



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Solenis LLC
Courtland, Virginia
Permit No. TRO-60188

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Solenis LLC has applied for a Title V Operating Permit for its Courtland facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Writer:

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Date: April 28, 2015

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Date: April 28, 2015

Regional Director:

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Date: April 28, 2015

I. FACILITY INFORMATION

Permittee

Solenis LLC
500 Hercules Road
Wilmington, Delaware 19808

Facility

Solenis LLC
27123 Shady Brook Trail
Courtland, Virginia 23837-2034

County-Plant Identification Number: 51-175-00012

A. SOURCE DESCRIPTION

NAICS Code: 325998 - All Other Miscellaneous Chemical Product and Preparation Manufacturing

The main process at the Solenis LLC facility is called the Aquapel® process, a batch process that converts fatty acids to an alkyl ketene dimer, a sizing agent for the fine paper industry. The process involves several steps as described in the permit application, including information that qualifies as confidential business information (9 VAC 5-170-60 B). Wastewater from the Aquapel® process is treated by the Wastewater Neutralization process.

The facility, formerly Hercules Incorporated, then Ashland Hercules Water Technologies, and now Solenis LLC (since June 2014), has its first Title V permit issued on 11/18/2002. Steam supply for the facility operation was from the nearby co-generator (Dominion-Southampton Power Station). Then starting from 2006, the facility began to apply for permits to construct and operate boilers to supply its own steam. The permitted size of the boilers and the fuel type had been revised over time. Currently, the facility has two boilers, each with a maximum rated heat input capacity of 32.659 million BTU/hr, firing natural gas with distillate oil as back-up fuel, permitted by the 2/17/2011 minor NSR permit. It was also issued on 3/28/2013 a minor NSR permit for a temporary boiler with a maximum rated heat input capacity of ≤ 50 million Btu/hr, firing the same fuels, which can be brought on-site for temporary use when a need arises such as when their regular boilers malfunction or are undergoing maintenance. The current permits do not allow simultaneous operation of all three boilers except during the transition period when one of the regular boilers is being taken off line or being brought back on line after being down.

The facility has an emergency air compressor with a diesel internal combustion engine manufactured on 8/16/2006 which is subject to NSPS Subpart IIII. Three other emergency reciprocating internal combustion engines at the site are a diesel fire pump and two diesel well pumps. They are ≤ 500 hp and constructed before 6/12/2006, hence subject to MACT Subpart ZZZZ, not NSPS Subpart IIII.

This source is located in an attainment area for all criteria pollutants. The first minor NSR permit was issued on 3/10/97 for an expansion of the Aquapel® process. The permit was amended on 5/17/02 mainly to remove some old boilers from the equipment list and reword confidential business information. To avoid possible PSD permit processing for a modification which might have caused a significant net emission increase, the facility agreed to a facility-wide VOC emission cap of 92.9 tons/yr in a State Operating Permit (SOP) dated 6/16/03. The SOP lists all equipment at the facility and contains all conditions of the 5/17/02 NSR permit. It underwent a minor amendment on 12/07/04, and the amended permit is still in effect today.

In the mean time, in 2001, the facility sold many of its assets to Eastman Chemical Resins, Inc. (Eastman) and GEO Specialty Chemicals (GEO), retaining only the Aquapel® process and parts of the Wastewater Treatment process that are necessary for the Aquapel® process. All three facilities, Hercules, Eastman, and GEO, contend that they are separate independent entities. However, EPA made a determination in a letter dated 5/13/2004 that the three facilities are under common control based on various factors, including the common steam supply and some employees. The three-facility combination would be major for VOC under both the Title V and the PSD regulations. Since then, Hercules has been partly sold to Ashland, Inc. and become Ashland Hercules Water Technologies, and GEO has been sold to Arkema Inc. When one of the main processes at Eastman which uses steam was eliminated, Eastman actively tried to appeal the 5/13/04 EPA decision. On November 19, 2009, EPA Region III responded to a letter from the Virginia DEQ requesting EPA's opinion on whether Ashland Hercules Water Technologies, Eastman Chemical Resins Inc., and Arkema Inc. should be considered as one or three separate stationary sources for applicability purposes under the Clean Air Act. In that response letter, EPA Region III concluded "that there is sufficient common control among Ashland, Eastman, and Arkema for Ashland, Eastman, and Arkema to be one stationary source under the Clean Air Act." More recently, Arkema also began its appeal to be a separate source, however, there has not been a positive response from EPA. Therefore, even though Virginia DEQ decided in 2001 that each facility would be issued its own Title V permit, it is mindful that the three separate permits are considered parts of a single Title V permit for a stationary source and may decide to combine them into one document in the future.

Please note that this Title V permit is written to contain no confidential business information (CBI) because the contents of a Title V permit cannot be kept confidential (CAA Amendment 1990, Section 503(e)). Hence, process description is minimal in the permit. Emissions sources are primarily identified as 19 groups of equipment with common functions, as seen below in the Emission Unit and Control Device Identification Section. While the underlying permits may contain CBI in the confidential version which can be sanitized or coded in the public version, that is not the case for the Title V permit. Even though the 12/07/04 SOP had been written to contain as few CBI as possible, it still has a confidential and a public version as the size/rated capacity of equipment needed sanitization, and individual HAP codes of X, Y, Z, and Q had to be defined in a separate confidential addendum. Since the Title V permit has to be self-explanatory and suitable for public review, the size/rated capacity of equipment is completely removed except when there are potentially applicable requirements such as in the case of tanks that could be subject to NSPS Subpart Kb. In that case, the size range is given as addressed in the NSPS. As for HAPs, they are addressed as a class of compounds (same as written in MACT), or as target VOCs, or as non-VOC HAP, as appropriate.

II. COMPLIANCE STATUS

The last full compliance evaluation of this facility, including a site visit, was conducted on 05/02/2013. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

III. EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

For fuel burning equipment, each unit has its own name.

For process equipment, the following naming system was used to identify emission units, stacks/vents, and control equipment associated with each process. Two letters are used to identify each process: AQ for Aquapel® process, and WW for Wastewater Neutralization process. A third letter “E”, “S”, or “C” denotes an emission group, a stack/vent, or a control device, respectively. The next two numbers are consecutive numbers used for each category to indicate a unit or a group of units with common function. For example AQE01 represents the emission group in the first step of the Aquapel® process. Each emission unit in AQE01 is then identified by its own equipment ID number, e.g. A-18 and A-19. Stack/vents and control devices are always individual units, e.g. AQS01 and AQC01 are stack 01 and control device 01, respectively, and hence, no further identification is necessary. Each stack/vent or control device may serve several emission groups. For example, AQC01 controls emissions from AQE02 to AQE09 with the common vent AQS01, while AQC02 and AQC03 (in series) control emissions from AQE10 to AQE18 (except tanks A-33 and A-89B) with the common vent AQS02.

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
ES-TB	EP-TB	Temporary boiler firing natural gas with distillate oil as back-up, to be brought on-site as needed, NSPS Subpart Dc	≤ 50 mmBtu/hr	N/A	N/A	N/A	03/28/13 NSR
ES-B1	EP-B1	Boiler firing natural gas with distillate oil as back-up, NSPS Subpart Dc and MACT Subpart DDDDD, Gas 1 Subcategory, installed 5/2012	32.659 mmBtu/hr	N/A	N/A	N/A	2/17/11 NSR
ES-B2	EP-B2	Boiler firing natural gas with distillate oil as back-up, NSPS Subpart Dc and MACT Subpart DDDDD, Gas 1 Subcategory, installed 5/2012	32.659 mmBtu/hr	N/A	N/A	N/A	2/17/11 NSR

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
EAC1	N/A	Atlas Copco emergency air compressor Model No. XAS 756 (CD) with Caterpillar C6.6 Tier III diesel internal combustion engine, built 08/16/2006, serial # 66601652, NSPS Subpart IIII	195.8 HP	N/A	N/A	N/A	N/A
Fire Pump	N/A	Emergency diesel fire pump, May 2003, MACT ZZZZ	300 HP	N/A	N/A	N/A	N/A
Well Pump #4	N/A	Emergency diesel well pump, August 1977, MACT ZZZZ	312 HP	N/A	N/A	N/A	N/A
Well Pump #5	N/A	Emergency diesel well pump, August 1993, MACT ZZZZ	255 HP	N/A	N/A	N/A	N/A
Aquapel® Process (MON MACT, 40 CFR 63 Subpart FFFF)							
AQE01/	N/A	Raw material and reactant storage tanks	-	N/A	N/A	N/A	12/07/04 SOP
A-18	N/A	Fatty acid tank, 1990	75 m ³ to <151m ³	N/A	N/A	N/A	-
A-19	N/A	Fatty acid tank, 1991	75 m ³ to <151m ³	N/A	N/A	N/A	-
AQE02	AQS01	Reactant storage tanks	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
AQE03/	AQS01	Reactors	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
R-110 & R-111	-	Two reactors, 1997	-	-	-	-	-
AQE04/	AQS01	Process Tanks	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
T-112 , T-113, T-114, and T-115	-	Four process tanks, 1990-1991	-	-	-	-	-
AQE05/	AQS01	Process Tanks	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
T-118	-	Process tank, 1997	-	-	-	-	-
T-119-1	-	Process Tank, 1999	-	-	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
T-119-2	-	Process tank, 2006	-	-	-	-	-
T-116 & T-117	-	Two process tanks, 1990	-	-	-	-	-
AQE06/	AQS01	Processing System	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
T-100	-	By-product tank, 1990	-	-	-	-	-
C-203	-	Processing unit, 1994	-	-	-	-	-
C-213	-	Processing unit, 1997	-	-	-	-	-
A-31	-	By-product tank, 1995	-	-	-	-	-
AQE07/	AQS01	Liquid handling system	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
CIRCUL	-	Aqueous solution tank, 1985	-	-	-	-	-
AQE08/	AQS01	By-product recovery and storage system	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
T-108-6	-	Aqueous solution tank, 1998	40 to <75 m3	-	-	-	-
A-12	-	By-product tank, 1991	40 to <75 m3	-	-	-	-
A-13	-	By-product tank, 1991	40 to <75 m3	-	-	-	-
A-14	-	By-product tank, 1991	40 to <75 m3	-	-	-	-
T-108-1	-	By-product tank, 1990	40 to <75 m3	-	-	-	-
A-29	-	By-product tank, 1993	40 to <75 m3	-	-	-	-
T-108-3	-	By-product tank, 1990	40 to <75 m3	-	-	-	-
T-108-5	-	Aqueous solution tank, 1997	-	-	-	-	-
AQE09/	AQS01	Neutralization System	-	Packed scrubber	AQC01	Non-VOC HAP	12/07/04 SOP
NEUTRAL	-	By-product tank, 1990	-	-	-	-	-
T-119-2	-	Water/Fatty acid tank, 2005	-	-	-	-	-
AQE10/	AQS02	VOC storage tanks	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
A-6	-	VOC storage tank, 1991	-	-	-	-	-
A-7	-	VOC storage tank, 1994	-	-	-	-	-
A-8	-	VOC storage tank, 1995	-	-	-	-	-
A-49	-	VOC storage tank, 1965	-	-	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE11/	AQS02	VOC storage tanks	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
A-16	-	VOC storage tank, 2001	-	-	-	-	-
A-17	-	VOC storage tank, 1994	-	-	-	-	-
A-5	-	VOC storage tank, 1991	-	-	-	-	-
AQE12/	AQS02	Reactors	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
R-41	-	Reactor, 2003	-	-	-	-	-
R-40	-	Reactor, 2003	-	-	-	-	-
A-33 ⁽¹⁾	-	VOC storage tank, 1965	-	N/A	N/A	N/A	-
AQE13/	AQS02	Centrifuge system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
T-412B	-	Centrifuge feed tank, 2003	-	-	-	-	-
S-403-1	-	Small centrifuge, April 2012	-	-	-	-	-
S-413-1	-	Large centrifuge, 1998	-	-	-	-	-
T-412-1	-	Centrifuge feed tank, 1989	-	-	-	-	-
AQE14/	AQS02	Separation system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04
T-42	-	Crude product tank, 1990	-	-	-	-	-
A-45	-	Crude product tank, 1966	-	-	-	-	-
A-53	-	Mixed solvent tank, 1965	-	-	-	-	-
C-608-1	-	Processing unit, 2000	-	-	-	-	-
S-611-2	-	Separator, 1990	-	-	-	-	-
S-614-2	-	Separator, 1990	-	-	-	-	-
S-620-2	-	Separator, 1996	-	-	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
AQE15/	AQS02	Solvent Recovery System	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
A-43	-	By-product solution tank, 1990	-	-	-	-	-
A-44	-	By-product solution tank, 1978	-	-	-	-	-
A-80, and A-81	-	By-product solution tanks, 1979	-	-	-	-	-
T-503-1 (same as A-82)	-	Recovery tank, 1997	-	-	-	-	-
AQE16= AQC02	AQS02 & AQS04	Condenser, 1990	-	Carbon Adsorber, January 1996	AQC03	95% control of VOC	12/07/04 SOP
AQE17/	AQS02	Batch separation system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
A-79	-	VOC tank, 1991	-	-	-	-	-
A-84	-	VOC tank, 1991	-	-	-	-	-
A-83	-	Overhead water tank, 1991	-	-	-	-	-
A-85	-	Scrap tank, 1991	-	-	-	-	-
A-86	-	VOC tank, 1981	-	-	-	-	-
A-86A	-	VOC tank, 1998	-	--	-	-	-
A-88	-	Overflow tank, 1965	-	-	-	-	-
A-90	-	Batch processing unit, 1965	-	-	-	-	-
AQE18/	AQS02	VOC processing system	-	Condenser and Carbon Adsorber in series	AQC02 and AQC03	95% control of VOC	12/07/04 SOP
A-87A	-	VOC tank, 1998	40 to <75 m3	-	-	-	-
A-87	-	VOC tank, 1981	-	-	-	-	-
A-89A	-	By-product tank, 2002	-	-	-	-	-
S-513-8	-	VOC processing unit, 2003	-	-	-	-	-
S-510-2	-	VOC separator, 1965	-	-	-	-	-

Emission Unit ID	Stack ID	Emission Unit Description	Size/ Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
A-89B ⁽¹⁾	-	By-product tank, 2004	-	N/A	N/A	N/A	-
AQE19/	AQS03	Packaging system	-	N/A	N/A	N/A	12/07/04 SOP
T-717-1	-	Dowfrost refrigerated water tank, 1996	-	N/A	N/A	N/A	-
T-103	-	Dowfrost refrigerated water tank, 1966	-	N/A	N/A	N/A	-
Processing units 1 & 2	-	Two processing units, 1997	-	N/A	N/A	N/A	-
T-65-1	-	Feed tank, 1996	-	N/A	N/A	N/A	-
Wastewater Neutralization Process							
WWE10/	N/A	Combined Basin, 1955	-	N/A	N/A	N/A	12/07/04 SOP
WWE11/	N/A	Wastewater neutralization tanks	-	N/A	N/A	N/A	12/07/04 SOP
T-702	N/A	Tank, 1998	-	N/A	N/A	N/A	-
T-703	N/A	Tank, 1994	-	N/A	N/A	N/A	-
T-704	N/A	Tank, 1996	75 m ³ to <151m ³	N/A	N/A	N/A	-

*The Size/Rated capacity and PCD efficiency are provided for informational purposes only, and are not an applicable requirement.

⁽¹⁾ The tank is not connected to AQC02 and AQC03.

IV. EMISSIONS INVENTORY

A copy of the 2013 annual emission update is attached. Emissions are summarized in the following table.

2013 Actual Criteria and Hazardous Air Pollutant Emissions in Tons/year

Emission Unit	VOC	CO	SO ₂	PM ₁₀	PM _{2.5}	NO _x	Non-VOC HAP
Aquapel® Process	90.0*						10.3
Boiler ES-B1	0.4	6.4	0.05	0.6	0.6	2.8	
Boiler ES-B2	0.5	7.1	0.05	0.6	0.6	3.1	
Temporary Boiler ES-TB	0	0	0	0	0	0	
Total	90.9	13.5	0.1	1.2	1.2	5.9	10.3

* Includes VOC-HAP

V. FUEL BURNING EQUIPMENT APPLICABLE REQUIREMENTS- TEMPORARY BOILER (EMISSION UNITS ID# ES-TB)

A. Limitations

The temporary boiler ES-TB is exempt from MACT DDDDD pursuant to 40 CFR 63.7575 because, as permitted in the 3/28/13 minor NSR, its operation meets the definition of a temporary boiler in the MACT: it is movable and shall not remain on-site for more than 12 consecutive months (Condition 5).

The boiler is subject to NSPS Subpart Dc. Note that it would have been exempt from the rule (as amended on 2/16/12) if it does not stay on site for more than 180 days at a time, and burns oil containing less than 0.06% S (emission limit of 0.06 lb/mmBTU). This exemption can be achieved if the NSR were amended to meet those requirements. Currently, the permitted fuel sulfur content limit is 0.2% (Condition 3) and visible emission is limited to 10% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20% opacity as determined by the EPA Method 9 (Condition 8). Those conditions are more stringent than required by NSPS Subpart Dc.

NO_x and SO₂ emissions are subject to state BACT requirements.

NO_x emissions shall be controlled by flue gas recirculation (Condition 1). For natural gas combustion, the manufacturer-guaranteed emission factor (EF) for NO_x is 30 ppmvd at 3% O₂ or 0.0357 lbs/MMBtu.

EF for NO_x in AP-42 (7/98, Table 1.4-1) are:

Uncontrolled: 100 lbs/MMscf = 100 lbs/MMscf x 1 MMscf/1020 MMBtu = 0.0980 lbs/MMBtu

Low NO_x burner: 50 lbs/MMscf = 50 lbs/MMscf x 1 MMscf/1020 MMBtu = 0.049 lbs/MMBtu

Low NO_x burner/FGR: 32 lbs/MMscf = 32 lbs/MMscf x 1 MMscf/1020 MMBtu = 0.0314 lbs/MMBtu

Hence, the manufacturer EF is lower than those for boilers with low NO_x burners, and almost as low as those for boilers with low NO_x burners and FGR. Hence, BACT is met.

For No. 2 fuel oil combustion, the guaranteed EF for NO_x is 90 ppmvd or 0.115 lbs/MMBtu which is lower than the uncontrolled EF for NO_x in AP-42 (5/10, Table 1.3-1) of 20 lbs/1000 gal or 0.143 lbs/MMBtu. Additionally, fuel oil throughput limit of 178,571 gal/year (Condition 4) which is equivalent to 500 hrs/year, further meets BACT.

For SO₂, the sulfur content limit of 0.2% S (Condition 3) and the above throughput limit meet BACT. Note that fuel throughput limit is not set for natural gas as it has lower emission factors for most criteria pollutants including NO_x and SO₂. The annual emission limits are based on the worst case fuel for each pollutant (Condition 7). They are all below the PSD significant levels; hence, PSD permitting does not apply. Additionally, CO₂^e emissions from the temporary boiler were estimated to be less than 75,000 tons/yr, hence, there are no applicable GHG permitting requirements.

B. Monitoring

Continuing compliance is demonstrated by weekly observation of visible emissions while firing distillate oil (Condition 12).

C. Testing

Initial compliance to the visible emission limit is demonstrated by performing Method 9 while firing distillate oil as required by NSPS Subpart Dc (Condition 14).

D. Recordkeeping, Notification and Reporting

Initial notification is required each time a temporary boiler is brought onsite (Condition 16).

Semi-annual fuel quality reports are required by NSPS Subpart Dc (Condition 17).

Records shall be kept for all notifications, duration of the boiler stay, monthly fuel usage, fuel certifications, visible emission observation and evaluation results, and all semi-annual fuel reports (Condition 13).

E. Streamlined Requirements

Most General Conditions in the 3/28/13 NSR permit were streamlined because they are already represented in the Title V General Conditions except for the following:

- The Permit Invalidation Condition (Condition 11) which sets a time limit of 18 months to begin installation of the boiler unless an extension is granted (9 VAC 5-80-1210). As the temporary boiler has not been needed on-site in that time period, the facility had submitted an extension request. The request was granted and the installation commence date was extended to 3/28/16. Further extension may be granted.
- The Violation of Ambient Air Quality Standards Condition (Condition 23 of 3/28/13 NSR) is not a Title V General Condition; it is retained in Condition 61, Section VII. Aquapel® Process Equipment Requirements.

VI. FUEL BURNING EQUIPMENT REQUIREMENTS- TWO NATURAL GAS AND DISTILLATE OIL BOILERS (EMISSION UNIT ID# ES-B1 AND ES-B2)

A. Limitations

Low NO_x burner meets BACT.

The boilers are subject to NSPS Subpart Dc. The fuel sulfur content is limited to 0.2% and visible emission is limited to 10% opacity except during one six-minute period in any one hour in which visible emissions shall not 20% opacity as determined by the EPA Method 9. Those conditions are more stringent than required by NSPS Subpart Dc.

The boilers are also subject to MACT DDDDD as new units because they were installed after 6/04/2010. Specific requirements were not in the 2/17/11 minor NSR permit because the rule was still being amended at the time. The facility has stated that the boilers will be operated to meet the MACT definition of “unit designed to burn gas 1 subcategory” which means burning natural gas, refinery gas or other “gas 1” fuels, and liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, and during periods of gas curtailment or gas supply interruptions of any duration. The main requirement for this boiler subcategory is the annual tune-up (see Monitoring).

Fuel throughput limit is set for distillate oil (Condition 20) to ensure that the PSD significant level for SO₂ is not exceeded. No throughput limit is set for natural gas as it has lower emissions per hour or per MMBtu for all criteria pollutants except for CO. The annual emission limits are based on the worst case fuel for each pollutant (Condition 26). No PSD significant levels are exceeded; hence, PSD permitting does not apply. As the facility was also permitted for a temporary boiler during the contemporaneous time period, Condition 21 ensures it does not operate at the same time with the two boilers except during the transition period when one of the boilers (ES-B1 and ES-B2) is being brought back on line after being down and the temporary boiler is being taken off line.

B. Monitoring

The visible emission observation requirement for any week that fuel oil is burned (Condition 29) meets Part 70 periodic monitoring requirements.

MACT Subpart DDDDD also requires an annual tune-up of the boilers (Condition 30) as specified in 63.7540(a)(10) (Table 3 of MACT DDDDD).

C. Recordkeeping

Monthly usage records of each fuel are required by NSPS Subpart Dc, and the annual distillate oil consumption records are to demonstrate compliance with the throughput limit. The permit also requires records of all fuel certifications, visible emissions monitoring and testing, maintenance and operator training, and semiannual fuel quality reports. Also included are MACT Subpart DDDDD recordkeeping requirements of all notifications, reports, tune-ups, and fuel oil usage to demonstrate meeting the gas 1 subcategory for the boilers.

D. Testing

Initial compliance determination by visible emission evaluation by Method 9 as required by NSPS Subpart Dc while firing distillate oil has been completed, hence, the relevant 2/17/11 NSR condition is not needed here.

The Department and EPA have authority to require additional testing not included in this permit if necessary to determine compliance with an emission limit or standard.

E. Notification and Reporting

As the compliance date for MACT DDDDD is 1/31/13, Initial Notification and Notice of Compliance Status have been completed; hence they are not needed here. Notification is required if the facility switches fuels or make physical change that resulted in the applicability of a different boiler subcategory (Condition 34). Annual compliance report is also required (Condition 35).

Semi-annual fuel quality reports requirement by NSPS Subpart Dc is included (Condition 36) but not the initial notification which has been completed.

F. Streamlined Requirements

The required Initial Compliance Determination by Visible Emission Evaluation and Initial Notifications from the 2/17/11 NSR Conditions 14 and 18, respectively, have been completed; therefore, those conditions are streamlined.

Most General Conditions in the 2/17/11 NSR were streamlined because they are already represented by the Title V General Conditions except for the following:

- Permit Invalidation Condition 19 of the 2/17/11 NSR is not a Title V General Condition; however, as the boilers ES-B1 and ES-B2 have been installed, the condition is streamlined.
- Portion of the Maintenance/Operating Procedures in General Condition 22 of the 2/17/11 NSR is not in the Title V General Condition 108; hence, it is included as Condition 28 of the Title V permit.
- The Violation of Ambient Air Quality Standards Condition 25 of 2/17/11 NSR is not a Title V General Condition; hence, it is included as Condition 61, Section VII. Aquapel® Process Equipment Requirements.

VII. FUEL BURNING EQUIPMENT REQUIREMENTS- EMERGENCY AIR COMPRESSOR (EMISSION UNIT ID# EAC1)

The facility has a diesel-fueled emergency air compressor (EAC1, engine built 8/16/2006, 195.8 HP) that is subject to NSPS Subpart IIII as well as MACT Subpart ZZZZ. The latter has no further requirements beyond those in NSPS Subpart IIII. Because the subpart has not been adopted into the Virginia air regulations, the unit is exempt from minor NSR permitting by Article 6 as an emergency internal combustion engine in accordance with 9 VAC 5-80-1105 B 2. The unit does not qualify as an insignificant activity in 9 VAC 5-80-720 C.1.a. Hence, federal applicable requirements for owner/operator by NSPS Subpart IIII have to be included in the Title V permit.

A. Limitations

Condition 37: 500-hour annual operation limit is included for EAC1 to qualify as an emergency internal combustion engine and exempt from Article 6 permitting requirements.

Conditions 38 through 41: Fuel requirements, operating and maintenance requirements, and non-resettable hour meter installation are as required by NSPS Subpart IIII.

Condition 42: Emission limits are based on the emission standards in Table 1 of NSPS Subpart IIII for the engine size:

- 1.0 g/hp-hr (1.3 g/kW-hr) HC,
- 6.9 g/hp-hr (9.2 g/kW-hr) NO_x,
- 8.5 g/hp-hr (11.4 g/kW-hr) CO, and
- 0.40 g/hp-hr (0.54 g/kW-hr) PM.

The EAC1 engine is certified to meet Tier 3 EPA standards (40 CFR 89.112):

- 4.0 g/kW-hr for NMHC+NO_x,
- 3.5 g/kW-hr CO, and
- 0.2 g/kW-hr PM

which can be considered surpassing all NSPS standards.

Condition 43: Visible emission limits are more stringent than the new source standards in 9 VAC 5-50-80.

B. Monitoring and Recordkeeping

Condition 45: Tracking of annual operation hours, fuel records, operation and maintenance records and engine certification records are required.

C. Testing

No performance test is required as the engine is certified (40 CFR 60.4211(b)(1)).

D. Notification and Reporting

There are no additional requirements for certified pre-2007 emergency engines of this size (40 CFR 60.4214 (b)).

VIII. FUEL BURNING EQUIPMENT REQUIREMENTS- EMERGENCY FIRE PUMP, AND EMERGENCY WELL PUMPS #4 AND #5

The above emergency fire pump was manufactured as a certified National Fire Protection Association (NFPA) engine before 7/01/2006, and the two emergency well pumps were constructed before 4/01/2006. Hence, they are not subject to NSPS Subpart III. However, all three reciprocating internal combustion engines (RICE) are subject to MACT Subpart ZZZZ as existing stationary engines ≤ 500 HP, located at a major source of HAP, and constructed before 6/12/2006. They are exempt from minor NSR permitting pursuant to 9 VAC 5-80-1105 B.

A. Limitations

Condition 46: To qualify as an emergency RICE, the engine operation has to meet the definition in 40 CFR 63.6675 and the operating hour limitations in 40 CFR 63.6640(f). Additionally, to be exempt from minor NSR permitting, it has to meet the definition of emergency in 9 VAC 5-80-1110 and the 500 hours operation limit per year in 9 VAC 5-80-1105 B.

Condition 47: MACT Subpart ZZZZ specifies operation and maintenance practices concerning oil and filter changes, air cleaner inspections, hose and belt inspections, manufacturer's instructions, and idling time during startup.

B. Monitoring and Recordkeeping

As required by MACT ZZZZ:

Condition 49: Installation of a non-resettable hour-meter is required if one has not been installed.

Condition 50: Records are required for hours of operation, operation and maintenance practice, and any required reports.

C. Reporting

Condition 51: A reports is required as in Footnote 1 of Table 2c in MACT Subpart ZZZZ whenever the facility has to delay maintenance practice due to emergency operation. Note that the annual reporting requirements in 40 CFR 63.6650(h) (as amended, FR 78, January 30, 2013) does not apply because the facility does not use the engine for demand response or voltage fluctuations as described in 40 CFR 63.6640(f)(2)(ii) or (iii), respectively, or for any financial agreement as described in 40 CFR 63.6640(f)(4)(ii).

IX. AQUAPEL® PROCESS EQUIPMENT REQUIREMENTS – EMISSION GROUPS AQE01 TO 19, AND WWE10 AND 11

A. General

The 12/07/04 SOP is a facility-wide operating permit with a VOC emission cap of 92.9 tons per year. At the time, there were no boilers at the facility; hence, the cap covers only the equipment of the Aquapel® process (AQE01 to 19) and the related wastewater treatment process (WWE10 and 11). Several units qualify as Insignificant Activities and can be found under that section.

No tanks in the wastewater treatment process are subject to NSPS Subpart Kb; those in the size range of 75 m³ to <151m³ contain liquid with maximum true vapor pressure below the threshold of 15.0 kilopascals.

The chemical compound designated as X in the SOP to maintain confidentiality requested by facility is now identified as "hydrogen halide", the same as used in MACT Subpart FFFF (MON) that is applicable to the Aquapel® process. The latter is considered an existing affected source under MON. The permittee had submitted a Notice of Compliance Status (NOCS, October 2008) Report in accordance with 40 CFR 63.2520(d) to identify process areas subject to the MON requirements and to notify DEQ of the methods that are used at the facility to comply with these requirements. Operating parameter limits have also been established by the performance tests that demonstrate compliance. All principle elements of MON as applicable to the Aquapel® process are discussed below.

The permittee has designated all process vents either halogenated Group 1 batch or Group 1 continuous process vents. The vents are ducted to a common recovery system consisting of a condenser (AQC02) and a carbon adsorber (AQC03) connected in series. The permittee has elected to comply with MON provisions by reducing organic HAP emissions from the sum of all process vents by $\geq 95\%$ by weight which is a Group 1 batch process vent requirement (Table 2 of MON), in accordance with the hierarchy provisions in 40 CFR 63.2450(c)(2). The latter has an exception for the hydrogen halide batch process vent (the circulating basin in AQE07/ CIRCUL). The permittee shall comply with the emission limit for hydrogen halide vents by reducing the halogen mass emission rate to ≤ 0.45 kg/hr (Table 3 of MON). Emissions are routed to a closed vent system to the packed scrubber (AQC01).

Additionally, MON refers to MACT Subpart SS (40 CFR 63.980 et seq.) that addresses in detail emission standards for closed vent systems, control devices, and recovery devices present at the Aquapel® process. There are two closed vent systems in the Aquapel® process. One routes emissions from the circulating basin to the scrubber and the other routes emissions from storage tanks and process vents to the condenser/adsorber system.

The Aquapel® process has six Group 1 storage tanks (A-86, A-86A, A-88, A-17, A-87, and A-87A); the remaining tanks are Group 2 storage tanks. The Group 1 storage tanks are routed to the condenser/ carbon adsorber system, complying with 95% control requirements (Table 4 of MON) as specified in the hierarchy provisions in 40 CFR 63.2450(c)(2). MON does not have emission limits or work practice standards for Group 2 storage tanks; the permittee will maintain documentation that those tanks do not meet the Group 1 thresholds. However, most tanks are already routed to the condenser/ carbon adsorber system.

There are no transfer racks (as defined in 40 CFR 63.2550) that load organic liquids to tank trucks or rail cars which would be subject to MON.

Equipment leaks from process equipment in organic HAP service at greater than 5% by weight are subject to MON requirements (40 CFR 63.2480) which refer to MACT Subpart UU (40 CFR 63.1019 et seq.). Applicable requirements are included in a separate section of the permit.

All process wastewater streams at the Aquapel® process are Group 2 wastewater streams (40 CFR 63.2485 and 63.2550). Therefore, following compliance with the reporting requirements in Notice of Compliance Status, only recordkeeping requirements remain (MACT Subpart G, Section 40 CFR 63.132(a)(3)).

Heat exchangers at the site are operated with minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side. Therefore, the heat exchangers are exempt from the requirements of the MON (40 CFR 63.2490 and Table 10, referring to MACT Subpart F, Section 40 CFR 63.104(a)(1)).

General Provisions apply in accordance with Table 12 of MON. In particular, the permittee has prepared a Startup, Shutdown, and Malfunction Plan (SSMP) as required by 40 CFR 63.6(e)(3).

All MON requirements as well as the underlying 12/07/04 SOP permit conditions are addressed in the Title V permit with any potential conflicts resolved, as discussed below.

B. Limitations

Condition 52:

The 12/07/04 SOP Condition 3 requires as BACT that emissions from the Aquapel® process areas AQE02 to AQE09 be controlled by a packed scrubber (AQC01) with 90% control efficiency. Compliance to this requirement has been shown by the compliance tests for MACT FFFF (see Notice of Compliance Status Report dated 10/06/08). However, the same compliance tests had established that the maximum concentration of hydrogen halide at the influent liquid flow to the scrubber shall not exceed 3.58 % by weight that corresponds to a $\text{pH} \leq 2.5$ s.u., and the minimum liquid to gas (L/G) ratio of the scrubber shall not fall below 20.66 gallons per 1,000 actual cubic feet. Given the design blower capacity of 3000 scfm that the facility is allowed to use (40 CFR 63.994(c)(ii)), the liquid flow is equivalent to 62 gal/minute. Those limits are more stringent than the SOP Condition 3 requirements of 4% by weight maximum concentration and 50 gallons/minute minimum liquid feed flow rate. Therefore, those SOP requirements are streamlined, subsumed by the limits established by the compliance tests.

Condition 53: The MON emission standard for hydrogen halide is added here. The SOP does not address this non-VOC HAP because the facility is subject to MACT, hence exempt from state toxics rules.

Condition 54:

The SOP Condition 5 also requires as BACT that VOC emissions from AQE10 to AQE18 are controlled by a condenser (AQC02) and a carbon adsorber (AQC03) connected in series with a combined control efficiency $\geq 95\%$. That control efficiency matches MACT requirement. Hence, no change is needed.

However, the compliance tests for MACT FFFF had established that the condenser exit gas temperature at two locations shall not exceed 116.1°F for E-1001 and 120.3° for E-606 while SOP requires the brine liquid inlet temperature not to exceed 36°F. Hence, the less comprehensive SOP requirement is subsumed to avoid redundancy.

Additionally, the MACT testing had established that the carbon adsorber shall be operated at a minimum steam flow of 265 lb/regeneration cycle and a maximum bed temperature of 125°C within 15 minutes after the regeneration cycle and before a cooling cycle. This was found not contradicting the SOP requirement that the steam regenerations of the carbon adsorber occurs every 12 hrs or less. Hence the SOP requirement is retained.

The SOP also requires that the maximum concentration of VOC from the outlet of the carbon adsorber not to exceed 50,000 ppmv measured by a Gas Analyzer. MON does not have an equivalent requirement even though test results indicated compliance to this condition. Hence, the SOP requirement is retained. Note that the term Y,Z, and Q have been

replaced with "target VOC compounds" as Title V permit may not contain coded keys for confidential business information which need additional explanation.

Conditions 55 and 56: Applicable MON requirements on work practice for tanks (40 CFR 63.2470(d)) and safety devices (40 CFR 63.2450(p)), respectively, are included.

Condition 57: The SOP Condition 10 limits the annual usage of fatty acid in the Aquapel® process to 48.6 million pounds, calculated monthly as the sum of each consecutive 12-month period. Fatty acid usage is a surrogate for the production capacity that is a confidential business information. This throughput limit was also based on a maximum operation of 8,760 hours per year where the production batches were run continuously.

Condition 58: VOC point emission limits in SOP Condition 11 were initially derived from the maximum potential to emit and the required control efficiency of 95% (NSR dated 3/10/97). The maximum potential to emit is the uncontrolled emissions at 8760 hrs of operation per year, calculated from the vent exhaust rate and partial pressure of stream components at a typical header temperature (140 °F at the time) prior to entering the condenser. For examples, calculated uncontrolled emissions for one of the main VOC components were 20.7 lbs/hr and 181,096 lbs/yr (90.5 tons/yr).

Assuming 95% control efficiency, emissions would be:

$$\begin{array}{rcl} 181,096 \text{ lbs/yr} \times (100-95)\% \times 1 \text{ ton}/2,000 \text{ lbs} & = & 4.5 \text{ tons/yr} \\ 20.7 \text{ lbs/hr} \times (100-95)\% & = & 1.0 \text{ lbs/hr} \end{array}$$

The results for all VOC components, combined, were 2.2 lbs/hr and 9.7 tons/yr. Compliance to the emission limits was found to be assured if the condenser brine inlet temperature is kept at ≤ 36 °F and the carbon adsorber is regenerated every 12 hours as required by the SOP. Recent performance test as required by MON also demonstrated compliance with the 95% minimum control efficiency and established operating limits for condenser exit gas temperatures and carbon adsorber operation. There are no equivalent emission limit requirements by MON, hence, this SOP condition is retained.

Condition 59: The SOP Condition 12's "Facility-Wide Emission Limits" are actually only the total emissions (point and fugitive sources) from the Aquapel® and the wastewater treatment process because there were no other significant emission units such as boilers at the time the SOP was issued. Point sources include emissions from the carbon adsorber (calculated above) and from tanks. The latter emissions were estimated based on AP-42, Section 7.1- Organic Liquid Storage Tanks. Fugitive emissions (via valves, flanges, pumps, open ends, pressure relief valves...) for fatty acid compounds were determined using SOCFI factors and methodology. For other compounds, process material balance was used as it generally gave higher results than did the SOCFI factors. The material balance was made by subtracting both the residual amounts in the product and the point emissions from the material consumption. There are no equivalent emission limit requirements by MON, hence, this SOP condition is retained.

Condition 61: This is General Condition 18 of the 12/07/04 SOP on Violation of Ambient Air Quality Standards which has no equivalent in the General Conditions section of the Title V permit.

C. Monitoring

CAM non-applicability: Even though pre-control VOC emissions from the Aquapel® process are potentially major, and the federally enforceable emission limit is 92.7 tons/year with control by the condenser/carbon adsorber system, CAM does not apply at Title V permit renewal because the process is already subject to MACT Subpart FFFF.

Conditions 62 and 63: Monitoring requirements for the packed scrubber in accordance with Condition 4 of the 12/07/04 SOP and MON. Condition 62 addresses the liquid flow and liquid to gas ratio monitoring while Condition 63 addresses the pH/hydrogen halide concentration monitoring. Note that the more stringent pH/hydrogen halide monitoring frequency of once per day required by MON replaces the twice/week frequency in SOP.

Conditions 64 through 66: Monitoring requirements for the condenser and carbon adsorber in accordance with SOP Condition 6 and MON. Condition 64 and 65 address continuous monitoring of the condenser exit temperatures and the carbon adsorber steam flow, respectively, while Condition 66 addresses quarterly monitoring of the emissions from the carbon adsorber vent. Note that the term "Gas Chromatography Instrument" in SOP Condition 6 has been changed to "Gas Analyzer" to be consistent with the term used in SOP Condition 5 and more accurately reflect the operation of the instrument which does not speciate compounds, only gives the total concentration.

Conditions 67 through 70: Monitoring requirements by MON, concerning the bypass valve, closed vent system inspection, operation and maintenance, and SSMP.

D. Recordkeeping

Condition 71: Besides the SOP Condition 14, specific recordkeeping requirements from MON are included in detail, including those from MACT subpart SS that was referenced in MACT Subpart FFFF. The coded key X in Condition 14.c has been replaced by hydrogen halide as used in the MACT. The coded keys Y, Z, and Q in SOP permit Condition 14.g and h have been replaced by "target VOCs" as discussed above (X was included by mistake in those two SOP Conditions; it is not a VOC emitted from the carbon adsorber vent). Condition 14.i has been streamlined as it has been sufficiently covered by MON requirements on operation and maintenance.

E. Testing

Initial performance tests have been completed as reported in the Notice of Compliance Status Report (NOCS, October 2008). There are no additional continuing performance testing requirements other than those required for monitoring.

F. Reporting

Condition 74: Semi-annual compliance reports as required by MON are described in detail (40 CFR 63.2520(e)).

G. Streamlined Requirements

Some conditions have been partially streamlined as discussed above. According to White Paper Number 2 from EPA OAQPS dated March 5, 1996, the subsumed conditions will not be enforced.

The following obsolete conditions have been streamlined in their entirety:

- SOP Conditions 7 and 8 that remind the permittee of possible permit requirement for reactivation of any shutdown/ replaced/disconnected equipment are streamlined as they are no longer needed.
- SOP Conditions 13 (Initial Notification) and 15 (Permit Invalidation) are also streamlined because equipment installation has either been completed or the allowed time has passed.

X. AQUAPEL® PROCESS REQUIREMENTS- EQUIPMENT LEAKS

The Aquapel® process is subject to MACT Subpart UU (40 CFR 63.1019 et seq.) as referenced by 40 CFR 63 Subpart FFFF. All applicable requirements on monitoring, recordkeeping, and reporting are included.

XI. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

a. Conditions 87-92. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

These general conditions cite the Article that follows:

Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

These general conditions cite the sections that follow:

9 VAC 5-80-80. Application

9 VAC 5-80-140. Permit Shield

9 VAC 5-80-150. Action on Permit Applications

b. Condition 98. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-50. Notification, Records and Reporting

9 VAC 5-50-50. Notification, Records and Reporting

c. Condition 102. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.

9 VAC 5-80-260. Enforcement.

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

d. Conditions 116- 119. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Conditions 116-119 and General Condition 98. For further explanation see the comments on General condition 98.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction

9 VAC 5-80-110. Permit Content

e. Condition on Asbestos Requirements is not needed because the facility has no asbestos on-site.

XII. STATE ONLY APPLICABLE REQUIREMENTS

State standards on odorous emissions (9 VAC 5-40-130 et seq. and 9 VAC 5-50-130 et seq.) are identified as applicable to the facility.

Note that the facility is exempt from the state rule on toxic pollutants in 9 VAC 5 Chapter 60 Article 5 as it is already subject to MACT (see 9 VAC 5-60-300 C 4).

XIII. FUTURE APPLICABLE REQUIREMENTS

It is not anticipated that the facility is subject to any future applicable requirements.

XIV. INAPPLICABLE REQUIREMENTS

The following requirements have been specifically identified as being not applicable to this permitted facility. The basis for each inapplicability is also provided.

Citation	Title of Citation	Description of Applicability- Basis for Inapplicability
9 VAC 5-40-3410 et seq. (Rule 4-25)	Emission Standards For Volatile Organic Compound Storage and Transfer Operations.	Facilities located in a VOC control area (9 VAC 5-20-206)- Southampton county is not on the list of VOC control areas.
40 CFR 63 Subparts F, G, H, and I	Hazardous Organic NESHAP (HON) MACT.	SOCMI major HAP sources that meet the criteria of 40 CFR 63.100 (b)(1) to (3)- Facility does not manufacture as a product or co-product any of the listed chemicals.
40 CFR 63 Subpart Q	Cooling Tower MACT.	Facilities that had previously used chromium-based water treatment chemicals in the cooling towers- Facility has never used chromium-based water treatment chemicals in its cooling towers.
60 CFR 60 Subpart III	NSPS for VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOMCI) Air Oxidation Unit Processes.	SOCMI emission units that meet the definition of "air oxidation process" in 40 CFR 60.611- Facility's processes do not meet the definition.
40 CFR 60 Subpart NNN	NSPS for VOC Emissions from SOCMI Distillation Operations.	SOCMI distillation processes that were in existence on December 20, 1983, and produces chemicals listed in 40 CFR 60.667- Facility does not produce any of the listed chemicals.
40 CFR 60 Subpart RRR	NSPS for VOC Emissions from SOCMI Reactor Processes.	SOCMI reactor processes that produce chemicals listed in 40 CFR 60.707- Facility does not produce any of the listed chemicals
40 CFR 63 Subpart GGGGG	National Emission Standards For Hazardous Air Pollutants: Site remediation	HAP emissions from remediation activities at major HAP sources- Facility does not have any remediation activities.
40 CFR 63 Subpart NNNNN	National Emission Standards for Hydrochloric Acid Production	Hydrochloric acid production at concentration of 30% by weight or greater- The hydrochloric acid by-product from the facility is at lower concentration.
Greenhouse Gas (GHG) Permitting Requirements		The facility has not triggered any PSD permitting requirements for any pollutants. Hence, there are no applicable GHG permitting requirements based on the EPA Memorandum dated 7/24/14.

XV. INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation ¹	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
Aquapel® process				
AQE01/ A-3, A-4, & A-15	Three fatty acid tanks, 1965	9 VAC 5-80-720 B 2	VOC	
T-501-1A & T-501-1B	Two by-product storage tanks, 1993	9 VAC 5-80-720 B 5	Non-VOC HAP	
AQE02/ A-1	Reactant tank, 1965	9 VAC 5-80-720 B 5	Non-VOC HAP	
A-1A	Reactant tank, 1989	9 VAC 5-80-720 B 5	Non-VOC HAP	
A-0	Reactant tank, 1994	9 VAC 5-80-720 B 5	Non-VOC HAP	
AQE08/ A-10 & A-11	Two by-product tanks, 1991	9 VAC 5-80-720 B 2	VOC	
A-25	Dilution water tank, 1994	9 VAC 5-80-720 B 2	VOC	
A-26	Aqueous solution tank, 1995	9 VAC 5-80-720 B 5	Non-VOC HAP	
T-707-1	Hot water tank, 1987	9 VAC 5-80-720 A42	N/A	
S-108-6A	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6B	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6C	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6D	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6E	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6F	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6G	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
S-108-6F	Treatment vessel, 1993	9 VAC 5-80-720 B 5	HAP	
AQE09/ A-2	Caustic solution tank, 2001	9 VAC 5-80-720 A 42	N/A	
AQE19/ A-63	Rework tank, 1966	9 VAC 5-80-720 B 5	VOC HAP	
A-61 & A-62	Two product tanks, 1966	9 VAC 5-80-720 B 5	VOC HAP	
Wastewater Neutralization Process				
No insignificant units identified				
Facility-wide				
IS-T-2 to be installed	No. 2 fuel oil storage tank, vertical fixed roof ≤ 20,000 gal, exempt from NSPS Subpart Kb	9 VAC-5 80-720 B	VOC	
Unassigned	Warehousing/storage/offices	9 VAC 5-80-720 A and B	All criteria pollutants	

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

XVI. CONFIDENTIAL INFORMATION

The source submitted a list of proposed confidential business information dated February 3, 1998, and received on February 5, 1998. The DEQ concurred with the proposed list of information in a DEQ letter dated February 23, 1998. The Title V permit was written to be self-explanatory but without any confidential business information so that it is suitable for public review.

XVII. PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the **Tidewater News** newspaper from **Friday, March 13, 2015** to **Monday, April 13, 2015**.