 5-402 – Written Reports When Requested.
Section 5-403 – Circumvention.
Section 5-404 – Methods for Sampling and Testing of Sources.
Section 5-405 – Required Air Monitoring.
Section 5-406 – Required Air Modeling.
Section 5-407 – Prevention of Air Contaminant Emissions.
Section 5-408 – Change in Ownership or Operational Control.

Applicable Requirements from the Vermont Air Pollution Control Regulations
Section 5-409 – False or Misleading Information.
§5-502(3) – Most Stringent Emission Rate (MSER).
Subchapter VIII – Registration of Air Contaminant Sources.
Subchapter X – Operating Permits.

(ii) Reasonably Available Control Technology - §5-1010 of the *Regulations*

Pursuant to 10 VSA §556a(d) and §5-1010 of the *Regulations* the Agency may establish and include within any Permit to Operate emission control requirements based on Reasonably Available Control Technology ("RACT"). Based on the Facility’s existing levels of emissions and emission controls, the Agency has not imposed any further requirements on this Facility under this authority at this time.

(iii) Existing Air Pollution Control Permit to Construct and/or Operate

The Facility currently operates under the confines of a Permit to Construct and Operate issued on February 23, 2022 (#AOP-21-043). The conditions within that existing permit are considered applicable requirements pursuant to §5-1002 of the *Regulations*. The requirements of that permit which are not being modified herein are incorporated into this new combined Permit to Construct and Operate (#AOP-22-051).

(iv) Federal Requirements:

Applicable Requirements from Federal Regulations and the Clean Air Act
40 <i>CFR</i> Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial- Institutional Steam Generating Units. Applies to all boilers with a heat input rating of 10 MMBTU/hr or greater manufactured or modified after June 9, 1989. Units larger than 30 MMBTU per hour installed after February 27, 2005 are subject to additional particulate matter requirements. <i>Both Verpol Boiler #1 (19.7 MMBtu/hr) and Verpol Boiler #2 (24 MMBtu/hr) are subject to this regulation.</i>
40 <i>CFR</i> Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers. Applies to new and existing fuel oil and solid fuel fired boilers located at area sources (major sources are subject to Subpart DDDDD). Natural gas or LPG fired boilers are not subject. The natural gas and LPG exemption allows use of backup fuel during periods of gas curtailment, gas supply emergencies, and for periodic testing not to exceed 48 hours combined during any calendar year. Oil fired hot water boilers less than 1.6 MMBTU/hr are not subject. The rule requires a tune-up for each boiler once every two years, except

**Applicable Requirements from
Federal Regulations and the Clean Air Act**

boilers with oxygen trim and oil boilers less than 5 MMBTU/hr may conduct tune-ups every five years. Existing facilities with any single boiler greater than 10 MMBTU/hr were required to conduct a site wide energy assessment audit to identify potential heat use efficiencies. New boilers greater than 10 MMBTU/hr are subject to PM emission limits. Boilers that commenced construction on or before June 4, 2010 are considered an existing source. New or reconstructed boilers that commenced construction or reconstruction on or before September 14, 2016, when demonstrating initial compliance with the PM emission limit must conduct a performance stack test in accordance with §63.11212 and Table 4 of this Subpart. These units must retest every three years if greater than 50% of the applicable PM standard, or every five years if less than 50% of the standard. An initial performance test must be conducted by September 14, 2021. New or reconstructed oil-fired boilers that commenced construction on or before September 14, 2016 that combust only oil that contains no more than 0.50 weight percent sulfur are not subject to the PM emission limit in Table 1 of this Subpart until September 14, 2019, provided that the Facility monitors and records on a monthly basis the type of fuel combusted. Boilers that combust only oil that contains no more than 0.0015 weight percent sulfur are not subject to the PM emission limit in Table 1.

The three (3) boilers at the Facility are subject to this regulation because they are permitted to fire No.2 fuel oil.

40 CFR Subpart GG - Stationary Gas Turbines. Applies to all stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired for which construction, modification, or reconstruction is commenced after October 3, 1977.

This regulation applies to the Facility's two (2) combustion turbines.

40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Applies to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station for which construction, modification, or reconstruction is commenced after August 31, 1983. Also applies to crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin. Does not apply to wet processing plants; Fixed sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 23 megagrams per hour (25 tons per hour) or less; Portable sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 136 megagrams per hour (150 tons per hour) or less; and Common clay plants and pumice plants with capacities, as defined in § 60.671, of 9 megagrams per hour (10 tons per hour) or less. This regulation establishes particulate matter and/or visible emission limitations on affected facilities. Units manufactured after April 22, 2008 are subject to more stringent limitations.

The Facility has equipment subject to both the 1983 and 2008 regulation. The Permit herein requires the Facility to develop and maintain a list of all equipment at the Facility of the type regulated under NSPS OOO and its specifications, including its date of manufacture and its applicability under this regulation.

The Agency has previously determined that the following equipment is not subject to this Subpart.

East Plant: 40 Mesh Unloading Silo, Flash Dryer #5 w/ product conveying, Flash Dryer

Applicable Requirements from Federal Regulations and the Clean Air Act
<p>#4, Product Silos 103, 106, 110 and 120, Bin 113 and, Manual and Automatic Packaging.</p> <p><i>Verpol Plant: Spray Dryer #1, Spray Dryer #2, Surface Treaters A and C (formerly Deagglomerator A and B) with product conveying Finished Product Silos #1 through #8, bulk truck/railcar load-out, and bulk bagging system.</i></p>
<p>40 CFR Part 60, Subpart UUU - Standards of Performance for Calciners and Dryers in Mineral Industries. Applies to calciners and dryers at mineral processing plants. Feed and product conveyors are not considered part of the affected facility. The owner or operator of any facility that commences construction, modification, or reconstruction after April 23, 1986, is subject to the requirements of this subpart.</p> <p>As defined in 40 CFR §60.731: <i>Mineral processing plant</i> means any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.</p> <p><i>Since Limestone is not a listed mineral, Subpart UUU does not apply to the Facility.</i></p>
<p>40 CFR Part 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. Applies to new spark ignition engines installed after June 12, 2006. Engines greater than 100 bhp firing landfill or digester gas must meet emission limits for NO_x, CO and VOC and, for units 500 bhp and less, shall have a one-time compliance test and, for units greater than 500 bhp, shall have a compliance test at least once every 8.760 hours of operation or every 3 years, whichever occurs first.</p> <p><i>Subpart JJJJ applies to Facility's Generac SD030 Propane 30 KW generator.</i></p>
<p>40 CFR Part 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE). Applies to stationary CI RICE model year 2007 and later as well as those ordered after July 11, 2005 and with an engine manufacture date after April 1, 2006. Also applies to stationary CI RICE that are modified or reconstructed after July 11, 2005. This regulation requires engine manufacturers to certify that subject engines, with limited exceptions, comply with applicable Tier rating emission standards as established for non-road engines under 40 CFR Part 89 and/or 1039. Also requires engine operators to maintain and operate the engine according to the manufacturer's written recommendations for the life of the engine and also limits fuel usage to diesel fuel with a maximum sulfur content of 15 ppm (ULSD).</p> <p><i>Subpart IIII applies to the following diesel engines located at the Facility:</i></p> <p><i>Tailings Dewatering Facility (TDF) CAT D175-2 Diesel 234 hp - 2008</i> <i>Patterson Fire Pump, Diesel 144 hp (128.9 bhp) 4.5 L/ cylinder - 2011</i></p>
<p>40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. Applies to <u>new</u> engines that commenced construction (installed) on or after June 12, 2006 at area sources of HAPs. Requires such engines to comply with NSPS Subpart IIII or JJJJ, as applicable. Also applies to <u>existing</u> engines that commenced construction (installed) prior to June 12, 2006 at area sources of HAPs. By May 3, 2013 requires non-emergency engines equal and greater than 300 bhp to meet CO emission standards, which may necessitate</p>

**Applicable Requirements from
Federal Regulations and the Clean Air Act**

catalytic controls, and must install closed crankcase ventilation system or equivalent. Non-emergency engines <300 bhp must meet maintenance requirements including changing oil & filter and inspecting, and replacing if necessary, air filter, hoses and belts. Emergency units are subject to maintenance requirements and must install an elapsed hour meter and report electronically to EPA. Does not apply to existing emergency units at an area source residential/commercial/institutional facility unless they are enrolled in peak shaving or demand response (DR) programs. Emergency engines are unrestricted for actual emergency operation but restricted to 100 hours per year of testing and maintenance, of which 50 hours may be local DR (no qualifying programs currently known to exist) and 50 hours may be for non-compensated non-emergency operation. Most utility programs do not qualify as allowed emergency engine operation. 4Z ULSD requirements vary, however state regulations mandate ULSD across the board. For engines firing landfill or digester gas comprising 10% or more of the heat input, the engines are subject to management practices only (change oil & filter, inspect plugs, and inspect hoses and belts every 1440 hours or annually, whichever occurs first) as well as operating in accordance with manufacturer's recommendations and minimizing time at idle.

Subpart ZZZZ applies to the following stationary reciprocating internal combustion engines at the Facility:

*East Plant GM 37IRC Diesel 80 hp - 1958
Cogen Plant Diesel Engine #1 (136 hp). Detroit Diesel Corp. Model 4-53 - 1992
Cogen Plant Diesel Engine #2 (136 hp). Detroit Diesel Corp. Model 4-53 - 1992
Cogen Plant Diesel Genset (145 hp). Detroit Diesel Corp. Model 4-71 – 1992
Aurora Fire Pump, Diesel 116 bhp, 6.6L/cylinder - 2002
Tailings Dewatering Facility (TDF) CAT D175-2 Diesel 234 hp - 2008
Patterson Fire Pump, Diesel 144 hp (128.9 bhp) 4.5 L/ cylinder - 2011
LNG Facility Generac SD030 LPG 30 KW – 2013*

Clean Air Act §§114(a)(3) Inspections, Monitoring and Entry; 502(b) Permit Programs; and 504(a)-(c) Permit Requirements and Conditions; 40 **CFR Part 64** Compliance Assurance Monitoring; 40 **CFR** Part 70 §§70.6(a)(3)(i)(B) and 70.6(c)(1) State Operating Permit Programs - Permit content. Upon renewal of a Title V Permit to Operate, a facility must comply with enhanced monitoring and compliance assurance monitoring requirements if applicable. the CAM rule applies to each Pollutant Specific Emission Unit (PSEU) at a major source that is required to obtain a part 70 or part 71 permit if the unit satisfies all of the following criteria: **1)** The unit is subject to an emission limitation or standard for the applicable regulated air pollutant other than an emissions limitation or standard that is exempt under §64.2(b)(1) [exempt limitations include emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Act], **2)** The unit uses a control device to achieve compliance with any such limit or standard; and **3)** The unit has pre-control device emissions of the applicable regulated pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

The Compliance Assurance Monitoring requirements do not apply to this Facility since all of the potentially affected bag house dust collectors are installed and operated as product recovery devices.

Clean Air Act §112r Prevention of Accidental Release; 40 **CFR Part 68** Chemical Accident Prevention Programs. Facilities that have more than the threshold quantity of a regulated substance in a process are subject to these provisions including the requirements to conduct a hazard assessment, establish a prevention program and

Applicable Requirements from Federal Regulations and the Clean Air Act
<p>develop a risk management plan.</p> <p><i>The Permittee has stated that the Facility does not have more than the threshold quantity of a regulated substance and thus is not subject to these requirements.</i></p>
<p>Clean Air Act §608 National recycling and emission reduction program; 40 CFR Part 82, Protection of Stratospheric Ozone, Subpart F – Recycling and Emissions Reductions. These requirements are applicable to any facility that owns, services, maintains, repairs, and disposes of appliances containing ozone depleting substances. Requirements of the regulation include, but are not limited to:</p> <p>(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR Part 82, Subpart F §82.156.</p> <p>(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment as specified in 40 CFR Part 82, Subpart F §82.158.</p> <p>(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program as specified in 40 CFR Part 82, Subpart F §82.161.</p> <p>(d) Commercial or industrial process refrigeration equipment must comply with the leak repair requirements specified in 40 CFR Part 82, Subpart F §82.156.</p> <p>(e) For each appliance normally containing fifty (50) or more pounds of refrigerant, the Permittee shall keep records of refrigerant purchased and added to such appliances as specified in 40 CFR Part 82, Subpart F §82.166.</p> <p><i>The Facility has subject equipment or operations and is subject to this regulation.</i></p>
<p>40 CFR Part 98 Mandatory Greenhouse Gas Reporting. Requires reporting of GHG emissions annually to EPA for 1) facilities in source categories listed in §98.2(a)(1) including electric utility units subject to Acid Rain, MSW landfills that generate CH₄ in amounts equivalent to 25,000 metric tons of CO₂e or more per year and electrical transmission and distribution equipment at facilities where the total nameplate capacity of SF₆ and PFC containing equipment exceeds 17,820 pounds, 2) facilities in source categories listed in §98.2(a)(2) including electronics manufacturing, iron and steel production and pulp and paper manufacturing that emit 25,000 metric tons of CO₂e or more per year from such source categories as well as all stationary combustion, 3) facilities with stationary combustion sources that aggregate to 30 MMBTU/hr or more and which emit 25,000 metric tons of CO₂e or more per year from all stationary combustion sources combined, and 4) fuel suppliers including all local natural gas distribution companies.</p> <p><i>The U.S. EPA has retained the implementing authority for this regulation and is responsible for determining applicability. This regulation under Part 98 is not considered to be an applicable requirement per 40 CFR Part 70.2 and as noted in 74 FR 56260 (October 30, 2009). Part 98 is anticipated to apply to the Facility.</i></p>
<p>40 CFR Part 72 Acid Rain Program.</p> <p><i>The U.S. EPA determined on September 18, 1996 that Units 1 and 2 are not affected units under the Acid Rain Program. This determination was based on the following: (1) Since some of the heat used to produce electricity is then used to dry the ground marble, the use of the energy is “sequential” as that term is applied in the definition of “cogeneration unit” in 40 CFR 72.2. Thus Units 1 and 2 are cogeneration units. (2) Under 40 CFR 72.6(b)(4)(ii), a cogeneration unit for which construction commenced after</i></p>

**Applicable Requirements from
Federal Regulations and the Clean Air Act**

November 15, 1990 that supplies an annual average of no more than 219,000 MWe-hours of actual electricity or no more than one-third of its potential electrical output capacity to a utility power distribution system on an annual basis is not considered a utility unit and is therefore not considered an affected unit under the Acid Rain Program. Construction commenced on Units 1 and 2 during June 1991. Units 1 and 2 are each rated at 3.8 MWe and their maximum annual potential electric output is 33,288 MWe-hours each. This is well below the 219,000 MWe-hour threshold. The Facility is not subject.

(b) Non-Applicable Requirements

Pursuant to §5-1015(a)(14) of the *Regulations*, an owner or operator of a Facility may request a permit shield from specific state or federally enforceable regulations and standards which are not applicable to the source. The applicant has not requested such a permit shield in accordance with the requirements of §5-1015(a)(14) of the *Regulations*.

(c) Enforceability

This section delineates which permit conditions are federally enforceable and which conditions are state only enforceable. All federal enforceable conditions are subject to federal citizen suit provisions. All conditions of this Permit are enforceable by both state and federal authorities.

(d) Compliance Certification

The Permittee is required by this Permit to certify compliance as part of its annual registration with the Agency pursuant to the requirements of Subchapter X of the *Regulations*. Additionally, this Permit requires the submission of semi-annual reports of monitoring records used to demonstrate compliance with the limitations contained in this Permit.

(G) CONTROL OF HAZARDOUS AIR CONTAMINANTS

Pursuant to §5-261 of the *Regulations*, any stationary source subject to the rule¹ with current or proposed actual emissions of a hazardous air contaminant (HAC) equal to or greater than the respective Action Level (found in Appendix C of the *Regulations*) shall be subject to the Regulation and shall achieve the Hazardous Most Stringent Emission Rate (HMSEER) for the respective HAC. HMSEER is defined as a rate of emissions which the Secretary, on a case-by-case basis, determines is achievable for a stationary source based on the lowest emission rate achieved in practice by such a category of source and considering economic impact and cost. HMSEER may be achieved through application of

¹ APCR §5-261(1)(c)(ii) provides that solid fuel burning equipment (not including incinerators) installed or constructed prior to January 1, 1993, and all fuel burning equipment which combust virgin liquid or gaseous fuel shall not be subject to the requirements of §5-261 of the *Regulations*.

pollution control equipment, production processes or techniques, equipment design, work practices, chemical substitution, or innovative pollution control techniques.

The Agency has determined that the Facility has or proposes to have emissions of crystalline silica, acetaldehyde, acrolein, formaldehyde, and benzene in excess of their respective Action Levels. Therefore, the Facility must achieve HMSER, as determined by the Secretary, pursuant to §5-261(2) of the *Regulations*.

The Agency has determined HMSER for the hazardous air contaminant, crystalline silica, as 0.009 pounds per hour. HMSER shall be achieved through the application of fabric filter collectors or electrostatic precipitators achieving the PM/PM₁₀ emission limitations identified in this Permit.

The Agency has determined HMSER for the hazardous air contaminants acetaldehyde, acrolein, formaldehyde and benzene to be maintaining the outlet temperature of each of the surface treaters at the Facility (Surface Treater A, Surface Treater B, Surface Treater C, and Flash Dryer #4) at or below the temperature of 121°C which is anticipated to minimize the formation of these compounds.

These HMSER evaluations shall be subject to re-evaluation five (5) years from the date of its determination and shall remain in effect until revised by the Agency, unless the source is modified or reconstructed during the five-year period. These and prior HMSER determinations for this Facility are presented below.

Hazardous Most Stringent Emission Rate Determinations		
Date of Determination/ Permit #	Pollutant (CAS #)	Description/Emission limit
#AOP-89-015 Reestablished #AOP-14-029 Reestablished #AOP-21-043	crystalline silica (14808-60-7)	HMSER shall be achieved through the application of fabric filter collectors or electrostatic precipitators achieving the PM/PM ₁₀ emission limitations identified in this Permit.
#AOP-14-029 Reestablished #AOP-21-043	acetaldehyde (75-07-7), acrolein (107-02-8), formaldehyde (50-00-0), benzene (71-43-2)	HMSER is achieved by only introducing stearic acid to a separate processing unit (i.e. 'surface treater') which does not use fuel combustion for product drying. In addition, the outlet temperature from each of the following processes shall be limited to a maximum temperature of 121 °C: Surface Treater A, Surface Treater B, Surface Treater C, and Flash Dryer #4 (which is a surface treater).

As the Agency has determined that the Facility, following imposition of HMSER as noted above, may continue to have estimated emissions of crystalline silica, acetaldehyde, acrolein, formaldehyde, benzene in excess of their respective Action Level, the Agency has considered whether or not an Air Quality Impact Evaluation (AQIE) should be required

pursuant to §5-261(3) of the *Regulations*.

For crystalline silica, the Agency has reviewed several factors relating to this Facility, including, but not limited to those listed in §5-261(3)(a)-(c) of the *Regulations* and the level of emissions and emission reduction measures typical for this category of emission source. Based on this review, the Agency is not requiring the Facility to conduct an air quality impact evaluation pursuant to §5-261(3) of the *Regulations* for crystalline silica at this time.

In 2007, the Permittee conducted an AQIE for acetaldehyde, acrolein, formaldehyde, and benzene. The results of this AQIE are summarized in the Technical Support Document for this permit. The predicted offsite impacts were found to be lower than the Hazardous Ambient Air Standard for the respective pollutants.

(H) EQUIVALENCY DETERMINATIONS

Particulate Matter Emission Standards:

The federal standard for non-metallic mineral processing plants specifies a limit of 0.05 grams per dry standard cubic meter [equivalent to 0.022 grains per dry standard cubic foot (gr/dscf)] for affected facilities equipped with fabric filter collectors. Due to major modification applicability in 1990, the Agency has specified an emission limit of 0.01 gr/dscf for the affected facilities as part of achieving the Most Stringent Emission Rate (MSER). The emission concentrations specified by MSER are more stringent and therefore overrule the federal emission standards in 40 CFR Part 60 Subpart OOO for the affected equipment at the Facility. Additionally, the same equipment is subject to a PM emission limit in §5-231(1)(a) and Table 1 of the *Regulations*. The requirements of §5-231(1)(a) and Table 1 of the *Regulations* are also less stringent than MSER and are also overruled by the MSER concentration of 0.01 gr/dscf.

Sulfur Dioxide Emission Standards:

The federal standard for SO₂ specified in 40 *CFR* Part 60 Subpart GG is subsumed by the sulfur in fuel restrictions specified for the Cogeneration Plant as part of achieving MSER. The Permittee has proposed to burn only natural gas or ultra-low sulfur diesel with a sulfur content less than 15 ppm (0.0015%) by weight. This is more stringent than the federal limit of 0.8 % by wt. and 150 ppmvd corrected to 15% O₂ at ISO conditions.

Nitrogen Oxides Emission Standards:

The federal standard for NO_x specified in 40 *CFR* Part 60 Subpart GG is subsumed by the NO_x limit specified for the Cogeneration Plant as part of achieving MSER. The combustion turbines may not emit NO_x in excess of 60 ppmvd corrected to 15% O₂ and ISO conditions, which is more stringent than the federal limit of 176 ppmvd corrected to 15% O₂ and ISO conditions.

Based on the Agency's review of the Facility's application and the above Findings of Fact, the Agency concludes that the Facility, subject to the following Permit conditions, complies with all applicable state and federal air pollution control laws and regulations or is subject to an acceptable schedule of compliance. Therefore, pursuant to 10 VSA §§556 and 556a, as amended, the Agency hereby issues a Permit approving the Facility, as described in the above Findings of Fact, subject to the following:

PERMIT CONDITIONS

NOTE: The conditions of this Permit are divided into four sections: conditions applicable to the Verpol Plant; conditions applicable to the East Plant; conditions applicable to the Cogeneration Plant; and site-wide conditions applicable to all three plants.

Verpol Plant - Construction and Equipment Specifications -

- (1) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-409 and 5-501(1) of the *Regulations*]

- (2) Spray Dryer #1 will be equipped with a dual fuel burner, capable of combusting natural gas and/or ULSD and shall have the following specifications:
 - (a) System feed rate: 30 metric tons per hour of ground limestone slurry on a dry weight basis
 - (b) Maximum heat input: 45 MMBtu/hr.
 - (c) Spray Dryer #1 shall be equipped with an ESP.
 - (d) Product collected by the ESP shall be conveyed to Surface Treater B.

[10 V.S.A. §§556(c) and 556a(d)] [AP-13-010]

- (3) Spray Dryer #2 will be equipped with a dual fuel burner, capable of combusting natural gas and/or ULSD, and shall have the following specifications:
 - (a) System Design Feed Rate: 30 metric tons per hour of ground limestone slurry on a dry weight basis
 - (b) Maximum Heat Input: 45 MMBtu/hr.
 - (c) Spray Dryer #2 shall be equipped with two cyclone precollectors in series with an ESP
 - (d) Product material collected by the ESP shall be conveyed to Deagglomerator C.

[10 V.S.A. §§556(c) and 556a(d)] [Application for AOP-14-029]

- (4) Deagglomerator C shall have a maximum design processing rate of up to twenty-five (25) metric tons per hour. Remaining entrained particulate matter shall be controlled with a cyclone followed by a fabric filter collector. [10 V.S.A. §§556(c) and 556a(d)] [Application for AP-89-049]

- (5) The product conveying systems installed and operated by Permittee shall transport product to silos 1 through 16 at the Verpol Plant. Each silo served by a product conveying system shall be equipped with a fabric filter collector. [10 V.S.A. §556(c)] [Application for AOP-98-015]
- (6) Flash Dryer System #1 and Flash Dryer System #2: Product from each flash dryer system shall be collected with a fabric filter collector. Each fabric filter shall be operated and maintained in accordance with the recommendations of the equipment manufacturer. Permittee shall install and operate monitoring devices designed to alert the operator of potential exceedances of the particulate matter emission limits as specified in Condition (14) of this Permit on each fabric filter installed as part of the flash dryer systems. The particulate matter monitoring devices shall be designed to detect fabric filter leaks or broken bags and shall provide either a visual or audible alert to the operator in the event of total or partial failure of the air pollution control system. [10 V.S.A. §§556(c) and 556a(d)]
- (7) Flash Dryer System #3: Product from the Flash Dryer #3 system shall be collected with a fabric filter collector. The fabric filter shall be operated and maintained in accordance with the recommendations of the equipment manufacturer. Permittee shall install and operate a monitoring device designed to alert the operator of potential exceedances of the particulate matter emission limits as specified in Condition (14) of this Permit on the fabric filter serving the flash dryer system. The particulate matter monitoring device shall be designed to detect fabric filter leaks or broken bags and shall provide either a visual or audible alert to the operator in the event of total or partial failure of the air pollution control system. [10 V.S.A. §§556(c) and 556a(d)]
- (8) In addition to the dust collectors identified in the Conditions of this Permit, the Permittee shall equip each of the sources of particulate matter ("PM") emissions listed below with a bag leak detection system sensors or equivalent system(s) approved by the Agency in writing. All monitoring devices at the Verpol Plant shall be maintained in good working order and shall be operated whenever their respective production equipment is in operation.

Broken Bag Sensors Installed on Fabric Filters	
Bag House	Broken bag detector
Surface Treater A	Auburn Triboguard II Model 4002
Surface Treater B	Auburn Triboguard II Model 4002
Surface Treater C	Auburn Triboguard II Model 4002
Deagglomerator C	Auburn Triboguard II Model 4002
Product Silos (1 – 16)	Tribo U3800 (on each silo fabric filter)
Treated bulk bag dust collector	Armac
Untreated bulk bag dust collector	Armac
Flash Dryer #1	Auburn Triboguard II Model 4002
Flash Dryer #2	Auburn Triboguard II Model 4002

Broken Bag Sensors Installed on Fabric Filters	
Bag House	Broken bag detector
Flash Dryer #3	Auburn Triboguard II Model 4002

[10 V.S.A. §§556(c) and 556a(d)]

- (9) **Stack heights:** The exhaust gases from the following Verpol Plant emission sources shall be vented through stacks as shown in the table below. These stack specifications were used in the Air Quality Impact Evaluation that was part of the application for permit AOP-98-015a. The Permittee shall, at the request of the Agency, increase the stack height of any respective stack if, in the judgment of the Agency based on inspections of the actual operations at the Facility, proper or adequate dispersion cannot be maintained at the current stack height. Any new stacks or modifications to existing stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. For the stacks listed below, the Permittee may replace any existing horizontal exhaust stack with a vertical stack of the same, or higher discharge elevation without requesting prior approval by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-406(1) of the *Regulations*]

Verpol Plant: Stack Specifications			
Verpol Plant Sources	Stack Height Above Base (ft)	Stack Diameter (ft)	Discharge Direction
Boiler #1 & Boiler #2 (shared stack)	87.3	2.58	vertical
Spray Dryer #1	87.3	4.05	vertical
Spray Dryer #2	109.8	4.12	vertical
Flash Dryer #1	109.8	2.58	vertical
Flash Dryer #2	109.8	2.58	vertical
Flash Dryer #3	109.8	2.58	vertical
FD#1 Prod. Conveying	106.5	0.667	horizontal
FD#2 Prod. Conveying	106.5	0.667	horizontal
FD#3 Prod. Conveying	106.5	0.667	horizontal
Surface Treater A	110.8	2.63	vertical
Surface Treater C	110.8	2.63	vertical
Surface Treater A Product Conveying	106.5	0.667	horizontal
Surface Treater C Product Conveying	106.5	0.667	horizontal
Surface Treater B	110.8	3.46	vertical
Deagglomerator. C	109.8	3.08	vertical
Surface Treater B Product conveying	106.5	0.667	horizontal
Deagglomerator C Product conveying	106.5	0.667	horizontal

Verpol Plant: Stack Specifications			
Verpol Plant Sources	Stack Height Above Base (ft)	Stack Diameter (ft)	Discharge Direction
Treated Bulk Bag Dust Collector (Z, W, X & TS)	44.9	0.83	Rain cap
Untreated Bulk Bag Dust Collector (R & U)	110	1.67	Rain cap

**- Verpol Plant -
- Operational Limitations -**

- (10) Verpol Plant: Fuel Limits: The total heat input to the Verpol Plant shall not exceed the following limits. Each limit is based on any rolling twelve (12) consecutive calendar month period.
- (a) Total fuel consumption for dryers: 770,000 MMBtu/yr
 - (b) Total fuel consumption for boilers: 95,200 MMBtu/yr

The combined annual heat input shall be calculated according to the following methodology:

Heat Input (MMBTU per 12 months) = (total natural gas standard cubic feet per 12 months) * (HHV natural gas) + (total distillate fuel oil gallons per 12 months) * (HHV distillate oil)

Where:

HHV natural gas = 0.00102 MMBtu/standard cubic foot

HHV distillate oil (No.2, diesel) = 0.14 MMBtu/gallon

Each dryer and boiler shall be equipped with and use fuel flow meters for both natural gas and No.2 fuel oil for the purposes of monitoring compliance with the above limitations.

With Agency approval, the Permittee may use an alternative HHV for natural gas if the Permittee provides written contractual or delivery certifications to the Agency that the natural gas used at the Facility has a different HHV than shown above. [10 V.S.A. §556(c) and 556a(d)] [§5-501(1) of the *Regulations*] [Application for #AP-13-010]

- (11) When the combustion turbines are in operation, the fuel firing rate in Spray Dryer #1 and Spray Dryer #2 shall not exceed 8.7 MMBtu/hr and 23.7 MMBtu/hr, respectively. [10 V.S.A. §§556(c) and 556a(d)]
- (12) The Permittee shall not make changes to the additives used in any process, where such changes may adversely affect the collection efficiency of the ESPs or fabric filters. [10 V.S.A. §§556(c) and 556a(d)]

- (13) Surface Treaters: The Permittee shall not combust any fuel in Surface Treater A, Surface Treater B, or Surface Treater C. The Permittee shall control the operation of Surface Treater A, Surface Treater B, and Surface Treater C such that the outlet temperatures from each of these processes do not exceed 121°C. Compliance with these temperature limits shall be based on an hourly average. [10 V.S.A. §§556(c) and 556a(d)] [§§ 5-261 and 5-1015(a)(3) and (4) of the *Regulations*]

**- Verpol Plant -
- Emission Limitations -**

- (14) The PM emission concentration from each fabric filter at the Verpol Plant shall not exceed the emission rates specified in the table below:

Verpol Plant: Particulate Matter Emission Limitations		
Unit	gr/dscf ¹	lbs/hour ²
Surface Treater A	0.01	0.86
Surface Treater A - Product Conveying System	0.01	0.10
Surface Treater B	0.01	2.1
Surface Treater B - Product Conveying System	0.01	0.10
Surface Treater C	0.01	0.86
Surface Treater C - Product Conveying System	0.01	0.10
Deagglomerator C	0.01	1.39
Deagglomerator C - Product Conveying System	0.01	0.26
Flash Dryer #1 System	0.01	0.86
Flash Dryer #1 - Product Conveying System	0.01	0.23
Flash Dryer #2 System	0.01	0.86
Flash Dryer #2 - Product Conveying System	0.01	0.23
Flash Dryer #3 System	0.01	0.86
Flash Dryer #3 - Product Conveying System	0.01	0.23
Product Silo Transfer Conveying System	0.01	0.23
Treated Bulk Bag Dust Collector (Z, W, X & TS)	0.01	0.28
Untreated Bulk Bag Dust Collector (R & U)	0.01	0.28

¹ gr/dscf = grains of particulate matter per dry standard cubic foot of undiluted exhaust.

² lbs/hr = pounds of particulate matter per hour.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(1)(b) and 5-404 of the *Regulations*]

- (15) The PM emission rate from the ESP servicing Spray Dryer #1 and the ESP servicing Spray Dryer #2 shall not exceed the PM emission rates shown in the table below:

Verpol Plant: Particulate Matter Emission Limitations		
Unit	Emission Limitations	
	lbs / short ton of total solids entering the spray dryer	lbs/hour ¹
Spray Dryer #1 – ESP	0.07	1.7
Spray Dryer #2 – ESP	0.070	2.3

¹ lbs/hour equals pounds of pollutant emitted per hour.

If any emission testing is conducted to demonstrate compliance with the above PM emission limitations, Permittee shall use Reference Method 5 of Appendix A of 40 *CFR* Part 60 or an alternative method which has been published in 40 *CFR* provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§5-502(3) of the *Regulations*]

- (16) The PM emission rate(s) from the Verpol Plant boilers shall not exceed the limits shown in the table below:

Verpol Plant: Boiler Particulate Matter Emission Limitations				
Unit	Filterable PM/PM ₁₀ Emission Limits		Total PM Emission Limits	
	lbs/MMBtu ¹	lbs/hour ²	lbs/MMBtu ¹	lbs/hour ²
Boiler #1 (19.7 MMBtu/hr)	-	-	0.36	7.2
Boiler #2 (24 MMBtu/hr)	0.014	0.35	0.33	8.0

¹ lbs/MMBtu equals pounds of pollutant emitted per million British Thermal Units of heat input.

² lbs/hour equals pounds of pollutant emitted per hour.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(3)(a)(ii) and 5-404 of the *Regulations*]

**East Plant
- Construction and Equipment Specifications -**

- (17) The Permittee shall construct and operate the Facility in accordance with the plans and specifications submitted to the Agency and in accordance with the conditions set forth herein, including the equipment specifications as listed in Findings of Fact (A) or their equivalent as approved by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-409 and 5-501(1) of the Regulations]
- (18) Stack heights: The exhaust gases from the following East Plant emission sources shall be vented through stacks as shown in the table below. These stack specifications were used in the Air Quality Impact Evaluation that was part of the application for permit AOP-98-015a. The Permittee shall at the request of the Agency increase the stack height of any respective stack if, in the judgment of the Agency based on inspections of the actual operations at the Facility, proper or adequate dispersion cannot be maintained at the current stack height. Any new stacks or modifications to existing stacks shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. For the stacks listed below, the Permittee may replace any existing horizontal exhaust stack or any '45° down' stack with a vertical stack of the same, or higher discharge elevation without requesting prior approval by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-406(1) of the Regulations]

East Plant: Stack Specifications			
East Plant Sources	Stack Height Above Base (ft)	Stack Diameter (ft)	Discharge Direction
Boiler #1	25	1.67	vertical
Flash Dryer #4 (no combustion – this unit is used as a surface treater)	51	0.833	horizontal
Flash Dryer #5	44	2	horizontal
Silo 110 (Silo #1)	84	1.23	45° down
Silo 120 (Silo #2)	84	1.23	45° down
Silo 106 (Silo #3)	84	1.23	45° down
Silo 103 (Silo #4)	84	1.23	45° down
Silo 113 (Bin A)	84	1.23	45° down
Silo 112 (Bin C)	84	1.23	45° down
Silo 111 (Bin D)	84	1.23	45° down
Silo 114 (Bin C&D receiver)	84	1.23	45° down
Manual Packaging dust relief	50	0.833	horizontal
Automatic Packaging dust relief	50	0.833	horizontal
Product Reclaim Silo (formerly 40 Mesh Unloading)	58	1	45° down

**East Plant
- Operational Limitations -**

- (19) East Plant: Fuel Limits: The total heat input to the East Plant shall not exceed the following limits. Each limit is based on any rolling twelve (12) consecutive calendar month period.

Total fuel consumption for boilers and flash dryers, combined: 84,000 MMBtu/yr

The combined annual heat input shall be calculated according to the following methodology:

Heat Input (MMBTU per 12 months) = (total natural gas standard cubic feet per 12 months) * (HHV natural gas) + (total distillate fuel oil gallons per 12 months) * (HHV distillate oil)

Where:

HHV natural gas = 0.00102 MMBtu/standard cubic foot

HHV distillate oil (No.2, diesel) = 0.14 MMBtu/gallon

Each dryer and boiler shall be equipped with and use fuel flow meters for both natural gas and No.2 fuel oil for the purposes of monitoring compliance with the above limitations.

With Agency approval, the Permittee may use an alternative HHV for natural gas if the Permittee provides written contractual or delivery certifications to the Agency that the natural gas used at the Facility has a different HHV than shown above. [10 V.S.A. §556(c) and 556a(d)] [§5-501(1) of the *Regulations*] [Application for #AP-13-010]

- (20) Flash Dryer #4: The Permittee shall not combust any fuel in Flash Dryer #4. The Permittee shall control the operation of Flash Dryer #4 such that the outlet temperature from Flash Dryer #4 does not exceed 121°C. Compliance with this temperature limit shall be based on an hourly average. [10 V.S.A. §§556(c) and 556a(d)] [§§ 5-261 and 5-1015(a)(3) and (4) of the *Regulations*]

**East Plant
- Emission Limitations -**

- (21) East Plant: Boiler Particulate Matter: Emissions of particulate matter from the East Plant Boiler shall not exceed the following limits:

East Plant: Boiler Particulate Matter Emission Limitations		
Unit	Emission Limitations	
	lbs/MMBtu ¹	lbs/hour ²
East Plant Boiler (10.5 MMBtu/hr)	0.49	5.1

¹ lbs/MMBtu equals pounds of pollutant emitted per million British Thermal Units of heat input.

² lbs/hour equals pounds of pollutant emitted per hour.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(3)(a)(ii) and 5-404 of the *Regulations*]

- (22) East Plant: Particulate Matter: Emissions of particulate matter from the fabric filter units at the East Plant shall not exceed the following limits:

East Plant: Particulate Matter Emission Limitations		
Unit	Emission Limits	
	gr/dscf ¹	lbs/hour ²
Bin 112 (formerly Bin C)	0.01	0.15
Bin 111 (formerly Bin D)		0.15
Bin 114 (formerly Bin C & D Receiver)		0.07
Flash Dryer #4 (functions as a surface treater)	0.02	1.54
Flash Dryer #4 Recycle Collector		0.50
Flash Dryer #5 (formerly FD#2)		1.4
Silo 110 (formerly Silo #1)		0.29
Silo 120 (formerly Silo #2)		0.29
Silo 106 formerly Silo #3)		0.29
Silo 103 (formerly Silo #4)		0.29

Bin 113 (formerly Bin A)		0.29
Manual Packaging Dust Relief		0.24
Automatic Packaging Dust Relief		0.46
Product Reclaim Silo (formerly 40 Mesh Unloading)	0.01	0.10

¹ gr/dscf equals grains of pollutant emitted per dry standard cubic foot of undiluted exhaust gas.

² lbs/hour equals pounds of pollutant emitted per hour.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202 or an alternative method which has been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231(1)(b) and 5-404 of the *Regulations*]

**Cogeneration Plant
- Construction and Equipment Specifications -**

- (23) The two combustion turbines ("CTs") installed to provide heat to dry product material and generate electricity shall be Model 501-KB5 turbine-electric generator units manufactured by Allison Gas Turbines. The two CTs shall be designed and operated in accordance with the plans and specifications submitted to the Agency.

Each turbine shall have the following specifications:

Dual Fuel Capability

Maximum Design Heat Input (based on LHV of fuel and water injection)
 (natural gas) 50.0 MMBtu/hr
 (distillate oil) 50.4 MMBtu/hr

Maximum Design Firing Rate (with water injection)
 (natural gas) 16.2 ft³ per second
 (distillate oil) 389 gals/hr

[10 V.S.A. §556(c)]

- (24) The CTs shall be equipped with water injection equipment for the purpose of limiting emissions of oxides of nitrogen ("NO_x"). All elements of this pollution control system shall be maintained in good working order and operated whenever the CTs are running at operating loads greater than 1.2 megawatts ("MWs") of electrical generation output from each unit. The Permittee shall take all reasonable precautions to minimize periods of operation at 1.2 MWs or less for the CTs. [10 V.S.A. §556(c)]

- (25) On September 18, 1996, the U.S. EPA issued an applicability determination saying the Cogeneration Plant is not currently a Title IV affected source. If the Permittee alters its method of operation of the Cogeneration Plant such that it exceeds the limits stated in 40 *CFR* Part 72.6(b)(4)(ii), the Cogeneration Plant shall become an affected source and comply with the requirements of 40 *CFR Parts* 72-78. [10 V.S.A. §556(c)]
- (26) Stack heights: The exhaust gases from the combustion turbines shall be vented vertically through stacks which extend 104 feet above the stack base grade elevation. This stack height was used in the Air Quality Impact Evaluation that was part of the application for permit #AOP-98-015a. The stack(s) shall not be equipped with any device that may obstruct the upward discharge of the exhaust gases such as a fixed rain cap of a type that has not been approved by the Agency. [10 V.S.A. §§556(c) and 556a(d)] [§5-406 of the *Regulations*]

**Cogeneration Plant
- Operational Limitations -**

- (27) Cogeneration Plant: Notification of Restart: The combustion turbines (CT) have not operated since 2009. The Permittee must notify the Agency at least ninety (90) days in advance of restarting either of the combustion turbines. [§5-1015(a)(5) of the *Regulations*]
- (28) Cogeneration Plant: Fuel Limits: The total heat input to the Cogeneration Plant shall not exceed the following limits. Each limit is based on any rolling twelve (12) consecutive calendar month period.
- (a) Total fuel consumption for combustion turbines: 954,130 MMBtu/yr
(b) Total fuel consumption for the diesel engines: 2,592 MMBtu/yr

The combined annual heat input shall be calculated according to the following methodology:

Heat Input (MMBTU per 12 months) = (total natural gas standard cubic feet per 12 months) * (HHV natural gas) + (total distillate fuel oil gallons per 12 months) * (HHV distillate oil)

Where:

HHV natural gas = 0.00102 MMBtu/standard cubic foot
HHV distillate oil (No.2, diesel) = 0.14 MMBtu/gallon

Each combustion turbine shall be equipped with and use fuel flow meters for both natural gas and No.2 fuel oil for the purposes of monitoring compliance with the above limitations.

With Agency approval, the Permittee may use an alternative HHV for natural gas if the Permittee provides written contractual or delivery certifications to the Agency that the natural gas used at the Facility has a different HHV than shown above. [10 V.S.A. §556(c) and 556a(d)] [§5-501(1) of the *Regulations*] [Application for #AP-13-010]

- (29) The maximum sulfur content in the distillate oil used by the combustion turbines shall not exceed 0.0015% by weight. Compliance with the fuel oil sulfur limit shall be determined using the sampling and analysis procedures as specified in Condition (38) of this Permit. [10 V.S.A. §556(c) & §5-502(3) of the *Regulations*] [Application for AP-13-010]
- (30) Cogeneration Plant: Start-up and Shutdown Conditions:
- (a) Turbine start-up periods shall be defined as those periods of time from initiation of CT firing until the unit reaches steady-state operations, but not longer than twenty (20) minutes. Turbine shutdown periods shall be defined as those periods of time beginning with the initiation of CT shutdown timer and ending with the elimination of CT air contaminant emissions to the exhaust stack. [10 V.S.A. §556(c)]
 - (b) The Permittee shall limit total CT start-ups and shutdowns to no more than five (5) during any one week period. The Permittee may exceed said limit only under emergency circumstances outside the direct control of the operator or during periods of CT maintenance. The Permittee shall notify the Agency within five (5) days of any exceedance of the weekly start-up and shutdown limit. [10 V.S.A. §556(c)]
 - (c) The emission limitations applicable to the CTs in Conditions (32) and (33) below shall not apply during CT start-up and shutdown conditions. Additionally, the NO_x emission limitations in units of ppmvd listed in Condition (33) below shall not apply during periods when the CTs are running at operating loads of 1.2 MW or less of electrical generation output from each unit, and the CO emission limitations listed in Conditions (33) and below shall not apply during low-load conditions while firing distillate oil.
 - (d) Low-load conditions shall be defined as any period when electrical production from a CT is less than 50% of its NEPOOL Claimed Capability. For the purposes of this Permit, the definition of NEPOOL Claimed Capability shall be the maximum claimed capability as determined by an audit approved by NEPOOL and published on NEPOOL Form NX-12 A. [10 V.S.A. §556(c)]
 - (e) Each CT shall be initiated using a starting engine driving a hydraulic motor as specified in VMPD's letter to the Agency dated April 17, 1990. The starting engines shall be Model 4-53 manufactured by Detroit Diesel Corporation and shall be equipped with N-50 injectors. Each starting engine shall be rated at 136 HP at 2,800 rpm, and shall be fueled with diesel fuel containing a maximum sulfur content not to exceed 15 ppm (0.0015% by weight). [10 V.S.A. §556(c)]
 - (f) Each starting engine shall not operate more than 100 hours during any rolling twelve (12) month period. [10 V.S.A. §556(c)]
 - (g) The Permittee shall equip each starting engine with a non-resettable elapsed time meter designed to measure and record its total hours of operation. [10 V.S.A. §556(c)]
 - (h) The Permittee shall record, in a logbook, the monthly hours of operation for each starting engine. These records shall be made available for Agency inspection upon request. [10 V.S.A. §556(c)]
 - (i) Emissions of visible air contaminants from the starting engines shall not exceed twenty (20) % opacity for more than a period or periods aggregating to six (6) minutes or more in any hour. At no time shall visible emissions exceed sixty (60) % opacity. Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [10 V.S.A. §556(c) and §5-211(2) of the *Regulations*]

- (31) In the event that annual CT hours of operation at low-load conditions while firing distillate oil exceed 10% of the total annual CT hours of operation while firing distillate oil, then the Permittee shall, within sixty (60) days of exceeding the 10% level, submit in writing to the Agency a plan detailing how the Permittee proposes to amend this Permit in order to operate the CT(s) under increased low-load operations. For the purposes of this condition, "hours of operation" means the hours during which the CTs are actually producing electrical energy, but does not include CT operations associated with start-up and shutdown, repair, maintenance, or testing activities. [10 V.S.A. §556(c)]

**Cogeneration Plant
- Emission Limitations -**

- (32) Particulate Matter – Combustion Turbines: During periods when the Permittee is firing distillate oil in the CTs, emissions of particulate matter from the CTs shall not exceed the following limits:

Cogeneration Plant: Particulate Matter Emission Limitations		
Unit	Emission Limitations	
	lbs/MMBtu ¹	lbs/hour ²
Cogeneration Plant, CT #1	0.06	3.0
Cogeneration Plant, CT #2	0.06	3.0

¹ lbs/MMBtu equals pounds of pollutant emitted per million British Thermal Units of heat input.

² lbs/hour equals pounds of pollutant emitted per hour.

Any emission testing conducted to demonstrate compliance with the above emission limit shall be performed in accordance with 40 *CFR* Part 60, Appendix A, Reference Method 5 and Part 51, Appendix M, Reference Method 202 or alternative method(s) which have been published in 40 *CFR*, provided the federally approved alternative method has been accepted in writing by the Agency before testing. [10 V.S.A. §§556(c) and 556a(d)] [§§5-231 and 5-404 of the *Regulations*]

- (33) Each CT shall be designed to achieve one-hour average emission concentrations and rates as specified in the table shown below. In the event that emission testing demonstrates that any one-hour average emission exceeds its respective design emission value concentration or rate but is less than the maximum emission values listed in the same table, the Permittee shall take all reasonable measures to reduce and maintain its emissions to the lowest feasible level below the maximum emission values listed in the table. [10 V.S.A. §556(c) and §5-502(3) of the *Regulations*]

Cogeneration Plant: NO_x and Carbon Monoxide Emission Limitations			
Pollutant	Fuel Type	Design Emission Values	
		Concentration (ppmvd) ¹	Emission Rate (lbs/hr)
NO _x	Oil	42	8.7
	Natural Gas	34	6.8
CO	Oil	60	7.6
	Natural Gas	26	3.2
Pollutant	Fuel Type	Maximum Emission Values	
		Concentration (ppmvd)	Emission Rate (lbs/hr)
NO _x	Oil	60	11.8
	Natural Gas	42	9.2
CO	Oil	83	10.5
	Natural Gas	36	4.4

¹ parts per million on a dry volume basis at ISO operating conditions corrected to 15% O₂ and ISO standard day conditions; ISO standard day conditions - 288 degrees Kelvin, 60 percent relative humidity, and 101.3 kilopascals.

- (34) Except as provided in Condition (30) of this Permit, one-hour average emissions shall at no time exceed the applicable maximum emission values concentrations and rates listed in the table shown above. In the event that emission testing demonstrates that any one-hour average emission exceeds its respective maximum emission value listed in the above table then the CT shall cease operation within thirty (30) days after the Permittee or the Agency receives the result of said testing. The Agency shall permit the facility to restart only after the Permittee has demonstrated to the satisfaction of the Agency that all necessary corrective actions have been taken to ensure that the facility will operate in compliance with this Permit. Within sixty (60) days after restarting operation under these circumstances, compliance with the emission standard specified in the above table shall be demonstrated by emission testing to the satisfaction of the Agency. [10 V.S.A. §556(c) and §5-502(3) of the Regulations]

- (35) The Permittee shall not allow the emission of any visible air contaminants from the CTs, for more than a period or periods aggregating to six (6) minutes in any hour, which have a shade, or density greater than twenty (20) % opacity. At no time shall such emissions have a shade, density, or appearance greater than sixty (60) % opacity. Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 CFR Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [10 V.S.A. §556(c) and §5-211(2) of the Regulations]

**Cogeneration Plant
- Monitoring Requirements -**

- (36) Continuous Parameter Monitoring: The Permittee shall equip each of the CTs with a continuous parameter monitoring system ("CPMS") to continuously monitor fuel consumption, turbine load output, and the ratio of water to fuel being fired in each of the turbines. All CPMS shall be installed, calibrated, maintained, and operated in such a manner as to meet the requirements of 40 *CFR*, Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines; and the Air Pollution Control Division, Technical Services Section's ("TSS") "Continuous Emission Monitoring Requirements". The Permittee shall continuously operate and maintain the system in accordance with the following:
- (a) All CPMS monitoring devices, and recording equipment shall be installed and operational before the Permittee conducts compliance testing of the CTs.
 - (b) The Permittee shall develop, implement, and maintain for all CPMS a Quality Assurance Plan ("QA Plan") which satisfactorily documents operations pursuant to state and federal requirements. The QA Plan must be acceptable to, and be approved by the Secretary prior to the compliance testing of the CTs. Said plan shall specify acceptable instrumentation, monitoring procedures, calibration procedures, and data acquisition systems as required to demonstrate compliance with this Permit. The QA Plan shall also include any testing procedures required to determine CPMS accuracy. The Permittee shall review the QA Plan and all data generated by its implementation at least once each year. The Permittee shall revise and update the plan as necessary but at least annually, based on the results of this review. The Permittee shall notify the TSS in writing of the results of each review.
 - (c) The Permittee shall submit a summary report of data to the Vermont Air Quality & Climate Division for each calendar quarter as required by Condition (70) of this Permit.
- [10 V.S.A. §556(c)]
- (37) Continuing compliance with the NO_x emission standards specified in Condition (33) of this Permit shall be determined by means of continuous monitoring of the water-to-fuel ratio, as required in Condition (36) of this Permit, with the exception of periods when a CT operational load is 1.2 MWs or less of output. [10 V.S.A. §556(c)]
- (38) The Permittee shall sample and analyze the fuel being fired in its combustion turbines at the Facility for its fuel oil sulfur content (percent by weight basis) in order to demonstrate compliance with Condition (29) of this Permit. As required by 40 *CFR* Part 60 §63.334(i)(1) a fuel oil sample shall be drawn from the combustion turbines' fuel oil storage tank on each occasion that fuel is transferred to the storage tank from any other source. The Permittee shall perform all fuel oil sampling and analysis in accordance with American Society for Testing and Materials ("ASTM") methods which have received the prior approval of the Secretary. The Permittee shall maintain records of each fuel oil delivery, and of all fuel oil sampling and analysis. [10 V.S.A. §556(c)] [40 *CFR* Part 60 §63.334(i)(1)]

(39) Backup (emergency) Diesel Engine Generator Set:

- (a) The Model 4-71 diesel engine generator set manufactured by Detroit Diesel Corporation shall be installed and operated in accordance with the plans and specifications submitted to the Agency on April 19, 1990. The diesel generator shall be equipped with N70 injectors and is rated at 145 HP @ 1,800 rpm.
- (b) The engine shall use only No. 2 fuel oil with a maximum sulfur content not to exceed 0.0015% sulfur by weight (15 parts per million).
- (c) The Permittee shall equip the diesel engine generator with a non-resettable elapsed time meter designed to measure and record its total hours of operation.
- (d) The Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each stationary emergency generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which the engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; the purpose of the operation be it emergency, testing or maintenance; and, if the purpose of the operation was for an emergency, the records shall include a brief description of the emergency and its cause.
- (e) Emissions of visible air contaminants from the engine generator set shall not exceed twenty (20) % opacity for more than a period or periods aggregating to six (6) minutes in any hour. At no time shall visible emissions exceed sixty (60) % opacity.

[10 V.S.A. §556(c)] [§5-211(2) of the *Regulations*]

(40) Emergency Generators/Engines: Stationary emergency generators/engines shall be used only for emergency purposes and up to 100 hours per year for routine testing and maintenance. Emergency purposes includes periods of time when:

- (a) The usual source of power, heat or lighting is temporarily unavailable due to reasons beyond the reasonable control of the owner/operator;
- (b) A fire or flood makes it necessary to pump water to minimize property damage.

In the event the Permittee must take action to restore the normal power source, the Permittee must take such action in a reasonable period of time. Emergency engines shall not be operated as part of any other ISO or utility peaking or load shedding activities without the approval of the Agency. The definition of emergency use for applicability to federal regulations NSPS Subpart IIII and NESHAP Subpart ZZZZ may be different and the Permittee should consult those regulations directly for applicability to those respective regulations. [10 V.S.A. §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*]

**Site-Wide Conditions
– Operation Limitations –**

- (41) Verpol and Cogeneration Plant: Fuel Limits: The total heat input to the Verpol Plant and the Cogeneration Plant shall not exceed the following limits. Each limit is based on any rolling twelve (12) consecutive calendar month period.

Total fuel consumption for Verpol Plant and Cogeneration Plant (Includes the total fuel for all dryers, boilers, combustion turbines and diesel engines combined):
1,572,900 MMBtu/yr

The combined annual heat input shall be calculated according to the following methodology:

Heat Input (MMBTU per 12 months) = (total natural gas standard cubic feet per 12 months) * (HHV natural gas) + (total distillate fuel oil gallons per 12 months) * (HHV distillate oil)

Where:

HHV natural gas = 0.00102 MMBtu/standard cubic foot
HHV distillate oil (No.2, diesel) = 0.14 MMBtu/gallon

Each unit shall be equipped with and use fuel flow meters for both natural gas and No.2 fuel oil for the purposes of monitoring compliance with the above limitations.

With Agency approval, the Permittee may use an alternative HHV for natural gas if the Permittee provides written contractual or delivery certifications to the Agency that the natural gas used at the Facility has a different HHV than shown above. [10 V.S.A. §556(c) and 556a(d)] [§5-501(1) of the *Regulations*] [Application for #AP-13-010]

- (42) Only natural gas, LPG or No.2 fuel oil, or lighter grade fuel oils, may be used as fuel at the Facility unless the Permittee obtains prior written approval from the Agency to use another type of fuel. The fuel oils shall have a maximum sulfur content not to exceed 0.0015 percent by weight (15 parts per million). [10 V.S.A. §556(c)] [§5-501 of the *Regulations*] [Application for #AP-13-010]
- (43) Stationary Diesel Engines: The Permittee shall not install or operate a stationary reciprocating internal combustion engine, as defined in the *Regulations*, unless the engine complies with §5-271 of the *Regulations* as may be applicable as well as any federal regulations including 40 *CFR* Part 60 Subpart IIII and 40 *CFR* Part 63 Subpart ZZZZ, as may be applicable. All engines, including emergency engines, installed on or after July 1, 2007 must comply with the applicable emission standards (Tier 2) of §5-271 immediately upon installation. Installation of any size engine, even those below 300 bhp, may still require approval from the Agency in the form of an amended permit prior to installation. [10 V.S.A. §§556(c) and 556a(d)] [§§5-271 and 5-501 of the *Regulations*]

- (44) Stationary Diesel Engines: The Permittee shall install, operate and maintain each reciprocating internal combustion engine, and any after-treatment control device (if any), in accordance with the manufacturer's written instructions and in a manner consistent with good air pollution control practices for minimizing emissions. [10 V.S.A. §§556(c) and 556a(d)] [§§5-407, 5-501 and 5-1015(a)(1) of the *Regulations*]
- (45) Stationary Emergency Diesel Engines: Stationary emergency diesel engines, including those specified as such in Finding of Fact (A), shall be used only for emergency purposes and up to 100 hours per year for routine testing and maintenance, of which 50 hours may be for non-compensated non-emergency operation. Emergency purposes include periods of time when:
- (a) The usual source of power, heat or lighting is temporarily unavailable due to reasons beyond the reasonable control of the owner/operator;
 - (b) A fire or flood makes it necessary to pump water to minimize property damage.

In the event the Permittee must take action to restore the normal power source, the Permittee must take such action in a reasonable period of time. Emergency engines shall not be operated as part of any other ISO or utility peaking or load shedding activities without the approval of the Agency. The definition of emergency use for applicability to federal regulations NSPS Subpart IIII and NESHAP Subpart ZZZZ may be different and the Permittee should consult those regulations directly for applicability to those respective regulations. [10 V.S.A. §§556(c) and 556a(d)] [§§5-401(6)(c) and 5-501 of the *Regulations*]

- (46) Stationary Diesel Engines: In accordance with 40 CFR Part 63 Subpart ZZZZ as may be applicable, for CI diesel engines which commenced construction (were installed) prior to June 12, 2006 the Permittee shall comply with the following. Engines that are limited to emergency operation only (emergency engines) are subject to different requirements than engines not restricted to emergency only operation (non-emergency engines).

For emergency engines of all sizes and non-emergency engines \leq 300 HP:

- (a) Change oil and filter every 500 hours of operation or annually (1,000 hours if non-emergency), whichever comes first;
- (b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;
- (c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary;
- (d) Install an elapsed hour meter (emergency engines only);
- (e) Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.

10 V.S.A. §556a(d)] [§§5-407, 5-501 and 5-1015(a)(1) of the *Regulations*] [40 CFR, Part 63, Subpart ZZZZ, §§63.6603, 63.6640 and Table 2d] Application for #AOP-22-051]

- (47) In accordance with 40 *CFR* Part 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers at area sources), the Permittee shall comply with the following requirements, as applicable, for the boilers as well as all other applicable requirements of this regulation.
- (a) Periodic Boiler Tune-ups:
- (i) Biennial tune-ups of the boiler(s) as required by 40 *CFR* §63.11223. All boilers at this facility without an oxygen trim system are subject to this regulation. For boilers installed prior to June 4, 2010 the first tune-up is required by March 21, 2014. Subsequent tune-ups must be completed no later than 25 months after the prior tune-up. Each tune-up must be conducted while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
 - (ii) 5-year tune-ups of the boiler(s) as required by 40 *CFR* §63.11223(c). All boilers at this facility with an oxygen trim system are subject to this regulation. For boilers installed prior to June 4, 2010 the first tune-up is required by March 21, 2014. Subsequent tune-ups must be completed no later than 61 months after the prior tune-up. Each tune-up must be conducted while burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
- (b) A one-time energy assessment of the boilers as well as the rest of the Facility as required by 40 *CFR* §63.11201(b). The energy assessment must be completed by March 21, 2014. The Facility's energy assessment has been completed.
- (c) Notification, reporting and recordkeeping requirements as specified in §63.11225. This includes:
- (i) §63.11225(a)(2): Initial Notification:
 - a. For boilers installed prior to June 4, 2010 the initial notification must be sent to the Agency and EPA no later than January 20, 2014. Permittee submitted initial notification on April 10, 2012.
 - (ii) §63.11225(a)(4): Notification of Compliance Status:
 - a. Notification of the initial tune-up of the boilers must be submitted no later than 120 days after the initial tune-up compliance date of March 21, 2014. Initial tune-ups for the boiler(s) were completed February 29, 2014. The notification of the initial tune-up for the two boilers was submitted on 7/31/14.
 - b. Notification of the completion of the energy assessment must be submitted no later than July 19, 2014. The energy assessment notification was submitted on March 18, 2014.
 - c. The notification(s) must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report was due, the written Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in § 63.13.
 - (iii) §63.11225(b): Periodic Compliance Certification:

- a. By March 1 of each year following a boiler tune-up, prepare and submit an annual compliance certification report for the previous calendar year. This compliance certification may be submitted with the other annual certifications required in Condition (74) of this Permit.
- (iv) §63.11225(c): Recordkeeping Requirements:
 - a. As required in § 63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.
 - b. Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.
 - c. For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report. [40 *CFR* Part 63 Subpart JJJJJ] [40 *CFR* Part 63]
- (48) Open Burning: Open burning is prohibited except as provided for in §5-202 of the *Regulations*. Prior to conducting open burning of any material, other than leaves, brush, or tree cuttings from normal grounds maintenance, the Permittee shall contact the Air Pollution Control Officer and obtain approval for such burning, if required. [10 *V.S.A.* §§556(c) and 556a(d)] [§5-202 of the *Regulations*]

Site-Wide Conditions

– Emission Limitations –

- (49) Visible Emissions [Facility Wide]: Emissions of visible air contaminants from any installation at the Facility shall not exceed twenty (20) percent opacity for more than a period or periods aggregating six (6) minutes in any hour and at no time shall visible emissions exceed sixty (60) percent opacity.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 51, Appendix M, Methods 203B and 203C, respectively, or equivalent methods approved in writing by the Agency. [10 *V.S.A.* §556(c)] [§§5-211(2), 5-211(3) and 5-404 of the *Regulations*]
- (50) Visible Emissions [Crushing Plant Equipment Manufactured On or After August 31, 1983 and Prior to April 22, 2008]: The Permittee shall not cause to be emitted from any nonmetallic mineral processing or handling operation any fugitive emissions which exhibit greater than ten (10) percent opacity except as provided in paragraphs (a) and (b) of this condition. The Permittee shall not cause to be emitted from a fabric filter dust collector, if used in lieu of or in conjunction with wet suppression, serving any nonmetallic mineral processing operation any stack emissions which exhibit greater than seven (7) percent opacity.

- (a) The Permittee shall not cause to be emitted from any crusher fugitive emissions which exhibit greater than fifteen (15) percent opacity.
- (b) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the above opacity standards. However, the Permittee shall take reasonable precautions at all times to control fugitive emissions from such truck dumping.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 60, Subparts A and OOO and Appendix A, Reference Method 9. [10 V.S.A. §556(c)] [§§5-231(4) and 5-261(2) of the *Regulations*] [40 *CFR* Part 60 Subpart OOO §60.672]

- (51) Visible Emissions [Crushing Plant Equipment Manufactured On or After April 22, 2008]: The Permittee shall not cause to be emitted from any nonmetallic mineral processing or handling operation any fugitive emissions which exhibit greater than seven (7) percent opacity except as provided in paragraphs (a) and (b) of this condition.

- (a) The Permittee shall not cause to be emitted from any crusher fugitive emissions which exhibit greater than twelve (12) percent opacity.
- (b) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the above opacity standards. However, the Permittee shall take reasonable precautions at all times to control fugitive emissions from such truck dumping.

Any emission testing conducted to demonstrate compliance with the above emission limits shall be performed in accordance with 40 *CFR* Part 60, Subparts A and OOO and Appendix A, Reference Method 9. [10 V.S.A. §556(c)] [§§5-231(4) and 5-261(2) of the *Regulations*] [40 *CFR* Part 60 Subpart OOO §60.672]

- (52) Volatile Organic Compounds: Emissions of volatile organic compounds from the Facility shall not equal or exceed thirty-eight (38) tons per year based on any rolling twelve (12) consecutive calendar month period. [10 V.S.A. §§556(c) and 556a(d)] [§5-502 of the *Regulations*]

- (53) Hazardous Air Pollutants: Emission of federally regulated hazardous air pollutants (HAPs) from the Facility shall not equal or exceed eight (8) tons/year of any single HAP or twenty (20) tons of total combined HAPs per calendar year. [10 V.S.A. §§556(c) and 556a(d)] [§§5-261 and 5-501 of the *Regulations*] [40 *CFR* Part 63]

- (54) Hazardous Air Contaminants: Emissions of state hazardous air contaminants (HACs) from the applicable operations at the Facility shall not equal or exceed their respective Action Level (found in Appendix C of the *Regulations*) unless the Agency has reviewed and approved such HAC emission under §5-261(2) of the *Regulations*. [10 V.S.A. §§556(c) and 556a(d)] [§5-261 of the *Regulations*]

- (55) Fugitive Particulate Matter Emissions: The Permittee shall take reasonable precautions at all times to control and minimize emissions of fugitive particulate matter from the operations at the Facility. Reasonable precautions to be taken shall include the following measures or other equally effective measures for those operations or activities under the Permittee's control or supervision:

- (a) The use of wet suppression, calcium chloride applications or other dust control measures as necessary to minimize fugitive dust from all unpaved roads and traffic areas, aggregate handling operations and storage piles at the Facility. The paved portions of the haul roads and traffic areas shall be periodically sprayed with water and swept to prevent buildup of material that may generate fugitive dust emissions;
- (b) The unpaved traffic and parking areas at the Facility shall be maintained as necessary by the application of water and/or generally accepted chemical treatments, such as calcium chloride unless otherwise restricted, which are applied at a rate and frequency to effectively limit visible dust emissions.
- (c) The paved traffic and parking areas at the Facility shall be maintained as necessary to prevent buildup of material that may generate fugitive dust emissions. Sweeping shall be performed in a manner to minimize fugitive dust air emissions, and may include lightly wetting the paved surface immediately before sweeping, or preferably by the use of a vacuum, regenerative, or high-efficiency sweeper.
- (d) All trucks owned, operated or under the control of the Permittee/s shall be securely covered when operated on public roadways when loaded with materials that may generate fugitive dust.
- (e) All unenclosed crushing and dry screening operations shall be equipped with a wet dust control (suppression) system with nozzles at appropriate locations and shall be operated as necessary.
- (f) Active storage piles shall be periodically maintained by application of water and/or generally accepted chemical treatments, such as calcium chloride unless otherwise restricted, which are applied at a rate and frequency to effectively limit visible dust emissions. Inactive storage piles and exposed surfaces shall be revegetated as soon as reasonably practicable.

[10 V.S.A. §§556(c) and 556a(d)] [§§5-231(4) and 5-407 of the *Regulations*]

- (56) Nuisance and Odor: The Permittee shall not discharge, cause, suffer, allow, or permit from any source whatsoever such quantities of air contaminants, or odors beyond the property line of a premises, which will cause injury, detriment, nuisance or annoyance to any considerable number of people or to the public or which endangers the comfort, repose, health or safety of any such persons or the public or which causes or has a natural tendency to cause injury or damage to business or property. [10 V.S.A. §§556(c) and 556a(d)] [§5-241(1) of the *Regulations*]

**Site-Wide Conditions
- Compliance Testing and Monitoring -**

- (57) Periodic Monitoring of Visible Air Contaminants and Particulate Matter:
- (a) Permittee shall equip the following process equipment with bag leak detection system sensors or equivalent system(s) approved by the Agency in writing. Permittee shall use these devices to alert the equipment operator of increased emissions of PM and visible emissions, and the need for scheduling maintenance on the air pollution control system. For the process equipment identified below, the

Permittee shall note each incidence that it receives an alarm, as well as the maintenance performed to rectify the problem identified by the alarm, in the logbook required by this of this Permit:

- (i) Each flash dryer system of this Permit shall be equipped with an Auburn Systems Triboguard II Model 4002.
 - (ii) Surface Treater B shall be equipped with an Auburn Systems Triboguard II Model 4002.
 - (iii) Deagglomerator C shall be equipped with an Auburn Systems Triboguard II Model 4002 unit.
 - (iv) Surface Treaters A & C shall be equipped with Auburn Systems Triboguard II Model 4002.
 - (v) Product Silos 1 – 16 shall be equipped with Auburn Systems Tribo U3800.
 - (vi) The Treated bulk bag dust collector and Untreated bulk bag dust collector shall each be equipped with an Armac broken bag detector.
- [§§5-405(1) and 5-1015(a)(3) of the *Regulations* and 40 *CFR* Part 70 §70.6(a)(3)(i)(B)]
- (b) Permittee shall record the electricity supplied and used by each field for the electrostatic precipitators serving Spray Dryer #1 and Spray Dryer #2. [§§5-405(1) and 5-1015(a)(3) of the *Regulations* and 40 *CFR* Part 70 §70.6(a)(3)(i)(B)]
 - (c) For the remainder of the process equipment at the Verpol Plant which is equipped with a fabric filter collector, Permittee shall maintain in each respective logbook, as required by this Permit, weekly observations of the pressure drop across each fabric filter exhausting to the ambient air. The logbook shall contain the name of the individual making the observation, the results of the observation in terms of inches of water, and, if necessary, the corrective action taken to maintain the pressure drop within acceptable ranges as specified by the fabric filter manufacturer for each respective fabric filter. [§§5-405(1) and 5-1015(a)(3) of the *Regulations* and 40 *CFR* Part 70 §70.6(a)(3)(i)(B)]
 - (d) Permittee shall maintain a logbook of weekly observations of the emissions from its boilers at the Verpol Plant. The logbook shall contain the name of the individual making the observation, the results of the observation in terms of emission density observed, and the corrective action taken to reduce the emission density, if any. [§§5-405(1) and 5-1015(a)(3) of the *Regulations* and 40 *CFR* Part 70 §70.6(a)(3)(i)(B)]
 - (e) Summaries of the records identified in Conditions 57(a) through 57(d) of this Permit shall be submitted to the Agency along with the semiannual report required in the Record Keeping and Reporting section of this Permit. [§5-1015(a)(3) of the *Regulations* and 40 *CFR* Part 70 §70.6]
- (58) The Permittee shall maintain a detailed list of all the following pieces of equipment and operations at the Facility: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor (and transfer points), bagging operation, storage bin, and each enclosed truck or railcar loading station. The Permittee shall determine as to whether a piece of equipment or operation is an affected facility subject to 40 *CFR* Part 60 Subpart OOO. If 40 *CFR* Part 60 Subpart OOO is not applicable, then the Permittee shall state the reason why it is not applicable. For each piece of equipment or operation, that is subject to 40 *CFR* Part 60 Subpart OOO, the list shall also include:
- (a) the year of manufacture of each piece of equipment;
 - (b) the year of last modification of that equipment (if any);

- (c) the rated capacity in tons per hour of each crusher, grinding mill, bucket elevator, bagging operation and enclosed truck or railcar loading station;
- (d) the total surface area of the top screen of each screening operation;
- (e) the width of each conveyor belt;
- (f) the rated capacity in tons of each storage bin;
- (g) the respective emission limit from 40 *CFR* Part 60 Subpart OOO and;
- (h) the date the applicable piece of equipment or emission point was tested showing compliance with 40 *CFR* Part 60 Subpart OOO.

The Permittee shall revise the list as necessary to reflect equipment or operational changes. The Permittee shall provide the Agency with a signed copy of the list attesting to its accuracy by a responsible official of the Facility within ninety (90) days of issuance of this Permit and shall make the list available to representative of the Agency upon request at all other times. [10 V.S.A. §§556(c) and 556a(d)] [§§5-402, 5-404(1) and 5-405(1) of the *Regulations*] [40 *CFR* Part 60 Subpart OOO §60.675]

- (59) Visible Emissions Testing: The Permittee shall perform visible emission testing on all applicable pieces of equipment subject to 40 *CFR* Part 60 Subpart OOO, for which testing has not previously been completed and approved by the Agency. The Permittee shall furnish the Agency with a written summary report of the results for all pieces of equipment subject to 40 *CFR* Part 60 Subpart OOO within one-hundred eighty (180) days of the issuance of this permit. If emission testing has previously been completed and approved by the Agency, the results shall be included in the summary report.

At least thirty days prior to performing the emission testing required above, the Permittee shall submit to the Agency a pretest report prepared in accordance with the Agency's "Source Emission Testing Guidelines".

[§§5-402, 5-404(1) and 5-405(1) of the *Regulations*] [40 *CFR* Part 60 Subpart OOO §60.675] [40 *CFR* 60.8]

Site-Wide Conditions - Record Keeping and Reporting -

- (60) Records of Fuel Use: Each month, the Permittee shall maintain the following fuel usage records:
- (a) Verpol Plant:
 - (i) The total quantity of No.2 fuel oil consumed in the boilers, in gallons;
 - (ii) The total quantity of natural gas consumed in the boilers, in million cubic feet (MMCF);
 - (iii) The total quantity of No.2 fuel oil consumed in the dryers, in gallons;
 - (iv) The total quantity of natural gas consumed in the dryers, in MMCF;
 - (b) East Plant:
 - (i) The total quantity of No.2 fuel oil consumed in the boiler and dryer, in gallons;
 - (ii) The total quantity of natural gas consumed in the boiler and dryer, in MMCF.
 - (c) Cogeneration Plant:

- (i) The total quantity of No.2 fuel oil consumed in the combustion turbines, in gallons;
 - (ii) The total quantity of natural gas consumed in the combustion turbines, in MMCF;
 - (iii) The total quantity of No.2 fuel oil consumed in the three diesel engines at the Cogeneration Plant, in gallons.
- (d) Stationary Diesel Engines:
- (i) The total quantity of No.2 fuel oil consumed in the diesel engines not covered by (60)(c)(iii), in gallons;
- (e) At the beginning of each month, the Permittee shall calculate the total quantity of fuel (in units of MMBtu/yr) consumed during the previous twelve (12) consecutive month period in:
- (i) The East Plant boiler and Spray Dryer #5
 - (ii) The Verpol Plant dryers
 - (iii) The Verpol Plant boilers
 - (iv) The combustion turbines
 - (v) The three diesel engines at the Cogeneration Plant
 - (vi) The Verpol Plant's boilers and dryers combined with the combustion turbines and the three diesel engines at the Cogeneration Plant.
 - (vii) For this energy calculation the default heat value for No.2 fuel oil is 0.14 MMBtu/gallon and the default heat value for natural gas is 0.00102 MMBtu/scf.

[10 V.S.A. §556(c)] [§5-405(1) of the *Regulations*] [40 CFR Subpart Dc §60.48c(g)]

- (61) The Permittee shall maintain thermocouples or similar temperature sensors to measure the following process temperatures:
- (a) Surface Treater A outlet temperature;
 - (b) Surface Treater B outlet temperature;
 - (c) Surface Treater C outlet temperature;
 - (d) Flash Dryer #4 outlet temperature.

The Permittee shall continuously measure these process temperatures, and record block hourly averages using the process control computer. The measurements shall be observed and recorded in accordance with the approved schedule in the operation and maintenance plan at a minimum of once per shift. Based on Agency observations, continuous recording of the process temperatures may be required. [10 V.S.A. §§556(c) and 556a(d)][§5-261(2) of the *Regulations*]

- (62) The Permittee shall record in a logbook, information pertaining to maintenance performed on each fabric filter. This maintenance logbook shall contain, in addition to the information specified in Condition (57) of this Permit, the following minimum information: work performed and date maintenance was completed. The Permittee shall also include in the logbook a diagram depicting the filter bag locations for each fabric filter unit. The diagram shall be updated each time maintenance is performed on the fabric filters in order to document the location of each fabric filter requiring maintenance. The Permittee shall make the logbook available for Agency inspection upon request. [10 V.S.A. §556(c)]

- (63) Records of Emergency Generator/Engine Usage: The Permittee shall maintain records in a log book, or electronic record system, of all hours of operation of each stationary emergency generator/engine and shall make such records available to the Agency upon request. The records shall include: the dates on which each engine was operated; the number of hours the engine was operated on the respective date, including the starting and ending hours shown on the engine's elapsed hour meter; the purpose of the operation be it emergency, testing or maintenance; and, if the purpose of the operation was for an emergency, the records shall include a brief description of the emergency and its cause. [10 V.S.A. §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*]
- (64) The Permittee shall maintain the following records for the Combustion Turbines, in addition to any other requirements of this Permit:
- (a) The hours of operation, including the hours of any start-up, shutdown event or malfunction in the operation of the CTs.
 - (b) The hours of operation at low load conditions, defined as those conditions where electrical production from a CT is less than 50% of its NEPOOL Claimed Capability. NEPOOL Claimed Capability being as defined in Condition (30)(d) of this Permit.
 - (c) The hours of operation when electrical energy actually being produced by each CT.
 - (d) NEPOOL Form NX-12 A for each CT.
 - (e) Once the Permittee commences fueling the combustion turbines with primarily natural gas, the Permittee shall record the date, start time, end time and amount of fuel used for any period when fuel oil is burned.
 - (f) Any malfunction of the air pollution control systems for the CTs.
- [10 V.S.A. §556(c)]
- (65) Records of Fuel Oil Certifications: The Permittee shall obtain from the fuel supplier, for each shipment of fuel oil received at the Facility for use in the boilers a certification or invoice regarding the sulfur content of the fuel oil. The certification or invoice shall include: the date of delivery, name of the fuel oil supplier, fuel type, quantity of fuel oil delivered, the sulfur content of the fuel delivered, and the location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location, and the method used to determine the sulfur content of the oil. [10 V.S.A. §§556(c) and 556a(d)] [§5-405(1) of the *Regulations*] [40 CFR Part 60 Subpart Dc §§60.42c(h) and 60.48c(f)]
- (66) Records: Records of all required compliance testing shall include the following:
- (a) the date, place, and time of sampling or measurements;
 - (b) the date analyses were performed;
 - (c) the company or entity that performed the analyses;
 - (d) the analytical techniques or methods used;
 - (e) the results of all such analyses; and
 - (f) the operating conditions existing at the time of sampling or measurement.

[10 V.S.A. §§556(c) and 556a(d)] [§§5-402, 5-405(1) and 5-1015(5) of the *Regulations*] [40 CFR Part 70.6(a)(3)(ii)(A)]

- (67) **Records:** All records shall be retained for a minimum period of five (5) years from the date of record and shall be made available to the Agency upon request. [10 V.S.A. §§556(c) and 556a(d)] [§§5-402, 5-405(1) and 5-1015(a)(7) of the *Regulations*] [40 CFR Part 70.6(a)(3)(ii)(B)]
- (68) **Notification:** The Permittee shall notify the Agency in writing within ten (10) days of any violation, of which it is aware, of any requirements of this Permit. This notification shall include, at a minimum, the cause for the violation and corrective action or preventative maintenance taken to correct the violation. [10 V.S.A. §§556(c) and 556a(d)] [§§5-402 and 5-1015(a)(6) of the *Regulations*]
- (69) **Notification:** The Permittee shall notify the Agency in writing of any proposed physical or operational change at the Facility which may increase the emission rate of any air contaminant to the ambient air regardless of any concurrent emission reductions that may be achieved. This notification requirement includes the proposed installation of any new equipment that is a source of air pollution, including the replacement of an existing permitted air pollution source. If the Agency determines that a permit amendment is required, a new application and the appropriate application fee shall be submitted. The permit amendment shall be obtained prior to commencing any such change except as may otherwise be allowed by the *Regulations*. [10 V.S.A. §§556(c) and 556a(d)] [§§5-402 and 5-501 of the *Regulations*]
- (70) **Reporting and Recordkeeping: Quarterly Reports for Combustion Turbines:** The Permittee shall submit quarterly reports to the Agency postmarked by the 30th day following the end of each reporting period. The reporting periods shall cover the operations from January 1st through March 31st, April 1st through June 30th, July 1st through September 30th and October 1st through December 31st. The quarterly reports shall be signed by a responsible official of the Facility and contain the following information regarding the preceding three (3) month reporting period:
- (a) A summary of the fuel oil delivery and sulfur content records required by Condition (38);
 - (b) A summary report of data regarding turbine fuel consumption and water-to-fuel ratio, in accordance with 40 *CFR* 60.334(c) and the TSS "Continuous Emissions Monitoring Requirements." Refer to permit Condition (36)
 - (c) The Permittee shall maintain a file of all information reported in the quarterly summaries and all other data collected by the monitoring systems for at least five (5) years from the date of collection of such data or submission of such summaries. All data records for the monitoring systems shall be marked to show the times of both start-up and shutdown of the CTs.
 - (d) If the CTs did not operate during a given calendar quarter, then a Quarterly Report for the Combustion Turbines is not required for the affected quarter. In lieu of a quarterly report, the Permittee must notify the Agency in its Semi Annual Periodic Monitoring Report, required by Condition (71) of this Permit. This notification shall include the period of time for the quarter of no CT operation.

[10 V.S.A. §556(c)] [40 *CFR* Part 60 §63.334(i)(1)]

(71) Reporting: Semi-Annual Periodic Monitoring Reports: The Permittee shall submit semi-annual reports to the Agency postmarked by the 30th day following the end of each reporting period. The reporting periods shall cover operations from January 1st through June 30th and July 1st through December 31st. The semi-annual reports shall be signed by a responsible official of the Facility and contain the following information regarding the preceding six (6) month reporting period:

- (a) A summary of the fuel usage records required by Condition (60) of this Permit;
- (b) The records required in Condition (57)(e)
- (c) If applicable, a statement that the Combustion Turbine(s) did not operate and the dates of the affected reporting quarter(s).

[§§5-402, 5-405(1) and 5-1015(a)(5) of the *Regulations*] [40 CFR Part 70 §70.6(a)(3)(iii)(A)]

(72) Semi-Annual Fuel Reporting for Subpart Dc Boilers: The Permittee shall submit semi-annual reports to the Agency and the U.S. EPA pertaining to the Verpol Plant Boiler #1 and Boiler #2. The reports shall be postmarked by the 30th day following the end of each reporting period. The reporting periods shall cover operations from January 1st through June 30th and July 1st through December 31st. Such semi-annual report shall include the following information:

- (a) Calendar dates covered in the reporting period;
- (b) For fuel oil combusted, either records of fuel supplier certifications as required by this Permit or a statement that no fuel oil was burned during the reporting period; and
- (c) For fuel oil combusted, a certified statement signed by a responsible official of the Facility that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the reporting period.

[10 V.S.A. §§556(c) and 556a(d)] [40 CFR Subpart Dc §§60.48c(d), 60.48c(e), 60.48c(f) and 60.48c(j)]

(73) Reporting: Annual Compliance Certification: By February 1st of each year, the Permittee shall submit to the Agency and the U.S. EPA an annual certification of compliance for the previous calendar year which ascertains and identifies the compliance status of the Facility with respect to all terms and conditions of this Permit, including but not limited to the following:

- (a) Identification of each term or condition of the permit that is the basis of the certification;
- (b) The compliance status;
- (c) Whether compliance was continuous or intermittent; and
- (d) The methods used for determining the compliance status of the Facility over the reporting period.
- (e) If necessary, the Permittee also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Act, which prohibits knowingly making a false certification or omitting material information

[10 V.S.A. §§556(c) and 556a(d)] [§114(a)(3) of the CAA] [§§5-402 and 5-1015(a)(11) of the *Regulations*]

(74) Annual Registration: The Permittee shall calculate the quantity of emissions of air contaminants from the Facility annually. If the Facility emits more than five (5) tons of any and all air contaminants per year or if the Facility performs one or more of the air contaminant emitting operations listed in 5-802(2) of the *Regulations*, the Permittee shall register the source with the Secretary of the Agency (hereinafter "Secretary"), and shall renew such registration annually. Each day of operating a source which is subject to registration without a valid, current registration shall constitute a separate violation and subject the Permittee to civil penalties. The registration process shall follow the procedures set forth in Subchapter VIII of the *Regulations*, including the payment of the annual registration fee on or before May 15 of each year. [10 V.S.A. §§556(c) and 556a(d)] [Subchapter VIII §§5-802, 5-803, 5-807, 5-808 of the *Regulations*]

(75) All records, notifications and reports that are required to be submitted to the Agency by this Permit shall be submitted to:

Air Quality & Climate Division
Department of Environmental Conservation
Agency of Natural Resources
Davis 4
One National Life Drive
Montpelier, Vermont 05620-3802

[10 V.S.A. §§556(c) and 556a(d)] [§5-402 of the *Regulations*]

(76) All records, notifications and reports that are required to be submitted to the U.S. EPA by this Permit shall be submitted to:

Attn: Air Compliance Clerk
Director, Enforcement and Compliance Division
U.S. EPA Region I
5 Post Office Square
Suite 100 (04-2)
Boston, MA 02109-3912

[10 V.S.A. §§556(c) and 556a(d)] [§5-402 of the *Regulations*]

- Stratospheric Ozone Protection -

(77) Protection of Stratospheric Ozone - Recycling and Emissions Reduction. The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 *CFR* Part 82, Subpart F:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 *CFR* Part 82, Subpart F §82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment as specified in 40 *CFR* Part 82, Subpart F §82.158.

- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program as specified in 40 *CFR* Part 82, Subpart F §82.161.
- (d) Commercial or industrial process refrigeration equipment must comply with the leak repair requirements specified in 40 *CFR* Part 82, Subpart F §82.156.
- (e) For each appliance normally containing fifty (50) or more pounds of refrigerant, the Permittee shall keep records of refrigerant purchased and added to such appliances as specified in 40 *CFR* Part 82, Subpart F §82.166.

[10 V.S.A. §§556(c) and 556a(d)] [40 *CFR* Part 82, Subpart F]

- Standard Permit Conditions -

- (78) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Agency which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [10 V.S.A. §§556(c) and (g) and 556a(d)] [40 *CFR* Part 60.11(d) and 63.6(e)]
- (79) Approval to construct or modify under this Permit shall become invalid if construction or modification is not commenced within eighteen (18) months after issuance of this Permit, if construction or modification is discontinued for a period of eighteen (18) months or more, or if construction is not substantially completed within a reasonable time. The Agency may extend any one of these periods upon a satisfactory showing that an extension is justified. The term "commence" as applied to the proposed construction or modification of a source means that the Permittee either has:
 - (a) Begun, or caused to begin, a continuous program of actual on-site construction or modification of the source, to be completed within a reasonable time; or
 - (b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the Permittee, to undertake a continuous program of actual on-site construction or modification of the source to be completed within a reasonable time.

[10 V.S.A. §556(c)] [§5-501 of the *Regulations*]

- (80) These Permit conditions may be suspended, terminated, modified, or revoked for cause and reissued upon the filing of a written request with the Secretary of the Agency (hereinafter "Secretary") or upon the Secretary's own motion. Any modification shall be granted only with the written approval of the Secretary. If the Secretary finds that modification is appropriate, only the conditions subject to modification shall be re-opened. The filing of a request for modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay any terms or conditions of this Permit. The Secretary may provide opportunity for public comment on any proposed modification of these conditions. If public comments are solicited, the Secretary shall follow the procedures set forth in 10 V.S.A. §556 and §556a, as amended.

[10 V.S.A. §§556(d) and 556a(g)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]

- (81) Cause for reopening, modification, termination and revocation of this Permit includes, but is not limited to:
- (a) Inclusion of additional applicable requirements pursuant to state or federal law;
 - (b) A determination that the permit contains a material mistake or that inaccurate information was used to establish emissions standards or other terms or conditions of the operating permit;
 - (c) A determination that the operating permit must be modified or revoked to ensure compliance with applicable requirements;
 - (d) A determination that the subject source has failed to comply with a permit condition;
 - (e) For Title V subject sources, a determination by U.S. EPA that cause exists to terminate, modify, revoke or reissue an operating permit;
 - (f) Those causes which are stated as grounds for refusal to issue, renew or modify an operating permit under §5-1008(a) of the *Regulations*; or
 - (g) If more than three (3) years remain in the permit term and the source becomes subject to a new applicable requirement.

[10 V.S.A. §§556(c) and 556a(d)] [§5-1008(e)(4) of the *Regulations*]

- (82) The Permittee shall furnish to the Agency, within a reasonable time, any information that the Agency may request in writing to determine whether cause exists to modify, revoke, reissue, or terminate the Permit or to determine compliance with this Permit. Upon request, the Permittee shall also furnish to the Agency copies of records required to be kept by this Permit. [10 V.S.A. §§556(c) and 556a(d)] [§5-402 of the *Regulations*] [40 CFR Part 70 §70.6(a)(6)(v)]
- (83) By acceptance of this Permit, the Permittee agrees to allow representatives of the State of Vermont access to the properties covered by the Permit, at reasonable times, to ascertain compliance with Vermont environmental and health statutes and regulations and with this Permit. The Permittee also agrees to give the Agency access to review and copy any records required to be maintained by this Permit, and to sample or monitor at reasonable times to ascertain compliance with this Permit. [10 V.S.A. §§556(c), 556a(d) and 557] [§§5-402, 5-404, and 5-1015(a)(10) of the *Regulations*]
- (84) All data, plans, specifications, analyses and other information submitted or caused to be submitted to the Agency as part of the application for this Permit or an amendment to this Permit shall be complete and truthful and, for Title V permit applications, certified by a responsible official whose designation has been approved by the Secretary. Any such submission which is false or misleading shall be sufficient grounds for denial or revocation of this Permit, and may result in a fine and/or imprisonment under the authority of Vermont statutes. [10 V.S.A. §§556(c) and 556a(d)] [§§5-409 and 5-1006(f) of the *Regulations*]
- (85) For the purpose of establishing whether or not a person has violated or is in violation of any condition of this Permit, nothing in this Permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [10 V.S.A. §§556(c) and 556a(d)]

- (86) Any permit noncompliance could constitute a violation of the federal Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [10 V.S.A. §§556(c) and 556a(d)] [§§5-1008(a) and 5-1008(e) of the *Regulations*]
- (87) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this Permit. [10 V.S.A. §§556(c) and 556a(d)]
- (88) No person shall build, erect, install or use any article, machine, equipment or other contrivances, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which otherwise would constitute a violation of these *Regulations*. [10 V.S.A. §§556(c) and 556a(d)] [§5-403 of the *Regulations*]
- (89) The provisions of this Permit are severable. If any provision of this Permit, or its application to any person or circumstances is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the invalidity shall not apply to any other portion of this Permit which can be given effect without the invalid provision or application thereof. [10 V.S.A. §§556(c) and 556a(d)]
- (90) This Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to private property or any invasion of personal rights. [10 V.S.A. §§556(c) and 556a(d)]
- (91) All subsequent owners and/or operators of this Facility must request an amendment and transfer of this Permit prior to commencing any operations covered by this Permit. All subsequent owners and/or operators shall submit to the Agency as part of the request for amendment all such information the Agency deems necessary to establish legal ownership and/or interest in the property and all such information the Agency deems necessary to ensure the new owners and/or operators will construct and operate the Facility in compliance with the *Regulations* and this Permit. The terms and conditions of this Permit shall remain in full force and effect after submittal of the request for amendment and until the issuance of an amended Permit or denial. Should the Secretary deny the request, the new owner and/or operator must take whatever action is necessary to comply with the denial. [10 V.S.A. §§556 and 556a] [§§5-408, 5-501, 5-1004, and 5-1013(a) of the *Regulations*]
- (92) Renewable Energy Projects – Right to Appeal to Public Utilities Commission. If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the Vermont Public Utilities Commission pursuant to 10 V.S.A. §8506. This section does not apply to a facility that is subject to 10 V.S.A. §1004 (dams before the Federal Energy Regulatory Commission), 10 V.S.A. §1006 (certification of hydroelectric projects) or 10 V.S.A. Chapter 43 (dams). Any appeal under this section must be filed with the Clerk of the Public Utilities Commission within 30 days of the date of this decision; the appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. 8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For further information, see the Rules and General Orders of the Public Utilities Commission,

available on line at www.psb.vermont.gov. The address for the Public Utilities Commission is 112 State Street, Montpelier, Vermont, 05620-2701 (Tel. # 802-828-2358). [10 V.S.A. §§556(c), 556a(d) and 8506]

- (93) All Other Projects – Right to Appeal to Environmental Court. Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. For further information, see the Vermont Rules for Environmental Court Proceedings, available on line at www.vermontjudiciary.org. The address for the Environmental Court is 2418 Airport Road, Suite 1, Barre, VT 05641 (Tel. # 802-828-1660). [10 V.S.A. §§556(c) and 556a(d)]
- (94) Conditions (1) – (26), (28) – (45), (47), (51), (54), (56) – (61), (66), (66), (68), (75), (78) – (83), (85) - (87) and (91), are derived from the new source review requirements of Subchapter V of the *Regulations*. With the exception of the cited new source review conditions, this Operating Permit shall expire as indicated on the cover page to this Permit. The Permittee shall submit to the Agency a complete application for renewal of the Operating Permit at least six (6) months before the expiration of the Operating Permit. If a timely and administratively complete application for an operating permit renewal is submitted to the Secretary, but the Secretary has failed to issue or deny such renewal before the end of the term of this Operating Permit, then the Permittee may continue to operate the subject source and all terms and conditions of this Operating Permit shall remain in effect until the Secretary has issued or denied the operating permit renewal. However, this Operating Permit shall automatically expire if, subsequent to the renewal application being determined or deemed administratively complete pursuant to §5-1006 of the *Regulations*, the Permittee fails to submit any additional information required by the Secretary as well as information pertaining to changes to the Facility within thirty (30) days or such other period as specified in writing by the Secretary. [10 V.S.A. §§556(c) and 556a(d)] [§§5-1011 and 5-1012(a) of the *Regulations*] [§§5-1005(c) and 5-1012 of the *Regulations*]
- (95) The conditions of this Permit as set forth above supersede all conditions contained in all prior Permits issued by the Agency to the Permittee for this Facility. [10 V.S.A. §§556(c) and 556a(d)]

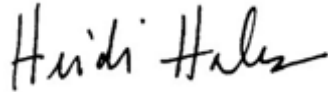
Omya, Inc.

#AOP-22-051

The Agency's issuance of this Air Pollution Control Permit relies upon the data, judgment, and other information supplied by the Permittee. The Agency makes no assurances that the air contaminant source approved herein will meet performance objectives or vendor guarantees supplied to the source Permittee. It is the sole responsibility of the Permittee to operate the source in accordance with the conditions herein and with all applicable state and federal standards and regulations.

Permit issued and effective this **13th** day of **February** , 2023.

Permit issuance authorized by:
Agency of Natural Resources
Peter Walke, Commissioner
Department of Environmental Conservation



By: _____
Heidi C. Hales, Director
Air Quality & Climate Division

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