TITLE V AIR PERMIT RENEWAL APPLICATION

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December 2023

TABLE OF CONTENTS

LIST OF TABLES

1. APPLICATION SUMMARY

1.1 Purpose of Application

Sekisui Specialty Chemicals America, LLC (Sekisui) owns and operates a polyvinyl alcohol (PVOH) manufacturing facility in Calvert City, Marshall County, Kentucky (Calvert City facility). This chemical manufacturing facility is classified as a major source under the Title V operating permit program and currently operates in accordance with permit V-18-035, issued by Kentucky Division for Air Quality (KDAQ) on June 30, 2019. As the permit expires on June 30, 2024, a renewal application for the permit must be submitted at least six months prior to the permit expiration date, or by December 30, 2023. This document and its appendices constitute the renewal application for Calvert City facility, as required under Condition G.2.a. of the existing permit and 401 KAR 52:020, Section 12.

1.2 Summary of Application Contents

Following this introduction, Section 2 presents summary information about the Calvert City facility including its location, brief description of operations, and a brief description of planned operational flexibility changes being sought through this renewal permit action. Section 2 also identifies each permit action undertaken by the Calvert City facility since issuance of the current Title V permit. Section 3 summarizes the emission impacts of these permit actions and proposed changes and identifies Sekisui's requested updates to the TEMPO database. Section 4 provides an overview of applicable regulatory requirements under state and federal air quality programs with a focus on the regulatory implications of permit actions undertaken since permit V-18-035 was issued on June 30, 2019, and recent changes to the Miscellaneous Organics National Emissions Standard for Hazardous Air Pollutants (MON) as a result of the recent residual risk and technology review (RTR). Section 5 identifies Sekisui's requested changes to the current Title V operating permit which are being sought as part of this renewal permit action.

Appendix A presents both area and aerial maps that show the location of the Calvert City facility relative to nearby geographic features. Appendix B provides the required DEP7007 series application forms. To facilitate a better understanding of the facility operations, Appendix C contains a plant-wide process flow diagram (PFD) as well as a set of process area-specific PFDs to identify significant emission units and corresponding emission points. Appendix D includes red-line strike-out (RLSO) mark-ups of select pages of the current permit, which identify Sekisui's requested permit changes, and specifically contain new and revised requirements to incorporate the MON RTR revisions. Appendix E includes supporting information for Sekisui's new calculation methodologies used to characterize emissions from equipment permitted via the permit actions summarized in Table 2-1.

For existing emission units not addressed by proposed changes in this Title V renewal permit action, the application forms included in Appendix B are limited to the 7007AI and DD forms required to be submitted with all Title V permit renewal applications. Other application forms addressing specific emission unit categories (e.g., 7007J form for storage tanks) and the emissions, stacks, and controls information 7007N form for each permit action involving installation of a new emission unit or modification to an emission unit were previously provided to the Division. Sekisui understands that in such cases the Division does not require re-submittal of the emission unit-specific application forms within the renewal application, as these application forms can be readily obtained from the permit record. Nonetheless, Sekisui is providing a 7007B, 7007J, 7007N, and 7007V form with relevant information from the permit actions submitted during the Title V permit term for conveniency. Because applicable regulatory requirements are already contained in the Title V permit and minimal changes to applicable requirements have occurred during the permit term, a comprehensive set of 7007V forms is not included in this application. Instead, a 7007V form is included only

to outline the new and revised requirements resulting from the MON RTR under 40 CFR 63, subpart FFFF. Similarly, the 7007CC form was provided to KDAQ in January of 2023 as part of the annual compliance certification, and as such is not duplicated in this application.

2. FACILITY AND OPERATIONS DESCRIPTION

2.1 Facility Location

The Calvert City facility is located in Marshall County 14 miles east of Paducah. Sekisui's property is a parcel within the Calvert City chemical complex also occupied by Evonik (AI ID# 2915) and Wacker (AI ID# 39186). The property encompasses an area of 114 acres and is bordered primarily by industrial development on all sides. The Tennessee River to the north of the facility provides barge access to the chemical complex, and the town of Calvert City is located approximately 1 mile south of the site. The approximate Universal Transverse Mercator (UTM) coordinates for the center of the facility are 379.8 km East and 4,100.8 km North in Zone 16.

Figure A-1 shows the facility property and the surrounding area on a topographical map relative to predominant geographical features such as nearby highways, railroads, streams, and rivers. Figure A-2 provides an aerial view of the main site operations.

2.2 Facility Summary of Operations

The Calvert City facility is a chemical manufacturing plant that produces PVOH using vinyl acetate, methanol, sodium hydroxide, and a peroxide catalyst. The primary process areas involved in the production of PVOH are Polymerization, Saponification, Polyrectification, WEDCO, and Acetic Acid Recovery (AAR). Additionally, the facility includes a tank farm, loading and unloading areas for products and raw materials, and support facilities (e.g., cooling towers). The following bulleted lists provides a brief description of each process area. Additional detail for these process descriptions can be found in Sekisui's March 2012 Title V renewal application.

- ***Polymerization (Poly):*** Vinyl acetate monomer (VAM) is continuously polymerized to polyvinyl acetate (PVAc). The reaction uses methanol and an organic peroxide.
- ***Saponification (SAP):*** Following polymerization, the PVAc in methanol is hydrolyzed to PVOH using sodium hydroxide as a catalyst.
- ***Polyrectification (Polyrec):*** VAM and methanol from the Polymerization area are separated to recover and recycle VAM and methanol.
- ***WEDCO:*** PVOH from the SAP area can be ground into the final PVOH product before being shipped offsite.
- ***Acetic Acid Recovery (AAR):*** The mother liquor (mixture of methanol and methyl acetate) from the SAP area is processed to extract and recycle the methanol. Methyl acetate is converted to acetic acid and methanol in ion exchange beds. The methanol from this reaction is also recovered and recycled. The acetic acid is de-watered and sent out as final product.
- ***Tank Farm:*** The area consists of 26 tanks that hold the raw materials, intermediate process streams, and final products from the methanol recovery operations and AAR area.
- ***Loading Operations:*** Materials are shipped and received by truck and railcar.
- ***Support Facilities:*** Cooling towers are used to meet the cooling water demands of the various heat exchange systems at the plant.

A plant-wide PFD and a set of process area specific PFDs depicting the defined process areas, emissions units, and air pollution control equipment are provided in Appendix C.

2.3 Title V Permit History Summary

The current Title V operating permit for the Calvert City facility was issued on June 30, 2019. This permit has not been revised since its issuance; however, as shown in Table 2-1, Sekisui has submitted three Section 502(b)(10) change notifications and one off-permit change notification during the lifetime of the current permit. Table 2-1 summarizes each permit action and the associated affected emission units. These entries are sorted chronologically by application submittal date. All requested revisions to the current Title V operating permit corresponding to the permit actions summarized are reiterated in the RLSO within Appendix D to this application.

Table 2-1. Summary of Permit Actions since Issuance of Previous Renewal

Submittal Date	Permit Action Type	Affected Emission Unit(s)	Description of Change
6/3/2019	Section 502(b)(10) Change	T10 (FB-5521 and FB-552)	Sekisui submitted a Section 502(b)(10) change notification to replace the vinyl acetate monomer (VAM) rework tanks designated as T10, FB-5521 and FB-5522 with a single fixed roof tank to be designated as T10, FA-5522, serving the same process function as the existing two tanks. The third tank within the T10 grouping, FB-5523, was not affected by this project.
11/29/2021 (APE20210001)	Section 502(b)(10) Change	W10-W12 (proposed)	Sekisui submitted a Section 502(b)(10) change notification to install a new PVOH grinding operation in the WEDCO Area to primarily support the 600 Line. The emissions generating equipment proposed for use in this project is largely the same equipment used in the now decommissioned 600 Line grinding system, previously permitted as W10, W11, and W12.
9/12/2022 (APE20220001)	Section 502(b)(10) Change	W07-W08 (proposed)	Sekisui submitted a Section 502(b)(10) change notification to install a new PVOH grinding operation in the WEDCO Area to primarily support the 400 Line. The emissions generating equipment proposed for use in this project is largely the same equipment used in the now decommissioned 400 Line grinding system, previously permitted as W07 and W08.
11/22/2022 (APE20220002)	Off-Permit Change	Polymatech (proposed)	Sekisui submitted an off-permit change notification for Sekisui Polymatech America LLC (SPA) – under the ownership of Sekisui Chemicals – to install a new manufacturing process producing a mixture to be used for car battery thermal gap fillers. The equipment proposed for use in this project includes big bag handling, pneumatic transfer equipment, hoppers, six planetary mixers, and a product drum filling press station. The entire process is to be conducted indoors.

3. FACILITY EMISSIONS

As explained in 401 KAR 52:020 Section 4(2)(c), Kentucky's regulations allow applicants to limit the scope of a renewal application to information that is new or different from the most recent facility-wide permit application. Accordingly, the scope of the emission calculations included in this permit renewal application has been tailored to only address necessary updates to existing emissions data. Specifically, Section 3.1 of this renewal application identifies the emission changes associated with recent permit actions undertaken since issuance of the current operating permit, while Section 3.2 documents the necessary updates to the Calvert City facility's TEMPO Facility General Report infrastructure to address permit actions within the permit term and requested changes to the emission reporting methodologies for existing sources.

3.1 Emission Changes from Recent Permit Actions

Sekisui is not revising any calculation methodologies for existing units and no revisions are being made to the methodologies originally presented in the permit actions submitted during the current permit term. However, Sekisui has included in Appendix E the as-submitted detailed emissions calculations for each permit action summarized in Table 2-1. The 7007N forms submitted to KDAQ with the original application or notification for each permit action provide relevant unit-specific emissions information as appropriate.

3.2 Requested Changes to KyEIS Infrastructure

Sekisui has developed a 7007N form detailing updates requested to existing emission units and new units permitted through the permit actions described in Section 2.3. As shown within the 7007N forms submitted with permit actions completed during the permit term, the following changes to the KyEIS infrastructure are needed to ensure the Calvert City facility's KyEIS Facility General Report is complete and accurate.

- Add new equipment IDs associated with emission points W07, W08, W10, W11, W12. Additionally, two process IDs should be associated with each new emission point as prescribed by the 7007N form.
- Revise the emission unit descriptions for EQPT27,F01 (process ID 19 and 20) and STOR17,F01 (Process ID 1) to reflect the removal of one of the VAM rework tanks. These updates are denoted by bold green text and corresponding red strikeout.
- Clean up the process descriptions for T10, such that consistent nomenclature is used and the description is paired with the correct operating scenario and SCC Units. See Table 3-1 below.

Table 3-1. Requested Revisions to T10 Nomenclature within KyEIS

Equipment ID	Equipment Desc	Process ID	Process Desc	SCC Units Desc
EQPT27,F01	Flare(non-assisted)BA-5000 A012A-DEMeAcExTDA-5300 A023A-DWMeAcExTDA-5304 A034A-CAldeTDA-5302 A045A-CAldeTDA-5302 A067A-DPAcidTDA-5309 R039A-GVinRecTDA-5104 R0310A-DVinExTDA-5110 P01(11C,E,H,12C,E,13C,14C,E,15C)6Polyk&3PStrip T0216A-DPStorTnksNNest1FB-5501-04 T0317A-DPStorTnksSNest2FB-5505-08 T0418A-BPStorTnksWNest3FB-5509-10 T1019A-BCRecVinAcRwrkStorTnksFB-55221-23 R029DVinRecTAccFA-5107 HON&MON Group1ConProcessVents Group2ProcessWWStreams Flare	19	T10 (19A-19BC) - RCATnk - OP1 BreaWork	1000 Gallon-Years Liquid Storage Capacity
		20	T10 (19A-19BC) - RCATnk - OP2 Brea	1000 Gallon-Years Liquid Storage Capacity
		27	T10 (19A-19BC) - RCATnk - OP1 - WORKING	1000 Gallons Liquid Throughput
		28	T10 (19A-19B) RCAVAC RWRK TNK OP#2 - WORKING	1000 Gallons Liquid Throughput
STOR17,T10-1	Recovered Vinyl Acetate Rework Storage Tanks (23), FB-5521, FB-5522, and FB-5523 (T10-19A-19BC) Operating Scenario #1 MON Group 1 Storage Tanks Tank Farm	1	Cleaning	Each Material Processed
STOR18,T10-2	Recovered Vinyl Acetate Rework Storage Tanks (23), FB-5521, FB-5522, and FB-5523 (T10-19A-19BC) Operating Scenario #2 MON Group 1 Storage Tanks Tank Farm	1	Cleaning	Each Material Processed

Additionally, Sekisui requests that the following updates to the KYEIS infrastructure not associated with permit actions submitted during the permit term be made:

- As indicated in the comments entered on the RY22 KYEIS Web Survey submission, add a new Equipment ID for T02 and T04 cleaning event emissions. Sekisui proposes Equipment IDs of "STOR14,T02" and "STOR14,T04."
  - Emissions from these cleaning events are currently included under EQPT27,F01, Process IDs 36-38; however, emissions from cleaning events are not vented to the flare, so these emissions should be separated from EQPT27,F01 and Process IDs 36-38 removed from EQPT27,F01.
- Revise the descriptions of EQPT27,F01 Process IDs 30 and 32 to refer to Operating Scenario #2 for T02 and T03
  - For example, revise Process ID 30 from "T02 (16A-D) - NN2 - OPT1" to "T02 (16A-D) - NN2 – OPT2."
- As indicated in the comments on the RY22 KYEIS Web Survey, loading area equipment leak components are not separated by sub-area (acetic acid, VAM, MON, etc.) when tabulating actual emissions. Emissions for each of these components are included in process IDs 1, 2, 3, 8, or 9. As such, the following Process

IDs should be removed from the KYEIS Web Survey as emissions are not allocated to them with the current methodologies:

- EQPT147,M12, Process IDs 4-10 and 13-14 (remove entries for VOC emissions only).
- EQPT147,M12, Process IDs 11-12 (remove entries for both VOC emissions and vinyl acetate emissions).

Sekisui requests that KDAQ's Permit Review Branch staff work in coordination with the Source Sampling Group and Emissions Inventory section to make sure these requested updates are made to the KyEIS reporting infrastructure in coordination with issuance of the Title V renewal permit.

4. APPLICABLE REQUIREMENTS SUMMARY

Section 4.1 provides general air quality regulatory information for Sekisui's Calvert City facility, including the facility's status with respect to the Prevention of Significant Deterioration (PSD) and Title V permitting programs. This section also discusses the facility's status as a major source of hazardous air pollutants (HAP). In accordance with the regulatory requirements for a Title V renewal application established by 401 KAR 52:020 Section 4(2)(c), Section 4.2 focuses on newly applicable or modified requirements that have impacted the Calvert City facility since issuance of the current Title V permit on December 19, 2013. Section 4.3 presents the regulatory applicability review for the proposed operating flexibility changes. Finally, Section 4.4 includes a discussion of the applicability of Compliance Assurance Monitoring (CAM) requirements to Sekisui's operations.

4.1 Source Classification

4.1.1 Prevention of Significant Deterioration

Sekisui's Calvert City facility is located in Marshall County, which has been designated by EPA as unclassified/attainment for all criteria pollutants.[1] Therefore, with respect to the federal New Source Review (NSR) permitting program, only PSD requirements could potentially apply to the source.

Kentucky has incorporated the requirements of the PSD permitting program into its State Implementation Plan (SIP) at 401 KAR 51:017. These PSD regulations specifically define 28 industrial source categories for which the "major" source threshold of any regulated NSR pollutant is 100 tpy, and chemical process plants are included on this "list of 28." Thus, the major source threshold under the PSD program for any regulated NSR pollutant emitted at the Calvert City facility is 100 tpy of a regulated pollutant. As the potential emissions of at least one regulated NSR pollutant (e.g., VOC) currently exceeds 100 tpy, the facility is classified as an existing major source under the PSD program.

As a renewal application for an operating permit, this submittal is not associated with a construction project or a facility modification that involves PSD applicability considerations. Accordingly, new PSD requirements are not triggered by this permit action.

4.1.2 Title V Permitting Program

40 CFR Part 70 contains the regulations implementing the federal Title V operating permit program. Kentucky has incorporated the provisions of this federal program in its Title V operating program at 401 KAR 52:020. As specified in 401 KAR 52:001, Section 1(46), a major source with respect to the Title V regulations encompasses facilities with potential emissions of 100 tpy of any regulated pollutant, 10 tpy of any single HAP and/or 25 tpy of any combination of HAPs. The Calvert City facility is an existing major source and is currently operating under Title V operating permit V-18-035, which was issued on June 30, 2019. Sekisui will continue to operate as a major source under the Title V operating permit program upon permit renewal.

[1] 40 CFR 81.318

4.1.3 Hazardous Air Pollutants

A major source of HAP is a source with potential emissions in excess of 25 tpy for total combined HAPs and/or potential emissions in excess of 10 tpy for any individual HAP. As potential emissions of HAPs from the Calvert City facility exceed 25 tpy collectively, the Calvert City facility is classified as an existing major source of HAPs. Sekisui is not requesting a revision to any HAP emission calculation methodologies with this permit renewal; as such, the Calvert City facility will remain a major source of HAP emissions.

4.2 Regulatory Applicability from Recent Permit Actions

There were no newly applicable regulations triggered as a result of the permit actions submitted by the Calvert City facility since issuance of the current Title V permit on June 30, 2019. Table 4-1 below documents instances where these permit actions impacted the regulatory requirements identified by the current permit. These entries are sorted chronologically by KDAQ's activity number for each permit action. Associated permit changes requested by Sekisui to accommodate these changes are documented in Section 5.1 of this application.

Table 4-1. Regulatory Impacts of Recent Permit Actions

Submittal Date	Permit Action Type	Affected Emission Unit(s)	Updated Regulatory Applicability
6/3/2019	Section 502(b)(10) Change	T10 (FB-5521 and FB-5522)	The VAM storage tanks grouped as Emission Unit T10 are included in the Title V permit under the "Tank Farm" emission unit group. The applicable requirements listed for the Tank Farm tanks did not change as a result of this permit action. Additionally, the VAM storage tanks are subject to VOC emissions limitations in Conditions 2.a. and 2.b. under the Group Requirements. These permit conditions apply to a group of emission units and now apply to the replacement VAM storage tank.
11/29/2021 (APE20210001)	Section 502(b)(10) Change	W10-W12 (proposed)	Like all other WEDCO Area emission units, these new emission points are subject to 401 KAR 59:010. The applicable requirements from 401 KAR 59:010 did not change as a result of either of these permit actions.
9/12/2022 (APE20220001)	Section 502(b)(10) Change	W07-W08 (proposed)	
11/22/2022 (APE20220002)	Off-Permit Change	Polymatech (proposed)	Based on the PTE from the thermal gap filler production process, the Polymatech process meets the criteria of an IA and is subject only to 401 KAR 59:010. The applicable requirements from 401 KAR 59:010 did not change as a result of this permit action.

4.3 Federal Regulatory Applicability – Recent Rule Changes

4.3.1 40 CFR 63, Subpart FFFF, Miscellaneous Organics NESHAP

On August 12, 2020, the EPA published amendments to the MON which have substantial impact on the applicable requirements for the Calvert City facility. The MON Amendments includes new or updated applicability criteria, work practice standards, and requirements for design, performance testing, monitoring, recordkeeping, and reporting. One key highlight of the MON Amendments includes the removal of Startup, Shutdown, Malfunction (SSM) blanket exemptions, thus requiring affected units to comply with standards at all times. Detailed records for events associated with any failure to meet applicable standards are also required by the amendments. The final compliance date for the regulation amendments was August 12, 2023 and the Calvert City facility is complying with the revised version of the rule. The facility is preparing the notification of compliance status (NOCS) report addendum required by the following sections include an overview of the revisions, as they apply to the Calvert City facility.

4.3.1.1 Closed Vent System (CVS) Bypass Line Requirements

Pursuant to 40 CFR 63.2450(e)(6), sources venting through a closed-vent system to a flare are subject to the emissions standards at all times and the use of a bypass line to divert group 1 emissions from the flare are an emissions standard deviation. 40 CFR 63. 2450(e)(4) specifies several exemption phrases that no longer apply to MON sources within the referenced 40 CFR 63 Subpart SS requirements for control devices and closed vent systems.

As such, the MON Amendments require the evaluation and implementation of measures to prevent bypasses of air pollutant control devices through non-exempt PRDs. Any bypass monitoring already applicable via reference HON and Subpart SS requirements applies with the exception of provisions exempting SSM events as detailed in 40 CFR 63.2485(q), 40 CFR 63.2450(e)(4), and 40 CFR 63.2480(f). Any bypass events must be quantified and reported electronically through CEDRI pursuant to 40 CFR 63.2525(n) and 40 CFR 63.2520(e)(12), respectively.

Note that pursuant to 40 CFR 63.2450(p) and (t), the previous allowance for opening safety devices to avoid unsafe conditions is eliminated.

Moreover, pursuant to 40 CFR 63.2450(e)(6)(v), the exemptions for PRDs previously contained in Subparts G, H, and SS, are now limited only to PRDs that are in organic HAP service and required to comply with the PRD requirements provided in 40 CFR 63.2480(e)(4).

Sekisui began compliance with these standards as required by August 12, 2023.

4.3.1.2 Maintenance Vent Requirements

The removal of the SSM Provisions and the obligation to comply at all times has resulted in the inclusion of additional work practice standards and alternative compliance for periods of maintenance activities. Specifically, 40 CFR 63.2450(v) provides that any vent that is used only as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service, may be designated as a maintenance vent rather than a process vent. The MON Amendments include the addition of work practices standards for maintenance vents, including the following.

- Prior to opening equipment for maintenance, remove process liquids from the equipment as much as practical and depressurize the equipment to a flare or non-flare control device meeting the control requirements of the MON, until one of the following conditions is met pursuant to 40 CFR 63.2450(v)(1):
  - Drain/purge to a closed system to $\leq$10 percent (%) lower explosive limit (LEL) or,
  - If LEL cannot be measure prior to opening the vessels, venting to atmosphere is allowed when pressure is $\leq$5 pounds per square inch gauge (psig). No active purging to atmosphere until less than 10% LEL is met, or
  - Demonstrate <50 pounds VOC would be emitted to atmosphere, or
  - Alternative standard: blind flange installation for depressurization to <2 psig

Detailed records for each maintenance vent opening subject to the requirements of 40 CFR 63.2450(v) must be kept pursuant to 40 CFR 63.2525(p), including site procedures to deinventory equipment for safety, and other specified records depending on the specific compliance strategy for the maintenance vent.

Additional reporting for any maintenance vent release exceeding the appliable limits of 40 CFR 63.4250(v)(1) must be included in the semi-annual compliance report as detailed in 40 CFR 63.2520(f)(14).

Sekisui began compliance with these standards as required by August 12, 2023.

4.3.1.3 Storage Tank Degassing Requirements

Similar to the new maintenance vent work practice standards, 40 CFR 63.2470(f) adds work practice standards for storage tank degassing. Specifically, group 1 storage tanks must comply with 40 CFR 63.2470(f)(1)-(3) during storage tank emptying and degassing until the vapor space concentration in the storage tank is less than 10 percent of the LEL. Newly applicable work practice standards include the following:

- Remove liquids from storage tanks as much as practicable.
- Reduce HAP emissions through closed vent system to flare, or reduce HAP by 95% through closed vent system and non-flare control, or route to a fuel gas system or process meeting certain criteria in 40 CFR 63 Subpart SS and the MON.
- Maintain records to demonstrate compliance with general duty requirements in 40 CFR 63.2450(u), including records of existing standard site procedures used to empty and degas equipment for safety purposes.

Sekisui began complying with these standards as required by August 12, 2023.

4.3.1.4 Leak Detection and Repair (LDAR) Requirements

Pursuant to 40 CFR 63.2480(b)(7), As of August 12, 2020, new or replaced LDAR equipment, except for those designated as unsafe or difficult to monitor (DTM), must be monitored within 30 days if subject to periodic monitoring. If related to repair, replaced components continue to be subject to the 15-day requirements.

Additionally, pursuant to 40 CFR 63.2480(b)(6), a lower leak threshold of 1,000 parts per million by volume (ppmv) is now in effect for pumps in light liquid service (in an MCPU that has no continuous process vents and is part of an existing source). However, this change does not affect Sekisui , as Sekisui was not previously utilizing the alternative leak threshold of 10,000 ppmv, previously allowed by 40 CFR 63.2480(b)(5). References to 63.2480(b) generically do not need to be amended in the Title V permit.

4.3.1.5 Heat Exchange System Requirements

Pursuant to 40 CFR 63.2490(d), the sampling and analytical methods required for heat exchange systems have been modified to require the use of the Modified El Paso Method at sampling locations and frequencies specified in 40 CFR 63.2490(d)(1), instead of the requirements of 40 CFR 63.104 (which no longer apply to MON heat exchange systems). Leak detection, repair, and re-monitoring requirements are provided in 40 CFR 63.2490(d)(2) and (3), with delay of repair allowances in 40 CFR 63.2490(d)(4). These requirements are summarized below.

- Quarterly monitoring (after 6 monthly monitoring events)
- Leak definition of 6.2 ppmv total strippable hydrocarbon concentration (as methane)
- If leak is above 62 ppmv, it must be repaired within 30 days and delay of repair is not allowed
- An alternative mass-based leak action level of 0.18 kilograms per hour (kg/hr) strippable hydrocarbon can be used for systems with cooling water flow rates $\leq$10,000 gallons per minute (gpm); however, this does not apply to Sekisui's cooling towers as flow rates exceed 10,000 gpm.

Recordkeeping and reporting requirements under 40 CFR 63.2525(r) and 40 CFR 63.2520(e)(16), respectively, replace the prior recordkeeping and reporting applicable under 40 CFR 63.104. Sekisui began complying with these standards as required by August 12, 2023, for all MON heat exchange systems.

Note that the HON heat exchange systems continue to be monitored at the combined site cooling tower systems (CT-6 and CT-7) outlet, as required by 40 CFR 63.104. Updates for the HON RTR, which includes heat exchange systems monitoring via the Modified El Paso Method, are not yet final as of the submittal date of this application.

4.3.1.6 Electronic Reporting Requirements

Pursuant to 40 CFR 63.2520(e), since the reporting template was not available as of the submittal of this application or prior to August 12, 2023, electronic reporting is not yet required. Once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, Sekisui will submit all subsequent reports to the EPA via the CEDRI, using the provided template.

Beginning on August 12, 2023, the semiannual compliance report must include new information about CVS bypasses, PRD atmospheric releases, and maintenance vent release deviations as described in other sections of this application. These elements will be added to Sekisui's report even though EPA's reporting template is not yet available.

Other new electronic reporting requirements in the regulation related to flare management plans, performance tests, and performance evaluations are not applicable to Sekisui, since Sekisui does not operate a flare in ethylene oxide service, is not subject to any periodic performance testing requirements, and does not operate CEMS.

4.3.1.7 Pressure Relief Device (PRD) Requirements

Pursuant to 40 CFR 63.2480(e), PRDs, such as pressure relief valves or rupture disks, in organic HAP gas or vapor service must comply with 40 CFR 63.2480(e)(1) and (2), subject to the exemption of 40 CFR 63.2480(e)(4), instead of the requirements of 40 CFR 63 Subpart H.

- Operate each PRD in organic HAP (OHAP) vapor or gas service, below 500 ppmv (same as Subpart H).
- For PRDs that do not consist of or include a rupture disc, conduct a Method 21 within 5 days of a pressure release (same as Subpart H).

- If a PRD with a pressure release includes a rupture disc, Method 21 monitoring must be completed within 5 days, whether or not the rupture disc is replaced.
- The definition of PRD has been expanded to standalone rupture disks. If the PRD consists only of a rupture disc, a replacement disc must be installed as soon as practicable but within 5 days. Also, equipment cannot be started up without the rupture disc replacement and Method 21 monitoring must be completed within 5 days of returning to OHAP service.
- Pursuant to 40 CFR 63.2480(e)(4), PRDs routed to a control device, process, fuel gas system, or drain system are exempt from the Method 21 monitoring requirements. While this is similar to previous requirements, the routing to a drain system has been added as an exemption option. For the exemption to apply, the drain is required to comply with individual drain system requirements contained in 40 CFR 63.2485(e), which applies to Group 1 wastewater streams.

Additionally, PRDs in all OHAP service now have pressure release management requirements pursuant to 40 CFR 63.2480(e)(3):

- Equip each affected pressure relief device with a device(s) or use a monitoring system that is capable of:
  - Identifying the pressure release;
  - Recording the time and duration of each pressure release; and
  - Notifying operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device itself or must be associated with the process system or piping, sufficient to indicate a pressure release to the atmosphere.
- Implement three (3) of the following independent safeguards to prevent a release:
  - Flow, temperature, liquid level, and pressure indicators with deadman switches, monitors, or automatic actuators. Independent, non-duplicative systems within this category count as separate redundant prevention measures
  - Documented routine inspection and maintenance programs and/or operator training (maintenance programs and operator training may count as only one redundant prevention measure).
  - Inherently safer designs or safety instrumentation systems.
  - Deluge systems.
  - Staged relief system where the initial pressure relief device (with lower set release pressure) discharges to a flare or other closed vent system and control device.
- Determine the total number of release events per calendar year per PRD separately.
  - Also requires a separate accounting of the pressure release events for each PRD that the root cause was a *force majeure* event.
- Except as exempted by 40 CFR 632480(e)(4), and (5), the following release events from affected PRD are considered deviations from the work practice standards:
  - All releases caused by operator error or poor maintenance are considered deviations.
  - A second release event not including force majeure events from a single pressure relief device in a three (3) calendar year period for the same root cause for the same equipment.
  - A third release event not including force majeure events from a single pressure relief device in a three (3) calendar year period for any reason.
- Conduct root cause analyses (RCA), corrective action analyses (CAA), and implement identified corrective actions anytime a PRD releases to atmosphere, as specified in 40 CFR 632480(e)(6), and (7)
  - The RCA and CAA are required as soon as possible but no later than 45 days after a release event.
  - The corrective actions (established in the corrective action analyses) should be implemented, or document that no corrective actions are needed, within 45 days of the event or as soon as

practicable. If corrective actions cannot be completed within 45 days, a schedule of implementation is required with proposed commencement and completion dates.

- RCA and CAA information is reported electronically to US EPA via CEDRI.

Exclusions to requirements pursuant to 40 CFR 632480(e)(4) or (5) include the following:
PRDs routed to control device, process, fuel gas system or drain system (please see above for drain system requirements), PRDs in heavy liquid service, thermal expansion relief valves, PRDs on mobile equipment, and pilot-operated or balanced bellows PRDs where primary release is routed to a control device, process, fuel gas system or drain system.

Recordkeeping pursuant to 40 CFR 63.2525(q), including records of prevention measures, releases to atmosphere, and RCA and CAA is required. Compliance reports are required to contain the information specified in 40 CFR 63.2520(e)(15)(i) through (iii), including instrument readings over 500 ppmv and any remonitoring results following a release of PRDs in OHAP gas or vapors service, and results of and RCA and CAA.

Sekisui began complying with these standards as required by August 12, 2023. Within 150 days of this compliance date for PRD monitoring, a supplement to the Notification of Compliance Status (NOCS) must be submitted with the information below.

- Description of the monitoring system to be implemented, including the relief devices and process parameters to be monitored,
- Description of the alarms or other methods by which operators will be notified of a pressure release, and
- Description of the prevention measures to be implemented for each affected pressure relief device.

The NOCS supplement will be submitted prior to the issuance of a renewal permit and thus this requirement is not shown in the suggested permit terms in Appendix D.

4.3.1.8 Other Requirements

In addition to the key highlights noted above, the MON amendments include other changes to be addressed, including:

- Detailed recordkeeping of events associated with each deviation, as required by 40 CFR 63.2525(i).
- General Duty requirements, pursuant to 40 CFR 63.2450(u), require determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Sekisui began complying with these general standards as required by August 12, 2023.

4.3.1.9 Non-Applicable Amendments

Several additional changes to the MON were made as a result of the RTR but do not impact Sekisui, as summarized below:

- Flare requirements added in 40 CFR 63.2450(e)(5) and associated monitoring, recordkeeping, and reporting requirements.
  - Sekisui does not operate a flare currently in ethylene oxide service, nor does Sekisui produce olefins or polyolefins. Thus, the additional flare requirements of 40 CFR 63.2450(e)(5) do not apply.

    - Note some action items related to flare compliance are warranted, as described in Section 3.
- Adsorber requirements added in 40 CFR 63.2450(e)(7) and associated monitoring, recordkeeping, and reporting requirements.
    - Sekisui does not operate an adsorber currently; thus, the added requirements for certain adsorbers do not apply.
- Ethylene oxide (EO) requirements added throughout the regulation for various MON sources.
    - Sekisui's raw materials and process operations were reviewed and determined not to contain ethylene oxide.
- Wastewater requirement revisions in 40 CFR 63.2485.
    - The only changes applicable to wastewater streams apply to control equipment; however, Sekisui does not use any control device to comply with the wastewater standards.
- Continuous Parameter Monitoring System (CPMS) maintenance and recordkeeping requirements added in 40 CFR 63.2450(k).
    - Sekisui is not subject to the added CPMS requirements, because flare monitoring via thermocouple is specified within Subpart SS separately from CPMS for non-flare control devices to which this paragraph applies.

4.3.2 40 CFR 63, Subpart EEEE, Organic Liquids Distribution MACT

The Organic Liquids Distribution (Non-Gasoline) (OLD) MACT under 40 CFR 63 Subpart EEEE does not apply to the organic liquid distribution of methanol and vinyl acetate because the storage tanks and loading activities are each subject either to 40 CFR 63, Subparts F, G and H, or to 40 CFR 63, Subpart FFFF, pursuant to 40 CFR 63.2338(c)(1).[2] Changes to the regulation were published in a final rule on July 7, 2020; however, none of the changes affect the non-applicability determinations previously made for the Calvert City facility.

4.3.3 40 CFR 63, Subparts F, G, H, and I, Hazardous Organics NESHAP and 40 CFR 60, Subpart VVa/VVb, NNN/NNNa, and RRR/RRRa

On April 25, 2023 EPA proposed amendments to the NSPS and Hazardous Organics NESHAP (HON)regulations that apply to the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The AAR process unit at the Calvert City facility is subject to the SOCMI regulations. The changes made to the HON regulations will have significant impact on the requirements for the AAR; however, the regulation changes are not yet final and their full impact cannot assessed as part of this application.

Similarly, the SOCMI NSPS regulations are also not finalized at the time of this permit application; however, the changes proposed indicate there will be no impact on applicability or requirements at the Calvert City facility, as the changes result in promulgation of new regulations in Subparts VVb, NNNa, and RRRa, which would only apply in the case of a new, modified, or reconstructed source.

4.4 Compliance Assurance Monitoring

A full CAM applicability evaluation, which remains valid for the current facility, was presented in the Title V renewal application submitted by Sekisui for the Calvert City facility in March 2012. The 2012 evaluation concluded that the SAP Methanol Tower [F01(5A), DA-5303] is the only emission unit with pre-control device potential emissions greater than the Title V major source threshold (i.e., 100 tpy of VOC in this case).

[2] Note that the Statement of Basis should be updated to cite this paragraph.

The flare used to control this emission unit [F01] is subject to the pilot flame monitoring and flare design requirements of NESHAP Subparts A, G, and SS. As demonstrated in the 2012 renewal application, these requirements are nearly identical and equivalently stringent to NSPS Subpart A flare requirements, such that they are acceptable as presumptive CAM requirements. Since the only emission unit that could possibly trigger CAM, the SAP Methanol Tower, is currently subject to presumptively acceptable CAM requirements, no CAM plan is required.

5. UPDATES TO TITLE V PERMIT FOR RENEWAL

As part of the renewal permit application process, certain updates to the current Title V permit are warranted. A short explanation of these changes is provided in the following subsections.

5.1 Permit Changes to Accommodate Recent Permit Actions

Table 5-1 describes permit changes requested by Sekisui to accommodate permit actions undertaken by the Calvert City facility since issuance of the current Title V permit on June 30, 2019. These entries are sorted chronologically by KDAQ's activity number for each permit action. Furthermore, Appendix D contains redline-strikeout mark-ups of the current Title V operating permit. These mark-ups detail Sekisui's specific requested changes to the existing permit language to accommodate these permit actions.

Table 5-1. Requested Title V Permit Changes to Accommodate Recent Permit Actions

Submittal Date	Application Title	Requested Changes to Existing Title V Permit
6/3/2019	VAM Tank Replacement	This project did not result in a change to throughput capacities, vinyl acetate recovery capacity, or stripper overheads recovery capacity. Through this permit action, Sekisui requested revisions to the appropriate tank IDs within permit to reflect the new nomenclature representing the two VAM tanks covered under T10.
11/29/2021 (APE20210001)	PVOH Grinding Operation – 600 Line	Through this permit action, Sekisui requested the addition of emission points W10, W11, and W12 to the appropriate permit conditions under WEDCO Area of the permit.
9/12/2022 (APE20220001)	PVOH Grinding Operation – 400 Line	Through this permit action, Sekisui requested the addition of emission points W07 and W08 to the appropriate permit conditions under the WEDCO Area of the permit.
11/22/2022 (APE20220002)	Thermal Gap Filler Production	Through this permit action, Sekisui requested the addition of a new Insignificant Activity to Section C. The only applicable regulation to the SPA thermal gap filler production process is 401 KAR 59:010.

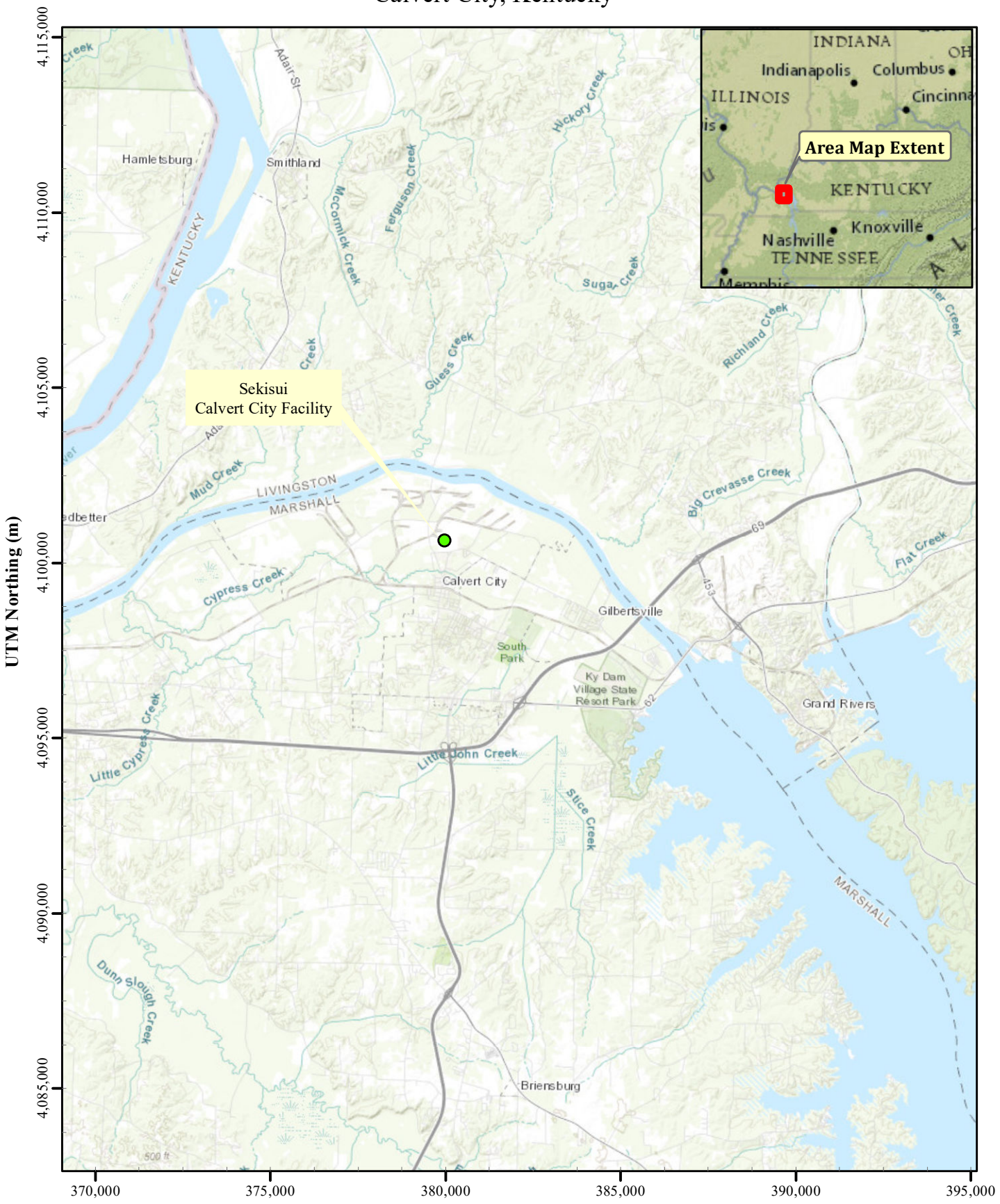
5.2 Permit Changes for MON RTR

Permit changes necessary to incorporate the revisions to the MON as a result of the RTR are detailed in the suggested permit terms in redline-strikeout contained in Appendix D, and referenced in the DEP7007V form contained in Appendix B.

APPENDIX A. MAPS AND SITE OPERATIONS LAYOUT

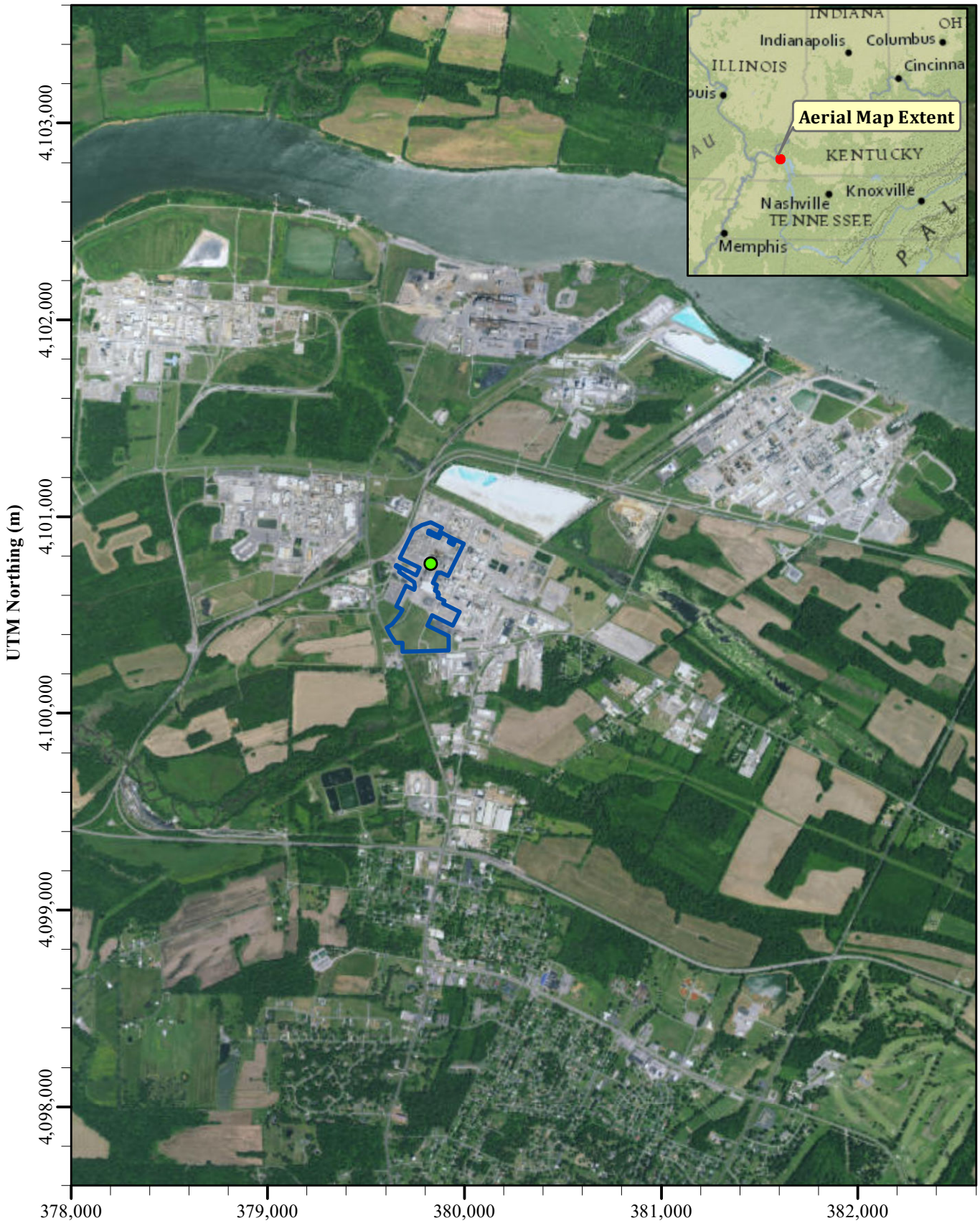
- Figure A-1: Area Topographical Map
- Figure A-2: Aerial Map Showing Property Line of Calvert City Facility
- Figure A-3: Site Plan

Figure A-1. Area Map
Sekisui Speciality Chemicals America, LLC
Calvert City Facility
Calvert City, Kentucky



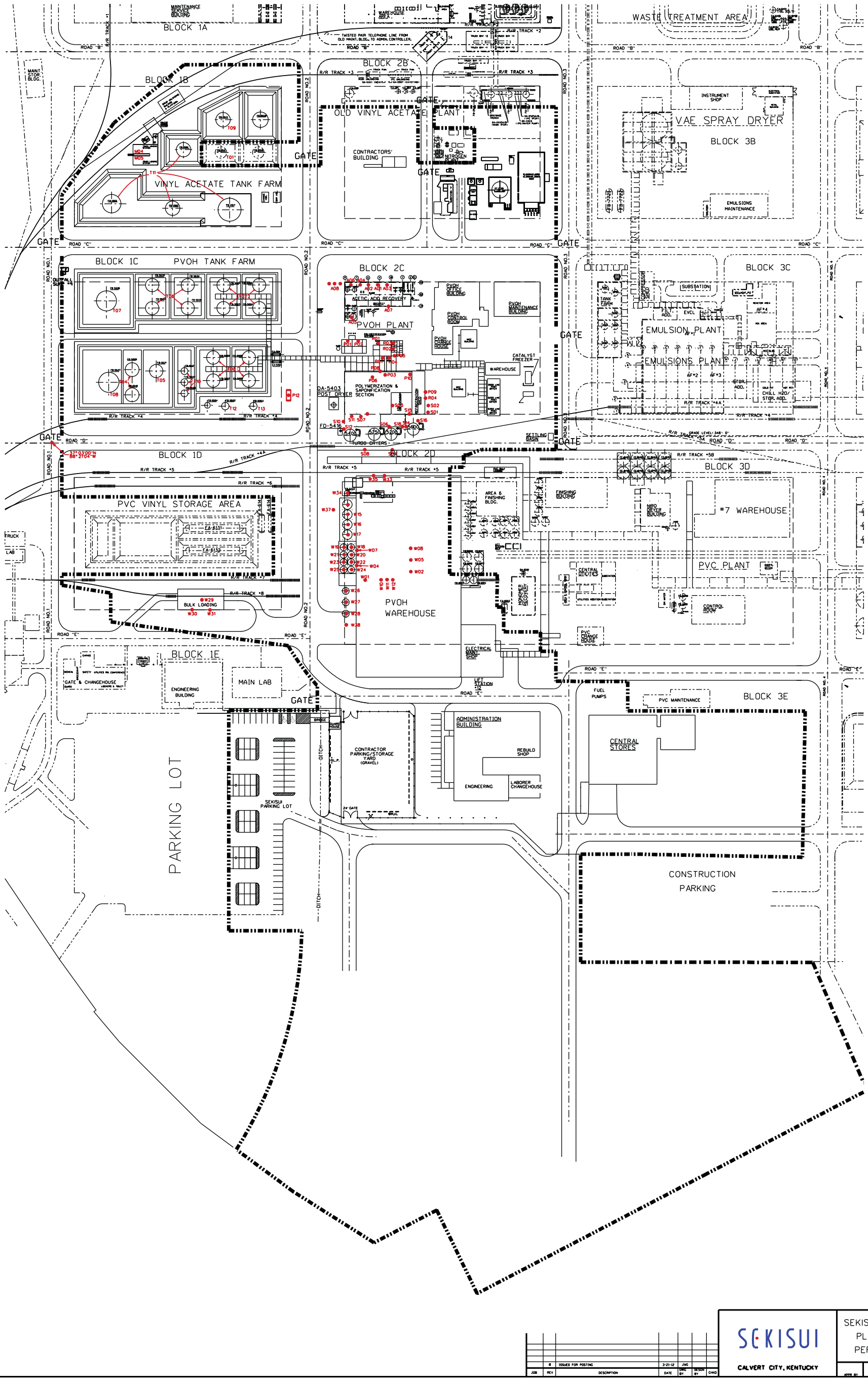
Coordinates reflect UTM Zone 16, NAD83.

Figure A-2. Aerial Map
Sekisui Speciality Chemicals America, LLC
Calvert City Facility
Calvert City, Kentucky



Coordinates reflect UTM Zone 16, NAD83.

Figure A-3. Site Plan



APPENDIX B. DEP7007 APPLICATION FORMS

- **7007AI** – Administrative Information
- **7007B** – Manufacturing or Process Operations
- **7007J** – Storage Tanks
- **7007N** – Emissions
- **7007V** – Applicable Regulations
- **7007DD** – Insignificant Activities

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

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DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: Sekisui Specialty Chemicals America, LLC

KY EIS (AFS) #: 21-157-00055

Permit #: V-18-035

Agency Interest (AI) ID: 40292

Date: December 2023

Section AI.1: Source Information

Physical Location Address:	**Street:**	246 Johnson Riley Road				
	City:	Calvert City	**County:**	Marshall	**Zip Code:**	42029
Mailing Address:	**Street or P.O. Box:**	PO Box 970				
	City:	Calvert City	**State:**	KY	**Zip Code:**	42029

Standard Coordinates for Source Physical Location

Longitude: -88.3517 (decimal degrees) **Latitude:** 37.04573 (decimal degrees)

Primary (NAICS) Category: Plastics Material and Resin Manufacturing **Primary NAICS #:** 325211

Classification (SIC) Category: Manufacturer of Industrial Chemicals **Primary SIC #:** 2821

Briefly discuss the type of business conducted at this site: The source produces Polyvinyl Alcohol (PVOH) using Vinyl Acetate Monomer (VAM), using methanol as a solvent, sodium hydroxide, and a peroxide catalyst. Acetic acid is produced as a byproduct.

Description of Area Surrounding Source: ☐ Rural Area ☑ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: ~84

Approximate distance to nearest residence or commercial property: 0.3 miles **Property Area:** 33.1 acres **Is this source portable?** ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☑ Currently Hold	☐ Need	☐ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Sekisui Specialty Chemicals America, LLC

Title: (if individual)

Mailing Address:
Street or P.O. Box: PO Box 970, 246 Johnson Riley Road
City: Calvert City **State:** KY **Zip Code:** 42029

Email: (if individual)

Phone: (270) 395-8577

Technical Contact

Name: Lagan Croft

Title: Environmental Engineer

Mailing Address:
Street or P.O. Box: Same as Applicant
City: **State:** **Zip Code:**

Email: Lagan.Croft@sekisui-sc.com

Phone: Same as applicant

Air Permit Contact for Source

Name: Same as Technical Contact

Title:

Mailing Address:
Street or P.O. Box:
City: **State:** **Zip Code:**

Email:

Phone:

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name: _____

Title: _____

Mailing Address: **Street or P.O. Box:** _____

City: _____ **State:** _____ **Zip Code:** _____

Email: _____

Phone: _____

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☐ Yes ☑ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☐ Single HAP	
☐ Volatile Organic Compounds (VOC)		☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* N/A

Proposed Operation Start-Up Date: *(MM/YYYY)* N/A

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* N/A

Proposed Operation Start-Up Date: *(MM/YYYY)* N/A

Applicant is seeking coverage under a permit shield. ☐ **Yes** ☑ **No**

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

☐	DEP7007A Indirect Heat Exchangers and Turbines	☐	DEP7007CC Compliance Certification Submitted in January 2023
☐	DEP7007B Manufacturing or Processing Operations	☑	DEP7007DD Insignificant Activities
☐	DEP7007C Incinerators and Waste Burners	☐	DEP7007EE Internal Combustion Engines
☐	DEP7007F Episode Standby Plan	☐	DEP7007FF Secondary Aluminum Processing
☑	DEP7007J Volatile Liquid Storage	☐	DEP7007GG Control Equipment
☐	DEP7007K Surface Coating or Printing Operations	☐	DEP7007HH Haul Roads
☐	DEP7007L Mineral Processes	☐	Confidentiality Claim
☐	DEP7007M Metal Cleaning Degreasers	☐	Ownership Change Form
☑	DEP7007N Source Emissions Profile	☐	Secretary of State Certificate
☐	DEP7007P Perchloroethylene Dry Cleaning Systems	☑	Flowcharts or diagrams depicting process
☐	DEP7007R Emission Offset Credit	☐	Digital Line Graphs (DLG) files of buldings, roads, etc.
☐	DEP7007S Service Stations	☐	Site Map
☐	DEP7007T Metal Plating and Surface Treatment Operations	☑	Map or drawing depicting location of facility
☑	DEP7007V Applicable Requirements and Compliance Activities	☐	Safety Data Sheet (SDS)
☐	DEP7007Y Good Engineering Practice and Stack Height Determination	☐	Emergency Response Plan
☐	DEP7007AA Compliance Schedule for Non-complying Emission Units	☐	Other: _____
☐	DEP7007BB Certified Progress Report		

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Andrew Olson — **Authorized Signature**

12/19/23 — **Date**

Andrew Olson — **Type or Printed Name of Signatory**

Site Leader — **Title of Signatory**

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: Sekisui Specialty Chemicals America, LLC
KY EIS (AFS) #: 21- 21-157-00055
Permit #: V-18-035
Agency Interest (AI) ID: 40292
Date: December 2023

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
W07	Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	Pneumatic transfer of PVOH from storage silos to grinding hopper.	1	PVOH Grinding and Recycle Transfers	Buhler-Miag / GORE	RPPR - 86/6 Product	09/2022	Continuous	na	na
W07			2	Evaporative Losses						
W08	Screener Feed Baghouse Blower	Pneumatic transfer of PVOH from grinders to screener.	1	PVOH Screener Transfer	Buhler-Miag	RPPR - 86/6 Product	09/2022	Continuous	na	na
W08			2	Evaporative Losses						

Section B.2: Materials and Fuel Information

Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content (%)	Ash Content (%)
				(Specify Units/hr)				(Specify Units/hr)			(Specify Units)		(Specify Units)		
W07	Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	PVOH	4.00	ton/hr	4.00	Ground PVOH	4.00	ton/hr	NA	NA	NA	NA	NA	NA	NA
W08	Screener Feed Baghouse Blower	PVOH	4.00	ton/hr	4.00	Ground PVOH	4.00	ton/hr	NA	NA	NA	NA	NA	NA	NA

Section B.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: Sekisui Specialty Chemicals America, LLC
KY EIS (AFS) #: 21- 21-157-00055
Permit #: V-18-035
Agency Interest (AI) ID: 40292
Date: December 2023

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
W10	PVOH Grinding System Transfer Baghouse	Pneumatic transfer of PVOH from storage silos to grinding hopper.	1	PVOH Hopper Transfer	Buhler-Miag / GORE	RPPR - 86/6 Product	12/2021	Continuous	na	na
W10			2	Evaporative Losses						
W11	PVOH Grinding System Screener Baghouse	Pneumatic transfer of PVOH from grinders to screener.	1	PVOH Screener Transfer	Buhler-Miag / GORE	RPPR - 18/6 Product	12/2021	Continuous	na	na
W11			2	Evaporative Losses						
W12	PVOH Grinding System Recycle Baghouse	Pneumatic transfer of PVOH from screener to grinding hopper.	1	PVOH Recycle Transfer	Buhler-Miag / GORE	RPPR - 86/6 Product	12/2021	Continuous	na	na
W12			2	Evaporative Losses						

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input		Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output		Fuel Type	Maximum Hourly Fuel Usage Rate		Maximum Yearly Fuel Usage Rate		Sulfur Content (%)	Ash Content (%)
				(Specify Units/hr)				(Specify Units/hr)			(Specify Units)		(Specify Units)		
W10	PVOH Grinding System Transfer Baghouse	PVOH	4	ton/hr	4	Ground PVOH	4	ton/hr	NA	NA	NA	NA	NA	NA	NA
W11	PVOH Grinding System Screener Baghouse	PVOH	4	ton/hr	4	Ground PVOH	4	ton/hr	NA	NA	NA	NA	NA	NA	NA
W12	PVOH Grinding System Recycle Baghouse	PVOH	4	ton/hr	4	Ground PVOH	4	ton/hr	NA	NA	NA	NA	NA	NA	NA

Section B.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard

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DEP7007J

Volatile Liquid Storage

___ Section J.1: General Information

___ Section J.2: Tank Description

___ Section J.3: Gasoline Plants and Terminals

___ Section J.4: Loading Rack(s)

___ Section J.5: Equipment Leaks

___ Section J.6: Notes, Comments, and Explanations

Additional Documentation

__ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.

__ SDS attached

Source Name: Sekisui Specialty Chemicals America, LLC

KY EIS (AFS) #: 21-157-00055

Permit #: V-18-035

Agency Interest (AI) ID: 40292

Date: December 2023

Section J.1: General Information

Emission Unit #	Emission Unit Name	Emission Unit Description	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Date of modification/ reconstruction	Control Device ID	Stack ID
T10 (FA-5522)	Recovered Vinyl Acetate Rework Storage Tank	Recovered Vinyl Acetate Storage Tanks	06/2019	N/A	BA-5000	F01

Section J.2: Tank Description

Emission Point #: F01(19A) (T10-19A-19C)

Emission Point Name: Recovered Vinyl Acetate Rework Storage Tanks (2)

Tank ID#: FA 5522

Date Installed: 06/2019

List Applicable Regulations: 40 CFR 63 Subpart FFFF, 40 CFR 60 Kb

J.2A: Stored Liquid Data:

Single or Multi-Component Liquid Name(s)	Maximum Annual Throughput *(gal/yr)*	Liquid Density *(lb/gal)*	Molecular Weight of Single or Multi-Component Liquid	Percent Composition of Multi-Component Liquid(s)	Temperature *(°F)*		Vapor Pressure *(psia)*	
					Minimum	Maximum	Minimum	Maximum
Vinyl Acetate	39,420,000 (total for both tanks)	7.83	86.09	100% Vinyl Acetate	38.9304	86.7664	0.74679	2.84641
Paste Stripper	355,200 (total for both tanks)	6.99	39.48	60% Methanol 40% Vinyl Acetate	38.9304	86.7664	0.74425	3.16068

J.2B: Tank Data:

Tank Capacity: *(gallons)* 30,402 **Shell Height/ Length:** *(ft)* 23 **Shell Diameter:** *(ft)* 15 **Tank Turnovers per Year:** 912

Tank Orientation: __ Horizontal X Vertical If Vertical, provide Maximum Liquid Height: *(ft)* 23 Average Liquid Height: *(ft)* 11.0

Shell Color/Shade: __ Red __ White __ Light Gray X Medium Gray __ Aluminum Specular __ Aluminum Diffuse __ Other: _____

Roof Color: __ Slack __ White __ Light Gray X Medium Gray __ Aluminum Specular __ Aluminum Diffuse __ Other: _____

Tank Type: X Fixed Roof __ Internal Floating Roof __ External Floating Roof __ Pressure Tank

J.2C: For Fixed Roof Tanks:

Roof Type: X Dome __ Flat __ Cone **Dome/Cone Height:** 2 ft **Average Vapor Space Height:** 12 ft

Is Tank Underground?: __ Yes X No **Roof Condition:** X Good __ Poor **Vacuum Setting:** -0.03 psig

Is Tank Heated?: __ Yes X No **Shell Condition:** X Good __ Poor **Pressure Setting:** 0.03 psig

J.2D: For All Internal Floating Roof Tanks:

Rim Seal Description: __ Vapor Mounted Primary __ Vapor Mounted Primary plus Secondary Seal __ Shoe Mounted

__ Liquid Mounted Primary __ Liquid Mounted Primary plus Secondary Seal __ Shoe Mounted plus Secondary Seal

Secondary Seal: __ Rim Mounted __ Shoe Mounted __ None

Internal Shell Condition: __ Light Rust __ Dense Rust __ Gunite-lined **External Shell Condition:** __ Good __ Poor

Roof Paint Condition: __ Good __ Poor **Self Supporting Roof?** __ Yes __ No

Number of Support Columns: _____ **Effective Column Diameter:** _____ ft

J.2E: Deck Data for Internal Floating Roofs:

Length of Deck Seam: _____ ft

Deck Type: __ Bolted __ Welded

Type of Deck Fitting:
__ Access Hatch __ Ladder Well __ Sample Pipe __ Sample Well __ Vacuum Breaker
__ Column Well __ Roof Leg __ Hanger Well __ Stub Drain __ Automatic Gauge Float Well

Design of each deck fitting:
(diameter sizes, bolted or gasket covers, sliding cover or fabric seal, adjustable or fixed roof leg/hanger well and number)

J.2F: For All External Floating Roof Tanks:

Rim Seal Description:
__ Vapor Mounted Primary __ Vapor Mounted Primary Rim Secondary Seal __ Vapor Mounted Prmary with Weather Shield
__ Liquid Mounted Primary __ Liquid Mounted Primary Rim Secondary Seal __ Liquid Mounted Primary with Weather Shield
__ Shoe Mounted Primary __ Shoe Mounted Primary Rim Secondary Seal __ Shoe Mounted Primary Shoe Secondary

Internal Shell Condition: __ Light Rust __ Dense Rust __ Gunite-lined

Tank Type: __ Riveted __ Welded

Roof Type: __ Pontoon Roof __ Double Deck Roof

J.2G: Deck Data for External Floating Roof Tanks:

Type of Deck Fitting:
__ Access Hatch __ Gauge Hatch __ Sample Well __ Roof Leg __ Vacuum Breaker
__ Guide Pole __ Gauge Float __ Roof Drain __ Rim Vent __ Other

Design of each deck fitting:
(diameter sizes, bolted or gasket covers, sliding cover, unslotted or slotted guide pole well, adjusted or fixed roof leg and number of each design)

J.2H: Emissions Data:

Attach SDS/Composition Analysis for Each Component Listed

Process ID	Component Name	Process Name (e.g. Breathing, Working, Cleaning, Flashing Loss(es))	Lost Emissions *(lb/1000 gal)*	Frequency of Occurrence	Determination Methodology for Each Type of Loss*
FA 5522(1)	Vinyl Acetate	Breathing & Working Loss	Refer to Appendix E - Emission Calculations		
FA 5522(2)	Paste Stripper	Breathing & Working Loss			

Section J.3: Gasoline Plants and Terminals

Indicate the percentage of one or more of the following modes of transportation for incoming liquid and outgoing liquid:

	Tank Truck	Trailer	Railcar	Pipeline	Marine Tank	Barge	Other (Specify)
Incoming Liquid Material:							100%-From Vinyl Redistillation Tower [R02(9F), DA 5105]
Outgoing Liquid Material:							~ 0-1% Vinyl Recovery Tower or ~ 99-100% to Poly Lines

For Gasoline Dispensing Facilities (GDF) only:

Is the loading of gasoline storage tanks at a GDF located at an area source of hazardous air pollutants as defined in 40 CFR 63.2? __ Yes __ No

Is there the dispensing of gasoline from a fixed storage tank at a GDF into a portable tank for the on-site delivery and subsequent dispensing into gasoline-fueled equipment? __ Yes __ No

Maximum monthly throughput in gallons: _____

For Bulk Gasoline Plants Only:

Is the maximum calculated design throughput less than 20,000 gallons (75,700 liters) per day? __ Yes __ No

Is gasoline loaded into cargo tanks for transport to gasoline dispensing facilities? __ Yes __ No

For Bulk Gasoline Terminals Only:

Is the maximum calculated design throughput equal to or greater than 20,000 gallons (75,700 liters) per day? __ Yes __ No

Is the terminal located at an area source of hazardous air pollutants as defined in 40 CFR 63.2?	__ Yes	__ No
Does the facility load from marine tank vessel loading operations at all loading berths less than 1.6 billion liters (10 M barrels) of gasoline annually and of less than 32 billion liters (200 M barrels) of crude oil annually?	__ Yes	__ No
Does the terminal handle any reformatted or oxygenated gasoline containing methyl tertbutyl ether (MTBE), CF?	__ Yes	__ No

Indicate the type of vapor control device utilized: __ Incinerator __ Adsorber __ Other

Section J.5: Equipment Leaks

Emission Point #: F01(19A) (T10-19A-19C)

Emission Point Name: Recovered Vinyl Acetate Rework Storage Tanks (2)

This section is to be completed for all components of Volatile Liquid Storage Systems that may have leaks.

Equipment Type	Indicate the number of each type of equipment for this emission point		Emission Factor *(lb/SCC units)*		Source of Emission Factor	Total Emissions *(lb/yr)*
	Gasoline	Other (diesel, kerosene, etc.)	Gasoline	Other		
Valves		9				
Pumps						
Connectors		36				
Risers/Loading-Arm Valves						
Open-ended Lines						
Other						

Refer to Appendix E of Title V Renewal Application Package

Section J.6: Notes, Comments, and Explanations
Sekisui submitted a DEP 7007J form alongside the Section 502(b)(10) change notification intending to notify KDAQ of the VAM tank replacement project.

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Sekisui Specialty Chemicals America, LLC
KY EIS (AFS) #: 21-157-00055
Permit #: V-18-035
Agency Interest (AI) ID: 40292
Date: December 2023

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
W07	Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	1	PVOH Grinding and Recycle Transfers	NA	NA	W07	4.00	PM	0.107	Manufacturer Data	--	--	0.429	0.429	1.88	1.88
		1		NA	NA	W07	4.00	PM10	0.107	Manufacturer Data	--	--	0.429	0.429	1.88	1.88
		1		NA	NA	W07	4.00	PM2.5	0.107	Manufacturer Data	--	--	0.429	0.429	1.88	1.88
		2	Evaporative Losses	NA	NA	W07	4.00	VOC	0.074	Engineering Calculations	--	--	0.295	0.295	1.29	1.29
		2		NA	NA	W07	4.00	MeOH	0.074	Engineering Calculations	--	--	0.295	0.295	1.29	1.29
		2		NA	NA	W07	4.00	MeAc	0.2508	Engineering Calculations	--	--	1.003	1.003	4.39	4.39
W08	Screener Feed Baghouse Blower	1	PVOH Screener Transfer	NA	NA	W08	4.00	PM	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W08	4.00	PM10	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W08	4.00	PM2.5	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		2	Evaporative Losses	NA	NA	W08	4.00	VOC	0.074	Engineering Calculations	--	--	0.295	0.295	1.29	1.29
		2		NA	NA	W08	4.00	MeOH	0.074	Engineering Calculations	--	--	0.295	0.295	1.29	1.29
		2		NA	NA	W08	4.00	MeAc	0.2508	Engineering Calculations	--	--	1.003	1.003	4.39	4.39

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
W10	PVOH Grinding System Transfer Baghouse	1	PVOH Hopper Transfer	NA	NA	W10	4	PM	0.021	Manufacturer Data	--	--	0.086	0.086	0.38	0.38
		1		NA	NA	W10	4	PM10	0.021	Manufacturer Data	--	--	0.086	0.086	0.38	0.38
		1		NA	NA	W10	4	PM2.5	0.021	Manufacturer Data	--	--	0.086	0.086	0.38	0.38
		2	Evaporative Losses	NA	NA	W10	4	VOC	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W10	4	MeOH	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W10	4	MeAc	0.1672	Engineering Calculations	--	--	0.669	0.669	2.93	2.93
W11	PVOH Grinding System Screener Baghouse	1	PVOH Screener Transfer	NA	NA	W11	4	PM	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W11	4	PM10	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W11	4	PM2.5	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		2	Evaporative Losses	NA	NA	W11	4	VOC	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W11	4	MeOH	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W11	4	MeAc	0.1672	Engineering Calculations	--	--	0.669	0.669	2.93	2.93
W12	PVOH Grinding System Recycle Baghouse	1	PVOH Recycle Transfer	NA	NA	W12	4	PM	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W12	4	PM10	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		1		NA	NA	W12	4	PM2.5	0.086	Manufacturer Data	--	--	0.343	0.343	1.50	1.50
		2	Evaporative Losses	NA	NA	W12	4	VOC	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W12	4	MeOH	0.049	Engineering Calculations	--	--	0.197	0.197	0.86	0.86
		2		NA	NA	W12	4	MeAc	0.1672	Engineering Calculations	--	--	0.669	0.669	2.93	2.93

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
EQPT27,F01	Flare, BA-5000 (F01(2A-D, 4A-C, 7A-D, 10A, 10B, 10D, 11A-H, 12A-E, 13A-C, 14A-E, 15A-C, 16A-D, 17A-D, 18A-B,19A-~~C~~ B, 20A)	19	T10 (19A-19B~~C~~) - RCATnk - OP1 Brea~~Work~~	Flare	F01	F01	30.40	VOC	3.98E-03	AP-42, Chapter 7.1	100%	98%	0.121	0.002	0.53	0.01
		20	T10 (19A-19B~~C~~) - RCATnk - OP2 Brea	Flare	F01	F01	30.40	VOC	2.16E-03	AP-42, Chapter 7.1	100%	98%	0.066	0.001	0.29	0.01
		27	T10 (19A-19B~~C~~) - RCATnk - OP1 - WORKING	Flare	F01	F01	3.00	VOC	0.644	AP-42, Chapter 7.1	100%	98%	1.932	0.039	8.46	0.17
		28	T10 (19A-19B) RCA~~VAC RWRK~~ TNK OP#2 - WORKING	Flare	F01	F01	0.03	VOC	1.665	AP-42, Chapter 7.1	100%	98%	0.045	0.001	0.20	3.94E-03
STOR17,T10-1	Recovered Vinyl Acetate Rework Storage Tanks (2~~3~~), ~~FB-5521~~, FB-5522, and FB-5523 (T10-19A-19B~~C~~) Operating Scenario #1 MON Group 1 Storage Tanks Tank Farm	1	Cleaning	na	na	na	1.14E-04	VOC	22.2	AP-42, Chapter 7.1	na	na	0.003	na	0.01	na

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
STOR18,T10-2	Recovered Vinyl Acetate Rework Storage Tanks (23), ~~FB-5521~~, FB-5522, and FB-5523 (T10-19A-19B~~C~~) Operating Scenario #2 MON Group 1 Storage Tanks Tank Farm	1	Cleaning	na	na	na	1.14E-04	VOC	11.8	AP-42, Chapter 7.1	na	na	0.001	na	0.01	na

Section N.2: Stack Information

UTM Zone:

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(° F)*	Exit Velocity *(ft/sec)*
W07	W07	1	TBD	~350	4,211,547	381,322	5,000	Ambient	26.5
W08	W08	1	TBD	~350	4,211,547	381,322	4,000	Ambient	21.2
W10	W10	0.5	TBD	~350	4,211,547	381,322	1,000	Ambient	21.2
W11	W11	1	TBD	~350	4,211,547	381,322	4,000	Ambient	21.2
W12	W12	1	TBD	~350	4,211,547	381,322	4,000	Ambient	21.2
F01	Flare, BA-5000 (F01(2A-D, 4A-C, 7A-D, 10A, 10B, 10D, 11A-H, 12A-E, 13A-C, 14A-E, 15A-C, 16A-D, 17A-D, 18A-B,19A~~-C~~ B, 20A)	Relevant stack information for F01 is already on file with KDAQ.							

Section N.3: Fugitive Information

UTM Zone:

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side *(ft)*	Length of the Y Side *(ft)*	Northing *(m)*	Easting *(m)*	Release Temperature *(°F)*	Release Height *(ft)*
Relevant fugitive area information is already on file with KDAQ. No updates to fugitive areas were made via the permit actions submitted during the permit term.								

Section N.4: Notes, Comments, and Explanations

Only the information highlighted in light green with maroon text is new/different from what was included on the original permit applications submitted during the current permit term.

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007V
Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)
___ Section V.2: Monitoring Requirements
___ Section V.3: Recordkeeping Requirement
___ Section V.4: Reporting Requirements
___ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: Sekisui Specialty Chemicals America, LLC
KY EIS (AFS) #: 21-157-00055
Permit #: V-18-035
Agency Interest (AI) ID: 40292
Date: December 2023

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
F01(11), P01, F01(12), F01(13), P03, F01(14), F01(15), P06, P02, P05, P08, P09, P10(01), P10(02), P10(03), P11	POLYMERIZATION (POLY) PROCESS AREA	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19	SAPONIFICATION (SAP) PROCESS AREA	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	
F01(8), T05, R01, F01(9), F01(19 A-C), R02, F01(10), F01(9C), R03, R04, R05	POLYRECTIFICATION (POLYREC) AREA	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	
F01	FLARE	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	
T01, T09, F01(16, 17), F01(16A-16D), F01(17A-17D), F01(18A, 18B), T05, T06, T07, T08, F01(19A-19B), T11-1, T11-2, T14, T15	TANK FARM	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	
M04, M05, M06, M12	LOADING AREA	40 CRR 63 Subpart FFFF	OHAP	N/A	N/A	Refer to 1. Operating Limitations in the suggested permit terms in Appendix D.	

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19	SAPONIFICATION (SAP) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	SSM	Refer to 4. Specific Monitoring Requirements in the suggested permit terms in Appendix D.
F01	FLARE	OHAP	40 CFR 63 Subpart FFFF	Temperature	Refer to 4. Specific Monitoring Requirements in the suggested permit terms in Appendix D.
T01, T09, F01(16, 17), F01(16A-16D), F01(17A-17D), F01(18A, 18B), T05, T06, T07, T08, F01(19A-19B), T11-1, T11-2, T14, T15	TANK FARM	OHAP	40 CFR 63 Subpart FFFF	SSM	Refer to 4. Specific Monitoring Requirements in the suggested permit terms in Appendix D.
CT-6, CT-7	COOLING TOWERS	OHAP	40 CFR 63 Subpart FFFF	Total strippable hydrocarbons	Refer to 4. Specific Monitoring Requirements in the suggested permit terms in Appendix D.

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
F01(11), P01, F01(12), F01(13), P03, F01(14), F01(15), P06, P02, P05, P08, P09, P10(01), P10(02), P10(03), P11	POLYMERIZATION (POLY) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	
S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19	SAPONIFICATION (SAP) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	
F01(8), T05, R01, F01(9), F01(19 A-C), R02, F01(10), F01(9C), R03, R04, R05	POLYRECTIFICATION (POLYREC) AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
T01, T09, F01(16, 17), F01(16A-16D), F01(17A-17D), F01(18A, 18B), T05, T06, T07, T08, F01(19A-19B), T11-1, T11-2, T14, T15	TANK FARM	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	
M04, M05, M06, M12	LOADING AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	
CT-6, CT-7	COOLING TOWERS	OHAP	40 CFR 63 Subpart FFFF	Refer to 5. Specific Recordkeeping Requirements in the suggested permit terms in Appendix D.	

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
F01(11), P01, F01(12), F01(13), P03, F01(14), F01(15), P06, P02, P05, P08, P09, P10(01), P10(02), P10(03), P11	POLYMERIZATION (POLY) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	
S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19	SAPONIFICATION (SAP) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	
F01(8), T05, R01, F01(9), F01(19 A-C), R02, F01(10), F01(9C), R03, R04, R05	POLYRECTIFICATION (POLYREC) AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
T01, T09, F01(16, 17), F01(16A-16D), F01(17A-17D), F01(18A, 18B), T05, T06, T07, T08, F01(19A-19B), T11-1, T11-2, T14, T15	TANK FARM	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	
M04, M05, M06, M12	LOADING AREA	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	
CT-6, CT-7	COOLING TOWERS	OHAP	40 CFR 63 Subpart FFFF	Refer to 6. Specific Reporting Requirements in the suggested permit terms in Appendix D.	

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
F01(11), P01, F01(12), F01(13), P03, F01(14), F01(15), P06, P02, P05, P08, P09, P10(01), P10(02), P10(03), P11	POLYMERIZATION (POLY) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	VOC Leaks	Refer to 3. Testing Requirements in the suggested permit terms in Appendix D.
S01, S02, S03, S04, S05, S06, S07, S08, S09, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19	SAPONIFICATION (SAP) PROCESS AREA	OHAP	40 CFR 63 Subpart FFFF	VOC Leaks	Refer to 3. Testing Requirements in the suggested permit terms in Appendix D.
F01(8), T05, R01, F01(9), F01(19 A-C), R02, F01(10), F01(9C), R03, R04, R05	POLYRECTIFICATION (POLYREC) AREA	OHAP	40 CFR 63 Subpart FFFF	VOC Leaks	Refer to 3. Testing Requirements in the suggested permit terms in Appendix D.

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
T01, T09, F01(16, 17), F01(16A-16D), F01(17A-17D), F01(18A, 18B), T05, T06, T07, T08, F01(19A-19B), T11-1, T11-2, T14, T15	TANK FARM	OHAP	40 CFR 63 Subpart FFFF	VOC Leaks	Refer to 3. Testing Requirements in the suggested permit terms in Appendix D.
M04, M05, M06, M12	LOADING AREA	OHAP	40 CFR 63 Subpart FFFF	VOC Leaks	Refer to 3. Testing Requirements in the suggested permit terms in Appendix D.

Section V.6: Notes, Comments, and Explanations

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: Sekisui Specialty Chemicals America, LLC

KY EIS (AFS) #: 21-157-00055

Permit #: V-18-035

Agency Interest (AI) ID: 40292

Date: December 2023

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
W31	Vacuum Cleaning System (Bulk Area) and Baghouse (FD-5758)	N/A	401 KAR 59:010 401 KAR 63:020	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
W35	Bagging Operation Vacuum Cleaning System (Bulk Area) and Baghouse (FD-5763)	N/A	401 KAR 59:010 401 KAR 63:020	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
W39	Silo #13 and #14 Product Collector (FD-5775)	N/A	401 KAR 59:010 401 KAR 63:020	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
W40	Silos # 11 and #12 Product Collector (FD-5777)	N/A	401 KAR 59:010 401 KAR 63:020	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
W41	Silos # 9 and # 10 Product Collector (FD-57)	N/A	401 KAR 59:010 401 KAR 63:020	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
M09	Diesel UST and Auxiliary Equipment, FB-0004	N/A	None	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
M11	Off-Spec/ Rework Pollution Control Trailers (Splash Loading from Processes), 390,000 gallons/yr Acetic Acid, 60,000 gallons/yr Mother Liquor, 30,000 gallons/yr Vinyl Acetate or 120,000 gallons/yr Methyl Acetate	N/A	None	PTE < 5 tpy for all non-hazardous regulated air pollutants, and < 0.5 tpy for combined HAP
TBD	Polymatech Process ~ 2.13 tons raw materials/batch (liquid silicones, aluminum powders, and product additives)	N/A	401 KAR 59:010	VOC: 3.50 tpy Total PM: 0.50 tpy PM_{10}: 0.50 tpy $PM_{2.5}$: 0.41 tpy

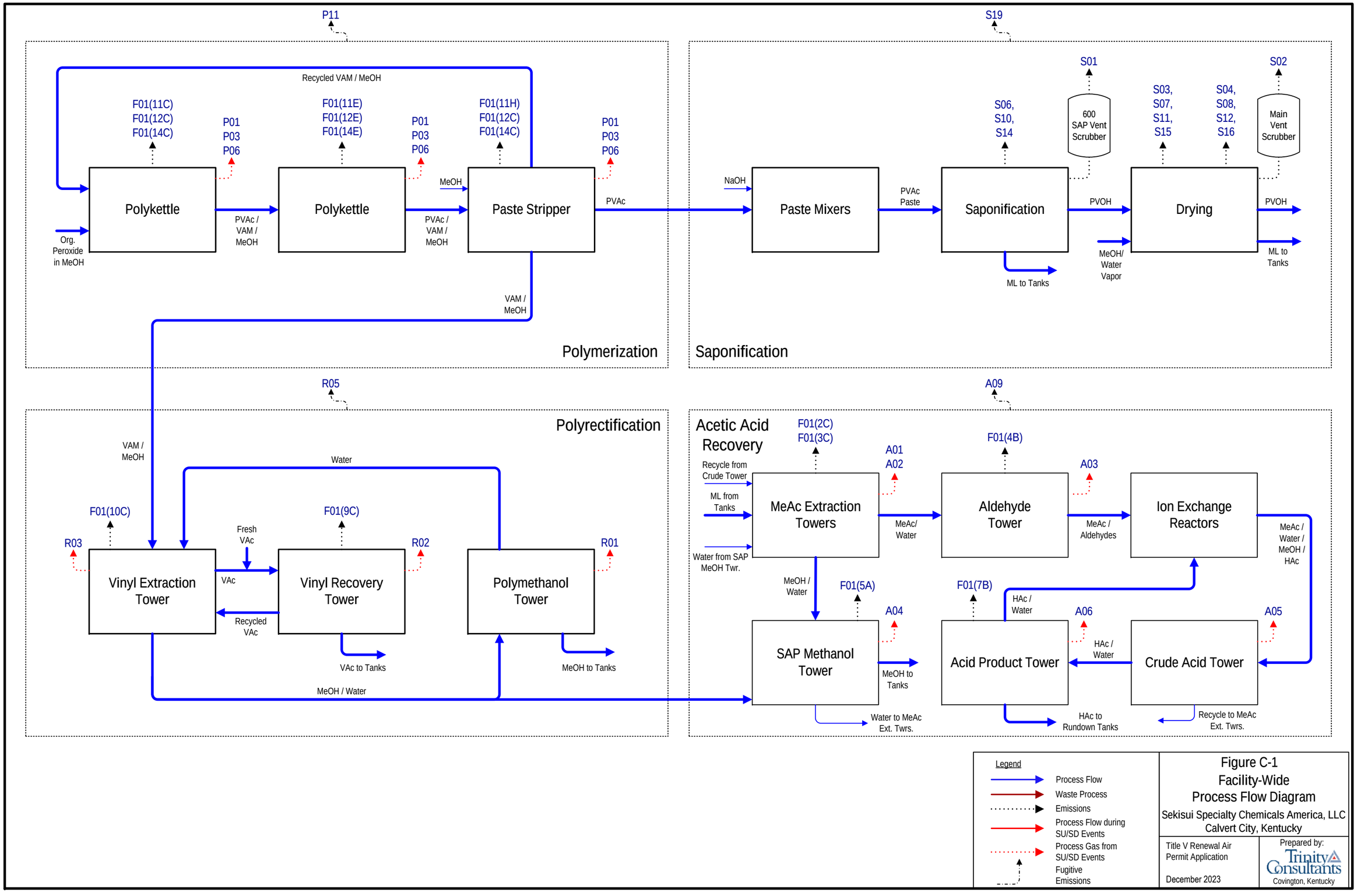
Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

	Authorized Signature	Date
By:	Andrew Olson	Site Leader
	Type/Print Name of Siguatory	Title of Siguatory

Section DD.3: Notes, Comments, and Explanations

APPENDIX C. PROCESS FLOW DIAGRAMS


P11
Recycled VAM / MeOH
F01(11C)
F01(12C)
F01(14C)
P01
P03
P06
F01(11E)
F01(12E)
F01(14E)
P01
P03
P06
F01(11H)
F01(12C)
F01(14C)
P01
P03
P06
Polykettle
Polykettle
Paste Stripper
Org. Peroxide in MeOH
PVAc / VAM / MeOH
PVAc / VAM / MeOH
MeOH
PVAc
VAM / MeOH
Polymerization
S19
S01
S02
S06, S10, S14
600 SAP Vent Scrubber
S03, S07, S11, S15
S04, S08, S12, S16
Main Vent Scrubber
NaOH
Paste Mixers
PVAc Paste
Saponification
PVOH
Drying
PVOH
ML to Tanks
MeOH/ Water Vapor
ML to Tanks
Saponification
R05
Polyrectification
VAM / MeOH
Water
F01(10C)
F01(9C)
R03
Fresh VAc
R02
R01
Vinyl Extraction Tower
VAc
Vinyl Recovery Tower
Polymethanol Tower
Recycled VAc
VAc to Tanks
MeOH to Tanks
MeOH / Water
A09
Acetic Acid Recovery
F01(2C)
F01(3C)
A01
A02
F01(4B)
A03
Recycle from Crude Tower
ML from Tanks
Water from SAP MeOH Twr.
MeAc Extraction Towers
MeAc/ Water
Aldehyde Tower
MeAc / Aldehydes
Ion Exchange Reactors
MeAc / Water / MeOH / HAc
MeOH / Water
F01(5A)
F01(7B)
HAc / Water
A04
A06
A05
SAP Methanol Tower
MeOH to Tanks
Acid Product Tower
HAc / Water
Crude Acid Tower
Water to MeAc Ext. Twrs.
HAc to Rundown Tanks
Recycle to MeAc Ext. Twrs.
Legend
Process Flow
Waste Process
Emissions
Process Flow during SU/SD Events
Process Gas from SU/SD Events
Fugitive Emissions
Figure C-1
Facility-Wide
Process Flow Diagram
Sekisui Specialty Chemicals America, LLC
Calvert City, Kentucky
Title V Renewal Air Permit Application
December 2023
Prepared by:
Trinity Consultants
Covington, Kentucky

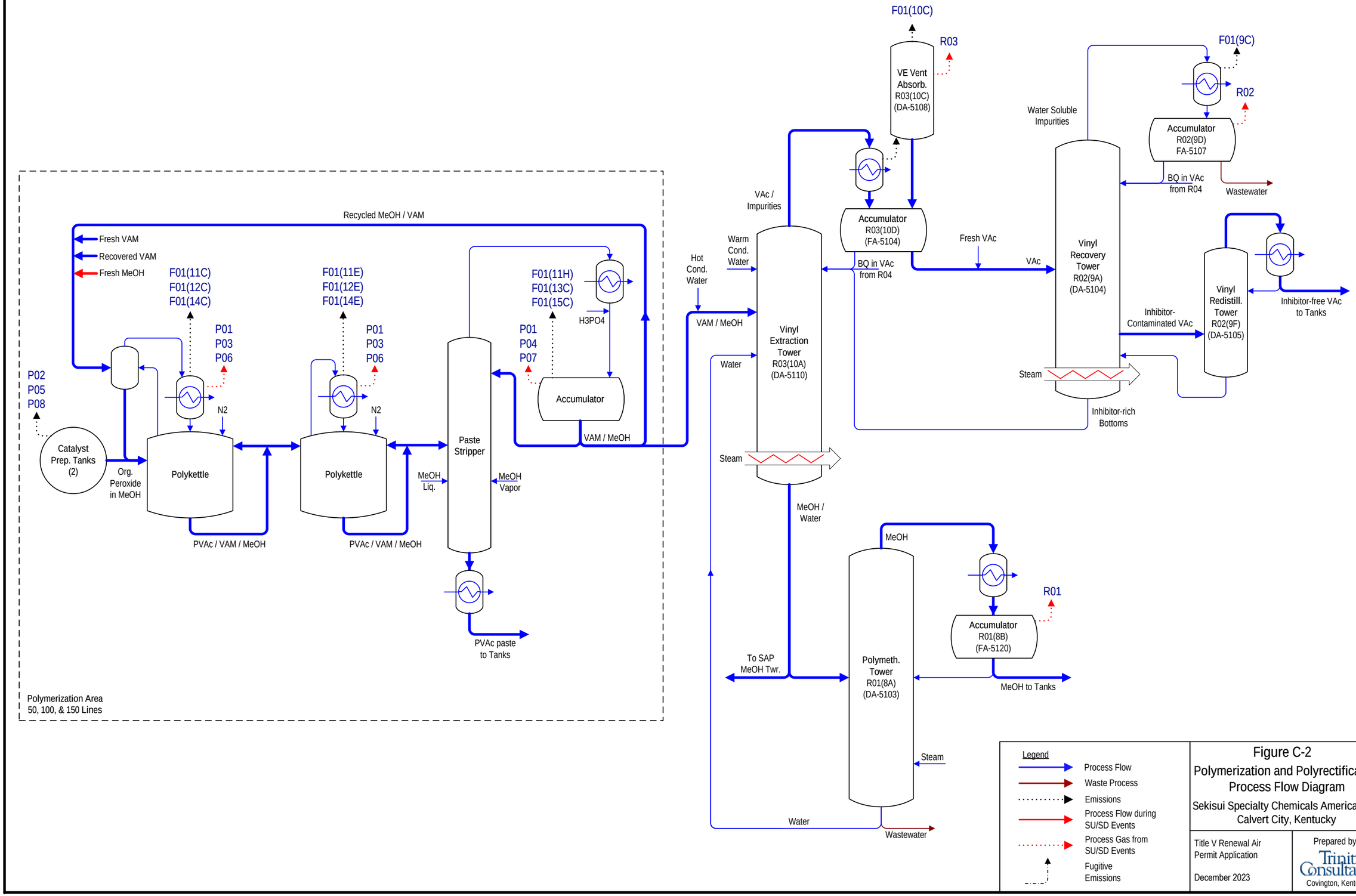


Figure C-2
Polymerization and Polyrectification Process Flow Diagram

Sekisui Specialty Chemicals America, LLC
Calvert City, Kentucky

Title V Renewal Air Permit Application

December 2023

Prepared by:
Trinity Consultants
Covington, Kentucky

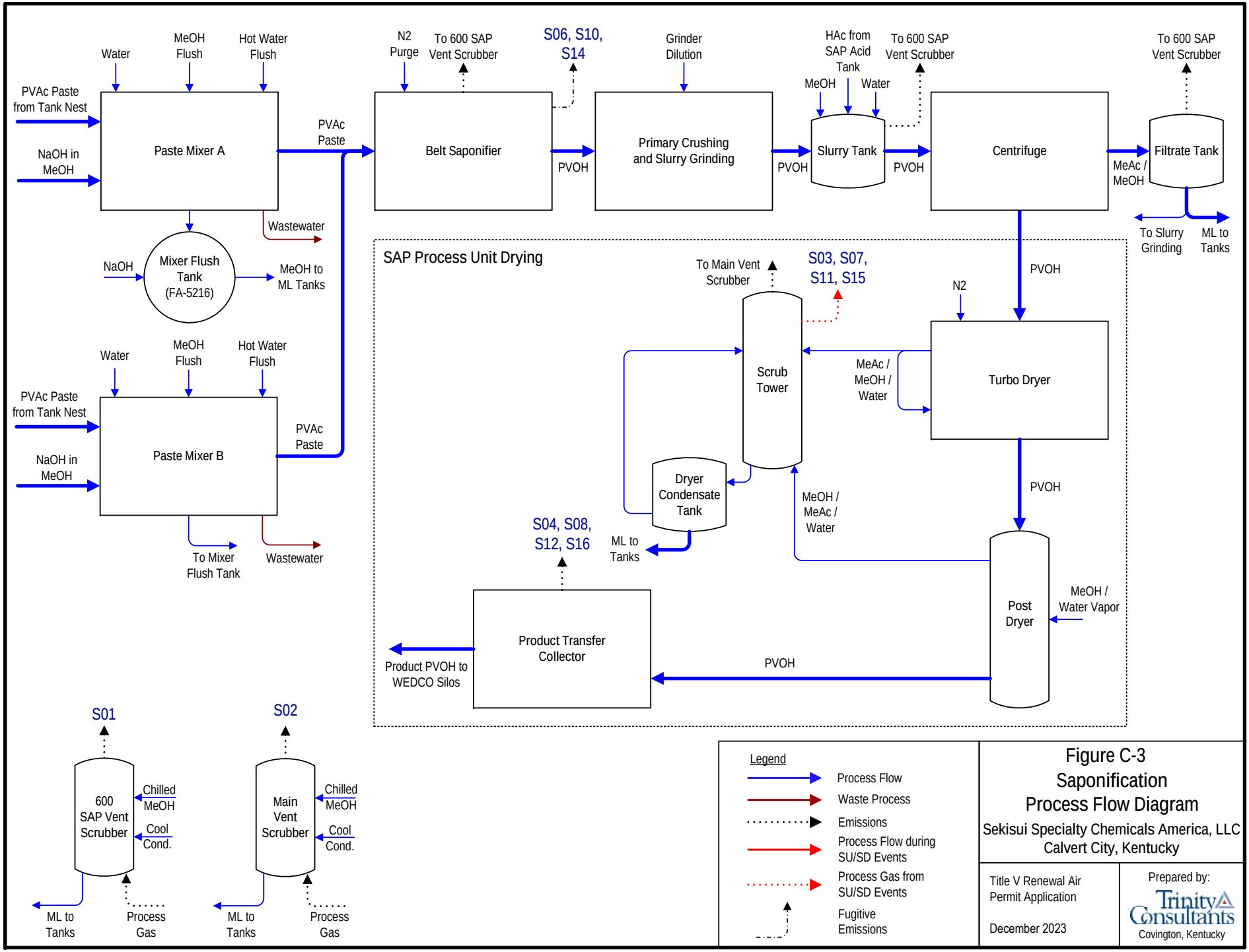


Figure C-3
Saponification
Process Flow Diagram

Sekisui Specialty Chemicals America, LLC
Calvert City, Kentucky

Title V Renewal Air Permit Application

December 2023

Prepared by:
Trinity Consultants
Covington, Kentucky

Acetic Acid Recovery Area

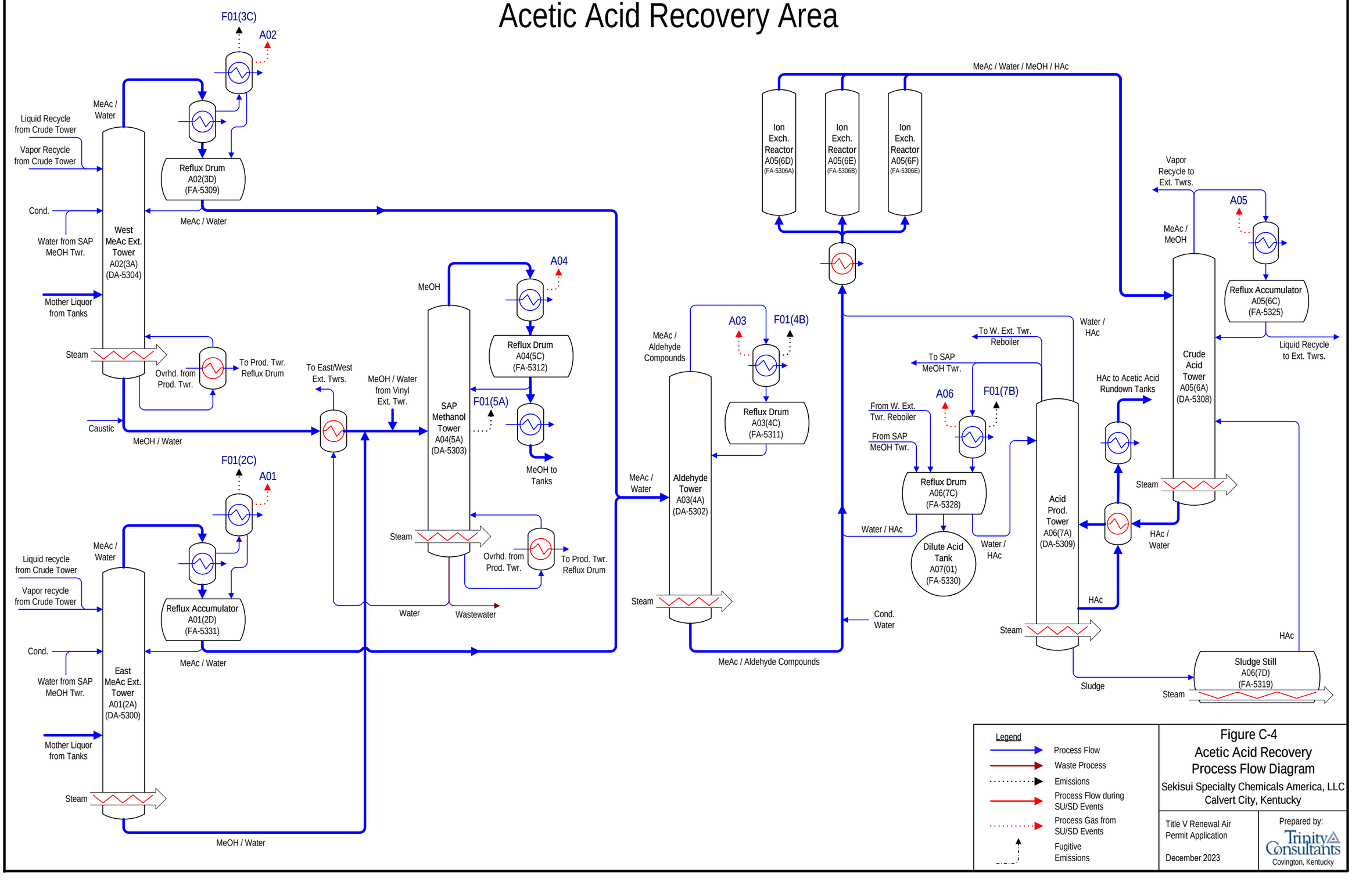


Figure C-4
Acetic Acid Recovery Process Flow Diagram
Sekisui Specialty Chemicals America, LLC
Calvert City, Kentucky

Title V Renewal Air Permit Application

December 2023

Prepared by:
Trinity Consultants
Covington, Kentucky

APPENDIX D. REQUESTED CHANGES TO EXISTING PERMIT

This appendix contains redline-strikeout mark-ups of select pages of Title V operating permit number V-18-035, which represent Sekisui's requested changes to the existing permit language.

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601
(502) 564-3999

FINAL

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name:	**Sekisui Specialty Chemicals America, LLC**
Mailing Address:	**246 Johnson Riley Road, Calvert City, KY 42029**
Source Name:	**Sekisui Specialty Chemicals America, LLC**
Mailing Address:	**246 Johnson Riley Road, Calvert City, KY 42029**
Source Location:	**246 Johnson Riley Road**
Permit:	**V-18-035**
Agency Interest:	**40292**
Activity:	**APE20180003**
Review Type:	**Title V, Operating**
Source ID:	**21-157-00055**
Regional Office:	**Paducah Regional Office** **130 Eagle Nest Drive** **Paducah, KY 42003** **(270) 898-8468**
County:	**Marshall**
Application Complete Date:	**July 16, 2018**
Issuance Date:	**June 30, 2019**
Expiration Date:	**June 30, 2024**

Rick S. Shewekah

For Melissa Duff, Director
Division for Air Quality

TABLE OF CONTENTS

	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
V-18-035	**Renewal**	**APE20180003**	**7/16/18**	**6/30/2019**	**Renewal of Title V operating permit**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

POLYMERIZATION (POLY) PROCESS AREA

Emission Point (EP) Emission Unit (EU)

EP(Source ID)	**EU**	**Emission Unit/Point Description**
F01(11)	P01-11:	**Description: Polymerization 50 Line Reactors, Stripper and Auxiliary Equipment** **Control Device:** FLARE, BA-5000 (see FLARE Section B, EP F01) Maximum Processing Rate: 79,000 lb/hr Construction Date: 1984, except (P01-11G) installed in 1996
	P01-11A	50 Line Polykettle Preheater, DA-5056 (P01 - 11A) product stream to (P01-11B); exhaust to (P01-11C)
	P01-11B	50 Line Polykettle 5 (PK5), DC-5051 (P01 11B) product stream to (P01-11D); exhaust to (P01-11A)
	P01-11C	50 Line PK5 Process Condenser, EA-5053 (P01 11C) product stream to (P01-11B); exhaust to FLARE (EP-F01) **Miscellaneous Organic NESHAP (MON) Group 1 Continuous Process Vent**
	P01-11D	50 Line Polykettle 6 (PK6), DC-5052 (P01-11D) product stream to (P01-11F); exhaust to (P01-11E)
	P01-11E	50 Line PK6 Process Condenser, EA-5054 (P01-11E) product stream to (P01-11D); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
	P01-11F	50 Line Paste Stripper, DA-5051 (P01 11F) product stream to Tank Farm; exhaust to (P01 11G)
	P01-11G	50 Line Paste Stripper Condenser, EA-5056 (P01 11G) product stream to (P01 11H)
	P01-11H	50 Line Paste Stripper Accumulator, FA-5052 Capacity: 576 gallons (P01 11H) product stream to (P01 11A), (P01 11F) or (R03 10A); exhaust to FLARE (EP F01) **MON Group 1 Continuous Process Vent**
P01	P01	**Polymerization 50 Line Reactors, Stripper and Auxiliary Equipment Startups**
F01(12)	P03-12:	**Description: Polymerization 100 Line Reactors and Auxiliary Equipment** Control Device: FLARE, BA-5000 (see Section B, EP F01) Maximum Processing Rate: 79,000 lbs/hr Construction Date: 1959, except (P03 12C) installed in 1996
	P03-12A	100 Line Polykettle Preheater, DA-5106 (P03 - 12A) product stream to (P03-12B); exhaust to (P03-12C)
	P03-12B	100 Line Polykettle 1 (PK1), DC-5101 (P03-12B) product stream to (P03-12D); exhaust to (P03-12A)
	P03-12C	100 Line PK1 Process Condenser, EA-5103 (P03-12C) product stream to (P03-12B); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
	P03-12D	100 Line Polykettle 2 (PK2), DC-5102 (P03-12D) product stream to (P04-13A); exhaust to (P03-12E)
	P03-12E	100 Line PK2 Process Condenser, EA-5104 (P03-12E) product stream to (P03-12D); exhaust to FLARE (EP F01) **MON Group 1 Continuous Process Vent**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F01(13)	P04-13:	**Description: Polymerization 100 Line Paste Stripper and Auxiliary Equipment** Control Device: FLARE, BA-5000 (see Section B, EP-F01) Maximum Processing Rate: 79,000 lbs/hr Construction Date: 1959
	P04-13A	100 Line Paste Stripper, DA-5101 (P04-13A) product stream to Tank Farm; exhaust to (P04-13B)
	P04-13B	100 Line Paste Stripper Condenser, EA-5106 (P04-13B) product stream to (P04-13C)
	P04-13C	100 Line Paste Stripper Accumulator, FA-5102 Capacity: 576 gallons (P04-13C) product stream to (P03-12A), (P04-13A) or (R03-10A); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vents**
P03	P03	**Polymerization 100 Line Reactors, Stripper and Auxiliary Equipment Startups**
F01(14)	P06-14:	**Description: Polymerization 150 Line Reactors and Auxiliary Equipment** **Control Device:** FLARE, BA-5000 (see Section B, EP-F01) Maximum Processing Rate: 79,000 lbs/hr Construction Date: 1984
	P06-14A	150 Line Polykettle Preheater, DA-5156 (P06-14A) product stream to (P06-14B); exhaust to (P06-4C)
	P06-14B	150 Line Polykettle 3 (PK3), DC-5151 (P06-14B) product stream to (P06-14D); exhaust to (P06-14A)
	P06-14C	150 Line PK3 Process Condenser, EA-5153 (P06-14C) product stream to (P06-14B); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
	P06-14D	150 Line Polykettle 4 (PK4), DC-5152 (P06-14D) product stream to (P07-15A); exhaust to (P06-14E)
	P06-14E	150 Line PK4 Process Condenser, EA-5154 (P06-4E) product stream to (P06-14D); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
F01(15)	P07-15:	**Description: Polymerization 150 Line Stripper and Auxiliary Equipment** **Control Device:** FLARE, BA-5000 (see Section B, EP-F01) Maximum Processing Rate: 79,000 lbs/hr
	P07-15A	150 Line Paste Stripper, DA-5151 Construction Date: 1984 (P07-15A) product stream to Tank Farm; exhaust to (P07-15B)
	P07-15B	150 Line Paste Stripper Condenser, EA-5156 Construction Date: 1996 (P07-15B) product stream to (P07-15C)
	P07-15C	150 Line Paste Stripper Accumulator, FA-5152 Capacity: 576 gallons Construction Date: 1959 (P07-15C) product stream to (P06-14A), (P07-15A) or (R03-10A); exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
P06	P06	**Polymerization 150 Line Reactors, Stripper and Auxiliary Equipment Startups**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

P02	P02	**Description:** 50 Line Catalyst Preparation Tanks (2), FA-5051A/B Capacity: 684 gallons each, storing a solution of 8 weight percent DEHA in methanol Construction Date: 1984 Maximum True Vapor Pressure: > 1.24 psia **MON Group 2 Storage Tanks**
P05	P05	**Description: 100 Line Catalyst Preparation Tanks (2)**, FA-5101A/B Capacity: 272 gallons each, storing a solution of 8 weight percent DEHA in methanol Construction Date: 1959 Maximum True Vapor Pressure: > 1.28 psia **MON Group 2 Storage Tanks**
P08	P08	**Description:** 150 Line Catalyst Preparation Tanks (2), FA-5151A/B Capacity: 272 gallons each, storing a solution of 8 weight percent DEHA in methanol Construction Date: 1959 Maximum True Vapor Pressure: > 1.28 psia **MON Group 2 Storage Tanks**
P09	P09	**Description:** Phosphoric Acid Tank, FA-5123 Capacity: 500 gallons, storing phosphoric acid in methanol Construction Date: 1983 Maximum True Vapor Pressure: > 1.28 psia **MON Group 2 Storage Tank**
P10(01)	P10 01	**Description:** DEHA Preparation Tank, FA-5118 Capacity: 200 gallons Construction Date: 1990 Maximum True Vapor Pressure: > 1.64 psia
P10(02)	P10 02	**Description:** DEHA Shortstop Charge Pots (2), HA-5063 and HA-5064 Capacity: 110 gallons each Construction Date: 1984 Maximum True Vapor Pressure: > 1.64 psia
P10(03)	P10 03	**Description:** DEHA Shortstop Charge Pots (4), HA-5113, HA-5114, HA-5163 and HA-5164 Capacity: 42 gallons each Construction Date: 1959 Maximum True Vapor Pressure: > 1.64 psia
P11	P11	**Equipment Leaks (Polymerization Process Area Fugitives)** Gas Vapor Valves: 115 Light Liquid Valves: 562 Light Liquid Pumps: 14 Connectors: 2,671 Agitators: 7 Instrumentation Systems: 140 Pressure Relief Devices Gas/Vapor: 5 Light Liquid: 9

The equipment leak component count for the Polymerization Process Area, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2.(4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(ii), 40 C.F.R. 63.980 to 63.999 (Subpart SS), National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, as referenced by 40 CFR 63, Subpart FFFF.

STATE-ORIGIN REQUIREMENTS:
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

PRECLUDED REGULATIONS:
Refer to **Section B**, **Group Requirements.**

1. **Operating Limitations:**
   a. Pursuant to 40 CFR 63.2445(d), if a Group 2 emission point becomes a Group 1 emission point, the permittee must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR 63, Subpart FFFF must be conducted within 150 days after the switch occurs.
   b. Refer to 40 CFR 63.2540 and 40 CFR 63, Subpart FFFF, Table 12, for general provisions.
   ~~b.~~c. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

   Continuous Process Vents and Closed Vent Systems
   Note: The closed vent system is constructed of hard piping as defined by 40 CFR 63.981.
   ~~c.~~d. Pursuant to 40 CFR 63.2455(a) and 40 CFR 63, Subpart FFFF, Table 1, item 1.ii., all Group 1 process vents of EU: P01-11C, P01-11E, P01-11H, P03-12C, P03-12E, P04-13C, P06-14C, P06-14E and P07-15C shall be vented to a flare that complies with all applicable requirements of 40 CFR 63.2450(f). Refer to **Section B,** EP-F01.
   ~~d.~~e. Pursuant to 40 CFR 63.983(a), and 40 CFR 63.982(b), the permittee shall comply with the following provisions for the closed vent systems routing the vapors to the FLARE, EP-F01.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Pursuant to 40 CFR 63.983(a)(1), each closed vent system shall be designed and operated to collect the regulated material vapors from the emission points, and to route the collected vapors to a control device.

(2) Pursuant to 40 CFR 63.983(a)(2), closed vent systems shall be operated at all times when emissions are vented to, or collected by, them.

~~(3)~~ Pursuant to 40 CFR 63.983(a)(3), and except as provided by 40 CFR 63.2450(e)(4) per 40 CFR 63.2450(e)(6)(ii), ~~except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and~~

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) ~~open-ended valves or lines,~~ the permittee shall comply with the provisions of either 40 CFR63.983(a)(3)(i or ii), for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Pursuant to 40 CFR 63.983(a)(3)(i), properly install, maintain, and operate a flow indicator at the entrance to any bypass line that is capable of taking periodic readings.

(ii) Pursuant to 40 CFR 63.983(a)(3)(ii), secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

(4) Pursuant to 40 CFR 63.983(d)(1), if there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by 40 CFR 63.983(b)(1)(i)(B), the permittee shall comply with either of the following procedures.

(i) Pursuant to 40 CFR 63.983(d)(1)(i), eliminate the leak.

(ii) Pursuant to 40 CFR 63.983(c), monitor the equipment according to the procedures therein.

(5) Pursuant to 40 CFR 63.983(d)(2), leaks, as indicated by an instrument reading greater than 500 ppm by volume above background or by visual inspections, shall be repaired as soon as practical.

(i) Pursuant to 40 CFR 63.983(d)(2)(i), a first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Pursuant to 40 CFR 63.983(d)(2)(ii), except as provided in 40 CFR 63.983(d)(3) for delay of repair, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

~~(ii)~~f. Pursuant to 40 CFR 63.2450(e)(6), the use of a bypass line at any time on a closed vent system to divert emissions subject to the requirements in Tables 1 through 7 to 40 CFR 63 Subpart FFFF to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 of 40 CFR 63 Subpart FFFF is an emissions standard deviation.

Equipment Leaks

~~e.~~g. Pursuant to 40 CFR 63.2480(a) the permittee shall meet each requirement in 40 CFR 63, Subpart FFFF, Table 6, item 1.(b.). The permittee shall comply with the requirements of 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d)-(f).

(1) Pursuant to 40 CFR 63.162(c), each piece of equipment in a process unit to which 40 CFR 63, Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to its requirements. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63.172 through 40 CFR 63.174, the permittee shall:

(i) Clearly identify the leaking equipment.

(ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

connector may be removed after it is monitored and no leak is detected during that monitoring.

(iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

~~(iv)~~(3) Pursuant to 40 CFR 63.2480(b)(7) for each piece of equipment subject to 40 CFR 63, Subpart FFFF that is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, the permittee must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this requirement.

h. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(1) and (2) for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of 40 CFR 63.165 of Subpart H. [40 CFR 63.2480(e)]

i. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4) and (5), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(3), (6), (7), and (8) for all pressure relief devices in organic HAP service.

(1) Pursuant to 40 CFR 63.2480(e)(3), implement the pressure release management requirements outlined in 40 CFR 63.2480(e)(3)(i) – (v).

(2) Pursuant to 40 CFR 63.2480(e)(6), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 63.2480(e)(6)(i) – (iii).

(3) Pursuant to 40 CFR 63.2480(e)(7), the permittee must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 CFR 63.2480(e)(7)(i) – (iii)

(4) Pursuant to 40 CFR 63.2480(e)(8), the permittee shall not install any flowing pilot-operated pressure relief device or replace any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023.

Maintenance Vents

j. Pursuant to 40 CFR 63.2450(v), the permittee shall meet the requirements outlined in 40 CFR 63.2450(v)(1) through (3) for any process vent designated as a maintenance vent and used only as a result of startup, shutdown, maintenance or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service.

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements** for Continuous Process Vents andClosed Vent Systems.

Equipment Leaks

b. Pursuant to 40 CFR 63.162(a), compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Maintenance Vents

c. Refer to **5. Specific Recordkeeping Requirements** and **6. Specific Reporting Requirements** for Maintenance Vents.

2. Emission Limitations:

a. Refer to **Section D.4.** for 401 KAR 63:020 requirements.

Equipment Leaks and Closed Vent Systems

b. Pursuant to 40 CFR 63.2480(a) and 40 CFR 63, Subpart FFFF, Table 6, the permittee shall comply with the fugitive emissions standards of 40 CFR 63, Subpart H as applicable.

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:

40 CFR 63.163(a):	Implementation and compliance provisions
40 CFR 63.163(b):	Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c) (except (c)(3)):	Repair procedures and time frames
40 CFR 63.163(d):	Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j):	Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors: 40

CFR 63.164(a)-(e):	Operational requirements
40 CFR 63.164(f):	Criteria for Leak detection
40 CFR 63.164(g):	Repair procedures and time frames
40 CFR 63.164(h)-(i):	Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vaporservice:

~~40 CFR 63.165(a)~~40 CFR 63.2480(e)(1):	Operational requirements
~~40 CFR 63.165(b)~~ 40 CFR 63.2480(e)(2):	Pressure release procedures
~~40 CFR 63.165(c) (d)~~ 40 CFR 63.2480(e)(4):	Exemptions for specific types of pressure relief devices

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:

40 CFR 63.166(a)-(b):	Operational requirements
40 CFR 63.166(c):	Exemptions for specific types of sampling connection systems

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:

40 CFR 63.167(a)-(c):	Operational requirements
40 CFR 63.167(d)-(e):	Exemptions for specific types of valves

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:

40 CFR 63.168(a):	Operational requirements
40 CFR 63.168(b)-(d):	Monitoring requirements and intervals
40 CFR 63.168(e):	Procedures to determine percent leaking valves
40 CFR 63.168(f):	Leak repair time frames
40 CFR 63.168(g):	First attempt repair procedures
40 CFR 63.168(h):	Exemptions for unsafe-to-monitor valves
40 CFR 63.168(i):	Exemptions for difficult-to-monitor valves

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:

40 CFR 63.169(a):	Monitoring frequency
40 CFR 63.169(b):	Leak detection levels
40 CFR 63.169(c):	Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:

40 CFR 63.171	Allowances for delay of repair

(9) Pursuant to 40 CFR 63.172, Standards for Closed-vent systems and control devices:

40 CFR 63.172(a)-(b):	Operational requirements
40 CFR 63.172(d),(m):	Control device requirements
40 CFR 63.172(f)-(g):	Monitoring requirements
40 CFR 63.172(h)-(i):	Repair procedures and time frames
40 CFR 63.172 (j) (except (j)(3)):	Operational requirements for bypass lines
40 CFR 63.172(k)-(l):	Exemptions for unsafe-to-inspect and difficult-to-inspect closed-vent systems

(10) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:

40 CFR 63.173(a):	Operational requirements
40 CFR 63.173(b):	Monitoring requirements and intervals
40 CFR 63.173(c):	Leak repair time frames
40 CFR 63.173(d)-(g):	Exemptions for specific types of agitators
40 CFR 63.173(h)-(j):	Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

(11) Pursuant to 40 CFR 63.174, Standards for Connectors in gas/vapor service and in light liquid service:

40 CFR 63.174(a):	Operational requirements
40 CFR 63.174(b):	Monitoring requirements and intervals
40 CFR 63.174(c):	Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d):	Leak repair time frames
40 CFR 63.174(e):	Monitoring frequency for repaired connectors
40 CFR 63.174(f)-(h):	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i):	Procedures to determine percent leaking connectors
40 CFR 63.174(j):	Optional credit for removed connectors

(12) Pursuant to 40 CFR 63.175 and 40 CFR 63.168(d)(1)(ii), in Phase III, Quality improvement program for valves: the permittee may elect to implement the following

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175(a):	Quality improvement program alternatives
40 CFR 63.175(b):	Criteria for ending quality improvement programs
40 CFR 63.175(c):	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175(d):	Quality improvement program to demonstrate further progress
40 CFR 63.175(e):	Quality improvement program of technology review and improvement

(13) Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if, in Phase III, Quality improvement program for pumps:, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Polymerization, Saponification, Polyrectification, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart FFFF MCPU) leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176(a):	Applicability criteria
40 CFR 63.176(b):	Criteria for ending the quality improvement program
40 CFR 63.176(c):	Criteria for resumption of the quality improvement program
40 CFR 63.176(d):	Quality improvement program elements

(14) Pursuant to 40 CFR 63.2480(b)(1) and 40 CFR 63.178(b), the requirements for pressure testing in 40 CFR 63.178(b) may be applied to all processes, not just batch processes, as stated in 40 CFR 63.2480(b)(1). The permittee may elect to use pressure testing of equipment to demonstrate compliance by meeting the following requirements of 40 CFR 63.178(b). Compliance with the provisions of 40 CFR 63.178(b) exempts the permittee from the monitoring provisions of 40 CFR 63.163, 40 CFR 63.168 and 40 CFR 63.169, and 40 CFR 63.173 through 40 CFR 63.176.

(i) Pursuant to 40 CFR 63.178(a), the permittee may switch among the alternatives provided the change is documented as specified in 40 CFR 63.181.

(ii) For the purposes of 40 CFR 63, Subpart FFFF pressure testing for leaks in accordance with 40 CFR 63.178(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

Compliance Demonstration Method:
Refer to **1. Operating Limitations** Compliance Demonstration b.

3. Testing Requirements:

Continuous Process Vents

a. Refer to **3. Testing Requirements** for the FLARE in **Section B,** EP F01.

Equipment Leaks

b. Pursuant to 40 CFR 63.180(a), the permittee shall comply with the following test methods and procedures requirements:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) 40 CFR 63.180(b) Monitoring procedures, test methods, and calibration procedures
(2) 40 CFR 63.180(c) Leak detection monitoring procedures (replacing reference to 40 CFR 63.165(a) with 40 CFR 63.2480(e)(1).
(3) 40 CFR 63.180(d) Procedures for determining organic HAP service applicability

c. Pursuant to 40 CFR 63.2515(c), a notification of performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1), if applicable.
d. Pursuant to KAR 50:045, Section 1, performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

Continuous Process Vents and Closed Vent Systems

a. Refer to **4. Specific Monitoring Requirements** for the FLARE in **Section B,** EP-F01.
b. Pursuant to 40 CFR 63.983(b)(1)(i), except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in 40 CFR 63.983(b)(2 and 3), the permittee shall comply with the following requirements for each closed vent system:
   (1) Pursuant to 40 CFR 63.983(b)(1)(i)(A), conduct an initial inspection according to the procedures in 40 CFR 63.983(c); and
   (2) Pursuant to 40 CFR 63.983(b)(1)(i)(B), conduct annual inspections for visible, audible, or olfactory indications of leaks.
c. Pursuant to 40 CFR 63.983(b)(4), for each bypass line, the permittee shall comply with either of the following requirements:
   (1) Pursuant to 40 CFR 63.983(b)(4)(i), if a flow indicator is used, take a reading at least once every 15 minutes.
   (2) Pursuant to 40 CFR 63.983(b)(4)(ii), if the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

Equipment Leaks

d. Refer to **1. Operating Limitations** Compliance Demonstration Method b. and **3. Testing Requirements**.

5. Specific Recordkeeping Requirements:

a. All records shall be maintained in accordance with **Section F.2.**
b. Pursuant to 40 CFR 63.2525, the permittee shall keep the following records:
   (1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced subparts G and SS of 40 CFR 63.
   (2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:
      (i) A description of the process and the type of process equipment used.
      (ii) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.
      (iii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

level of required control, and for vents, the level of control for each vent.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~(iii)~~(iv) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

~~(iv)~~(v) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

~~(v)~~(vi) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

~~(vi)~~(vii) Calculations and engineering analyses required to demonstrate compliance.

~~(vii)~~(viii) For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario.

~~(3) Pursuant to 40 CFR 63.2525(j), in the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.~~

(3) Pursuant to 40 CFR 63.2525(l), for each deviation from an emission limit, operating limit, or work practice standard, the permittee must keep a record of the information specified in 40 CFR 63.2525(l)(1) – (3). The records shall be maintained as specified in 40 CFR 63.10(b)(1) of subpart A. In the event that an affected unit does not meet an applicable standard, record the number of deviations.

(i) For each deviation record the date, time, and duration of each deviation.

(ii) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(iii) Record actions taken to minimize emissions in accordance with 40 CFR 63.2450(u) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

Continuous Process Vents and Closed Vent Systems

c. Refer to **5. Specific Recordkeeping Requirements** for the FLARE in **Section B,** EP-F01.

d. Pursuant to 40 CFR 63.998(d)(1), for the closed vent systems, the permittee shall record the following information.

(1) Pursuant to 40 CFR 63.998(d)(1)(i), the identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR 63.983(b)(2)(ii or iii).

(2) Pursuant to 40 CFR 63.998(d)(1)(ii)(A or B), as applicable, the information , for each closed vent system that contains bypass lines that could divert a vent stream away from the flare and to the atmosphere:

(i) Hourly records of whether the flow indicator specified under 40 CFR 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the flare or the flow indicator is not operating; or

(ii) Where a seal mechanism is used to comply with 40 CFR 63.983(a)(3)(ii),

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

hourly records of flow are not required. In such cases, the permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(3) Pursuant to 40 CFR 63.998(d)(1)(iii), for a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in 40 CFR 63.983(d)(2), the information specified in (d)(1)(iii)(A through F) of 40 CFR 63.998, below, shall be recorded and kept for 5 years.

(i) The instrument and equipment identification number and the operator name, initials, or identification number.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(ii) The date the leak was detected and the date of the first attempt to repair the leak.
(iii) The date of successful repair of the leak.
(iv) The maximum instrument reading measured by the procedures in 40 CFR 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.
(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
(vi) Copies of the Periodic Reports as specified in 40 CFR 63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(4) Pursuant to 40 CFR 63.998(d)(1)(iv), for each instrumental or visual inspection conducted in accordance with 40 CFR 63.983(b)(1) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

e. Pursuant to 40 CFR 63.2525(n), for each flow event from a bypass line subject to the requirements 63.2450(e)(6), the permittee must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 to this subpart, the permittee must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

Equipment Leaks

~~e.~~f. Pursuant to 40 CFR 63.181(a), the permittee shall comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

~~f.~~g. Pursuant to 40 CFR 63.181(b), except as provided in 40 CFR 63.181(e), and amended by 40 CFR 63.2480(f)(18), the following information pertaining to all equipment in each process unit subject to the requirements in40 CFR 63.162 through 40 CFR 63.174 shall be recorded:

(1) Pursuant to 40 CFR 63.181(b)(1)(i through iii):
(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 and instrumentation systems). Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63, Subpart H are identified as a group, and the number of connectors subject is indicated. Pursuant to 40 CFR63.2480(b)(3), as an existing source under 40 CFR 63, Subpart FFFF the permittee is not required to develop an initial list of identification numbers for connectors.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) Pursuant to 40 CFR 63.181(b)(2)(i and ii):

(i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.2480(e)(4)~~63.165(c)~~, or 40 CFR 63.173(f).

(ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3) and 40 CFR 63.2480(f)(18)(iii) and (iv), a list of identification numbers for pressure relief devices subject to 40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~ and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.2480(e)(2)(ii) and (iii)~~40 CFR 63.165(d)~~.

(4) Pursuant to 40 CFR 63.181(b)(4), identification of instrumentation systems. Individual components in an instrumentation system need not be identified.

(5) Pursuant to 40 CFR 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 40 CFR 63.181(b)(6), the following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 40 CFR 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i), agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):

(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors are expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63.172 through 40 CFR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

~~g.~~h. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the inspection was conducted and the date of the inspection. The permittee shall maintain records as specified in 40 CFR 60.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

~~h.~~i. Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall be recorded and kept for two years:

(1) Pursuant to 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.

(2) Pursuant to 40 CFR 63.181(d)(2), the date the leak was detected and the date of first attempt to repair the leak.

(3) Pursuant to 40 CFR 63.181(d)(3), the date of successful repair of the leak.

(4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) Pursuant to 40 CFR 63.181(d)(5), "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. ~~The written procedures may be included as part of the startup/shutdown/malfunction plan (SSMP), required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site.~~ In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):

(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) Pursuant to 40 CFR 63.181(d)(9), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

~~i.~~j. Pursuant to 40 CFR 63.178(b), if the permittee elects to comply with the pressure testing requirements in accordance with **2. Emission Limitations b. (14),** the permittee is exempt from the requirements of paragraphs f, g, h and j of this section **B**. Instead, the permittee shall maintain records as specified in 40 CFR 63.181(e)(1 through 6).

~~j.~~k. Pursuant to 40 CFR 63.181(f) and 40 CFR 63.2480(f)(18)(v), the dates and results of compliance tests required for compressors and the dates and results of monitoring

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

following a pressure relief valve pressure release subject to 40 CFR 63.2480(e)(1) and (2) shall be recorded. The results shall include:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Pursuant to 40 CFR 63.181(f)(1), the background level measured during each compliance test.
(2) Pursuant to 40 CFR 63.181(f)(2), the maximum instrument reading measured at each piece of equipment during each compliance test.

~~k.~~l. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.

(1) Pursuant to 40 CFR 63.181(g)(1), the design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i through iv) shall be retained for the life of the equipment.
(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.
(ii) The dates and descriptions of any changes in the design specifications.
(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63, Subpart A.
(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
(2) Pursuant to 40 CFR 63.181(g)(2), records of operation of closed-vent systems and control devices, as specified in 40 CFR 63.181(g)(2)(i through iii) shall be retained for 2 years.
(i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.
(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.
(iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.
(3) Pursuant to 40 CFR 63.181(g)(3), records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, as specified in 40 CFR 63.181(g)(3)(i and ii) shall be retained for 2 years.
(i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1 or 2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
(ii) For each inspection conducted in accordance with 40 CFR 63.172(f)(1 or 2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

~~l.~~m. Pursuant 40 CFR 63.181(h), if the permittee implements any of the quality improvement programs required by 40 CFR 63.175 or 40 CFR 63.176, the records specified in 40 CFR 63.181(h)(1 through 9) shall be maintained for a period of the quality improvement plan for the process unit.

n. Pursuant to 40 CFR 63.2525(q), for each pressure relief device subject to the pressure release management work practice standards in 40 CFR 63.2480(e), the permittee must keep the records specified in 40 CFR 63.2525(q) (1) - (3).
(1) Records of the prevention measures implemented as required in 40 63.2480(e)(3)(ii).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past 5 calendar years.

(3) For each release to the atmosphere, the permittee must keep the records specified in 40 CFR 63.2525(q)(3)(i) - (iv).

(i) The start and end time and date of each pressure release to the atmosphere;

(ii) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event;

(iii) Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 63.2480(e)(7)(i);

~~(i)~~(iv) For any corrective action analysis for which implementation of corrective actions are required in 40 CFR 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

All Process Equipment

~~m.~~o. Pursuant to 40 CFR 63.981, "continuous record" means documentation, either in hard copyor computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in 40 CFR 63.998(b), except that periods of startup, shutdown, and malfunction shall not be excluded pursuant to 40 CFR 63.2450(e)(4)(vii).

~~n.~~p. Pursuant to 40 CFR 63.998(b)(1), where 40 CFR 63, Subpart SS, requires a continuous record, the owner or operator shall maintain a record as specified in 40 CFR 63.998(b)(1) as applicable:

(1) Pursuant to 40 CFR 63.998(b)(1)(i), a record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or

(2) Pursuant to 40 CFR 63.998(b)(1)(ii), a record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measured more frequently than once per minute.

(3) Pursuant to 40 CFR 63.998(b)(1)(iii), where data is collected from an automated continuous parameter monitoring system, the owner or operator may calculate and retain block hourly average values from each 15-minute block average period or from at least one measured value per minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records, if the hourly averages do not exclude periods of CPMS breakdown or malfunction. An automated CPMS records the measured data and calculates the hourly averages through the use of a computerized data acquisition system.

(4) Pursuant to 40 CFR 63.998(b)(1)(iv), a record as required by an alternative approved under a referencing subpart.

Maintenance Vents

q. Pursuant to 40 CFR 63.2525(p), for maintenance vent openings~~,~~ subject to 40 CFR 63.2450(v), the permittee shall record the following information, as applicable.

(1) Pursuant to 40 CFR 63.2525(p)(1), maintain standard site procedures used to deinventory equipment for safety purposes to document the procedures used to meet the requirements in 40 CFR 63.2450(v). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of 40 CFR 63.2450(v)(1)(i), and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of 40 CFR 63.2450(v)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of 40 CFR 63.2450(v)(1)(iii), records of the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in 40 CFR 63.2525(p)(1) are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this condition, records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of 40 CFR 63.2450(v)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

~~(4)~~

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, for equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit a Compliance report containing the information specified in 40 CFR 63.2520(e)(1 through 10), semiannually.

b. Pursuant to 40 CFR 63.2520(e), Once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, submit all subsequent reports to the EPA via the CEDRI, which can be accessed through the EPA's CDX(https://cdx.epa.gov/). Report using the appropriate report template located on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under 40 CFR 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in 40 CFR 63 Subpart FFFF, regardless of the method in which the report is submitted. The permittee shall not use CEDRI to submit information claimed as CBI.

c. Pursuant to 40 CFR 63.2520(e), the permittee may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in this paragraph (e) provided the permittee meets the requirements outlined in 40 CFR 63.2520(i) or (j), as applicable. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.2520(h)(1) through (7).

~~b.~~d. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, the permittee shall submit a precompliance report as specified in 40 CFR 63.2520(c)(1 through c) at least 6 months prior for new sources, with an application for approval of construction or reconstruction.

Continuous Process Vents and Closed Vent Systems

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~c.~~e. The permittee shall furnish reports as specified in **5. Specific Recordkeeping Requirements** for the flare in **Section B**, EP-F01.

~~d.~~f. Pursuant to 40 CFR 63.999(c)(1), the permittee shall submit Periodic reports that shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in 40 CFR 63.999 and in 40 CFR 63, Subpart FFFF including reports of periods when monitored parameters are outside their established ranges.

~~e.~~g. Pursuant to 40 CFR 63.999(c)(2), the permittee shall submit, as part of the periodic report:

(1) Pursuant to 40 CFR 63.999(c)(2)(i), the information recorded in 40 CFR 63.998(d)(1)(iii)(B through E).

(2) Pursuant to 40 CFR 63.999(c)(2)(ii), reports of the times of all periods recorded under 40 CFR 63.998(d)(1)(ii)(A) when the vent stream is diverted from the flare through a bypass line; and

(3) Pursuant to 40 CFR 63.999(c)(2)(iii), reports of all times recorded under 40 CFR 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

h. Pursuant to 40 CFR 63.2520(e)(12) bypass lines must include in the compliance report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

Equipment Leaks

i. Pursuant to 40 CFR 63.2520(e)(15), compliance reports for pressure relief devices subject to the requirements 40 CFR 63.2480(e) must include the information specified in 40 CFR 63.2520(e)(15)(i) through (iii).

(1) For pressure relief devices in organic HAP gas or vapor service, pursuant to 40 CFR 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.

(2) For pressure relief devices in organic HAP gas or vapor service subject to 40 CFR 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(3) For pressure relief devices in organic HAP service subject to 40 CFR 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

Maintenance Vents

j. Pursuant to 40 CFR 63.2520(e)(14), the permittee shall submit, as part of the compliance report for any maintenance vent release exceeding the applicable limits in 40 CFR 63.2450(v)(1), the items specified in 40 CFR 63.2520(e)(14)(i)-(iv). For any maintenance vent release complying with 40 CFR 63.2450(v)(1)(iv), report an explanation for any event as to why utilization of this alternative was required.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~(4)~~

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

Continuous Process Vents

a. Pursuant to 40 CFR 63.11(b)(3) the FLARE (EP F01) shall be in operation at all times the emission units that vent to the FLARE are operating. Refer to **Section B** for EP F01.

b. Pursuant to 40 CFR 63.2450(a), the permittee must be in compliance with the emission limits and work practice standards in 40 CFR 63, Subpart FFFF, Tables 1 through 7, at all times, ~~except during periods of startup, shutdown, and malfunction,~~ and the permittee must meet the requirements specified in 40 CFR 63.2455 through 40 CFR 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in of 40 CFR 63.2450(b through ~~s~~v). The permittee must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525.

8. Alternate Operating Scenarios:

~~a. Pursuant to 40 CFR 63, Subparts A and FFFF for the occurrences of start-ups at EU-P01, P03 or P06, the permittee shall follow the required SSMP.~~

~~b.~~a. Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF for the equipment leaks subject to 40 CFR 63 Subpart FFFF, the permittee may comply with one of the following requirements:

(1) 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f);

(2) 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f); or

(3) 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 40 CFR 63.2480(c) and (d) -(f).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

SAPONIFICATION (SAP) PROCESS AREA

EP(Source ID)	**EU**	**Emission Unit/Point Description**
S01	S01	**Description: Saponification Process Unit**, consisting of Four (4) Parallel Production Lines (200, 250, 400, 600) **Recovery/Control Device** (Recovery device as defined in the HON & MON): Countercurrent, crossflow packed bed scrubber, identified as **600 SAP Vent Scrubber**, DA-5602/DA-5604 Scrubbing Liquid: Water, methanol and methyl acetate Scrubbing Liquid Flow Rate: 35 gal/min Control Efficiency: 99% for Methyl Acetate and Methanol 600 SAP Vent Scrubber, DA-5602/DA-5604, is a MON Recovery device and a **MON Group 2 Continuous Process Vent**
	S01-A:	**Description: Saponification 200 Line Process** Maximum Processing Rate: 41,485 lbs/hr
	S01-A1	200 Line Paste Mixer, GD-5201 A/B
	S01-A2	200 Line Belt Saponifier, DC-5201
	S01-A3	200 Line Primary Crushing Mill (#1 Polymer Cutting Machine (PCM)), PA-5201
	S01-A4	200 Line Slurry Grinder (#2 PCM), PA-5202
	S01-A5	200 Line Slurry Tank, FA-5201 (1,940 gallons) **MON Surge Control Vessel**
	S01-A6	200 Line Centrifuge, JB-5201
	S01-A7	200 Line Filtrate Tank, FA-5214 (415 gallons) **MON Surge Control Vessel**
	S01-B:	**Description: Saponification 250 Line Process** Maximum Processing Rate: 41,485 lbs/hr
	S01-B1	250 Line Paste Mixer, GD-5251 A/B
	S01-B2	250 Line Belt Saponifier, DC-5251
	S01-B3	250 Line Primary Crushing Mill (#1 PCM), PA-5251
	S01-B4	250 Line Slurry Grinder (#2 PCM), PA-5252
	S01-B5	250 Line Slurry Tank, FA-5251 (1,940 gallons) **MON Surge Control Vessel**
	S01-B6	250 Line Centrifuge, JB-5251
	S01-B7	250 Line Filtrate Tank, FA-5254 (650 gallons) **MON Surge Control Vessel**
S01	S01-C:	**Description: Saponification 400 Line Process** Maximum Processing Rate: 41,485 lbs/hr
	S01-C1	400 Line Paste Mixer, GD-5401 A/B
	S01-C2	400 Line Belt Saponifier, DC-5401
	S01-C3	400 Line Primary Crushing Mill (#1 Polymer Cutting Machine (PCM)), PA-5401
	S01-C4	400 Line Slurry Grinder (#2 PCM), PA-5402
	S01-C5	400 Line Slurry Tank, FA-5401 (1,940 gallons) **MON Surge Control Vessel**
	S01-C6	400 Line Centrifuge, JB-5401
	S01-C7	400 Line Filtrate Tank, FA-5404 (630 gallons) **MON Surge Control Vessel**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP(Source ID**)**	**EU**	**Emission Unit/Point Description**
S01	S01-D:	**Description: Saponification 600 Line Process** Maximum Processing Rate: 55,300 lbs/hr
	S01-D1	600 Line Paste Mixer, GD-5601 A/B
	S01-D2	600 Line Belt Saponifier, DC-5601
	S01-D3	600 Line Primary Crushing Mill (#1 PCM), PA-5601
	S01-D4	600 Line Slurry Grinder (#2 PCM), PA-5602
	S01-D5	600 Line Slurry Tank, FA-5601 (1,940 gallons) **MON Surge Control Vessel**
	S01-D6	600 Line Centrifuge, JB-5601
	S01-D7	600 Line Filtrate Tank, FA-5604 (1,170 gallons) **MON Surge Control Vessel**
S01(E1,F1)	S01-E1, F1	**Saponification Process Tanks** Tank Description: Fixed Roof Tanks **MON Group 2 Storage Tanks**
S01(E1)	S01-E1	Chilled Methanol Return Tank, FA-5203, storing methanol (250 gallons)
S01(F1)	S01-F1	Sodium Hydroxide Feed Tank, FA-5211, storing a solution of 10 weight percent sodium hydroxide (4,210 gallons)
S01(G1)	S01-G1	Mixer Flush Tank, FA-5216, storing polyvinyl acetate and polyvinyl alcohol in methanol (2,200 gallons)
S01(H1)	S01-H1	SAP Catalyst Make-up Tank, FA-5261, storing a solution of 10 weight percent sodium hydroxide (4,260 gallons)
S02	S02	**Description: Saponification Process Unit Drying** **Recovery/Control Device** (Recovery device as defined in the HON & MON): Countercurrent packed bed scrubber, identified as **Main Vent Scrubber**, DA-5605/DA-5605B Scrubbing Liquid: Chilled recovered methanol and methyl acetate recycled to the scrubber, chilled methanol, and water Scrubbing Liquid Flow Rate: 50 gal/min recycled methanol and methyl acetate, 5gal/min chilled methanol, and 5 gal/min water Control Efficiency: 92% for Methyl Acetate, 99% for Methanol Main Vent Scrubber, DA-5605/DA5605B, is a MON Recovery device and a **MON Group 2 Continuous Process Vent**
S02(A)	S02-A:	**Description: Saponification 200 Line Drying** Maximum Processing Rate: 41,485 lbs/hr
	S02-A1	200 Line Turbo Dryer, PA-5205
	S02-A2	200 Line Post Dryer, DA-5206
	S02-A4	200 Line Scrub Tower, DA-5201
	S02-A5	200 Line Dryer Condensate Tank, FA-5202 (1,150 gallons) **MON Surge Control Vessel**
S02(B)	S02-B:	**Description: Saponification 250 Line Drying** Maximum Processing Rate: 41,485 lbs/hr
	S02-B1	250 Line Turbo Dryer, PA-5255
	S02-B2	250 Line Post Dryer, DA-5256
	S02-B4	250 Line Scrub Tower, DA-5251
	S02-B5	250 Line Dryer Condensate Tank, FA-5252 (1,350 gallons) **MON Surge Control Vessel**
S02(C)	S02-C:	**Description: Saponification 400 Line Drying** Maximum Processing Rate: 41,485 lbs/hr
	S02-C1	400 Line Turbo Dryer, PA-5405

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP(Source ID**)**	**EU**	**Emission Unit/Point Description**
	S02-C2	400 Line Post Dryer, DA-5403
	S02-C4	400 Line Scrub Tower, DA-5401
	S02-C5	400 Line Dryer Condensate Tank, FA-5402 (810 gallons) **MON Surge Control Vessel**
S02(D)	S02-D:	**Description: Saponification 600 Line Drying** Maximum Processing Rate: 55,300 lbs/hr
	S02-D1	600 Line Turbo Dryer, PA-5605
	S02-D2	600 Line Post Dryer, DA-5606
	S02-D4	600 Line Scrub Tower, DA-5603
	S02-D5	600 Line Dryer Condensate Tank, FA-5602 (2,750 gallons) **MON Surge Control Vessel**
S03	S03	**200 Line Turbo Dryer Startups**, PA-5202
S04	S04	**200 Line Product Transfer Collector**, FD-5216 Description: Pneumatically transfers solids to the Pre-Grinded Product Silos **Control Device:** Baghouse, 99.6% control efficiency for PM
S05	S05	**200 Line Boilout Emissions** Boilout from Paste Mixer is a **MON Group 2 Wastewater Stream** Boilout from the Saponifier and Slurry Tank, Centrifuge and Filtrate Tank, Turbo Dryer, and Post Dryer are **MON Maintenance Wastewater Streams**
S06	S06	**200/250 Saponification Lines Spot Vent Blower**, GB-5215 Captures 200/250 Line fugitive emissions
S07	S07	**250 Line Turbo Dryer Startups**, PA-5255
S08	S08	**250 Line Product Transfer Collector**, FD-5266 Pneumatically transfers solids to the Pre-Grinded Product Silos **Control Device:** Baghouse, 99.6% control efficiency for PM
S09	S09	**250 Line Boilout Emissions** Boilout from Paste Mixer is a **MON Group 2 Wastewater Stream** Boilout from the Saponifier and Slurry Tank, Centrifuge and Filtrate Tank, Turbo Dryer, and Post Dryer are **MON Maintenance Wastewater Streams**
S10	S10	**400 Line Spot Vent Blower**, GB-5429 Captures 400 Line fugitive emissions
S11	S11	**400 Line Turbo Dryer Startups**, PA-5405
S12	S12	**400 Line Product Transfer Collector**, FD-5416 Pneumatically transfers solids to the Pre-Grinded Product Silos **Control Device:** Baghouse, 99.6% control efficiency for PM
S13	S13	**400 Line Boilout Emissions** Boilout from Paste Mixer is a **MON Group 2 Wastewater Stream** Boilout from the Saponifier and Slurry Tank, Centrifuge and Filtrate Tank, Turbo Dryer, and Post Dryer are **MON Maintenance Wastewater Streams**
S14	S14	**600 Line Spot Vent Blower**, GB-5602 Captures 600 Line fugitive emissions
S15	S15	**600 Line Turbo Dryer Startups**, PA-5605
S16	S16	**600 Line Product Transfer Collector**, PA-5606 Pneumatically transfers solids to the Pre-Grinded Product Silos **Control Device:** Baghouse 99.6% control efficiency for PM
S17	S17	**600 Line Boilout Emissions** Boilout from Paste Mixer is a **MON Group 2 Wastewater Stream** Boilout from the Saponifier and Slurry Tank, Centrifuge and Filtrate Tank, Turbo Dryer, and Post Dryer are **MON Maintenance Wastewater Streams**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP(Source ID**)**	**EU**	**Emission Unit/Point Description**
S18	S18	**SAP Acid Tank**, FA-5215, storing Acetic Acid (185 gallons) **MON Group 2 Storage Tank**
S19	S19	**Equipment Leaks (Saponification Process Area Fugitives)** Gas Vapor Valves: 345 Light Liquid Valves: 2,312 Light Liquid Pumps: 57 Connectors: 8,769 Agitators: 77 Instrumentation Systems: 32 Pressure Relief Devices Gas/Vapor: 15 Light Liquid: 31

The equipment leak component count for the Saponification Process Area, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations.

401 KAR 63:002, Section 2.(4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2.(4)(a), 40 C.F.R. 63.100 to 63.107, Tables 1 to 4 (Subpart F), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(ii), 40 C.F.R. 63.980 to 63.999 (Subpart SS), National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, as referenced by 40 CFR 63, Subpart FFFF.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 63:002, Section 2.(4)(mm), 40 C.F.R. 63.1060 to 63.1067 (Subpart WW), National Emission Standards for Storage Vessels (Tanks) - Control Level 2, as referenced by 40 CFR 63, Subpart FFFF.

STATE-ORIGIN REQUIREMENTS:
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

PRECLUDED REGULATIONS:
Refer to **Section B**, **Group Requirements.**

1. **Operating Limitations:**
   a. Pursuant to 40 CFR 63.2445(d), if a Group 2 emission point becomes a Group 1 emission point, the permittee must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR 63, Subpart FFFF must be conducted within 150 days after the switch occurs.
   b. Pursuant to 401 KAR 52:020, Section 10, the particulate control devices shall be in operation at all times the Product Transfer Collectors at EP-S04, S08, S12, and S16 are operating.
   c. Refer to 40 CFR 63.2540 and 40 CFR 63, Subpart FFFF, Table 12, for general provisions.
   ~~c.~~d. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

   Continuous Process Vents and Closed Vent Systems
   Note: The closed vent system is constructed of hard piping as defined by 40 CFR 63.981.
   ~~d.~~e. Pursuant to 40 CFR 63.2455(c), the permittee using recovery devices to continuously maintain the TRE greater than 5.0 shall comply with 40 CFR 63.993(a)(2) and the requirements therein as follows:

   For the Group 2 continuous process vents at EP-S01 and S02, the recovery devices, including the 600 SAP Vent Scrubber and the Main Vent Scrubber, shall be operated at all times when emissions are vented to them. Refer to **7. Specific Control Equipment Operating Conditions**.

   Maintenance Wastewater Streams
   ~~e.~~f. Pursuant to 40 CFR 63.2485(a) and 40 CFR 63, Subpart FFFF, Table 7, item 2, the permittee shall comply with the requirements in 40 CFR 63.105(a) and the requirements referenced therein, except as specified in 40 CFR 63.2485, for the maintenance wastewaters from Boilout of the Saponifiers and Slurry Tanks, Centrifuges and Filtrate Tanks, Turbo Dryers, and Post Dryers in the SAP Area containing organic HAPs listed in 40 CFR 63, Subpart FFFF, Tables 8 and 9.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Process Wastewater Streams

~~f.~~g. Pursuant to 40 CFR 63.2485(a), and 40 CFR 63, Subpart FFFF, Table 7, item 1, the permittee shall comply with the requirements in 40 CFR 63.132 through 40 CFR 63.148 and the requirements referenced therein, except as specified in 40 CFR 63.2485 below:

Pursuant to 40 CFR 63.132(f), the permittee shall not discard liquid or solid organic materials with a concentration of greater than 30,000 ppmw of total partially soluble HAP

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(PSHAP) and soluble HAP (SHAP) or greater than 10,000 ppmw of PSHAP (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b), as amended by 40 CFR 63.2485(h)(4)) from a chemical manufacturing processunit to water or wastewater, unless the receiving stream is managed and treated as a Group1 wastewater stream.

Pursuant to 40 CFR 63.132(f), this prohibition does not apply to materials from the following activities:

(1) Pursuant to 40 CFR 63.132(f)(1) ,equipment leaks;
(2) Pursuant to 40 CFR 63.132(f)(2) and 40 CFR 63.2485(q)(3), Activities included in maintenance ~~or SSMPs~~;
(3) Pursuant to 40 CFR 63.132(f)(3)Spills; or
(4) Pursuant to 40 CFR 63.132(f)(4)Samples of a size not greater than reasonably necessary for the method of analysis that is used.

Liquid Streams in Open Systems

~~g.~~h.40 CFR 63.2485(a) and 40 CFR 63, Subpart FFFF, Table 7, item 3, the permittee shall comply with the requirements in 40 CFR 63.149 and the requirements referenced therein, except as specified in 40 CFR 63.2485. For the Saponifier enclosure manhole hatches, at EU S01-A2, S01-B2, S01-C2 and S01-D2, the permittee shall maintain tight-fitting solid covers (TFSC) with no visible gaps or openings, except during periods of sampling, inspection, or maintenance pursuant to 40 CFR 63.149(a) and 40 CFR 63, Subpart G, Table 35, item “Manhole.”

Equipment Leaks

~~h.~~i. Pursuant to 40 CFR 63.2480(a) the permittee shall meet each requirement in 40 CFR 63, Subpart FFFF, Table 6, item 1.(b.). The permittee shall comply with the requirements of 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d)-(f).

(1) Pursuant to 40 CFR 63.162(c), each piece of equipment in a process unit to which 40 CFR 63, Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to its requirements. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.
(2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63.172 through 40 CFR 63.174, the permittee shall:
    (i) Clearly identify the leaking equipment.
    (ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored and no leak is detected during that monitoring.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

(3) Pursuant to 40 CFR 63.2480(b)(7) for ~~for~~each piece of equipment subject to 40 CFR 63, Subpart FFFF that is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, the permittee must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this requirement.

j. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(1) and (2) for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of 40 CFR 63.165 of Subpart H. [40 CFR 63.2480(e)]

k. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4) and (5), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(3), (6), (7), and (8) for all pressure relief devices in organic HAP service.

(1) Pursuant to 40 CFR 63.2480(e)(3), implement the pressure release management requirements outlined in 40 CFR 63.2480(e)(3)(i) – (v).

(2) Pursuant to 40 CFR 63.2480(e)(6), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 63.2480(e)(6)(i) – (iii).

(3) Pursuant to 40 CFR 63.2480(e)(7), the permittee must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 CFR 63.2480(e)(7)(i) – (iii)

(4) Pursuant to 40 CFR 63.2480(e)(8), the permittee shall not install any flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023.

Maintenance Vents

a. Pursuant to 40 CFR 63.2450(v), the permittee shall meet the requirements outlined in 40 CFR 63.2450(v)(1) through (3) for any process vent designated as a maintenance vent and used only as a result of startup, shutdown, maintenance or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service.

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements** for Continuous Process Vents and Maintenance Wastewater Streams.

Process Wastewater Streams

b. Pursuant to 40 CFR 63.132(c), total annual average concentration shall be determined according to the procedures specified in 40 CFR 63.144(b), as amended by 40 CFR 63.2485(h)(4). Annual average flow rate shall be determined according to the procedures specified in 40 CFR 63.144(c).

c. Pursuant to 40 CFR 63.132(c)(3), for a Group 2 wastewater, the permittee shall re-determine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

be expected to change the stream to a Group 1 stream. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or whenever there is a replacement, removal, or addition of recovery or control equipment. Process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original determination was based.

Liquid Streams in Open Systems

d. Compliance with **1. g. Operating Limitations** shall be determined by inspection.

Equipment Leaks

e. Pursuant to 40 CFR 63.162(a), compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

Maintenance Vents

b. Pursuant to 40 CFR 63.2450(v), the permittee shall meet the requirements outlined in 40 CFR 63.2450(v)(1) through (3) for any process vent designated as a maintenance vent and used only as a result of startup, shutdown, maintenance or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3(2), emissions of particulate matter (PM) from each emission point, EP-S04, S08, S12 or S16, shall not exceed the values calculated by the equation below:

$$E = 3.59(P)^{0.62}$$

Where:
E = Allowable Emission Rate in lbs/hr
P = Process Weight Rate in tons/hr

b. Pursuant to 401 KAR 59:010, Section 3(1), emissions shall not equal or exceed 20% opacity from each Product Transfer Collector at EP-S04, S08, S12 or S16.

c. Refer to **Section D.4.** for 401 KAR 63:020 requirements.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Equipment Leaks and Closed Vent Systems

d. Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF the permittee shall comply with the fugitive emissions standards of 40 CFR 63, Subpart H as applicable.

e Pursuant to 40 CFR 63, Subpart H the permittee shall comply with the fugitive emissions standards as applicable.

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:

40 CFR 63.163(a):	Implementation and compliance provisions
40 CFR 63.163(b):	Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c) (except (c)(3)):	Repair procedures and time frames
40 CFR 63.163(d):	Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j):	Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors: 40

CFR 63.164(a)-(e):	Operational requirements
40 CFR 63.164(f):	Criteria for Leak detection
40 CFR 63.164(g):	Repair procedures and time frames
40 CFR 63.164(h)-(i):	Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vapor service:

40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~:	Operational requirements
40 CFR 63.2480(e)(2)~~40 CFR 63.165(b)~~:	Pressure release procedures
40 CFR 63.2480(e)(4)~~40 CFR 63.165(c) (d)~~:	Exemptions for specific types of pressure relief devices

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:

40 CFR 63.166(a)-(b):	Operational requirements
40 CFR 63.166(c):	Exemptions for specific types of sampling connection systems

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:

40 CFR 63.167(a)-(c):	Operational requirements
40 CFR 63.167(d)-(e):	Exemptions for specific types of valves

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:

40 CFR 63.168(a):	Operational requirements
40 CFR 63.168(b)-(d):	Monitoring requirements and intervals
40 CFR 63.168(e):	Procedures to determine percent leaking valves
40 CFR 63.168(f):	Leak repair time frames
40 CFR 63.168(g):	First attempt repair procedures
40 CFR 63.168(h):	Exemptions for unsafe-to-monitor valves
40 CFR 63.168(i):	Exemptions for difficult-to-monitor valves

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:

40 CFR 63.169(a):	Monitoring frequency
40 CFR 63.169(b):	Leak detection levels
40 CFR 63.169(c):	Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:

40 CFR 63.171	Allowances for delay of repair

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(9) Pursuant to 40 CFR 63.172, Standards for Closed-vent systems and control devices:

40 CFR 63.172(a)-(b):	Operational requirements
40 CFR 63.172(d),(m):	Control device requirements
40 CFR 63.172(f)-(g):	Monitoring requirements
40 CFR 63.172(h)-(i):	Repair procedures and time frames
40 CFR 63.172 (j) (except (j)(3)):	Operational requirements for bypass lines
40 CFR 63.172(k)-(l):	Exemptions for unsafe-to-inspect and difficult-to-inspect closed-vent systems

(10) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:

40 CFR 63.173(a):	Operational requirements
40 CFR 63.173(b):	Monitoring requirements and intervals
40 CFR 63.173(c):	Leak repair time frames
40 CFR 63.173(d)-(g):	Exemptions for specific types of agitators
40 CFR 63.173(h)-(j):	Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

(11) Pursuant to 40 CFR 63.174, Standards for connectors in gas/vapor service and in light liquid service.

40 CFR 63.174(a):	Operational requirements
40 CFR 63.174(b):	Monitoring requirements and intervals
40 CFR 63.174(c):	Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d):	Leak repair time frames
40 CFR 63.174(e):	Monitoring frequency for repaired connectors
40 CFR 63.174(f)-(h):	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i):	Procedures to determine percent leaking connectors
40 CFR 63.174(j):	Optional credit for removed connectors

(12) Pursuant to 40 CFR 63.175 and 40 CFR 63.168(d)(1)(ii), in Phase III, Quality improvement program for valves:, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175(a):	Quality improvement program alternatives
40 CFR 63.175(b):	Criteria for ending quality improvement programs
40 CFR 63.175(c):	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175(d):	Quality improvement program to demonstrate further progress
40 CFR 63.175(e):	Quality improvement program of technology review and improvement

(13) Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if, in Phase III, Quality improvement program for pumps: calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Polymerization, Saponification, Polyrectification, Tank Farm, and, Loading Areas (that are part of the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63, Subpart FFFF MCPU) leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176(a):	Applicability criteria
40 CFR 63.176(b):	Criteria for ending the quality improvement program
40 CFR 63.176(c):	Criteria for resumption of the quality improvement program
40 CFR 63.176(d):	Quality improvement program elements

(14) Pursuant to 40 CFR 40 63.2480(b)(1) and 40 CFR 63.178(b), the requirements for pressure testing in 40 CFR 63.178(b) may be applied to all processes, not just batch processes, as stated in 40 CFR 63.2480(b)(1). The permittee may elect to use pressure testing of equipment to demonstrate compliance by meeting the following requirements of 40 CFR 63.178(b). Compliance with the provisions of 40 CFR 63.178(b) exempts the permittee from the monitoring provisions of 40 CFR 63.163, 40 CFR 63.168 and 40 CFR 63.169, and 40 CFR 63.173 through 40 CFR 63.176.

(i) Pursuant to 40 CFR 63.178(a), the permittee may switch among the alternatives provided the change is documented as specified in 40 CFR 63.181.

(ii) Pursuant to 40 CFR 63, Subpart FFFF pressure testing for leaks in accordance with 40 CFR 63.178(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

Compliance Demonstration Method:

a. The permittee shall monitor the amount of process weight added to each emissions unit. The process weight rate shall be determined by dividing the tons of material added to each emission unit in a calendar month by the total hours the unit operated that month. Average particulate (PM) emissions shall be calculated as follows:

Controlled PM Emissions = PR x EF x (1 – CE/100)

Where: PR = PVOH Production Rate for the emission point (tons/hr)
EF = Emission Factor (lbs PM / ton PVOH produced)
CE = Control Efficiency (%)

b. For compliance with the opacity limit, refer to **4. Specific Monitoring Requirements.**

c. If a Product Transfer Collector at EP-S04, S08, S12 or S16 is in operation during any period of malfunction of the particulate control device, the permittee shall shut down the affected emission unit until associated repairs are complete and take the necessary corrective actions in accordance with **5. Specific Recordkeeping Requirements d.**

Equipment Leaks

d. Refer to **1. Operating Limitations** Compliance Demonstration e.

3. Testing Requirements:

Equipment Leaks

a. Pursuant to 40 CFR 63.180(a), the permittee shall comply with the following test methods and procedures requirements:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) 40 CFR 63.180(b) Monitoring procedures, test methods, and calibration procedures
(2) 40 CFR 63.180(c) Leak detection monitoring procedures (replacing reference to 40 CFR 63.165(a) with 40 CFR 63.2480(e)(1).
(3) 40 CFR 63.180(d) Procedures for determining organic HAP service applicability

b. Pursuant to 40 CFR 63.2515(c), a notification of performance test shall be submitted at least 60 calendar days before a performance test is scheduled to begin as required in 40 CFR 63.7(b)(1), if applicable.
c. Pursuant to KAR 50:045, Section 1, performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall also perform the following monitoring:
(1) Pursuant to 401 KAR 52:020, Section 10, a qualitative visual observation of the opacity of emissions once each calendar month while operating each Product Transfer Collector at EP-S04, S08, S12 and S16. If visible emissions are seen (not including condensed water vapor within the plume), the permittee shall perform an EPA Reference Method 9 test for opacity on the applicable stack emissions within 24 hours of observing visible emissions, and make any necessary repairs to bring the opacity into compliance.
(2) Pursuant to 401 KAR 52:020, Section 10, the pressure drop across each dust collector once each calendar month.

b. Refer to **7. Specific Control Equipment Operating Conditions**.

Continuous Process Vents and Closed Vent Systems

c. Pursuant to 401 KAR 52:020, Section 10, the permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications, a device for the continuous measurement of the scrubbing liquid flow rate and temperature at scrubbers EP-S01 (600 SAP Vent Scrubber**)** and the S02 (Main Vent Scrubber).
d. Pursuant to 40 CFR 63.982(e), for the Group 2 process vents at EP-S01 and S02, if the TRE index value is >1.9 but less than or equal to 5.0, the permittee shall comply with the requirements specified in 40 CFR 63.2450(k)(5).

Maintenance Wastewater

e. Pursuant to 40 CFR 63.105(b), the permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
(1) Pursuant to 40 CFR 63.105(b)(1) ,specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities;
(2) Pursuant to 40 CFR 63.105(b)(2) ,specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) Pursuant to 40 CFR 63.105(b)(3) ,the procedures to be followed when clearing materials from process equipment.

f. Pursuant to 40 CFR 63.105(c), the permittee shall modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

g. ~~Pursuant to 40 CFR 63.105(d), the permittee shall incorporate the procedures described in 40 CFR 63.105(b) and (c) as part of the SSMP required under 40 CFR 63.6(e)(3).~~

Equipment Leaks

h. Refer to **1. Operating Limitations** Compliance Demonstration Method b. and **3. Testing Requirements**

5. Specific Recordkeeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain visual opacity observation records in accordance with **4. Specific Monitoring Requirements a**.

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of preventive maintenance and inspections of the particulate control devices and the scrubbers at EP S01 and S02 in accordance with **7. Specific Control Equipment Operating Conditions**.

c. Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the occurrence, duration, cause and any corrective action taken for each incident when a Product Transfer Collector at EP-S04, S08, S12 or S16 is in operation but its respective particulate control device is not.

d. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the pressure drop across the particulate control devices at EP-S04, S08, S12, and S16 and the flow rate and temperature of the scrubbing liquid at the scrubbers at EP-S01 and S02.

e. All records shall be maintained in accordance with **Section F.2.**

f. Pursuant to 40 CFR 63.2525, the permittee shall keep the following records:

(1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced subparts F, G and SS of 40 CFR 63.

(2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:

(i) A description of the process and the type of process equipment used.

(ii) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.

(iii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the level of required control, and for vents, the level of control for each vent.

(iv) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(v) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(vi) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(vii) Calculations and engineering analyses required to demonstrate compliance.
(viii) For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario.

~~(3) Pursuant to 40 CFR 63.2525(j), in the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.~~

(3) Pursuant to 40 CFR 63.2525(l), for each deviation from an emission limit, operating limit, or work practice standard, the permittee must keep a record of the information specified in 40 CFR 63.2525(l)(1) – (3). The records shall be maintained as specified in 40 CFR 63.10(b)(1) of subpart A. In the event that an affected unit does not meet an applicable standard, record the number of deviations.
(i) For each deviation record the date, time, and duration of each deviation.
(ii) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.
(iii) Record actions taken to minimize emissions in accordance with 40 CFR 63.2450(u) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

Continuous Process Vents and Closed Vent Systems

g. Pursuant to 40 CFR 63.993(b) and 40 CFR 63.982(e), for the Group 2 process vents at EP-S01 and S02, TRE index value determination information shall be recorded as specified in 40 CFR 63.998(a)(3).

Storage Vessels

h. Pursuant to 40 CFR 63.1065(a), for all Group 2 storage vessels, a record shall be kept for as long as the liquid is stored of the dimensions of the storage vessel, an analysis of the capacity of the storage vessel, and an identification of the liquid stored.

Maintenance wastewater

i. Pursuant to 40 CFR 63.105(e) and 40 CFR 63.2485(q), the permittee shall maintain a record of the information required by 40 CFR 63.105(b and c) ~~as part of the start-up, shutdown, and malfunction planrequired under 40 CFR 63.6(e)(3)~~.

Process Wastewater Streams

j. Pursuant to 40 CFR 63.147(b)(8) and 40 CFR 63.147(f), for the Group 2 wastewater streams, the permittee shall keep in a readily accessible location the following records:
(1) Pursuant to 63.147(b)(8)(i), process unit identification and description of the process unit.
(2) Pursuant to 63.147(b)(8)(ii), stream identification code.
(3) Pursuant to 63.147(b)(8)(iii), the concentration of the compound(s) in Tables 8 and 9 of 40 CFR 63, Subpart FFFF in parts per million, by weight, including documentation of the methodology used to determine concentration.
(4) Pursuant to 63.147(b)(8)(iv), flow rate in liter per minute.
(5) Pursuant to 40 CFR 63.147(f), if the permittee uses process knowledge to determine

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the annual average concentration of a wastewater stream as specified in 40 CFR 63.144(b)(3) and/or uses process knowledge to determine the annual average flow rate as specified in 40 CFR 63.144(c)(1), and determines that the wastewater stream is not a Group 1 wastewater stream, the permittee shall keep in a readily accessible location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

Equipment Leaks

k. Pursuant to 40 CFR 63.181(a), the permittee may comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

l. Pursuant to 40 CFR 63.181(b), except as provided in 40 CFR 63.181(e), and amended by 40 CFR 63.2480(f)(18), the following information pertaining to all equipment in each process unit subject to the requirements in40 CFR 63.162 through 40 CFR 63.174 shall be recorded:

(1) Pursuant to 40 CFR 63.181(b)(1)(i):

(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 and instrumentation systems). Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of CFR 63, Subpart H are identified as a group, and the number of connectors subject is indicated. Pursuant to 40 CFR 63.2480(b)(3), as an existing source under 40 CFR 63, Subpart FFFF the permittee is not required to develop an initial list of identification numbers for connectors.

(ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) Pursuant to 40 CFR 63.181(b)(2)(i and ii):

(i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 63.164(h), 63.2480(e)(4)~~63.165(e)~~, or 63.173(f).

(ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3) and 40 CFR 63.2480(f)(18)(iii) and (iv), a list of identification numbers for pressure relief devices subject to 40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~ and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.2480(e)(2)(ii) and (iii)~~40 CFR 63.165(d)~~.

(4) Pursuant to 40 CFR 63.181(b)(4), identification of instrumentation systems. Individual components in an instrumentation system need not be identified.

(5) Pursuant to 40 CFR 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 40 CFR 63.181(b)(6), the following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 40 CFR 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i),

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):

(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credit for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63.172 through 40 CFR 63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

m. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in 40 CFR 63.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

n. Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall be recorded and kept for two years.

(1) Pursuant to 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.

(2) Pursuant to 40 CFR 63.181(d)(2), the date the leak was detected and the date of first attempt to repair the leak.

(3) Pursuant to 40 CFR 63.181(d)(3), the date of successful repair of the leak.

(4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) Pursuant to 40 CFR 63.181(d)(5), “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. ~~The written procedures may be included as part of the SSMP, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site.~~ In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):

(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) Pursuant to 40 CFR 63.181(d)(9), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

o. Pursuant to 40 CFR 63.178(b), if the permittee elects to comply with the pressure testing requirements in accordance with **2. Emission Limitations e.(14),** the permittee is exempt from the requirements of paragraphs l, m, n and p of this permit section. Instead, the permittee shall maintain records as specified in 40 CFR 63.181(e)(1 through 6).

p. Pursuant to 40 CFR 63.181(f) and 40 CFR 63.2480(f)(18)(v), the results of compliance tests required for compressors andthe dates and results of monitoring following a pressure relief valve pressure release subject to 40 CFR 63.2480(e)(1) and (2) shallbe recorded. The results shall include:

(1) Pursuant to 40 CFR 63.181(f)(1), the background level measured during each compliance test.

(2) Pursuant to 40 CFR 63.181(f)(2), the maximum instrument reading measured at each piece of equipment during each compliance test.

q. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.

(1) Pursuant to 40 CFR 63.181(g)(1)(i through iv), the design specifications and performance demonstrations specified in shall be retained for the life of the equipment.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63 Subpart A.

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Pursuant to 40 CFR 63.181(g)(2)(i through iii), records of operation of closed-vent systems and control devices, as specified in shall be retained for 2 years.
   (i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters.
   (ii) Dates and durations during which the monitoring system or monitoring device is inoperative.
   (iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.

(3) Pursuant to 40 CFR 63.181(g)(3)(i and ii), records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, as specified therein, shall be retained for 2 years.
   (i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or (f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
   (ii) For each inspection conducted in accordance with 63.172(f)(1) or (f)(2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

r. Pursuant 40 CFR 63.181(h), if the permittee implements any of the quality improvement programs required by 40 CFR 63.175 or 40 CFR 63.176, the records specified in 40 CFR 63.181(h)(1 through 9) shall be maintained for a period of the quality improvement plan for the process unit.

s. Pursuant to 40 CFR 63.2525(q), for each pressure relief device subject to the pressure release management work practice standards in 40 CFR 63.2480(e), the permittee must keep the records specified in 40 CFR 63.2525(q) (1) – (3).
   (1) Records of the prevention measures implemented as required in 40 63.2480(e)(3)(ii).
   (2) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past 5 calendar years.
   (3) For each release to the atmosphere, the permittee must keep the records specified in 40 CFR 63.2525(q)(3)(i) – (iv).
      (i) The start and end time and date of each pressure release to the atmosphere;
      (ii) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event;
      (iii) Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 63.2480(e)(7)(i);
      (iv) For any corrective action analysis for which implementation of corrective actions are required in 40 CFR 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

proposed commencement and completion dates.

~~r.~~

All Process Equipment

~~s.~~t. Pursuant to 40 CFR 63.981, "continuous record" means any documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in 40 CFR 63.998(b), except that periods of startup, shutdown, and malfunction shall not be excluded pursuant to 40 CFR 63.2450(e)(4)(vii).

u. Pursuant to 40 CFR 63.998(b)(1), values that are recorded and monitored at least once every 15 minutes meet the definition of "continuous records."

Maintenance Vents

v. Pursuant to 40 CFR 63.2525(p), for maintenance vent openings subject to 40 CFR 63.2450(v), the permittee shall record the following information, as applicable.

(1) Pursuant to 40 CFR 63.2525(p)(1), maintain standard site procedures used to deinventory equipment for safety purposes to document the procedures used to meet the requirements in 40 CFR 63.2450(v). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of 40 CFR 63.2450(v)(1)(i), and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of 40 CFR 63.2450(v)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of 40 CFR 63.2450(v)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in 40 CFR 63.2525(p)(1) are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this condition, records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

~~t.~~(5) If complying with the requirements of 40 CFR 63.2450(v)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

6. Specific Reporting Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, EPA Reference Method 9 observations shall be submitted to the Paducah Regional Office.

b. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, for equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit a Compliance report containing the information specified in 40 CFR 63.2520(e)(1 through 10), semiannually.

c. Pursuant to 40 CFR 63.2520(e), once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, submit all subsequent reports to the EPA via the CEDRI, which can be accessed through the EPA's CDX(https://cdx.epa.gov/). Report using the appropriate report template located on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under 40 CFR 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in 40 CFR 63 Subpart FFFF, regardless of the method in which the report is submitted. The permittee shall not use CEDRI to submit information claimed as CBI.

d. Pursuant to 40 CFR 63.2520(e), the permittee may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in this paragraph (e) provided the permittee meets the requirements outlined in 40 CFR 63.2520(i) or (j), as applicable. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.2520(h)(1) through (7).

~~c.~~e. Refer to **Section F.5**.

Process Wastewater Streams

~~d.~~f. Pursuant to 40 CFR 63.146(b)(1 and 2), for the Group 2 wastewater stream, the permittee shall submit the information specified in Table 15 of 40 CFR 63, Subpart G as part of the Compliance Report.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Equipment Leaks

g. Pursuant to 40 CFR 63.2520(e)(15), compliance reports for pressure relief devices subject to the requirements 40 CFR 63.2480(e) must include the information specified in 40 CFR 63.2520(e)(15)(i) through (iii).
   (6) For pressure relief devices in organic HAP gas or vapor service, pursuant to 40 CFR 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.
   (7) For pressure relief devices in organic HAP gas or vapor service subject to 40 CFR 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.
   (8) For pressure relief devices in organic HAP service subject to 40 CFR 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

Maintenance Vents

h. Pursuant to 40 CFR 63.2520(e)(14), the permittee shall submit, as part of the compliance report for any maintenance vent release exceeding the applicable limits in 40 CFR 63.2450(v)(1), the items specified in 40 CFR 63.2520(e)(14)(i)-(iv). For any maintenance vent release complying with 40 CFR 63.2450(v)(1)(iv), report an explanation for any event as to why utilization of this alternative was required.

7. Specific Control Equipment Operating Conditions:

a. Pursuant to 401 KAR 52:020, Section 10, the particulate control devices shall be in operation at all times any of the Product Transfer Collectors at EP-S04, S08, S12, and S16 are operating.

b. Pursuant to 401 KAR 52:020, Section 10, preventive maintenance shall be performed, for all particulate control devices, in accordance with the manufacturers' recommendations. Each device shall be inspected monthly for proper operation of the following:
   (1) Pulse jet device to release dust cake from bags.
   (2) Air flow source and equipment.
   (3) Pressure drop measuring system.

c. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain the pressure drop across each dust collector and maintain and monitor the flow rate and temperature of the scrubbing liquid at the scrubbers at EP-S01 and S02 within the range recommended by the manufacturer or the range based on process engineering assessments that result in normal operation of the equipment.

d. Pursuant to 40 CFR 63.2450, the permittee must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to 40 CFR 63, Subpart FFFF at all times~~, except during periods of startup, shutdown, and malfunction~~, and the permittee must meet the requirements specified in 40 CFR 63.2455 through 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450 (b) through (sv~~)~~. The permittee must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 40 CFR 63.2515, 40 CFR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

63.2520, and 40 CFR 63.2525.

8. Alternate Operating Scenarios:

~~a. Pursuant to 40 CFR 63, Subparts A and Subpart FFFF for the occurrences of start-ups at EU-S03, S07, S11, or S15, the permittee shall follow the SSMP requirements.~~

~~b.~~a. Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF for the equipment leaks subject to, the permittee may comply with one of the following requirements:

(1) 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) –(f);

(2) 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) –(f); or

(3) 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 40 CFR 63.2480(c) and (d) –(f).

~~c.~~b. The process gas from the scrub towers, EP S02-A4, S02-B4, S02-C4, and S02-D4, in the SAP Process Unit Drying area may be diverted from the Main Vent Scrubber (DA-5605) to the 600 SAP Vent Scrubber (DA-5602/DA-5604) for periods of maintenance on the Main Vent Scrubber. Prior to diverting the process vent to 600 SAP Vent Scrubber, the permittee shall develop and maintain records of a TRE index value determination for this mode of operation using available process data to demonstrate EP-S02 retains its Group 2

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

status. Pursuant to 40 CFR 63.2455(c), 40 CFR 63.982(e), and 40 CFR 63.993(b), the permittee must also submit the following reports in the semiannual reporting period when the new operating scenario is implemented:

(1) Pursuant 40 CFR 63.2520(e)(7), the semiannual compliance report must include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, the permittee must provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. A revised operating scenario for an existing process is considered to be a new operating scenario.

(2) Pursuant 40 CFR 63.2520(e)(10), except as specified in paragraph 40 CFR 63.2520(e)(10)(ii), whenever the permittee makes a process change, or change any of the information submitted in the notification of compliance status report or a previous compliance report, that is not within the scope of an existing operating scenario, the permittee must document the change in the compliance report. The notification must include all of the information specified below.

(i) A description of the process change.

(ii) Revisions to any of the information reported in the original notification of compliance status report under 40 CFR 63.2520(d).

(iii) Information required by the notification of compliance status report under 40 CFR 63.2520 for changes involving the addition of processes or equipment at the affected source.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

POLYRECTIFICATION (POLYREC) AREA

EP(Source ID)	**EU**	**Emission Unit/Point Description**
F01(8)	R01-8:	**Description: Polymethanol Tower** (DA-5103)- Separates Vinyl Extraction Tower Bottoms to Methanol and Wastewater Maximum Processing Rate: 75,000 lbs/hr Control Device: FLARE, BA-5000 (see Section B, EP-F01)
	R01-8A	Polymethanol Tower, DA-5103; (R01-8A) bottoms product stream to (R03-10A); overheads to Condenser, EA-5109, to FA-5120; (R01-8B) **MON Group 2 Process Wastewater Stream**
T05	R01-8B	Polymethanol Reflux Accumulator, FA-5120 (1,070 gallons); (R01-8B) product stream to (R01-8A) or Methanol Tank T05
R01	R01	**Description: Polymethanol Tower Startups**
F01(9)	R02-9:	**Description: Vinyl Recovery Tower** (DA-5104)- Purifies Vinyl Extraction Tower Overheads Maximum Processing Rate: 55,420 lbs/hr **Control Device:** FLARE, BA-5000 (EP-F01)
	R02-9A	Vinyl Recovery Tower, DA-5104; (R02-9A) bottoms product stream to (R02-9E); (R02 9A) side draw product to (R02-9F), overheads to (R02-9C)
	R02-9C	East Vinyl Recovery Condenser, EA-5108; (R02-9C) product stream to (R02-9D), exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent**
	R02-9D	Vinyl Recovery Tower Accumulator, FA-5107 (2,053 gallons); (R02-9D) product stream to (R02-9A) or to wastewater, exhaust to FLARE (EP-F01) **MON Group 1 Continuous Process Vent** **MON Group 1 Process Wastewater Stream**
	R02-9E	Vinyl Sludge Still, FA-5117; (R02-9E) overheads to DA 5110 (R03-10A); bottoms product to waste disposal
F01(19 A-C)	R02-9F	Vinyl Redistillation Tower, DA-5105; (R02-9F) product stream to (R02-9G)
F01(19 A-C)	R02-9G	Redistillation Condenser, EA-5171; (R02-9G) product stream to T10(19A-~~19C~~19B)
R02	R02	**Description: Vinyl Recovery Tower Startups**
F01(10)	R03-10:	**Description: Vinyl Extraction Tower** (DA-5110)-Separates Polymerization Unit Paste Stripper Accumulator Overheads to Vinyl Acetate and Methanol Maximum Processing Rate: 55,260 pounds/hour **Control Device:** FLARE, BA-5000 (EP F01)
	R03-10A	Vinyl Extraction Tower, DA-5110; (R03 10A) bottoms product stream to (R01-8A) or (A04-5A), overheads to (R03-10B); exhaust to (R03-10C)
	R03-10B	Vinyl Extraction Tower Condenser, EA-5170; (R03-10B) product stream to (R03-10D)
	R03-10C	Vinyl Extraction Vent Absorber, DA-5108; (R03-10C) product stream to (R03-10D); exhaust to FLARE (EP F01) **MON Group 1 Continuous Process Vent**
F01(9C)	R03-10D	Vinyl Extraction Tower Accumulator, FA-5104 (3,100 gallons); (R03-10D) product stream to (R02-9A)
R03	R03	**Description: Vinyl Extraction Tower Startups**
R04	R04	**Inhibitor (BQ) Feed Tank, FA-5109** Description: Vinyl Acetate Storage Tank (265 gallons) Maximum throughput: 193,450 gallons/yr **MON Group 2 Storage Tank**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP(Source ID)	**EU**	**Emission Unit/Point Description**
R05	R05	**Equipment Leaks (Polyrectification Process Unit Fugitives)** Gas Vapor Valves: 38 Light Liquid Valves: 850 Light Liquid Pumps: 21 Connectors: 3,373 Agitators: 158 Instrumentation Systems: 20

The equipment leak component count for the Polyrectification Process Area, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2.(4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2.(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(ii), 40 C.F.R. 63.980 to 63.999 (Subpart SS), National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, as referenced by 40 CFR 63, Subpart FFFF.

PRECLUDED REGULATIONS:
Refer to **Section B**, **Group Requirements.**

1. **Operating Limitations:**
   a. Pursuant to 40 CFR Part 63.2445(d), if a Group 2 emission point becomes a Group 1 emission point, the permittee must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR 63, Subpart FFFF must be conducted within 150 days after the switch occurs.
   b. Refer to 40 CFR 63.2540 and 40 CFR 63, Subpart FFFF, Table 12, for general provisions.
   ~~b.~~c. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Continuous Process Vents and Closed Vent Systems

Note: The closed vent system is constructed of hard piping as defined by 40 CFR 63.981.

~~c.~~d. Pursuant to 40 CFR 63.2455(a) and Table 1 of 40 CFR 63, Subpart FFFF all Group 1 process vents of EU, R02-9C, R02-9D and R03-10C shall be vented to a flare. Refer to **Section B,** EP-F01.

~~d.~~e. Pursuant to 40 CFR 63.2450(e)(2), 40 CFR 63.983(a) and 40 CFR 63.982(b), the permittee shall comply with the following provisions for the closed vent systems routing the vapors the FLARE, EP-F01:

(1) Pursuant to 40 CFR 63.983(a)(1), closed vent systems shall be designed and operated to collect the regulated material vapors from the emission points, and to route the collected vapors to a control device (FLARE).

(2) Pursuant to 40 CFR 63.983(a)(2), closed vent systems shall be operated at all times when emissions are vented to, or collected by, them.

(3) Pursuant to 40 CFR 63.983(a)(3), and except as provided by 40 CFR 63.2450(e)(4) per 40 CFR 63.2450(e)(6)(ii), ~~except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, andopen-ended valves or lines,~~ the permittee shall comply with the provisions of either paragraphs (a)(3)(i) or (ii) of 40 CFR 63.983, below, for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Pursuant to 40 CFR 63.983(a)(3)(i), properly install, maintain, and operate a flow indicator at the entrance to any bypass line that is capable of taking periodic readings.

(ii) Pursuant to 40 CFR 63.983(a)(3)(ii), secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

(4) Pursuant to 40 CFR 63.983(d)(1), if there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by 40 CFR 63.983(b)(1)(i)(B), the permittee shall comply with either of the following procedures.

(i) Pursuant to 40 CFR 63.983(d)(1)(i), eliminate the leak.

(ii) Pursuant to 40 CFR 63.983(c), monitor the equipment according to the procedures therein.

(5) Pursuant to 40 CFR 63.983(d)(2), leaks, as indicated by an instrument reading greater than 500 ppm by volume above background or by visual inspections, shall be repaired as soon as practical.

(i) Pursuant to 40 CFR 63.983(d)(2)(i), a first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Pursuant to 40 CFR 63.983(d)(2)(ii), except as provided in 40 CFR 63.983(d)(3) for delay of repair, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

~~(ii)~~f. Pursuant to 40 CFR 63.2450(e)(6), the use of a bypass line at any time on a closed vent system to divert emissions subject to the requirements in Tables 1 through 7 to 40 CFR 63 Subpart FFFF to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 of 40 CFR 63 Subpart FFFF is an emissions standard deviation.

Process Wastewater Streams

~~e.~~g. Pursuant to 40 CFR 63.2485(a), and 40 CFR 63, Subpart FFFF, Table 7, item 1, the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

permittee shall comply with the requirements in 40 CFR 63.132 through 40 CFR 63.148 and the requirements referenced therein, except as specified in 40 CFR 63.2485 below:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Pursuant to 40 CFR 63.132(f), the permittee shall not discard liquid or solid organic materials with a concentration of greater than 30,000 ppmw of total partially soluble HAP (PSHAP) and soluble HAP (SHAP) or greater than 10,000 ppmw of PSHAP (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b), as amended by 40 CFR 63.2485(h)(4)) from a chemical manufacturing processunit to water or wastewater, unless the receiving stream is managed and treated as a Group1 wastewater stream. This prohibition does not apply to materials from the following activities:

(1) Pursuant to 40 CFR 63.132(f)(1) ,equipment leaks;
(2) Pursuant to 40 CFR 63.132(f)(2) and 40 CFR 63.2485(q)(3), Activities included in maintenance ~~or SSMPs~~;
(3) Pursuant to 40 CFR 63.132(f)(3)Spills; or;
(4) Pursuant to Samples of a size not greater than reasonably necessary for the method of analysis that is used.

~~f.~~h. Pursuant to 40 CFR 63.132(g), for the Group 1 wastewater stream from EU-(R02-9D), the permittee has elected to transfer this stream to an off-site treatment operation.

Equipment Leaks

~~g.~~i. Pursuant to 40 CFR 63.2480(a) the permittee shall meet each requirement in 40 CFR 63, Subpart FFFF, Table 6, item 1.(b.). The permittee shall comply with the requirements of 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d)-(f).

(1) Pursuant to 40 CFR 63.162(c), each piece of equipment leaks subject to 40 CFR 63, Subpart FFFF shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63, Subpart H.
(2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63:172 through 40 CFR 63.174, the permittee shall:
    (i) Clearly identify the leaking equipment.
    (ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored and no leak is detected during that monitoring.
    (iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

~~(iii)~~(3) Pursuant to 40 CFR 63.2480(b)(7) for each piece of equipment subject to 40 CFR 63, Subpart FFFF that is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, the permittee must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this requirement.

j. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(1) and (2) for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

instead of the pressure relief device requirements of 40 CFR 63.165 of Subpart H.

k. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4) and (5), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(3), (6), (7), and (8) for all pressure relief devices in organic HAP service.
   (1) Pursuant to 40 CFR 63.2480(e)(3), implement the pressure release management requirements outlined in 40 CFR 63.2480(e)(3)(i) – (v).
   (2) Pursuant to 40 CFR 63.2480(e)(6), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 63.2480(e)(6)(i) – (iii).
   (3) Pursuant to 40 CFR 63.2480(e)(7), the permittee must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 CFR 63.2480(e)(7)(i) – (iii)
   (4) Pursuant to 40 CFR 63.2480(e)(8), the permittee shall not install any flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023.

Maintenance Vents

a. Pursuant to 40 CFR 63.2450(v), the permittee shall meet the requirements outlined in 40 CFR 63.2450(v)(1) through (3) for any process vent designated as a maintenance vent and used only as a result of startup, shutdown, maintenance or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service.

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements and 5. Specific Reporting Requirements** for Continuous Process Vents andClosed Vent Systems.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Process Wastewater Streams

b. Pursuant to 40 CFR 63.132(c), total annual average concentration shall be determined according to the procedures specified in 40 CFR 63.144(b), as amended by 40 CFR 63.2485(h)(4). Annual average flow rate shall be determined according to the procedures specified in 40 CFR 63.144(c).

c. Pursuant to 40 CFR 63.132(c)(3), for a Group 2 wastewater, the permittee shall re-determine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably be expected to change the stream to a Group 1 stream. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or whenever there is a replacement, removal, or addition of recovery or control equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original determination was based.

Equipment Leaks

d. Pursuant to 40 CFR 63.162(a), compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

Maintenance Vents

~~d.~~e. Refer to **5. Specific Recordkeeping Requirements** and **6. Specific Reporting Requirements** for Maintenance Vents.

2. Emission Limitations:

Equipment Leaks and Closed Vent Systems

a. Pursuant to 40 CFR 63.2480(a) and 40 CFR 63, Subpart FFFF, Table 6, the permittee shall comply with the fugitive emissions standards of 40 CFR 63, Subpart H as applicable.

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:

40 CFR 63.163(a):	Implementation and compliance provisions
40 CFR 63.163(b):	Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c) (except (c)(3)):	Repair procedures and time frames
40 CFR 63.163(d):	Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j):	Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors: 40

CFR 63.164(a)-(e):	Operational requirements
40 CFR 63.164(f):	Criteria for Leak detection
40 CFR 63.164(g):	Repair procedures and time frames
40 CFR 63.164(h)-(i):	Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vapor service:

40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~:	Operational requirements
40 CFR 63.2480(e)(2)~~40 CFR 63.165(b)~~:	Pressure release procedures
40 CFR 63.2480(e)(4)~~40 CFR 63.165(c)-(d)~~:	Exemptions for specific types of pressure relief devices

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:

40 CFR 63.166(a)-(b):	Operational requirements
40 CFR 63.166(c):	Exemptions for specific types of sampling connection systems

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:

40 CFR 63.167(a)-(c):	Operational requirements
40 CFR 63.167(d)-(e):	Exemptions for specific types of valves

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:

40 CFR 63.168(a):	Operational requirements
40 CFR 63.168(b)-(d):	Monitoring requirements and intervals
40 CFR 63.168(e):	Procedures to determine percent leaking valves
40 CFR 63.168(f):	Leak repair time frames
40 CFR 63.168(g):	First attempt repair procedures
40 CFR 63.168(h):	Exemptions for unsafe-to-monitor valves
40 CFR 63.168(i):	Exemptions for difficult-to-monitor valves

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:

40 CFR 63.169(a):	Monitoring frequency
40 CFR 63.169(b):	Leak detection levels
40 CFR 63.169(c):	Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:

40 CFR 63.171	Allowances for delay of repair

(9) Pursuant to 40 CFR 63.172, Standards for Closed-vent systems and control devices:

40 CFR 63.172(a)-(b):	Operational requirements
40 CFR 63.172(d),(m):	Control device requirements
40 CFR 63.172(f)-(g):	Monitoring requirements
40 CFR 63.172(h)-(i):	Repair procedures and time frames
40 CFR 63.172 (j) (except (j)(3)):	Operational requirements for bypass lines
40 CFR 63.172(k)-(l):	Exemptions for unsafe-to-inspect and difficult-to-inspect closed-vent systems

(10) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:

40 CFR 63.173(a):	Operational requirements
40 CFR 63.173(b):	Monitoring requirements and intervals
40 CFR 63.173(c):	Leak repair time frames
40 CFR 63.173(d)-(g):	Exemptions for specific types of agitators
40 CFR 63.173(h)-(j):	Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

(11) Pursuant to 40 CFR 63.174, Standards for connectors in gas/vapor service and in light liquid service:

40 CFR 63.174(a):	Operational requirements
40 CFR 63.174(b):	Monitoring requirements and intervals
40 CFR 63.174(c):	Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d):	Leak repair time frames
40 CFR 63.174(e):	Monitoring frequency for repaired connectors
40 CFR 63.174(f)-(h):	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i):	Procedures to determine percent leaking connectors

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.174(j): Optional credit for removed connectors

(12) Quality improvement program for valves: Pursuant to 40 CFR 63.175 and 40 CFR 63.168(d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175(a): Quality improvement program alternatives
40 CFR 63.175(b): Criteria for ending quality improvement programs
40 CFR 63.175(c): Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175(d): Quality improvement program to demonstrate further progress
40 CFR 63.175(e): Quality improvement program of technology review and improvement

(13) Quality improvement program for pumps: Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Polymerization, Saponification, Polyrectification, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart FFFF MCPU) leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176(a): Applicability criteria
40 CFR 63.176(b): Criteria for ending the quality improvement program
40 CFR 63.176(c): Criteria for resumption of the quality improvement program
40 CFR 63.176(d): Quality improvement program elements

(14) Pursuant to 40 CFR 63.2480(b)(1) and 40 CFR 63.178(b), the requirements for pressure testing in 40 CFR 63.178(b) may be applied to all processes, not just batch processes, as stated in 40 CFR 63.2480(b)(1). The permittee may elect to use pressure testing of equipment to demonstrate compliance by meeting the following requirements of 40 CFR 63.178(b). Compliance with the provisions of 40 CFR 63.178(b) exempts the permittee from the monitoring provisions of 40 CFR 63.163, 40 CFR 63.168 and 40 CFR 63.169, and 40 CFR 63.173 through 40 CFR 63.176.

(i) Pursuant to 40 CFR 63.178(a), the permittee may switch among the alternatives provided the change is documented as specified in 40 CFR 63.181.

(ii) For the purposes of 40 CFR 63, Subpart FFFF pressure testing for leaks in accordance with 40 CFR 63.178(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

Compliance Demonstration Method:
Equipment Leaks
Refer to **1. Operating Limitations** Compliance Demonstration Method e.

3. Testing Requirements:
Continuous Process Vents
a. Refer to **3. Testing Requirements** for the FLARE in **Section B**, EP-F01.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Equipment Leaks

b. The permittee shall comply with the following test methods and procedures requirements pursuant to 40 CFR 63.180(a):
   (1) Pursuant to 40 CFR 63.180(b) Monitoring procedures, test methods, and calibration procedures
   (2) Pursuant to 40 CFR 63.180(c) Leak detection monitoring procedures (replacing reference to 40 CFR 63.165(a) with 40 CFR 63.2480(e)(1).
   (3) Pursuant to 40 CFR 63.180(d) Procedures for determining organic HAP service applicability
c. Pursuant to 40 CFR 63.2515(c), a notification of performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1), if applicable.
d. Pursuant to KAR 50:045, Section 1, performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

Continuous Process Vents and Closed Vent Systems

a. Refer to **4. Specific Monitoring Requirements** for the FLARE in **Section B**, EP-F01.
b. Pursuant to 40 CFR 63.983(b)(1)(i), except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in 40 CFR 63.983(b)(2 and 3), the permittee shall comply with the following requirements for each closed vent system.
   (1) Pursuant to 40 CFR 63.983(b)(1)(i)(A), conduct an initial inspection according to the procedures in 40 CFR 63.983(c); and
   (2) Pursuant to 40 CFR 63.983(b)(1)(i)(B), conduct annual inspections for visible, audible, or olfactory indications of leaks.
c. Pursuant to 40 CFR 63.983(b)(4), for each bypass line, the permittee shall comply with either of the following requirements.
   (1) Pursuant to 40 CFR 63.983(b)(4)(i), if a flow indicator is used, take a reading at least once every 15 minutes.
   (2) Pursuant to 40 CFR 63.983(b)(4)(ii), if the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

Process Wastewater Streams

d. Pursuant to 40 CFR 63.132(g)(1)(ii), the permittee shall include a notice with the shipment or transport of each Group 1 wastewater stream stating that the wastewater stream contains organic hazardous air pollutants that are to be treated in accordance with the provisions of 40 CFR 63, Subpart G as referenced by 40 CFR 63, Subpart FFFF. When the transport is continuous or ongoing, the notice shall be submitted to the treatment operator initially and whenever there is a change in the required treatment.
e. Pursuant to 40 CFR 63.132(g)(2) and 40 CFR 63.2485(i)(1), the permittee must comply with either of the following requirements:
   (1) Pursuant to 40 CFR 63.132(g)(2), the permittee may not transfer the wastewater stream unless the transferee has submitted to the Division a written certification, as specified in 40 CFR 63.132(g)(2).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) Pursuant to 40 CFR 63.2485(i)(1), the permittee may document in the notification of compliance status report that the wastewater will be treated as a hazardous waste at a facility that meets the requirements of 40 CFR 63.138(h).

Equipment Leaks

f. Refer to **1. Operating Limitations** Compliance Demonstration Method e. and **3. Testing Requirements**.

5. Specific Recordkeeping Requirements:

a. All records shall be maintained in accordance with **Section F.2.**

b. Pursuant to 40 CFR 63.2525, the permittee shall keep the following records:

(1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced subparts F, G and SS of 40 CFR Part 63.

(2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:

(i) A description of the process and the type of process equipment used.

(ii) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.

(iii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the level of required control, and for vents, the level of control for each vent.

(iv) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(v) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(vi) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(vii) Calculations and engineering analyses required to demonstrate compliance.

(viii) For reporting purposes, a change to any of these elements not previously reported, except for 63.2525(b)(5), constitutes a new operating scenario.

~~(3) Pursuant to 40 CFR 63.2525(j), in the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.~~

(3) Pursuant to 40 CFR 63.2525(l), for each deviation from an emission limit, operating limit, or work practice standard, the permittee must keep a record of the information specified in 40 CFR 63.2525(l)(1) – (3). The records shall be maintained as specified in 40 CFR 63.10(b)(1) of subpart A. In the event that an affected unit does not meet an applicable standard, record the number of deviations.

(i) For each deviation record the date, time, and duration of each deviation.

(ii) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(iii) Record actions taken to minimize emissions in accordance with 40 CFR 63.2450(u) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

Continuous Process Vents and Closed Vent Systems

c. Refer to **5. Specific Recordkeeping Requirements** for the FLARE in **Section B,** EP-F01.

d. Pursuant to 40 CFR 63.998(d)(1), for the closed vent systems, the permittee shall record the following information.

(1) Pursuant to 40 CFR 63.998(d)(1)(i), the identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR 63.983(b)(2)(ii or iii).

(2) Pursuant to 40 CFR 63.998(d)(1)(ii), the information specified in either 40 CFR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

63.998(d)(1)(ii)(A or B), as applicable, for each closed vent system that contains bypass lines that could divert a vent stream away from the flare and to the atmosphere.

(i) Hourly records of whether the flow indicator specified under 40 CFR 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the flare or the flow indicator is not operating; or

(ii) Where a seal mechanism is used to comply with 40 CFR 63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(3) Pursuant to 40 CFR 63.998(d)(1)(iii), the following information, when a leak is detected as specified in 40 CFR 63.983(d)(2). These records shall be kept for 5 years.

(i) The instrument and equipment identification number and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) The maximum instrument reading measured by the procedures in 40 CFR 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(vi) Copies of the Periodic Reports as specified in 40 CFR 63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(4) Pursuant to 40 CFR 63.998(d)(iv), for each instrumental or visual inspection conducted in accordance with 40 CFR 63.983(b)(1) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

~~(4)~~e. Pursuant to 40 CFR 63.2525(n), for each flow event from a bypass line subject to the requirements 63.2450(e)(6), the permittee must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 to this subpart, the permittee must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

Storage Vessels

~~e.~~f. Pursuant to 40 CFR 63.1065(a), for all Group 2 storage vessels, a record shall be kept for as long as the liquid is stored of the dimensions of the storage vessel, an analysis of the capacity of the storage vessel, and an identification of the liquid stored.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Process Wastewater Streams

~~f.~~g. Pursuant to 40 CFR 63.147(a), for the Group 1 wastewater stream transferred in accordance with 40 CFR 63.132(g), the permittee shall keep a record of the notice sent to the treatment operator stating that the wastewater stream contains organic hazardous air pollutants which are required to be managed and treated in accordance with the provisions of 40 CFR 63 Subpart G.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~g.~~h. Pursuant to 40 CFR 63.147(b)(8) and 40 CFR 63.147(f), for the Group 2 wastewater streams, the permittee shall keep in a readily accessible location the following records.

(1) Pursuant to 40 CFR 63.147(b)(8)(i), process unit identification and description of the process unit.

(2) Pursuant to 40 CFR 63.147(b)(8)(ii), stream identification code.

(3) Pursuant to 40 CFR 63.147(b)(8)(iii), the concentration of the compound(s) in Tables 8 and 9 of 40 CFR 63, Subpart FFFF in parts per million, by weight, including documentation of the methodology used to determine concentration.

(4) Pursuant to 40 CFR 63.147(b)(8)(iv), flow rate in liter per minute.

(5) Pursuant to 40 CFR 63.147(f), if the permittee uses process knowledge to determine the annual average concentration of a wastewater stream as specified in 40 CFR 63.144(b)(3) and/or uses process knowledge to determine the annual average flow rate as specified in 40 CFR 63.144(c)(1), and determines that the wastewater stream is not a Group 1 wastewater stream, the permittee shall keep in a readily accessible location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

~~h.~~i. Refer to **4. Specific Monitoring Requirements** for Process Wastewater Streams

Equipment Leaks

~~i.~~j. Pursuant to 40 CFR 63.181(a), the permittee shall comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

~~j.~~k. Pursuant to 40 CFR 63.181(b), except as provided in 40 CFR 63.181(e), and amended by 40 CFR 63.2480(f)(18), the following information pertaining to all equipment in each process unit subject to the requirements in40 CFR 63.162 through 40 CFR 63.174 shall be recorded:

(1) ~~(1)~~ Pursuant to 40 CFR 63.181(b)(1)(i):

(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 and instrumentation systems). Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63, Subpart H are identified as a group, and the number of connectors subject is indicated. Pursuant to 40 CFR 63.2480(b)(3), as an existing source under 40 CFR 63, Subpart FFFF the permittee is not required to develop an initial list of identification numbers for connectors.

(ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of subpart may be identified on a plant site plan, in log entries, or by other appropriate methods.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) Pursuant to 40 CFR 63.181(b)(2):
  (i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.2480(e)(4)~~63.165(c)~~, or 40 CFR 63.173(f).
  (ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3) and 40 CFR 63.2480(f)(18)(iii) and (iv), a list of identification numbers for pressure relief devices subject to 40 CFR 63.2480(e)(1) ~~40 CFR 63.165(a)~~ and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.2480(e)(2)(ii) and (iii)~~40 CFR 63.165(d)~~.

(4) Pursuant to 40 CFR 63.181(b)(4) ,identification of instrumentation systems subject to 40 CFR 63, Subpart H. Individual components in an instrumentation system need not be identified.

(5) Pursuant to 40 CFR 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 40 CFR 63.181(b)(6), the following information shall be recorded for each dual mechanical seal system:
  (i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and
  (ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 40 CFR 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i), agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:
  (i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.
  (ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.
  (iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):
  (i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.
  (ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63.172 through 40 CFR 63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~k.~~l. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in 40 CFR 60.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

~~l.~~m. Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall berecorded and kept for two years.

(1) Pursuant to 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.

(2) Pursuant to 40 CFR 63.181(d)(2), the date the leak was detected and the date of first attempt to repair the leak.

(3) Pursuant to 40 CFR 63.181(d)(3), the date of successful repair of the leak.

(4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) Pursuant to 40 CFR 63.181(d)(5), "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. ~~The written procedures may be included as part of the SSMP, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site.~~ In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):

(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) Pursuant to 40 CFR 63.181(d)(9), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

~~m.~~n. Pursuant to 40 CFR 63.178(b), if the permittee elects to comply with the pressure testingrequirements in accordance with **2. Emission Limitations a.(14),** the permittee is exempt

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

from the requirements of paragraphs j, k, l and n of this section. Instead, the permittee shall maintain records as specified in 40 CFR 63.181(e)(1 through 6).

~~n.~~o. Pursuant to 40 CFR 63.181(f) and 40 CFR 63.2480(f)(18)(v), the results of compliance tests required for compressors andthe dates and results of monitoring following a pressure relief valve pressure release subject to 40 CFR 63.2480(e)(1) and (2) shallbe recorded. The results shall include:

(1) Pursuant to 40 CFR 63.181(f)(1), the background level measured during each compliance test.

(2) Pursuant to 40 CFR 63.181(f)(2), the maximum instrument reading measured at each piece of equipment during each compliance test.

~~o.~~p. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.

(1) Pursuant to 40 CFR 63.181(g)(1), the design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i through iv) shall be retained for the life of the equipment.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63 Subpart A.

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Pursuant to 40 CFR 63.181(g)(2), records of operation of closed-vent systems and control devices, as specified in 40 CFR 63.181(g)(2)(i through iii) shall be retained for 2 years.

(i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.

(iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.

(3) Pursuant to 40 CFR 63.181(g)(3), records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, as specified in 40 CFR 63.181(g)(3)(i and ii) shall be retained for 2 years.

(i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or (f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(ii) For each inspection conducted in accordance with 40 CFR 63.172(f)(1 or 2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

q. Pursuant 40 CFR 63.181(h), if the permittee implements any of the quality improvement programs required by 40 CFR 63.175 or 40 CFR 63.176, the records specified in 40 CFR 63.181(h) shall be maintained for a period of the quality improvement plan for the process unit.

r. Pursuant to 40 CFR 63.2525(q), for each pressure relief device subject to the pressure release management work practice standards in 40 CFR 63.2480(e), the permittee must keep the records specified in 40 CFR 63.2525(q) (1) - (3).

(1) Records of the prevention measures implemented as required in 40 63.2480(e)(3)(ii).

(2) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past 5 calendar years.

(3) For each release to the atmosphere, the permittee must keep the records specified in 40 CFR 63.2525(q)(3)(i) - (iv).

(v) The start and end time and date of each pressure release to the atmosphere;

(vi) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event;

(vii) Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 63.2480(e)(7)(i);

(viii) For any corrective action analysis for which implementation of corrective actions are required in 40 CFR 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

~~p.~~

All Process Equipment

~~q.~~s. Pursuant to 40 CFR 63.981, “continuous record” is defined as any documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in 40 CFR 63.998(b) , except that periods of startup, shutdown, and malfunction shall not be excluded pursuant to 40 CFR 63.2450(e)(4)(vii).

~~r.~~t. Pursuant to 40 CFR 63.998(b)(1), where 40 CFR 63, Subpart SS, requires a continuous record, the owner or operator shall maintain a record as specified in 40 CFR 63.998(b)(1), as applicable:

(1) Pursuant to 40 CFR 63.998(b)(1)(i), a record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or

(2) Pursuant to 40 CFR 63.998(b)(1)(ii), a record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measured more frequently than once per minute.

(3) Pursuant to 40 CFR 63.998(b)(1)(iii), where data is collected from an automated continuous parameter monitoring system, the owner or operator may calculate and

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

retain block hourly average values from each 15-minute block average period or from at least one measured value per minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records, if the hourly averages do not exclude periods of CPMS breakdown or malfunction. An automated CPMS records the measured data and calculates the hourly averages through the use of a computerized data acquisition system.

(4) Pursuant to 40 CFR 63.998(b)(1)(iv), a record as required by an alternative approved under a referencing subpart.

Maintenance Vents

u. Pursuant to 40 CFR 63.2525(p), for maintenance vent openings subject to 40 CFR 63.2450(v), the permittee shall record the following information, as applicable.

(1) Pursuant to 40 CFR 63.2525(p)(1), maintain standard site procedures used to deinventory equipment for safety purposes to document the procedures used to meet the requirements in 40 CFR 63.2450(v). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of 40 CFR 63.2450(v)(1)(i), and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of 40 CFR 63.2450(v)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of 40 CFR 63.2450(v)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in 40 CFR 63.2525(p)(1) are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this condition, records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of 40 CFR 63.2450(v)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

~~(4)~~

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, for equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit a Compliance report containing the information specified in 40 CFR 63.2520(e)(1 through 10), semiannually.

b. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, the permittee shall submit a precompliance report as specified in 40 CFR 63.2520(c)(1 through c) at least 6 months prior for new sources, with an application for approval of construction or reconstruction.

c. Pursuant to 40 CFR 63.2520(e), Once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, submit all subsequent reports to the EPA via the CEDRI, which can be accessed through the EPA's CDX(https://cdx.epa.gov/). Report using the appropriate report template located on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under 40 CFR 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in 40 CFR 63 Subpart FFFF, regardless of the method in which the report is submitted. The permittee shall not use CEDRI to submit information claimed as CBI.

d. Pursuant to 40 CFR 63.2520(e), the permittee may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in this paragraph (e) provided the permittee meets the requirements outlined in 40 CFR 63.2520(i) or (j), as applicable. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.2520(h)(1) through (7).

~~b.~~

Continuous Process Vents and Closed Vent Systems

~~c.~~e. The permittee shall furnish reports as specified in **6. Specific Reporting Requirements** for the FLARE in **Section B**, EP-F01.

~~d.~~f. Pursuant to 40 CFR 63.999(c)(1), the permittee shall submit Periodic reports that shall include the reporting period dates, the total source operating time for the reporting period,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

and, as applicable, all information specified in 40 CFR 63.999 and in 40 CFR 63, Subpart FFFF including reports of periods when monitored parameters are outside their established ranges.

~~e.~~g. Pursuant to 40 CFR 63.999(c)(2), the permittee shall submit, as part of the periodic report:

(1) Pursuant to in 40 CFR 63.999(c)(2)(i), the information recorded in 40 CFR 63.998(d)(1)(iii)(B through E);

(2) Pursuant to in 40 CFR 63.999(c)(2)(ii), reports of the times of all periods recorded under 40 CFR 63.998(d)(1)(ii)(A) when the vent stream is diverted from the flare through a bypass line; and

(3) Pursuant to in 40 CFR 63.999(c)(2)(iii), reports of all times recorded under 40 CFR 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

h. Pursuant to 40 CFR 63.2520(e)(12) bypass lines must include in the compliance report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

Equipment Leaks

i. Pursuant to 40 CFR 63.2520(e)(15), compliance reports for pressure relief devices subject to the requirements 40 CFR 63.2480(e) must include the information specified in 40 CFR 63.2520(e)(15)(i) through (iii).

(1) For pressure relief devices in organic HAP gas or vapor service, pursuant to 40 CFR 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.

(2) For pressure relief devices in organic HAP gas or vapor service subject to 40 CFR 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(3) For pressure relief devices in organic HAP service subject to 40 CFR 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

Maintenance Vents

j. Pursuant to 40 CFR 63.2520(e)(14), the permittee shall submit, as part of the compliance report for any maintenance vent release exceeding the applicable limits in 40 CFR 63.2450(v)(1), the items specified in 40 CFR 63.2520(e)(14)(i)-(iv). For any maintenance vent release complying with 40 CFR 63.2450(v)(1)(iv), report an explanation for any event as to why utilization of this alternative was required.

~~(3)~~

7. Specific Control Equipment Operating Conditions:

Continuous Process Vents

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. Pursuant to 40 CFR 63.11(b)(3) the FLARE (EP F01) shall be in operation at all times the emission units that vent to the FLARE are operating. Refer to **Section B** for EP-F01.

b. Pursuant to 40 CFR 63.2450, the permittee must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to 40 CFR 63, Subpart FFFF at all times~~, except during periods of startup, shutdown, and malfunction~~, and the permittee must meet the requirements specified in 40 CFR 63.2455 through 40 CFR 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in paragraphs (b) through (v~~s~~) of 40 CFR 63.2450. The permittee must meet the notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525.

8. Alternate Operating Scenarios:

a. ~~Pursuant to 40 CFR 63 Subparts A and FFFF for the occurrences of start-ups at EU-R01, R02 or R03, the permittee shall follow the SSMP requirements.~~

b. Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF for the equipment leaks subject to, the permittee may comply with one of the following requirements:

(1) 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f);

(2) 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f); or

(3) 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 40 CFR 63.2480(c) and (d) -(f).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

WEDCO AREA

EP	EU	Emission Unit/Point Description
W07-08	W07 W08	**Description: Product Grinding** Description: Dry material pneumatic handling and grinding of PVOH product. Two product separation cyclones (FC-5403 and FC-5405) for transfer to hoppers/grinders and recycle, and product separation baghouse (FD-5404) for enhanced material recycle (W-07). Product separation baghouse (FD-5407) for transfer to screener (W-08). Maximum Processing Rate: 8,000 lbs/hr Construction Date: 2022 Control Device: N/A
W10-12	W10 W11 W12	**Description: Product Grinding** Description: Dry material pneumatic handling and grinding of PVOH product. Product separation baghouses for transfer to hopper/grinders FD-5630 (W-10), transfer to screener FD-5632 (W-11) and recycle FD-5631 (W-12). Maximum Processing Rate: 8,000 lbs/hr Construction Date: 2021 Control Device: NA
W14		**Description: Final Product Silos #1-#4** Description: Final product storage Maximum Processing Rate: 18,000 lbs/hr each Construction Date: 1959 Control Device: Silo #1, #2, #3, and #4Vent Filters, 99.6% control efficiency Construction Date: 1978
	W14	Final Product Silo #1, FB-5701 Control Device: Silo #1 Vent Filter, FD-5704
	W15	Final Product Silo #2, FB-5702 Control Device: Silo #2 Vent Filter, FD-5705
	W16	Final Product Silo #3, FB-5703 Control Device: Silo #3 Vent Filter, FD-5706
	W17	Final Product Silo #4, FB-5704 Control Device: Silo #4 Vent Filter, FD-5707
W18-25		**Intermediate Product Silos #7 - #14** Description: SAP Area product storage Maximum Processing Rate: 18,000 lbs/hr each Construction Date: 1959 Control Device: Silo #7, #8, #9, #10, #11, #12, #13 and #14 Vent Filters, 99.6% control efficiency Construction Date: 1978
	W18	Intermediate Product Silo #7, FB-5707 Control Device: Silo #7 Vent Filter, FD-5708
	W19	Intermediate Product Silo #8, FB-5708 Control Device: Silo #8 Vent Filter, FD-5709
	W20	Intermediate Product Silo #9, FB-5709 Control Device: Silo #9 Vent Filter, FD-5710
	W21	Intermediate Product Silo #10, FB-5710 Control Device: Silo #10 Vent Filter, FD-5711
	W22	Intermediate Product Silo #11, FB-5711 Control Device: Silo #11 Vent Filter, FD-5712
	W23	Intermediate Product Silo #12, FB-5712 Control Device: Silo #12 Vent Filter, FD-5713

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

	W24	Intermediate Product Silo #13, FB-5713 Control Device: Silo #13 Vent Filter, FD-5714
	W25	Intermediate Product #14**,** FB-5714 Control Device: Silo #14 Vent Filter, FD-5715
W26-28		**Description: Final Product Silos #15, #16 &#17** Maximum Processing Rate: 18,000 lbs/hr each Construction Date: 1985 Control Device: Silo #15, #16 and #17 Pulse Jet Bin Vent Filters, 99.6% control efficiency Construction Date: 1985
	W26	Final Product Silo #15, FB-5715 Control Device: Silo #15 Pulse Jet Bin Vent Filter, FD-5739
	W27	Final Product Silo #16, FB-5716 Control Device: Silo #16 Pulse Jet Bin Vent Filter, FD-5740
	W28	Final Product Silo #17, FB-5717 Control Device: Silo #17 Pulse Jet Bin Vent Filter, FD-5741

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP	EU	Emission Unit/Point Description
W29	W29	**PVOH Bulk Loading - Railcar** Maximum Processing Rate: 36,000 lbs/hr Construction Date: 1985 Control Device: Bulk Loading Baghouse, FD-5716, 99.6% control efficiency Construction Date: 1985
W30	W30	**PVOH Bulk Unloading** Maximum Processing Rate: 7,200 lbs/hr Construction Date: 1985 Control Device: Bulk Unloading Baghouse, FD-5718, 99.6% control efficiency Construction Date: 1985
W32	W32	**Bulk Loading/Unloading Fugitives** Maximum Processing Rate: 3,548 lbs/hr
W33	W33	**Bagging Operation: Filling - Sackmatic**, PA-5716 Description: Filling Operation Maximum Processing Rate: 900 lbs/hr Construction Date: 1978 Control Measure: Bag cinching around loading spout
W34	W34	**Bagging Hopper**, FB-5723 Description: PVOH Filling Operation Maximum Processing Rate: 30,000 lbs/hr Construction Date: 1978 Control Device: Bagging Hopper Dust Collector, FD-5759, 99.6% control efficiency Construction Date: 1978
W36	W36	**Bagging Area Fugitives** Maximum Processing Rate: 30,000 lbs/hr
W37	W37	**North Bulk Truck Loading Station** Description: Loading from Silos #1 and #4 and the bagging hopper Maximum Processing Rate: 100,000 lb/hr Construction Date: 2003 Control Device: 40” Trailer Mounted Filter Canister, 99.6% control efficiency for PM
W38	W38	**South Bulk Truck Loading Station** Description: Loading from Silos #15-17 Maximum Processing Rate: 100,000 lb/hr Construction Date: 2003 Control Device: 40” Trailer Mounted Filter Canister, 99.6% control efficiency for PM

APPLICABLE REGULATIONS:
401 KAR 59:010, New Process Operations

401 KAR 63:010, Fugitive Emissions

STATE-ORIGIN REQUIREMENTS:
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

PRECLUDED REGULATIONS:
Refer to **Section B**, **Group Requirements.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. **Operating Limitations:**
   Pursuant to 401 KAR 52:020, Section 10, the particulate control devices shall be in operation at all times any emission unit at EU W14-W28, W29, W30 W33, W34, W37 or W38 are operating.

   Compliance Demonstration Method:
   Refer to **Section B, Group Requirements**.

2. **Emission Limitations:**
   a. Pursuant to 401 KAR 59:010, Section 3(2), emissions of particulate matter (PM) from each EP W07-08, W10-12, W14-W28, W29, W30, W33, W34, W37 and W38 shall not exceed the values listed below:

$$E = 3.59(P)^{0.62}$$

   b. Pursuant to 401 KAR 59:010, Section 3(1), emissions shall not equal or exceed 20% opacity from each EP W07-08, W10-12, W14-W28, W29, W30, W33, W34, W37 and W38.
   c. Pursuant to 401 KAR 63:010, Section 3(1), No person shall cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished, or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
      (1) Pursuant to 401 KAR 63:010, Section 3(1)(a), use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
      (2) Pursuant to 401 KAR 63:010, Section 3(1)(b), application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
      (3) Pursuant to 401 KAR 63:010, Section 3(1)(c), installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations;
      (4) Pursuant to 401 KAR 63:010, Section 3(1)(d), covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
      (5) Pursuant to 401 KAR 63:010, Section 3(1)(e), the maintenance of paved roadways in a clean condition;
      (6) Pursuant to 401 KAR 63:010, Section 3(1)(f), the prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

   d. Pursuant to 401 KAR 63:010, Section 3(2), no person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. Pursuant to 401 KAR 63:010, Section 3(3), when dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

f. For 401 KAR 63:020 requirements, refer to **Section D.4.**

Compliance Demonstration Method:

a. The permittee shall monitor the amount of process weight added to each emissions unit. The process weight rate shall be determined by dividing the tons of material added to each emission unit in a calendar month by the total hours the unit operated that month. Average particulate matter (PM) emissions shall be calculated as follows:

Controlled PM Emissions = PR x EF x (1 – CE/100)

Where: PR = PVOH Production Rate for the emission point (tons/hr)
EF = Emission Factor (lbs PM / ton PVOH produced)
CE = Control Efficiency (%)

b. For compliance with the opacity limit, refer to **4. Specific Monitoring Requirements**.

c. If an emissions unit at EU W14-W30, W33, W34, W37 or W38 is in operation during any period of malfunction of the particulate control device, the permittee shall shut down the affected emission unit until associated repairs are complete and take the necessary corrective actions in accordance with **5. Specific Recordkeeping Requirements d.**

d. In order to demonstrate compliance with 401 KAR 63:010, Fugitive Emissions, each affected facility listed above shall be controlled with wet suppression, enclosures, and/or dust collection equipment.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using Reference methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall also perform the following monitoring:

(1) A qualitative visual observation of the opacity of emissions once each calendar month while operating each emission unit at EU- W07-08, W10-12, W14-W28, W29, W30, W33, W34, W37 and W38. For W14-W28, the visible observation must be conducted when product is being loaded into the silos. If visible emissions are seen (not including condensedwater vapor within the plume), the permittee shall perform an EPA Reference Method9 test for opacity on the applicable stack emissions within 24 hours of observing visible emissions, and make any necessary repairs to bring the opacity into compliance.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) The pressure drop across each dust collector once each calendar month.
(3) The information specified in **5. Specific Recordkeeping Requirements**.

b. Refer to **7. Specific Control Equipment Operating Conditions**.

5. Specific Recordkeeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain visual opacity observation records in accordance with **4. Specific Monitoring Requirements b.**
b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of preventive maintenance and inspections of the particulate control devices in accordance with **7. Specific Control Equipment Operating Conditions.**
c. All records shall be maintained in accordance with **Section F.2.**

6. Specific Reporting Requirements:

a. The permittee shall furnish reports as specified in **5. Specific Recordkeeping Requirements.**
b. Refer to **Section F.5.**

7. Specific Control Equipment Operating Conditions:

Pursuant to 401 KAR 52:020, Section 10, preventive maintenance shall be performed, for all particulate control devices, in accordance with the manufacturers' recommendations. Each device shall be inspected monthly for proper operation of the following:

a. Pulse jet device to release dust cake from bags.
b. Air flow source and equipment.
c. Pressure drop measuring system.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ACETIC ACID RECOVERY (AAR) AREA

	EU	Emission Unit/Point Description
F01(2)	A01-2:	**Description: East Methyl Acetate (MeAc) Extraction Tower** - Separates Mother Liquor from the SAP Unit to Methyl Acetate and Methanol. Receives MeAc from Tank Farm supplied via railcars/tank trucks as a supplemental feed stream to Mother Liquor Tank Maximum Processing Rate: 53,000 lbs/hr **Control Device:** FLARE, BA-5000 (EP-F01) **HON Maintenance Wastewater Stream**
F01(2C)	*A01-2A*	East MeAc Extraction Tower (A01-2A), DA-5300
	A01-2B	East MeAc Extraction Tower Condenser (A01-2B), EA-5310B
	A01-2C	East MeAc Extraction Tower Vent Condenser (A01-2C), EA-5341 **HON Group 1 Continuous Process Vent**
F01(4B)	A01-2D	East MeAc Extraction Tower Reflux Accumulator (A01-2D), FA-5331 (2,538 gal)
A01	A01	**Description: East Methyl Acetate (MeAc) Extraction Tower Startups**
F01(3)	A02-3:	**Description: West Methyl Acetate (MeAc) Extraction Tower** - Separates Mother Liquor from the SAP Unit to Methyl Acetate and Methanol Receives MeAc from Tank Farm supplied via railcars/tank trucks as a supplemental feed stream to Mother Liquor tank. Maximum Processing Rate: 85,000 lbs/hr **Control Device:** FLARE, BA-5000 (EP-F01) **HON Maintenance Wastewater Stream**
F01(3C)	*A02-3A*	West MeAc Extraction Tower (A02-3A), DA-5304
	A02-3B	West MeAc Extraction Tower Condenser (A02-3B), EA-5313
	A02-3C	West MeAc Extraction Tower Vent Condenser (A02-3C), EA-5339 **HON Group 1 Continuous Process Vent**
F01(4B)	A02-3D	West MeAc Extraction Tower Reflux Drum (A02-3D), FA-5309 (5,299 gallons)
A02	A02	**Description: West Methyl Acetate (MeAc) Extraction Tower Startups**
F01(4)	A03-4:	**Description: Aldehyde Tower** - Processes MeAc Towers' Overheads. Receives MeAc from Tank Farm supplied via railcars/tank trucks as a supplemental feed stream to MeAc Towers' overheads. Maximum Processing Rate: 120,000 lbs/hr Control Device: FLARE, BA-5000 (EP-F01) **HON Maintenance Wastewater Stream**
F01(4B)	*A03-4A*	Aldehyde Tower, DA-5302
	A03-4B	Aldehyde Tower Condenser (A03-4A), EA-5308 **HON Group 1 Continuous Process Vent**
	A03-4C	Aldehyde Tower Reflux Drum (A03-4C), FA-5311 (1,018 gallons)
A03	A03	**Description: Aldehyde Tower Startups**
F01(5)	A04-5:	**Description: SAP Methanol Tower** - Separates MeAc Towers' Bottoms and Vinyl Extraction Tower Bottoms to Methanol and Water Maximum Processing Rate: 100,000 lbs/hr Control Device: FLARE, BA-5000 (EP F01) **HON Group 2 Maintenance Wastewater Stream**
F01(5A)	*A04-5A*	SAP Methanol Tower (A04-5A), DA-5303 **HON Group 1 Continuous Process Vent**, **HON Group 2 Process Wastewater Stream**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

	EU	Emission Unit/Point Description
	A04-5B	Methanol Reboiler (A04-5B), EA-5309A
	A04-5C	Methanol Reflux Drum (A04-5C), FA-5312 (9,000 gallons)
A04	A04	**Description: SAP Methanol Tower Startups**
F01(7B)	A05-6A	**Description: Crude Acid Tower** - Processes Ion Exchange Reactors' Product Stream Maximum Processing Rate: 100,000 lbs/hr **Control Device:** FLARE, BA-5000 (EP F01) **HON Maintenance Wastewater Stream**
	A05-6A	Crude Acid Tower (A05-6A), DA-5308
	A05-6B	Crude Acid Condenser (A05-6B), EA-5328
	A05-6C	Crude Acid Tower Reflux Accumulator (A05-6C), FA-5325 (1,183 gal)
	A05-6D, 6E & 6F	**Description: Three (3) Ion Exchange Reactors** - Processes Aldehyde Tower Bottoms to Methanol and Acetic Acid **HON Maintenance Wastewater Stream**
	A05-6D	Ion Exchange Reactor (A05-6D), FA-5306A
	A05-6E	Ion Exchange Reactor (A05-6E), FA-5306B
	A05-6F	Ion Exchange Reactor (A05-6F), FA-5306E
A05	A05-6D, 6E &-6F	**Description: Three (3) Ion Exchange Reactors and Crude Acid Tower Startups**
F01(7)	A06-7:	**Description: Product Acid Tower** - Processes Crude Tower Bottoms to Acetic Acid Maximum Processing Rate: 31,600 lbs/hr **Control Device:** FLARE, BA-5000 (EP-F01) **HON Maintenance Wastewater Stream**
F01(7B)	*A06-7A*	Product Acid Tower (A06-7A), DA-5309
	A06-7B	Product Acid Tower Condenser (A06-7B), EA-5332 **HON Group 1 Continuous Process Vent**
	A06-7C	Product Acid Reflux Drum (A06-7C), FA-5328 (1,648 gallons)
	A06-7D	Sludge Still (A06-7D), FA-5319
A06	A06	**Description: Product Acid Tower Startups**
A07	A07	Dilute Acid Tank Condenser, EA-5340
A07	A07-01	Dilute Acid Tank (A07-01), FA-5330 (10,000 gallons) Maximum Throughput: 200,000 gallons/yr
A08	A08	**Acetic Acid Rundown Tanks** (2) Capacity: FA-5322B - 10,000 gal and FA-5322C - 10,000 gal Maximum Throughput: 31,536,000 gallons/yr (total)
A09	A09	**Equipment Leaks (AAR Process Unit Fugitives)** Gas Vapor Valves: 499 Light Liquid Valves: 1,396 Light Liquid Pumps: 48 Connectors: 6,022 Agitators: 7 Instrumentation Systems: 404 Pressure Relief Devices Gas/Vapor: 21 Light Liquid: 13

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

The equipment leak component count for the AAR Area, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2.(2)(bbb), 40 C.F.R. 60.480 to 60.489 (Subpart VV), Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006.

401 KAR 63:002, Section 2.(4)(a), 40 C.F.R. 63.100 to 63.107, Tables 1 to 4 (Subpart F), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry.

401 KAR 63:002, Section 2(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.
Note: Compliance with 40 CFR 63, Subpart H is deemed compliance with Subpart VV.

PRECLUDED REGULATIONS:
Refer to **Section B, Group Requirements.**

1. **Operating Limitations:**
   a. Refer to 40 CFR 63.103(a)for general provisions.

   Maintenance Wastewater Streams
   b. Pursuant to 40 CFR 63.105(a), for maintenance wastewaters containing organic HAPs listed in Table 9 of 40 CFR 63, Subpart G from the AAR Area units, the permittee shall properly manage the wastewater and control organic HAP emissions.

   Continuous Process Vents and Closed Vent Systems
   Note: The closed vent system is constructed of hard piping as defined by 40 CFR 63.981.
   c. Pursuant to 40 CFR 63.113(a)(1), all Group 1 process vents from the AAR Area units; A01-2C, A02-3C, A03-4B, A04-5A & A06-7B shall be vented to a flare that complies with all applicable requirements of 40 CFR 63.11(b).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Process Wastewater Streams

d. Pursuant to 40 CFR 63.132(f), the permittee shall not discard liquid or solid organic materials with a concentration of greater than 10,000 parts per million of compounds in Table 9 of 40 CFR 63 Subpart G (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b)) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. This prohibition does not apply to materials from the following activities:
   (1) Pursuant to 40 CFR 63.132(f)(1) equipment leaks;
   (2) Pursuant to 40 CFR 63.132(f)(2)activities included in maintenance or SSMPs;
   (3) Pursuant to 40 CFR 63.132(f)(3)spills; or;
   (4) Pursuant to 40 CFR 63.132(f)(4), samples of a size not greater than reasonably necessary for the method of analysis that is used.

Equipment Leaks

e. Pursuant to 40 CFR 63.160(c), if a process unit subject to the provisions of 40 CFR 63, Subpart H has equipment to which 40 CFR 63, Subpart H does not apply, but which is subject to 40 CFR part 60, Subpart VV the permittee may elect to apply with 40 CFR 63, Subpart H to all such equipment in the process unit. If the permittee elects this method of compliance, all VOC in such equipment shall be considered, for purposes of applicability and compliance with 40 CFR 63, Subpart H as if it were organic hazardous air pollutant (HAP). Compliance with the provisions of 40 CFR 63, Subpart H in the manner described in this paragraph, shall be deemed to constitute compliance with 40 CFR part 60, Subpart VV.
f. Pursuant to 40 CFR 63.162, for the equipment leaks in organic hazardous air pollutant service, the permittee shall implement an LDAR program containing the following elements:
   (1) Pursuant to 40 CFR 63.162(c), each piece of equipment subject to 40 CFR 63 Subpart H shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.
   (2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63:172 through 40 CFR 63.174, the permittee shall:
      (i) Clearly identify the leaking equipment.
      (ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored and no leak is detected during that monitoring.
      (iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements** for Maintenance wastewater, Continuous Process Vents.

Process Wastewater Streams

b. Pursuant to 40 CFR 63.132(c), total annual average concentration shall be determined according to the procedures specified in 40 CFR 63.144(b). Annual average flow rate shall be determined according to the procedures specified in 40 CFR 63.144(c).

c. Pursuant to 40 CFR 63.132(c)(3), for a Group 2 wastewater, the permittee shall re-determine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably be expected to change the stream to a Group 1 stream. Examples of process changes include, but are not limited to, changes in production capacity, production rate, feedstock type, or whenever there is a replacement, removal, or addition of recovery or control equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the range on which the original determination was based.

Equipment Leaks

d. Pursuant to 40 CFR 63.162(a), compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

2. Emission Limitations:

Equipment Leaks and Closed Vent Systems

a. The permittee shall comply with the fugitive equipment leak emissions standards pursuant to 40 CFR 63.160 through 40 CFR 63.182, as applicable:

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:

40 CFR 63.163(a):	Implementation and compliance provisions
40 CFR 63.163(b):	Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c):	Repair procedures and time frames
40 CFR 63.163(d):	Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j):	Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors:

40 CFR 63.164(a)-(e):	Operational requirements
40 CFR 63.164(f):	Criteria for Leak detection
40 CFR 63.164(g):	Repair procedures and time frames
40 CFR 63.164(h)-(i):	Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vapor service:

40 CFR 63.165(a):	Operational requirements
40 CFR 63.165(b):	Pressure release procedures
40 CFR 63.165(c)-(d):	Exemptions for specific types of pressure relief devices

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.166(a)-(c): Operational requirements

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:
40 CFR 63.167(a)-(c): Operational requirements
40 CFR 63.167(d)-(e): Exemptions for specific types of valves

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:
40 CFR 63.168(a): Operational requirements
40 CFR 63.168(b)-(d): Monitoring requirements and intervals
40 CFR 63.168(e): Procedures to determine percent leaking valves
40 CFR 63.168(f): Leak repair time frames
40 CFR 63.168(g): First attempt repair procedures
40 CFR 63.168(h)-(i): Exemptions for unsafe-to-monitor and difficult-to-monitor valves
40 CFR 63.168(j) 250 or fewer valve exemption

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:
40 CFR 63.169(a): Monitoring frequency
40 CFR 63.169(b): Leak detection levels
40 CFR 63.169(c): Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:
40 CFR 63.171 Allowances for delay of repair

(9) Pursuant to 40 CFR 63.172, Standards for Closed-vent systems and control devices:
40 CFR 63.172(a)-(b): Operational requirements
40 CFR 63.172(d),(m): Control device requirements
40 CFR 63.172(f)-(g): Monitoring requirements
40 CFR 63.172(h)-(i): Repair procedures and time frames
40 CFR 63.172 (j): Operational requirements for bypass lines
40 CFR 63.172(k)-(l): Exemptions for unsafe-to-inspect and difficult-to-inspect closed-vent systems

(10) Pursuant to 40 CFR 63.171, Standards for Delay of repair:
40 CFR 63.171: Allowances for delay of repair

(11) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:
40 CFR 63.173(a): Operational requirements
40 CFR 63.173(b): Monitoring requirements and intervals
40 CFR 63.173(c): Leak repair time frames
40 CFR 63.173(d)-(g): Exemptions for specific types of agitators
40 CFR 63.173(h)-(j): Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

(12) Pursuant to 40 CFR 63.174, Standards for Connectors in gas/vapor service and in light liquid service:
40 CFR 63.174(a): Operational requirements
40 CFR 63.174(b): Monitoring requirements and intervals
40 CFR 63.174(c): Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d): Leak repair time frames
40 CFR 63.174(e): Monitoring frequency for repaired connectors

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.174(f)-(h):	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i):	Procedures to determine percent leaking connectors
40 CFR 63.174(j):	Optional credit for removed connectors

(13) Pursuant to 40 CFR 63.175 and 40 CFR 63.168(d)(1)(ii), in Phase III, Quality improvement program for valves: the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175(a):	Quality improvement program alternatives
40 CFR 63.175(b):	Criteria for ending quality improvement programs
40 CFR 63.175(c):	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175(d):	Quality improvement program to demonstrate further progress
40 CFR 63.175(e):	Quality improvement program of technology review and improvement

(14) Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if, in Phase III, Quality improvement program for pumps: calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in the AAR, Tank Farm, and Loading Areas that are part of the 40 CFR 63, Subpart H chemical manufacturing process unit (CMPU) or three pumps in the AAR area leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176(a):	Applicability criteria
40 CFR 63.176(b):	Criteria for ending the quality improvement program
40 CFR 63.176(c):	Criteria for resumption of the quality improvement program
40 CFR 63.176(d):	Quality improvement program elements

Compliance Demonstration Method:
Equipment Leaks
Refer to **1. Operating Limitations** Compliance Demonstration Method d.

3. Testing Requirements:
Continuous Process Vents
a. Refer to **3. Testing Requirements** for the FLARE in **Section B,** EP-F01.

Equipment Leaks
b. The permittee shall comply with the following test methods and procedures requirements, pursuant to 40 CFR 63.180(a):

(1)	40 CFR 63.180(b)	Monitoring procedures, test methods, and calibration procedures
(2)	40 CFR 63.180(c)	Leak detection monitoring procedures
(3)	40 CFR 63.180(d)	Procedures for determining organic HAP service applicability

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Pursuant to 40 CFR 63.180(e), when a flare is used to comply with 40 CFR 63.172(d), the permittee shall comply with 40 CFR 63.180(e)(1 through 3). The permittee is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration:
   (i) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4).
   (ii) Determine the net heating value of the gas being combusted using the techniques in 40 CFR 63.11(b)(6).
   (iii) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i and iii), where applicable).

4. Specific Monitoring Requirements

Maintenance wastewater

a. Pursuant to 40 CFR 63.105(b), the permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
   (1) Pursuant to 40 CFR 63.105(b)(1), specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.
   (2) Pursuant to 40 CFR 63.105(b)(2), specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and
   (3) Pursuant to 40 CFR 63.105(b)(3), specify the procedures to be followed when clearing materials from process equipment.

b. Pursuant to 40 CFR 63.105(c), the permittee shall modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

Continuous Process Vents

c. Refer to **4. Specific Monitoring Requirements** for the FLARE in **Section B,** EP-F01.
d. Pursuant to 40 CFR 63.114(d), for any bypass line between the origin of the gas stream (i.e., at a distillation unit or reactor) and the point where the gas stream reaches the process vent that could divert the gas stream directly to the atmosphere, the permittee shall comply with one of the following requirements (equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to these requirements):
   (1) Pursuant to 40 CFR 63.114(d)(1), properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in 40 CFR 63.118(a)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert the gas stream to the atmosphere; or;
   (2) Pursuant to 40 CFR 63.114(d)(2), secure the bypass line valve in the non-diverting position with a car-seal. A visual inspection of the seal mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

position and the gas stream is not diverted through the bypass line.

Equipment Leaks

f. Refer to **3. Testing Requirements**.

5. Specific Recordkeeping Requirements:

a. All records shall be kept in accordance with 40 CFR 63.103(c).

Maintenance wastewater

b. Pursuant to 40 CFR 63.105(d), the permittee shall maintain a record of the information required by 40 CFR 63.105(b and c) as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3).

Continuous Process Vents

c. Pursuant to 40 CFR 63.118(a), the permittee shall keep the following records up-to-date and readily accessible:
   (1) Pursuant to 40 CFR 63.118(a)(3), hourly records of whether the flow indicator specified under 40 CFR 63.114(d)(1) was operating and whether a diversion was detected at any time during the hour,
   (2) Pursuant to 40 CFR 63.118(a)(3), records of the times and durations of all periods when the gas stream is diverted to the atmosphere.
   (3) Pursuant to 40 CFR 63.118(a)(3), records of the times and durations of all periods when the flow monitor is not operating.
   (4) Pursuant to 40 CFR 63.118(a)(4), where a seal mechanism is used to comply with 40 CFR 63.114(d)(2), hourly records of flow are not required. In such cases, the permittee shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

Process Wastewater Streams

d. Pursuant to 40 CFR 63.147(b)(8) and 40 CFR 63.147(f), for the Group 2 wastewater streams, the permittee shall keep in a readily accessible location the following records:
   (1) Pursuant to 63.147(b)(8)(i), process unit identification and description of the process unit.
   (2) Pursuant to 63.147(b)(8)(ii), stream identification code.
   (3) Pursuant to 63.147(b)(8)(iii), the concentration of the compound(s) in Tables 8 and 9 of 40 CFR 63, Subpart FFFF in parts per million, by weight, including documentation of the methodology used to determine concentration.
   (4) Pursuant to 63.147(b)(8)(iv), flow rate in liter per minute.
   (5) Pursuant to 40 CFR 63.147(f), if the permittee uses process knowledge to determine the annual average concentration of a wastewater stream as specified in 40 CFR 63.144(b)(3) and/or uses process knowledge to determine the annual average flow rate as specified in 40 CFR 63.144(c)(1), and determines that the wastewater stream is not a Group 1 wastewater stream, the permittee shall keep in a readily accessible

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

location the documentation of how process knowledge was used to determine the annual average concentration and/or the annual average flow rate of the wastewater stream.

Equipment Leaks

e. Pursuant to 40 CFR 63.181(a), the permittee may comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

f Pursuant to 40 CFR 63.181(b), except as provided in 40 CFR 63.181(e), the following information pertaining to all equipment in each process unit subject to the requirements in 40 CFR 63.162 through 40 CFR 63.174 shall be recorded:

(1) Pursuant to 40 CFR 63.181(b)(i):

(i) A list of identification numbers for equipment (except connectors exempt from monitoring and recordkeeping identified in 40 CFR 63.174 and instrumentation systems) subject to the requirements therein. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of 40 CFR 63, Subpart H are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the list shall be complete no later than the completion of the initial survey required by 40 CFR 63.174 (b)(1 or 2).

(ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) Pursuant to 40 CFR 63.181(b)(2)(i and ii):

(i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.165(c), or 40 CFR 63.173(f).

(ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3), a list of identification numbers for pressure relief devices subject to 40 CFR 63.165(a) and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.165(d).

(4) Pursuant to 40 CFR 63.181(b)(4), identification of instrumentation systems. Individual components in an instrumentation system need not be identified.

(5) Pursuant to 40 CFR 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 40 CFR 63.181(b)(6), the following information shall be recorded for each dual mechanical seal system:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and
(ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 40 CFR 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i), agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:
(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.
(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.
(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):
(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.
(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63.172 through 40 CFR 63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

g. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in 40 CFR 60.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

h Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall be recorded and kept for two years.

(1) Pursuant to 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.
(2) Pursuant to 40 CFR 63.181(d)(2), the date the leak was detected and the date of first attempt to repair the leak.
(3) Pursuant to 40 CFR 63.181(d)(3), the date of successful repair of the leak.
(4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.
(5) Pursuant to 40 CFR 63.181(d)(5), “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures may be included as part of the SSMP, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):

(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) Pursuant to 40 CFR 63.181(d)(9), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

i. Pursuant to 40 CFR 63.181(f), the results of compliance tests required for compressors and the dates and results of monitoring following a pressure relief valve pressure release shall be recorded. The results shall include:

(1) Pursuant to 40 CFR 63.181(f)(1), the background level measured during each compliance test.

(2) Pursuant to 40 CFR 63.181(f)(2), the maximum instrument reading measured at each piece of equipment during each compliance test.

j. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.

(1) Pursuant to 40 CFR 63.181(g)(1), the design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i through iv) shall be retained for the life of the equipment.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63, Subpart A.

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Pursuant to 40 CFR 63.181(g)(2),records of operation of closed-vent systems and control devices, as specified in 40 CFR 63.181(g)(2)(i through iii) shall be retained for 2 years.
   (i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.
   (ii) Dates and durations during which the monitoring system or monitoring device is inoperative.
   (iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.

(3) Pursuant to 40 CFR 63.181(g)), records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, as specified in 40 CFR 63.181(g)(3)(i and ii) shall be retained for 2 years.
   (i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1) or (f)(2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
   (ii) For each inspection conducted in accordance with 40 CFR 63.172(f)(1) or (f)(2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

k. Pursuant 40 CFR 63.181(h), if the permittee implements any of the quality improvement programs required by 40 CFR 63.175 or 40 CFR 63.176, the records specified in 40 CFR 63.181(h)(1 through 9) shall be maintained for a period of the quality improvement plan for the process unit.

6. Specific Reporting Requirements:

a. All reports shall be submitted in accordance with 40 CFR 63.103(d).

b. For equipment subject to 40 CFR 63 Subparts F, G and H, the permittee shall submit the following reports:

Pursuant to 40 CFR 63.182(a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182(d)(2).

c. Refer to **Section F.5.**

Continuous Process Vents

d. Pursuant to 40 CFR 63.118(f), the permittee shall submit to the Division Periodic Reports of the information in **5. Specific Recordkeeping Requirements c.** according to the schedule in 40 CFR 63.152.

e. The permittee shall furnish reports as specified in **5. Specific Reporting Requirements** for the FLARE in **Section B,** EP F01.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

Continuous Process Vents

Pursuant to 40 CFR 63.11(b)(3) the FLARE (EP-F01) shall be in operation at all times the emission units that vent to the FLARE are operating. Refer to **Section B**, EP-F01.

8. Alternate Operating Scenarios:

40 CFR 63, Subparts A, for the occurrences of start-ups at EU-(A01-A06), the permittee shall follow the SSMP requirements of 40 CFR 63 Subparts A, F, G and H.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

FLARE

EP	EU	Emission Unit/Point Description
F01	F01:	**FLARE (non assited)**, BA-5000 **Description:** The FLARE is used to control hydrocarbon streams from EU: A01 2A-2D(East Methyl Acetate Extraction Tower-DA 5300- & associated process equipment (APE)), A02 3A-D(West Methyl Acetate Extraction Tower-DA5304 & APE), A03 4A-C(Aldehyde Tower-DA-5302 & APE), A04 5A-5C(Aldehyde Tower DA 5302 & APE), A06 7A-D(Product Acid Tower DA 5309 & APE), R03 9A-G(Vinyl Recovery Tower DA 5104 & APE), R03 10A-D(Vinyl Extraction Tower-DA 5110 & AEP), P01 11C, 11E, 11H, 12C, 12E, 13C, 14C, 14E, 15C(Six Polykettles and Three Paste Strippers & APE), T02 16A-D(Paste Storage Tanks North Nest #1-FB-5501, FB-5502, FB-5503 and FB-5504), T03 17A-17D(Paste Storage Tanks South Nest #2, FB-5505, FB-5506, FB-5507 and FB-5508, T04 18A&B(Paste Storage Tanks West Nest #3, FB-5509 and FB-5510), T10 19A-~~19C~~19B(Recovered Vinyl Acetate Rework Storage Tanks, ~~FB-5521,~~ ~~FB-5522~~ FA-5522 and FB-5523. Manufacturer: John Zinc Model: EEF-QS-10 Utility Non-assisted Flare Control Efficiency: 98.0% (VOC and organic HAP) **Includes HON and MON Group 1 Continuous Process Vents, Group 2 Process Wastewater Streams**
	F01-1A	**AAR Knockout Pot** Control Device: FLARE, BA-5000
	F01-1B	**FLARE Knockout Drum** Control Device: FLARE, BA-5000

APPLICABLE REGULATIONS:

401 KAR 63:015, Flares, applies to the opacity of the FLARE.

401 KAR 63:002, Section 2 (4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(ii), 40 C.F.R. 63.980 to 63.999 (Subpart SS), National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, as referenced by 40 CFR 63, Subpart FFFF.

1. **Operating Limitations:**
   a. Pursuant to 40 CFR 63.11(b)(3), the flare shall be operated at all times when emissions may be vented to it.
   b. Pursuant to 40 CFR 63.11(b)(5), the flare shall be operated with a flame present at all times.
   c. Pursuant to 40 CFR 63.11(b)(6 and 7), 40 CFR 63.116(a)(2 and 3), 40 CFR 63.987(b), and 40 CFR 63.2450(f)(1), the non-assisted flare shall be operated in accordance with the net heating value and exit velocity requirements, as specified in (1) through (3) below:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Pursuant to 40 CFR 63.11(b)(6)(ii) and 40 CFR 63.987(b)(3)(ii), the non-assisted flares shall be used only with the net heating value of the gas being combusted at 7.45M/scm (200 Btu/scf) or greater. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K\sum_{i=1}^{n} C_i * H_i$$

Where:

H_T = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based oncombustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volumecorresponding to one mole is 20 °C;

$K_1 = 1.740 \times 10^{-7}$ (parts per million by volume)$^{-1}$ (gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

n = number of sample components;

C_i = Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) under the conditions specified in 63.997(e)(2)(iii)(D)(*1*) through (*3*). Hydrogen and carbon monoxide are measured by ASTM D1946–90; and

H_j = Net heat of combustion of sample component j, kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

(2) Pursuant to 40 CFR 63.11(b)(7)(iii), the permittee shall design and operate the non-assisted flare with an exit velocity, as determined by the method specified in c(3) below, less than the velocity V_{max} and less than 122m/sec (400 ft/sec). The maximum permitted velocity, V_{max}, shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

Where:

V_{max} = Maximum permitted velocity, m/sec;

28.8 = Constant

31.7 = Constant

H_T = The net heating value as determined by c.(1) above.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) Pursuant to 40 CFR 63.11(b)(6)(i)(B), 40 CFR 63.11(b)(7)(i) and 40 CFR 63.987(b)(3)(iii), the actual exit velocity of the flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR 60, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip. The net heating value of the gas being combusted in a flare shall be calculated using the equation in c.(1) above.

c. ~~d.~~ Refer to 40 CFR 63.2540 and 40 CFR 63, Subpart FFFF, Table 12, for general provisions.

d. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Compliance Demonstration Method:

a. For compliance with the **1.a. and 1.b. Operating Limitations**, refer to **4. Specific Monitoring Requirements.**

b. For compliance with the **1. Operating Limitations**, **c.** compliance shall be determined by review of the Notification of Compliance Status Report and the semiannual Periodic and Compliance Reports required by 40 CFR 63, Subpart G and 40 CFR 63, Subpart FFFF.

2. Emission Limitations:

a. Pursuant to 401 KAR 63:015, visible emissions from the flare shall not exceed 20 percent opacity for more than three minutes in any one day.

b. Pursuant to 40 CFR 63.11(b)(4), the flare shall be operated with be no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

Compliance Demonstration Method:

For compliance with 401 KAR 63:015 and 40 CFR 63.11(b)(4) visible emissions standards, refer to **3. Testing Requirements**.

3. Testing Requirements:

Pursuant to 40 CFR 63.116(a) and 40 CFR 63.11(b)(4), the permittee shall conduct a visible emission test by EPA Test Method 22, with a 2 hour observation period. The test shall be performed annually, within 180 days of issuance of V-18-035.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 63.114(a)(2), the permittee shall install, calibrate, maintain, and operate a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame. This shall be in accordance to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 40 CFR 63.111 and 40 CFR 63.981, "continuous record" means documentation, either in hard copyor computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in 40 CFR 63.998(b) , except that periods of startup, shutdown, and malfunction shall not be excluded pursuant to 40 CFR 63.2450(e)(4)(vii).

c. For the surge control vessels, fulfill all monitoring requirements per **2. Emission Limitations**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

a. The permittee shall keep an up-to-date, readily accessible record of the following data and, pursuant to 40 CFR 63.998(a)(1)(i), this data shall be included in the flare compliance assessment report as specified in 40 CFR 63.999(a)(2)(iii)(A).
   (1) Pursuant to 40 CFR 998(a)(1)(i)(A), flare design (i.e., steam-assisted, air-assisted, or non-assisted);
   (2) Pursuant to 40 CFR 998(a)(1)(i)(B), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by 40 CFR 63.116(a); and
   (3) Pursuant to 40 CFR 998(a)(1)(i)(C), all periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

b. Pursuant to 40 CFR 63.2450(f)(2)(ii), when complying with **Operating Limitations**, Compliance Demonstration Method a., the permittee shall keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity and shall include these records in the flare compliance report required in 40 CFR 63.999(a)(2).

c. Pursuant to 40 CFR 63.118(a) and 40 CFR 63.998(a)(1)(ii and iii), the permittee shall keep the following records up-to-date and readily accessible:
   (1) Pursuant to 40 CFR 63.998(a)(1)(ii), hourly records of whether the monitor was continuously operating and whether the pilot flame was continuously present during each hour.
   (2) 40 CFR 63.998(a)(1)(iii), records of the times and duration of all periods during which the pilot flame is absent or the monitor is not operating for each operating day determined according to the procedures specified in 40 CFR 63.152(f).

6. Specific Reporting Requirements:

a. The permittee shall submit to the Division Periodic Reports of the following recorded information according to the schedule in 40 CFR 63.152.
   (1) Pursuant to 40 CFR 63.118(f)(2), reports of the duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data as defined in 40 CFR 63.152(c)(2)(ii)(A) and 40 CFR 63.999(c)(6)(i).
   (2) Pursuant to 40 CFR 63.118(f)(5), reports of the times and durations of all periods in which the pilot flame was absent, as recorded in **5. Specific Recordkeeping Requirements c.(2).**

b. Refer to **Section F.**

7. Specific Control Equipment Operating Conditions:

a. Pursuant to 40 CFR 63.2450, the permittee must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to 40 CFR 63, Subpart FFFF at all times~~, except during periods of startup, shutdown, and malfunction~~, and the permittee must meet the requirements specified in 40 CFR 63.2455 through 40 CFR 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in 40 CFR 63.2450(b through v~~s~~).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

TANK FARM

EP	EU	Emission Unit/Point Description
T01, T09	T01, T09	**Methyl Acetate/Methanol Storage Tanks** Tank Description: Two (2) Internal Floating Roof Tanks with primary seal (vapor-mounted) and secondary seal (rim-mounted); Capacity: 110,000 gallons each; Maximum Throughput: 22,000,000 gallons/yr each Construction Date: 1959 Maximum True Vapor Pressure: 3.081 psia **HON Group 1 Storage Vessels**
T01	T01	Methyl Acetate/Methanol Storage Tank, FB-1513
T09	T09	Methyl Acetate/Methanol Storage Tank, FB-5538
F01(16, 17)	T02-16A through 16D T03-17A through 17D	**Paste Storage Tanks Nests #1 and #2** Tank Description: Eight (8) Fixed Roof Tanks Capacity: 51,000 gallons each; Construction Date: 1959 Control Device: FLARE, BA-5000 (see Section B, EP-F01) Operating Scenario #1: Fixed Roof Tanks for receipt of paste from the Polymerization Area and for feed for SAP Area Maximum throughput: 60,000,000 gallons/yr as methanol each nest Maximum True Vapor Pressure: 10.8542 psia Operating Scenario #2: Fixed Roof Tanks for storing stripper overheads (primarily vinyl acetate and methanol) from the Paste Stripper Accumulators P01-11H, P04-13C, and P07-15C. Maximum throughput: 355,200 gallons/yr total Maximum True Vapor Pressure: 2.3622 psia **MON Group 1 Storage Tanks**
F01(16A-16D)	T02 16A-16D	Paste Storage Tanks North Nest #1, FB-5501, FB-5502, FB-5503 & FB-5504
F01(17A-17D)	T03 17A-17D	Paste Storage Tanks South Nest #2 , FB-5505, FB-5506, FB-5507 & FB-5508
F01(18A,18B)	T04 18A, 18B	**Paste Storage Tanks West Nest #3**, FB-5509 and FB-5510 Tank Description: Fixed Roof Tanks Capacity: 78,800 gallons each; Construction Date: 1984 Control Device: FLARE, BA-5000 (see Section B, EP-F01) Operating Scenario #1: Fixed Roof Tanks for receipt of paste from the Polymerization Area and for feed for SAP Area Maximum throughput: 60,000,000 gallons/yr as methanol total Maximum True Vapor Pressure: 10.8542 psia Operating Scenario #2: Fixed Roof Tanks for storing stripper overheads (primarily vinyl acetate and methanol) from the Paste Stripper Accumulators P01-11H, P04-13C, and P07-15C. Maximum throughput: 355,200 gallons/yr total Maximum True Vapor Pressure: 3.4610 psia **MON Group 1 Storage Tanks**
T05	T05	**Methanol Storage Tank**, FB-5531 Tank Description: Internal Floating Roof Tank with primary seal (Vapor-mounted) and secondary seal (Rim-mounted) storing “fresh” methanol (95%) and recovered methanol (5%) from the Polymethanol Tower, DA-5103 Capacity: 51,000 gallons; Construction Date: 1959 Maximum throughput: 3,120,000 gallons/yr Maximum True Vapor Pressure: 1.3917 psia **MON Group 1 Storage Tank**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP	EU	Emission Unit/Point Description
T06	T06	**Methanol Saponification Tank System (4)**, FB-5532, FB-5533, FB-5534 and FB-5535 Tank Description: Internal Floating Roof Tanks with primary seal (Vapor-mounted) primarily storing recovered methanol from the SAP Methanol Tower (DA-5303) and the Polymethanol Tower (DA-5103) and also storing Mother Liquor. Tank Capacity: 51,000 gallons each; Construction Date: 1959 Maximum Throughput: 134,028,000 gallons/yr (total) Maximum True Vapor Pressure: 2.619 psia **HON Group 1 Storage Vessels**
T07, T08	T07,T08	**Mother Liquor Storage Tanks** Tank Description: Two (2) Internal Floating Roof Tank with Primary Seal (Vapor-mounted) and Secondary Seal (Rim-mounted) Capacity: 215,000 gallons each; Construction Date: 1959 Maximum Throughput: 138,809,600 gallons/yr each Maximum True Vapor Pressure: 1.9093 psia **HON Group 1 Storage Vessels**
T07	T07	N. Mother Liquor Storage Tank, FB-5536
T08	T08	S. Mother Liquor Storage Tank, FB-5537
F01(19A-~~19C~~19B)	T10-19A-~~19C~~19B	**Recovered Vinyl Acetate Rework Storage Tanks ~~(3), FB-5521, FB-5522~~(2), FA-5522** and FB-5523 Capacity:~~ FB-5521/FB-5522 - 14,800 gallons each~~ FA-5522 – 30,400 gallons, FB-5523 - 15,220 gal Construction Date: ~~1959 for FB-5521/FB-5523,~~ 2019 for FA-5522, 2015 for FB-5523 Control Device: FLARE, BA-5000 (see Section B, EP-F01) Operating Scenario #1: Fixed roof tanks storing recovered vinyl acetate from the Vinyl Re-distillation Tower (DA-5105) and/or fresh vinyl acetate from pump GA-5112 A/B. Maximum throughput: 39,420,000 gallons/yr total Maximum True Vapor Pressure: 2.2002 psia Operating Scenario #2: Fixed roof tanks storing stripper overheads (primarily vinyl acetate and methanol) from the Paste Stripper Accumulators P01-11H, P04-13C, and P07-15C. Maximum throughput: 355,200 gallons/yr total Maximum True Vapor Pressure: 2.3622 psia **MON Group 1 Storage Tanks**
T11-1 **T11-2**	T11	**Acetic Acid Tanks (4)** Tank Description: Fixed Roof Tanks FB-1501-71,000 gal, FB-1502 - 110,000 gal, FB-1503-204,000 gal, FB-1517/FB-4517-450,000 gal Operating Scenario #1: Acetic Acid Storage Maximum Throughput: 31,536,000 gallons/yr total Operating Scenario #2: Methyl Acetate storage in FB-1517/FB-4517 Maximum Throughput: 2,250,000 gallons/yr in FB-1517/FB-4517 Maximum True Vapor Pressure: 0.5998 psia Construction Date: 1959 for FB-1501, FB-1502, FB-1503 Construction Date: 1978 for FB-1517/FB-4517
T14	T14	**Equipment Leaks (Tank Farm Fugitives)** Light Liquid Valves: 625 Light Liquid Pumps: 28 Connectors: 2,479 Instrumentation Systems: 104 Pressure Relief Devices Light Liquid: 35

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP	EU	Emission Unit/Point Description
T15	T15	**Maintenance Wastewater/Group 2 Wastewater Tanks , FT-1, FT-2, FT-3 and FT-4** Capacity: 21,000 gallons each Construction Date: January 9, 2014 Tank Description: Frac Tanks Operating Scenario: Maintenance wastewater from 200/250/400/600 Line Boilouts **MON Maintenance Wastewater Streams** Maximum throughput: 84,000 gallons/yr total Maximum True Vapor Pressure: 0.3064 psi

The equipment leak component count for the Tank Farm, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2.(2)(r), 40 C.F.R. 60.110b to 60.117b (Subpart Kb), Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. Pursuant to 40 CFR 63.2525(c), the source has elected to assign T04-(18A-18B) and T10-(19A/B) to a MCPUand to comply with the requirements for Group 1 storage tanks under 40 CFR 63, Subpart FFFF which also demonstrates compliance with the requirements of 40 CFR 60, Subpart Kb.

401 KAR 63:002, Section 2 (4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, applies to the storage vessels at EU-T01, T06, T07, T08, T09 and T15, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.; 40 CFR 63, Subpart H applies to the equipment leaks at EU T14 and the storage vessels at EU T01 and T06-T09, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(ii), 40 C.F.R. 63.980 to 63.999 (Subpart SS), National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.; (40 CFR 63, Subpart SS), as referenced by 40 CFR 63, Subpart FFFF.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

401 KAR 63:002, Section 2.(4)(mm), 40 C.F.R. 63.1060 to 63.1067 (Subpart WW), National Emission Standards for Storage Vessels (Tanks) - Control Level 2. This regulation applies to tank EU-T05. (40 CFR 63, Subpart WW), as referenced by 40 CFR 63, Subpart FFFF.

PRECLUDED REGULATIONS:
Refer to **Section B, Group Requirements.**

1. **Operating Limitations:**
   a. Pursuant to 40 CFR 63.2445(d), if a 40 CFR 63, Subpart FFFF Group 2 emission point becomes a Group 1 emission point, the permittee must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR 63, Subpart FFFF must be conducted within 150 days after the switch occurs.
   b. Refer to 40 CFR 63.103(a) for general provisions.
   c. Refer to 40 CFR 63.2540 for general provisions.
   ~~c.~~d. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

   Storage Vessels
   ~~d.~~e. Pursuant to 40 CFR 63.119(a)(1), for the Group 1 storage vessels at EU-T01 and T06-T09 storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the permittee shall reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining a fixed roof and internal floating roof (IFR) in accordance with the requirements in 40 CFR 63.119(b), or equivalent as provided in 40 CFR 63.121.
   ~~e.~~f. Pursuant to 40 CFR 63.119(a)(1) and 40 CFR 63.119(b), for the HON Group 1 storage vessels at EU-T01 and T06-T09, the permittee shall comply with the following requirements.
      (1) Pursuant to 40 CFR 63.119(b)(1), the IFR shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the following periods:
         (i) During the initial fill.
         (ii) After the vessel has been completely emptied and degassed.
         (iii) When the vessel is completely emptied before being subsequently refilled.
      (2) Pursuant to 40 CFR 63.119(b)(2), when the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical.

      Note: The intent of 40 CFR 63.119(b)(1 and 2), is to avoid having a vapor space between the floating roof and the stored liquid for extended periods. Storage vessels may be emptied for purposes such as routine storage vessel maintenance, inspections,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

petroleum liquid deliveries, or transfer operations. Storage vessels where liquid is left on walls, as bottom clingage, or in pools due to floor irregularity are considered completely empty.

(3) Pursuant to 40 CFR 63.119(b)(3)(iii), each IFR shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device shall consist of a liquid-mounted seal, a metallic shoe seal, or two seals mounted one above the other so that each forms a continuous closure that completely covers the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

space between the wall of the storage vessel and the edge of the IFR. The lower seal may be vapor-mounted, but both must be continuous seals.

(4) Pursuant to 40 CFR 63.119(b)(4), automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports.

(5) Pursuant to 40 CFR 63.119(b)(5)(i through vii), each IFR shall meet the following specifications:

(i) Each opening in a noncontact IFR except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface.

(ii) Each opening in the IFR except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket.

(iii) Each penetration of the IFR for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(iv) Each automatic bleeder vent shall be gasketed.

(v) Each rim space vent shall be gasketed.

(vi) Each penetration of the IFR that allows for passage of a ladder shall have a gasketed sliding cover.

(vii) Each penetration of the IFR that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(6) Pursuant to 40 CFR 63.119(6), each cover or lid on any opening in the IFR shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be air-tight when they are closed. Rim space vents are to be set to open only when the IFR is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

~~f.~~g. Pursuant to 40 CFR 63.2470(a), for the MON Group 1 storage tanks at EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B) and T10-(19A-~~19C~~19B) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the permittee shall reduce total organic HAP emissions by venting emissions through a closed vent system to a flare.

~~g.~~h. Pursuant to 40 CFR 63.2470(a), for the MON Group 1 storage tank at EU-T05, equipped with an IFR and storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the permittee shall comply with the requirements of 40 CFR 63 Subpart WW to operate and maintain an IFR, according to the following design requirements:

(1) Pursuant to 40 CFR 63.1063(a)(1)(i)(C), for rim seals, the IFR shall be equipped with two seals mounted one above the other. The lower seal may be vapor-mounted.

(2) Pursuant to 40 CFR 63.1063(a)(2)(i through viii), for deck fittings, the openings through the deck of the floating roof shall be equipped with the following:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) Each opening except those for automatic bleeder vents (vacuum breaker vents) and rim space vents shall have its lower edge below the surface of the stored liquid.
(ii) Each opening except those for automatic bleeder vents (vacuum breaker vents), rim space vents, leg sleeves, and deck drains shall be equipped with a deck cover. The deck cover shall be equipped with a gasket between the cover and the deck.
(iii) Each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be equipped with a gasketed lid.
(iv) Each opening for a sample well or deck drain (that empties into the stored liquid) may be equipped with a slit fabric seal that covers at least 90 percent of the opening, instead of a deck cover.
(v) Each cover on access hatches and gauge float wells shall be designed to be bolted or fastened when closed.
(vi) Each opening for an unslotted guidepole shall be equipped with a pole wiper, and each unslotted guidepole shall be equipped with a gasketed cap on the top of the guidepole.
(vii) Each opening for a slotted guidepole shall be equipped with one of the following control device configurations:
(A) A pole wiper and a pole float. The wiper or seal of the pole float shall be at or above the height of the pole wiper.
(B) A pole wiper and a pole sleeve.

(3) Pursuant to 40 CFR 63.1063(b)(1), the floating roof shall float on the stored liquid surface at all times, except when the floating roof is supported by its leg supports or other support devices (e.g., hangers from the fixed roof).
(4) Pursuant to 40 CFR 63.1063(b)(2), when the storage vessel is storing liquid, but the liquid depth is insufficient to float the floating roof, the process of filling to the point of refloating the floating roof shall be continuous and shall be performed as soon as practical.
(5) Pursuant to 40 CFR 63.1063(b)(3), each cover over an opening in the floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall be closed at all times, except when the cover must be open for access.
(6) Pursuant to 40 CFR 63.1063(b)(4), each automatic bleeder vent (vacuum breaker vent) and rim space vent shall be closed at all times, except when required to be open to relieve excess pressure or vacuum, in accordance with the manufacturer's design.
(7) Pursuant to 40 CFR 63.1063(b)(5), each unslotted guidepole cap shall be closed at all times except when gauging the liquid level or taking liquid samples.

i. Pursuant to 40 CFR 63.2470(f), for the MON Group 1 storage tanks at EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B), T10-(19A-19B), and T05,:the permittee must comply with 40 CFR 63.2470(f)(1)-(3) during storage tank shutdown operations until the vapor space concentration in the storage tank is less than 10 percent of the LEL using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer’s specifications:
(1) Remove liquids from storage tanks as much as practicable.
(2) Comply with one of the following:
(i) Reduce HAP emissions through closed vent system to flare.
(ii) Reduce HAP by 95 wt% through closed vent system to any combination of non-

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

flare control devices.

(iii) Route to a fuel gas system or process and meet the requirements specified in 40 CFR 63.982(d) and the applicable requirements in 40 CFR 63.2450(e)(4).

~~(7)~~

Closed Vent Systems

Note: The closed vent system is constructed of hard piping as defined by 40 CFR 63.981.

~~h.~~j. Pursuant to 40 CFR 63.2450(e), all MON Group 1 storage tanks at EU T02-(16A-16D), T03-(17A-17D), T04-(18A & 18B) and T10-(19A-~~19C~~19B) shall be vented to a flare that complies with all applicable requirements of 40 CFR 63.2450(f).

~~i.~~k. Pursuant to CFR 63.2450(e)(2), 40 CFR 63.983(a) and 40 CFR 63.982(b), the permittee shall comply with the following provisions for the closed vent systems routing the vapors from the Group 1 storage tanks to the FLARE, EP-F01.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Pursuant to 40 CFR 63.983(a)(1), closed vent systems shall be designed and operated to collect the regulated material vapors from the emission points, and to route the collected vapors to a control device.

(2) Pursuant to 40 CFR 63.983(a)(2), closed vent systems shall be operated at all times when emissions are vented to, or collected by, them.

(3) Pursuant to 40 CFR 63.983(a)(3), ~~except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines,~~ the permittee shall comply with the provisions of either 40 CFR63.983(a)(3)(i or ii) of 40 CFR 63.983, for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Pursuant to 40 CFR 63.983(a)(3)(i), properly install, maintain, and operate a flow indicator at the entrance to any bypass line that is capable of taking periodic readings. Records shall be generated as specified in 40 CFR 63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Pursuant to 40 CFR 63.983(a)(3)(ii), secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

(4) Pursuant to 40 CFR 63.983(d)(1), if there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by 40 CFR 63.983(b)(1)(i)(B), the permittee shall comply with either of the following procedures.

(i) Pursuant to 40 CFR 63.983(d)(1)(i), eliminate the leak.

(ii) Pursuant to 40 CFR 63.983(c), monitor the equipment according to the procedures therein.

(5) Pursuant to 40 CFR 63.983(d)(2), leaks, as indicated by an instrument reading greater than 500 ppm by volume above background or by visual inspections, shall be repaired as soon as practical.

(i) Pursuant to 40 CFR 63.983(d)(2)(i), a first attempt at repair shall be made no later than 5 days after the leak is detected.

(ii) Pursuant to 40 CFR 63.983(d)(2)(ii), except as provided in 40 CFR 63.983(d)(3) for delay of repair, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

j. Pursuant to 40 CFR 63.983(a)(3), for EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B) and T10-(19A-~~19C~~19B), and except as provided by 40 CFR 63.2450(e)(4) per 40 CFR 63.2450(e)(6)(ii), ~~except for equipment needed for safety purposes such aspressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines,~~ the permittee shall comply with the provisions of either of the following for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere:

(1) Pursuant to 40 CFR 63.983(a)(3)(i), properly install, maintain, and operate a flow indicator at the entrance to any bypass line that is capable of taking periodic readings.

(2) Pursuant to 40 CFR 983(a)(3)(ii) , secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

k. Pursuant to 40 CFR 63.2450(e)(6), the use of a bypass line at any time on a closed vent system to divert emissions subject to the requirements in Tables 1 through 7 to 40 CFR 63 Subpart FFFF to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 of 40 CFR 63 Subpart FFFF is an emissions standard deviation.

l~~k~~. Pursuant to 40 CFR 63.983(d)(1), for, EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B) and T10-(19A-~~19C~~19B) if there are visible, audible, or olfactory indications of equipment leaks at the time of the annual visual inspections required by 40 CFR 63.983(b)(1)(i)(B), the permittee shall comply with either of the following procedures.

(1) Pursuant to 40 CFR 63.983(d)(1)(i), eliminate the leak.

(2) Pursuant to 40 CFR 63.983(c), monitor the equipment according to the procedures therein.

m~~l~~. Pursuant to 40 CFR 63.983(d)(2), EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B) and T10-(19A-~~19C~~19B), leaks, as indicated by an instrument reading greater than 500 ppm byvolume above background or by visual inspections, shall be repaired as soon as practical.

(1) Pursuant to 40 CFR 63.983(d)(2)(i), a first attempt at repair shall be made no later than 5 days after the leak is detected.

(2) Pursuant to 40 CFR 63.983(d)(2)(ii), except as provided in 40 CFR 63.983(d)(3) for delay of repair, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

Equipment Leaks

n~~m~~. Pursuant to 40 CFR 63.160, 40 CFR 63.2480(a) and 40 CFR 63, Subpart FFFF, Table 6, for the equipment leaks in organic hazardous air pollutant service, the permittee shall implement an LDAR program in accordance with 40 CFR 63, Subpart H containing the following elements, except as provided by 40 CFR 63.2480(b)(7):

(1) Pursuant to 40 CFR 63.162(c), each piece of equipment leaks subject to 40 CFR 63 Subpart H or 40 CFR 63, Subpart FFFF shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63, Subpart H or 40 CFR 63, Subpart FFFF.

(2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63:172 through 40 CFR 63.174, the permittee shall:

(i) Clearly identify the leaking equipment.

(ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored and no leak is detected during that monitoring.

(iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

~~(iii)~~(3) Pursuant to 40 CFR 63.2480(b)(7) for each piece of equipment subject to 40 CFR 63, Subpart FFFF that is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, the permittee must

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this requirement.

o. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(1) and (2) for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of 40 CFR 63.165 of Subpart H. [40 CFR 63.2480(e)]

p. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4) and (5), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(3), (6), (7), and (8) for all pressure relief devices in organic HAP service.

(1) Pursuant to 40 CFR 63.2480(e)(3), implement the pressure release management requirements outlined in 40 CFR 63.2480(e)(3)(i) – (v).

(2) Pursuant to 40 CFR 63.2480(e)(6), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 63.2480(e)(6)(i) – (iii).

(3) Pursuant to 40 CFR 63.2480(e)(7), the permittee must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 CFR 63.2480(e)(7)(i) – (iii)

(4) Pursuant to 40 CFR 63.2480(e)(8), the permittee shall not install any flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023.

Maintenance Wastewater Streams

q~~n~~. Pursuant to 40 CFR 63.2485(a) and 40 CFR 63, Subpart FFFF, Table 7, item 2, the permittee shall comply with the requirements in 40 CFR 63.105(a) and the requirements referenced therein, except as specified in 40 CFR 63.2485, for the maintenance wastewaters from Boilout of the Saponifiers and Slurry Tanks, Centrifuges and Filtrate

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Tanks, Turbo Dryers, and Post Dryers in the SAP Area containing organic HAPs listed in 40 CFR 63, Subpart FFFF, Tables 8 and 9.

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements** for Closed Vent Systems Storage Vessels and Maintenance Wastewater Tanks.

b. Pursuant to 40 CFR 63.162(a), for the equipment leaks, compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

2. Emission Limitations:

Equipment Leaks and Closed Vent Systems

For the equipment leaks, the permittee shall comply with the fugitive equipment leak emissions standards, pursuant to 40 CFR 63.160 through 40 CFR 63.182, as applicable.

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:

40 CFR 63.163(a):	Implementation and compliance provisions
40 CFR 63.163(b):	Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c) (except (c)(3)):	Repair procedures and time frames
40 CFR 63.163(d):	Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j):	Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors:

40 CFR 63.164(a)-(e):	Operational requirements
40 CFR 63.164(f):	Criteria for Leak detection
40 CFR 63.164(g):	Repair procedures and time frames
40 CFR 63.164(h)-(i):	Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vapor service:

40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~:	Operational requirements
40 CFR 63.2480(e)(2)~~40 CFR 63.165(b)~~:	Pressure release procedures
40 CFR 63.2480(e)(4)~~40 CFR 63.165(c) (d)~~:	Exemptions for specific types of pressure relief devices

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:

40 CFR 63.166(a)-(b):	Operational requirements
40 CFR 63.166(c):	Exemptions for specific types of sampling connection systems

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:

40 CFR 63.167(a)-(c):	Operational requirements
40 CFR 63.167(d)-(e):	Exemptions for specific types of valves

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:

40 CFR 63.168(a):	Operational requirements
40 CFR 63.168(b)-(d):	Monitoring requirements and intervals
40 CFR 63.168(e):	Procedures to determine percent leaking valves
40 CFR 63.168(f):	Leak repair time frames
40 CFR 63.168(g):	First attempt repair procedures

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.168(h): Exemptions for unsafe-to-monitor valves
40 CFR 63.168(i): Exemptions for difficult-to-monitor valves

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:
40 CFR 63.169(a): Monitoring frequency
40 CFR 63.169(b): Leak detection levels
40 CFR 63.169(c): Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:
40 CFR 63.171 Allowances for delay of repair

(9) Pursuant to 40 CFR 63.172, Standards for Closed-vent systems and control devices:
40 CFR 63.172(a)-(b): Operational requirements
40 CFR 63.172(d),(m): Control device requirements
40 CFR 63.172(f)-(g): Monitoring requirements
40 CFR 63.172(h)-(i): Repair procedures and time frames
40 CFR 63.172 (j) (except (j)(3)):Operational requirements for bypass lines
40 CFR 63.172(k)-(l): Exemptions for unsafe-to-inspect and difficult-to-inspect closed-vent systems

(10) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:
40 CFR 63.173(a): Operational requirements
40 CFR 63.173(b): Monitoring requirements and intervals
40 CFR 63.173(c): Leak repair time frames
40 CFR 63.173(d)-(g): Exemptions for specific types of agitators
40 CFR 63.173(h)-(j): Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

(11) Pursuant to 40 CFR 63.174, Standards for connectors in gas/vapor service and in light liquid service.
40 CFR 63.174(a): Operational requirements
40 CFR 63.174(b): Monitoring requirements and intervals
40 CFR 63.174(c): Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d): Leak repair time frames
40 CFR 63.174(e): Monitoring frequency for repaired connectors
40 CFR 63.174(f)-(h): Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i): Procedures to determine percent leaking connectors
40 CFR 63.174(j): Optional credit for removed connectors

(12) Pursuant to 40 CFR 63.175 and 40 CFR 63.168(d)(1)(ii), in Phase III, Quality improvement program for valves: the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:
40 CFR 63.175(a): Quality improvement program alternatives
40 CFR 63.175(b): Criteria for ending quality improvement programs
40 CFR 63.175(c): Alternatives following achievement of less than 2 percent leaking valves target

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.175(d): Quality improvement program to demonstrate further progress
40 CFR 63.175(e): Quality improvement program of technology review and improvement

(13) Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if, in Phase III, Quality improvement program for pumps: calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Polymerization, Saponification, Polyrectification, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart FFFF MCPU) or in the AAR, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart H CMPU) leak, the permittee shall implement the following quality improvement programs for pumps:
40 CFR 63.176(a): Applicability criteria
40 CFR 63.176(b): Criteria for ending the quality improvement program
40 CFR 63.176(c): Criteria for resumption of the quality improvement program
40 CFR 63.176(d): Quality improvement program elements

Compliance Demonstration Method:
Refer to **1. Operating Limitations** Compliance Demonstration b.

3. Testing Requirements:

a. Refer to **3. Testing Requirements** for the FLARE in **Section B**, EP-F01.
b. Pursuant to 40 CFR 63.1063(c)(1), for EU T05, , IFRs shall be inspected as specified in 40 CFR 63.1063(d)(1) before the initial filling of the storage vessel. Subsequent inspections shall be performed as specified in 40 CFR 63.1063(c)(1)(i or ii):
   (1) Pursuant to 40 CFR 63.1063(c)(1)(i)(A), at least once per year as specified in 40 CFR 63.1063(d)(2); and;
   (2) Pursuant to 40 CFR 63.1063(c)(1)(i)(B), each time the storage vessel is completely emptied and degassed, or every 10 years, whichever occurs first, the IFR shall be inspected as specified in 40 CFR 63.1063(d)(1) or;
   (3) Pursuant to 40 CFR 63.1063(c)(1)(ii), IFRs with two rim seals may be inspected as specified in 40 CFR 63.1063(d)(1) each time the storage vessel is completely emptied and degassed, or every 5 years, whichever occurs first.
c. Pursuant to 40 CFR 63.180(a through d), for the equipment leaks, the permittee shall comply with the following test methods and procedures requirements:
   (1) 40 CFR 63.180(b) Monitoring procedures, test methods, and calibration procedures
   (2) 40 CFR 63.180(c) Leak detection monitoring procedures (replacing reference to 40 CFR 63.165(a) with 40 CFR 63.2480(e)(1).
   (3) 40 CFR 63.180(d) Procedures for determining organic HAP service applicability
   (4) Pursuant to 40 CFR 63.180(e), when a flare is used to comply with 40 CFR 63.172(d), the permittee shall comply with 40 CFR 63.180(e)(1 through 3). The permittee is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4).
(ii) Determine the net heating value of the gas being combusted using the techniques in 40 CFR 63.11(b)(6).
(iii) Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) (and 40 CFR 63.11(b)(7)(iii), where applicable).

(5) Pursuant to 40 CFR 63.2515(c): A notification of performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1), if applicable.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 63.119(b), for the Group 1 storage vessels at EU-T01 and T06-T09, the permittee shall comply with the following requirements in accordance with 40 CFR 63.120(a):

(1) Pursuant to 40 CFR 63.120(a)(3), the permittee shall visually inspect the IFR, the primary seal, and the secondary seal, by performing either the inspection required by 40 CFR 63.120(a)(3)(i) or the inspections required by both CFR 63.120(a)(3)(ii and iii) as follows:
(i) Visually inspect the IFR, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years; or
(ii) Visually inspect the IFR and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months, and;
(iii) Visually inspect the IFR, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years.

(2) Pursuant to 40 CFR 63.120(a)(4), if during the inspections required by paragraph 40 CFR 63.120(a)(2)(i) or 40 CFR 63.120(a)(3)(ii), the IFR is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the permittee shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If this failure cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the permittee may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical.

(3) Pursuant to 40 CFR 63.120(a)(5), except as provided in 40 CFR 63.120(a)(6), for all the inspections required by 40 CFR 63.120(a)(2)(ii), 40 CFR 63.120(a)(3)(i and iii), the permittee shall notify the Division in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Division the opportunity to have an observer present.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Pursuant to 40 CFR 63.120(a)(6), if the inspection required by 40 CFR 63.120(a)(2)(ii), 40 CFR 63.120(a)(3)(i or iii) is not planned and the permittee could not have known about the inspection 30 calendar days in advance of refilling the vessel, the permittee shall notify the Division at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Division at least 7 calendar days prior to refilling.

(5) Pursuant to 40 CFR 63.120(a)(7), if, during the inspections required by 40 CFR 63.120(a)(2)(ii), 40 CFR 63.120(a)(3)(i or iii), the IFR has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the permittee shall repair the items as necessary so that none of the conditions specified exist before refilling the storage vessel with organic HAP.

b. For EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B) and T10-(19A-~~19C~~19B), refer to **4. Specific Monitoring Requirements** for the FLARE **Section B**, F01.

c. Pursuant to 40 CFR 63.1063(d), for EU-T05, inspections shall be conducted as specified in 40 CFR 63.1063(d)(1 through 3), as applicable. If the floating roof fails an inspection, the owner or operator shall comply with the repair requirements of 40 CFR 63.1063(e).

(1) Pursuant to 40 CFR 63.1063(d)(1), floating roof inspections shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seals from within the storage vessel. The inspection may be performed entirely from the top side of the floating roof, as long as there is visual access to all deck components specified in 40 CFR 63.1063(a).

Any of the conditions described in 40 CFR 63.1063(d)(1)(i through v) constitutes inspection failure.

(i) Stored liquid on the floating roof.

(ii) Holes or tears in the primary or secondary seal.

(iii) Floating roof deck, deck fittings, or rim seals that are not functioning as designed (as specified in 40 CFR 63.1063(a)).

(iv) Failure to comply with the operational requirements of 40 CFR 63.1063(b).

(v) Gaps of more than 0.32 centimeters (1/8 inch) between any deck fitting gasket, seal, or wiper (required by 40 CFR 63.1063(a)) and any surface that it is intended to seal.

(2) Pursuant to 40 CFR 63.1063(d)(2), tank-top inspections of the IFR shall be conducted by visually inspecting the floating roof deck, deck fittings, and rim seal through openings in the fixed roof. Any of the conditions described in 40 CFR 63.1063(d)(1)(i) through (d)(1)(iv) constitutes inspection failure. Identification of holes or tears in the rim seal is required only for the seal that is visible from the top of the storage vessel.

(3) Pursuant to 40 CFR 63.1063(e)(1 and 2), conditions causing inspection failures under 40 CFR 63.1063(d) shall be repaired as specified:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) If the inspection is performed while the storage vessel is not storing liquid, repairs shall be completed before the refilling of the storage vessel with liquid.

(ii) If the inspection is performed while the storage vessel is storing liquid, repairs shall be completed or the vessel removed from service within 45 days. If a repair cannot be completed and the vessel cannot be emptied within 45 days, the owner or operator may use up to 2 extensions of up to 30 additional days each. Documentation of a decision to use an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be completely emptied as soon as practical.

Continuous Process Vents and Closed Vent Systems

d. Pursuant to 40 CFR 63.983(b)(1)(i), except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in 40 CFR 63.983(b)(2 and 3), the permittee shall comply with the following requirements for each closed vent system:
   (1) Pursuant to 40 CFR 63.983(b)(1)(i)(A), conduct an initial inspection according to the procedures in 40 CFR 63.983(c); and
   (2) Pursuant to 40 CFR 63.983(b)(1)(i)(B), conduct annual inspections for visible, audible, or olfactory indications of leaks.

e. Pursuant to 40 CFR 63.983(b)(4), for each bypass line, the permittee shall comply with either of the following requirements:
   (1) Pursuant to 40 CFR 63.983(b)(4)(i), if a flow indicator is used, take a reading at least once every 15 minutes.
   (2) Pursuant to 40 CFR 63.983(b)(4)(ii), if the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.

Equipment Leaks

f. Refer to **1. Operating Limitations** Compliance Demonstration Method b. and **3. Testing Requirements**.

Maintenance Wastewater

g. Pursuant to 40 CFR 63.105(b), the permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turnaround)and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
   (1) Pursuant to 40 CFR 63.105(b)(1) ,specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities;
   (2) Pursuant to 40 CFR 63.105(b)(2) ,specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and
   (3) Pursuant to 40 CFR 63.105(b)(3) ,the procedures to be followed when clearing materials from process equipment.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

h Pursuant to 40 CFR 63.105(c), the permittee shall modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure.

i. ~~Pursuant to 40 CFR 63.105(d), the permittee shall incorporate the procedures described in 40 CFR 63.105(b and c) as part of the SSMP required under 40 CFR 63.6(e)(3).~~

5. Specific Recordkeeping Requirements:

a. For the equipment subject to 40 CFR 63, Subparts F, G and H, all records shall be kept in accordance with 40 CFR 63.103(c).

b. All records shall be maintained in accordance with **Section F.2.**

c. Pursuant to 40 CFR 63.2525(b), for the storage tank at EU-T04-(18A & 18B), the permittee shall keep the following applicable records:

(1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced subparts F, G, SS, and WW of 40 CFR Part 63.

(2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:

(i) An identification of storage tanks.

(ii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the level of required control, and for vents, the level of control for each vent.

(iii) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(iv) The process vents, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(v) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(vi) Calculations and engineering analyses required to demonstrate compliance.

(vii) For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR 63.2525(b)(5), constitutes a new operating scenario.

~~(3) Pursuant to 40 CFR 63.2525(j), in the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.~~

(3) Pursuant to 40 CFR 63.2525(l), for each deviation from an emission limit, operating limit, or work practice standard, the permittee must keep a record of the information specified in 40 CFR 63.2525(l)(1) – (3). The records shall be maintained as specified in 40 CFR 63.10(b)(1) of subpart A. In the event that an affected unit does not meet an applicable standard, record the number of deviations.

(i) For each deviation record the date, time, and duration of each deviation.

(ii) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(iii) Record actions taken to minimize emissions in accordance with 40 CFR 63.2450(u) and any corrective actions taken to return the affected unit to its

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

normal or usual manner of operation.

Closed Vent Systems

d. The permittee shall keep records as specified in **5. Specific Recordkeeping Requirements** for the FLARE in **Section B**, EP-F01.

e. Pursuant to 40 CFR 63.998(d)(1), for the closed vent systems, the permittee shall record the following information.

(1) The identification of all parts of the closed vent system that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by 40 CFR 63.983(b)(2)(ii) or (iii).

(2) Pursuant to 40 CFR 63.998(d)(1)(ii), the information specified in either 63.998(d)(1)(ii)(A) or (B), as applicable, for each closed vent system that contains

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

bypass lines that could divert a vent stream away from the flare and to the atmosphere.

(i) Hourly records of whether the flow indicator specified under 40 CFR 63.983(a)(3)(i) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the flare or the flow indicator is not operating; or

(ii) Where a seal mechanism is used to comply with 40 CFR 63.983(a)(3)(ii), hourly records of flow are not required. In such cases, the permittee shall record that the monthly visual inspection of the seals or closure mechanisms has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(3) Pursuant to 40 CFR 63.998(d)(1)(iii), the following information, when a leak is detected as specified in 40 CFR 63.983(d)(2). These records shall be kept for 5 years.

(i) The instrument and equipment identification number and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) The maximum instrument reading measured by the procedures in 40 CFR 63.983(c) after the leak is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(vi) Copies of the Periodic Reports as specified in 40 CFR 63.999(c), if records are not maintained on a computerized database capable of generating summary reports from the records.

(4) Pursuant to 40 CFR 63.998(d)(iv), for each instrumental or visual inspection conducted in accordance with 40 CFR 63.983(b)(1) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

f. Pursuant to 40 CFR 63.123(a), for the storage vessels at EU-T01 and T06-T09, the permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation.

g. Pursuant to 40 CFR 63.123(c), for the storage tanks at EU-T01 and T06-T09, an owner or operator who elects to comply with 40 CFR 63.119(b) shall keep a record that each inspection required by 40 CFR 63.120(a) was performed.

h. Pursuant to 40 CFR 63.123(g), for the storage tanks at EU-T01 and T06-T09, an owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120(a)(4) shall keep in a readily accessible location, the documentation specified in 40 CFR 63.120(a)(4).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. Pursuant to 40 CFR 63.1065(a), for the storage tanks at EU-T02-(16A-16D), T03-(17A-17D), T04-(18A & 18B) and T10-(19A-~~19C~~19B), a record shall be kept for as long as the liquidis stored of the dimensions of the storage vessel, an analysis of the capacity of the storagevessel, and an identification of the liquid stored.

j. Pursuant to 40 CFR 63.1065(a), for EU-T05, the permittee shall keep the following records for at least 5 years.
   (1) Pursuant to 40 CFR 63.1065(b)(1), if the floating roof passes inspection, a record shall be kept that includes the information specified in 40 CFR 63.1065(b)(1)(i and ii). If the floating roof fails inspection, a record shall be kept that includes the information specified in 40 CFR 63.1065(b)(1)(i through v):
      (i) Identification of the storage vessel that was inspected.
      (ii) The date of the inspection.
      (iii) A description of all inspection failures.
      (iv) A description of all repairs and the dates they were made.
      (v) The date the storage vessel was removed from service, if applicable.
   (2) Pursuant to 40 CFR 63.1065(c), the permittee shall keep a record of the date when a floating roof is set on its legs or other support devices. The permittee shall also keep a record of the date when the roof was refloated, and the record shall indicate whether the process of refloating was continuous.
   (3) Pursuant to 40 CFR 63.1065(d), an owner or operator who elects to use an extension in accordance with 40 CFR 63.1063(e)(2) or 40 CFR 63.1063(c)(2)(iv)(B) shall keep the documentation as required.

k. Pursuant to 40 CFR 63.181(a), for the equipment leaks, the permittee may comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

l. Pursuant to 40 CFR 63.181(b), except as provided in 40 CFR 63.181(e), and amended by 40 CFR 63.2480(f)(18), the following information pertaining to all equipment in each process unit subject to the requirements in40 CFR 63.162 through 40 CFR 63.174 shall be recorded:
   (1) Pursuant to 40 CFR 63.181(b)(i through iii):
      (i) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of 40 CFR 63, Subpart H. Pursuant to 40 CFR 63.2480(b)(3), as an existing source under 40 CFR 63, Subpart FFFF the permittee is not required to develop an initial list of identification numbers for connectors that are part of the MCPU as would otherwise be required under 40 CFR 63.181(b)(1)(i).
      (ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).
      (iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.
   (2) Pursuant to 40 CFR 63.181(b)(2)(i and ii):

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.2480(e)(4)~~63.165(c)~~, or 40 CFR 63.173(f).

(ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3) and 40 CFR 63.2480(f)(18)(iii) and (iv), a list of identification numbers for pressure relief devices subject to 40 CFR 63.2480(e)(1) ~~40 CFR 63.165(a)~~ and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR 63.2480(e)(2)(ii) and (iii)~~40 CFR 63.165(d)~~.

(4) Pursuant to 40 CFR 63.181(b)(4), individual components in an instrumentation system need not be identified.

(5) Pursuant to 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 63.181(b)(6), the following information shall be recorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i), agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):

(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.172 through 40 CFR 63.174, for any leaks detected as specified in, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

m. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in 40 CFR 60.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

n. Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall be recorded and kept for two years.
   (1) Pursuant 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.
   (2) Pursuant to 40 CFR 63.181(d)(2), the date the leak was detected and the date of first attempt to repair the leak.
   (3) Pursuant to 40 CFR 63.181(d)(3), the date of successful repair of the leak.
   (4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.
   (5) Pursuant to 40 CFR 63.181(d)(5), "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
      (i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. ~~The written procedures may be included as part of the SSMP, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site.~~ In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
      (ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.
   (6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.
   (7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):
      (i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).
      (ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.
   (8) Pursuant to 40 CFR 63.181(d)(8), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

o. Pursuant to 40 CFR 63.181(f) and 40 CFR 63.2480(f)(18)(v), the results of compliance tests required for compressors andthe dates and results of monitoring following a pressure relief valve pressure release subject to 40 CFR 63.2480(e)(1) and (2) shallbe recorded. The results shall include:
   (1) Pursuant to 40 CFR 63.181(f)(1), the background level measured during each compliance test.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(2) 40 CFR 63.181(f)(2), the maximum instrument reading measured at each piece of equipment during each compliance test.

p. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.
   (1) Pursuant to 40 CFR 63.181(g)(1)(i through iv), the design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i through iv) shall be retained for the life of the equipment.
      (i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.
      (ii) The dates and descriptions of any changes in the design specifications.
      (iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63 Subpart A.
      (iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.
   (2) Pursuant to 40 CFR 63.181(g)(2)(i through iii), records of operation of closed-vent systems and control devices shall be retained for 2 years.
      (i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.
      (ii) Dates and durations during which the monitoring system or monitoring device is inoperative.
      (iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.
   (3) Pursuant to 40 CFR 63.181(g)(3)(i and ii), records of inspections of closed-vent systems subject to the provisions of 40 CFR 63.172, shall be retained for 2 years.
      (i) For each inspection conducted in accordance with the provisions of 40 CFR 63.172(f)(1 or 2) during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.
      (ii) For each inspection conducted in accordance with 40 CFR 63.172(f)(1 or 2) during which leaks were detected, the information specified in 40 CFR 63.181(d) shall be recorded.

q. Pursuant to 40 CFR 63.175 or 40 CFR 63.176, if the permittee implements any of the quality improvement programs, the records specified in 40 CFR 63.181(h) shall be maintained for a period of the quality improvement plan for the process unit.

r. Pursuant to 40 CFR 63.2525(n), for each flow event from a bypass line subject to the requirements 63.2450(e)(6), the permittee must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 to this subpart, the permittee must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

using process knowledge and engineering estimates.

s. Pursuant to 40 CFR 63.2525(q), for each pressure relief device subject to the pressure release management work practice standards in 40 CFR 63.2480(e), the permittee must keep the records specified in 40 CFR 63.2525(q) (1) - (3).

(1) Records of the prevention measures implemented as required in 40 63.2480(e)(3)(ii).

(2) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past 5 calendar years.

(3) For each release to the atmosphere, the permittee must keep the records specified in 40 CFR 63.2525(q)(3)(i) - (iv).

(ix) The start and end time and date of each pressure release to the atmosphere;

(x) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event;

(xi) Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 63.2480(e)(7)(i);

(xii) For any corrective action analysis for which implementation of corrective actions are required in 40 CFR 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

~~q.~~

All Process Equipment

~~r.~~t. Pursuant to 40 CFR 63.981, “continuous record” means any documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in 40 CFR 63.998(b), except that periods of startup, shutdown, and malfunction shall not be excluded pursuant to 40 CFR 63.2450(e)(4)(vii).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~s.~~u. Pursuant to 40 CFR 63.998(b)(1), values that are recorded and monitored at least once every 15 minutes meet the definition of "continuous records."

Maintenance wastewater

v. Pursuant to 40 CFR 63.105(e) and 40 CFR 63.2485(q), the permittee shall maintain a record of the information required by 40 CFR 63.105(b and c) ~~as part of the start-up, shutdown, and malfunction planrequired under 40 CFR 63.6(e)(3)~~.

Storage vessels

w. Pursuant to 40 CFR 63.2470(f)(3), for the MON Group 1 storage tanks at EU-T02-(16A-16D), T03-(17A-17D), T04-(18A&18B), T10-(19A-19B), and T05, maintain records to demonstrate compliance with general duty requirements in 40 CFR 63.2450(u), including records of existing standard site procedures used to empty and degas equipment for safety purposes.

~~t.~~

6. **Specific Reporting Requirements:**
   a. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, for equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit a Compliance report containing the information specified in 40 CFR 63.2520(e)(1 through 10), semiannually.
   b. Pursuant to 40 CFR 63.2520(b) and 40 CFR 63, Subpart FFFF, Table 11, the permittee shall submit a precompliance report as specified in 40 CFR 63.2520(c)(1 through c) at least 6 months prior for new sources, with an application for approval of construction or reconstruction.
   c All reports shall be submitted in accordance with 40 CFR 63.103(d).
   d For equipment subject to 40 CFR 63 Subparts F, G and H the permittee shall submit the following reports:

      Pursuant to 40 CFR 63.182(a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182(d)(2).

   e. The permittee shall furnish reports as specified in **5. Specific Recordkeeping Requirements**.
   f. Pursuant to 40 CFR 63.2520(e), Once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, submit all subsequent reports to the EPA via the CEDRI, which can be accessed through the EPA's CDX(https://cdx.epa.gov/). Report using the appropriate report template located on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under 40 CFR 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in 40 CFR 63 Subpart FFFF, regardless of the method in which the report is submitted. The permittee shall not use CEDRI to submit information claimed as CBI.
   g. Pursuant to 40 CFR 63.2520(e), the permittee may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in this paragraph (e) provided the permittee meets the requirements outlined in 40 CFR 63.2520(i) or (j), as applicable. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.2520(h)(1) through (7).
   ~~f.~~h. Refer to **Section F.5.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Storage Vessels

~~g.~~i. Pursuant to 40 CFR 63.122(a)(4), for the storage vessels at EU-T01 and T06-T09, the permittee shall submit Periodic Reports as required by 40 CFR 63.152(c).

~~h.~~j. Pursuant to 40 CFR 63.122(d), for the storage vessels at EU-T01 and T06-T09, the permittee shall submit, as part of the Periodic Report required under 40 CFR 63.152(c), the results of each inspection conducted in accordance with 40 CFR 63.120(a) in which a failure is detected in the control equipment.

(1) Pursuant to 40 CFR 63.122(d)(1), for vessels for which annual inspections are required under 40 CFR 63.120(a)(3)(ii), the following specifications and requirements apply:

(i) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(ii) Except as provided in 40 CFR 63.122(d)(1)(iii), each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

~~(ii)~~(iii) If an extension is utilized in accordance with 40 CFR 63.120(a)(4), the permittee shall, in the next Periodic Report, identify the vessel; include the documentation specified in 40 CFR 63.120(a)(4); and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(2) Pursuant to 40 CFR 63.122(d)(2), for vessels for which inspections are required under 40 CFR 63.120(a)(3)(i or iii), the following specifications and requirements apply:

(i) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) Each Periodic Report required under 40 CFR 63.152(c) shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall alsodescribe the nature of and date the repair was made.

~~i.~~k. Pursuant to 40 CFR 63.122(h), for the storage vessels at EU-T01 and T06-T09, the permittee who elects to comply with 63.119(b) shall submit the reports specified below:

(1) Pursuant to 40 CFR 63.122(h)(1), in order to afford the Division the opportunity to have an observer present, the owner or operator shall notify the Division of the refilling of a storage vessel that has been emptied and degassed.

(2) Pursuant to 40 CFR 63.122(h)(1)(i), the notification shall meet the requirements of either 40 CFR 63.120 (a)(5 or 6), as applicable.

~~j.~~l. Pursuant to 40 CFR 63.1066(b), for EU-T05, the permittee shall report, as applicable, in the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

periodic report specified in 40 CFR 63, Subpart FFFF.

(1) Pursuant to 40 CFR 63.1066(b)(1), to provide the Division the opportunity to have an observer present, the permittee shall notify the Division at least 30 days before an inspection required by 40 CFR 63.1063(d)(1 or 3). If an inspection is unplanned and the permittee could not have known about the inspection 30 days in advance, then the permittee shall notify the Division at least 7 days before the inspection. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Division at least 7 days before the inspection.

(2) Pursuant to 40 CFR 63.1066(b)(2), the permittee shall submit a copy of the inspection record (required in 40 CFR 63.1065) when inspection failures occur.

(3) Pursuant to 40 CFR 63.1066(b)(4), an owner or operator who elects to use an extension in accordance with 40 CFR 63.1063(e)(2) or 40 CFR 63.1063(c)(2)(iv)(B) shall submit the documentation required therein.

Closed Vent Systems

~~k.~~m. The permittee shall furnish reports as specified in **5. Specific Reporting Requirements** for the flare in **Section B**, EP-F01.

~~l.~~n. Pursuant to 40 CFR 63.999(c)(1), the permittee shall submit Periodic reports that shall include the reporting period dates, the total source operating time for the reporting period,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

and, as applicable, all information specified in 40 CFR 63.999 and in 40 CFR 63, Subpart FFFF including reports of periods when monitored parameters are outside their established ranges.

~~m.~~o. Pursuant to 40 CFR 63.999(c)(2), the permittee shall submit, as part of the periodic report:

(1) Pursuant to in 40 CFR 63.999(c)(2)(i), the information recorded in 40 CFR 63.998(d)(1)(iii)(B through E).

(2) Pursuant to in 40 CFR 63.999(c)(2)(ii), reports of the times of all periods recorded under 40 CFR 63.998(d)(1)(ii)(A) when the vent stream is diverted from the flare through a bypass line; and

(3) Pursuant to in 40 CFR 63.999(c)(2)(iii), reports of all times recorded under 40 CFR 63.998(d)(1)(ii)(B) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

p. Pursuant to 40 CFR 63.2520(e)(12) bypass lines must include in the compliance report the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

Equipment Leaks

q. Pursuant to 40 CFR 63.2520(e)(15), compliance reports for pressure relief devices subject to the requirements 40 CFR 63.2480(e) must include the information specified in 40 CFR 63.2520(e)(15)(i) through (iii).

(1) For pressure relief devices in organic HAP gas or vapor service, pursuant to 40 CFR 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.

(2) For pressure relief devices in organic HAP gas or vapor service subject to 40 CFR 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(3) For pressure relief devices in organic HAP service subject to 40 CFR 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

~~(3)~~

7. **Specific Control Equipment Operating Conditions:**

a. Pursuant to 40 CFR 63.11(b)(3) the FLARE (EP-F01) shall be in operation at all times the emission units that vent to the FLARE are operating. Refer to **Section B** for EP-F01.

b. Pursuant to 40 CFR 63.2450, the permittee must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to 40 CFR 63, Subpart FFFF at all times, ~~except during periods of startup, shutdown, and malfunction ,~~ and the permittee must meet the requirements specified in 40 CFR 63.2455 through 63.2490 (or the alternative means of compliance in 40 CFR 63.2495, 40 CFR 63.2500, or 40 CFR 63.2505), except as specified in paragraphs (b) through (v~~s~~) of 40CFR 63.2450. The permittee must meet the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

notification, reporting, and recordkeeping requirements specified in 40 CFR 63.2515, 40 CFR 63.2520, and 40 CFR 63.2525.

8. Alternate Operating Scenarios:

Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF for the equipment leaks subject to, the permittee may comply with one of the following requirements:

a. 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d)-(f);

b. 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f); or

c. 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 40 CFR 63.2480(c) and (d) -(f).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP	Emission Unit/Point Description
M08	3,000 gallon Gasoline Underground Storage Tank (FB-0003)

APPLICABLE REGULATIONS:
401 KAR 59:050, New storage vessels for petroleum liquids.

STATE-ORIGIN REQUIREMENTS:
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

1. **Operating Limitations:**
   Pursuant to 401 KAR 59:050, Section 3(2), the tank shall be equipped with a permanent submerged fill pipe.

   Compliance Demonstration Method:
   Visual inspection for presence of submerged fill pipe.

2. **Emission Limitations:**
   Refer to **Section D.4.** for 401 KAR 63:020 requirements.

3. **Testing Requirements:**
   None

4. **Specific Monitoring Requirements:**
   None

5. **Specific Recordkeeping Requirements:**
   None

6. **Specific Reporting Requirements:**
   None

7. **Specific Control Equipment Operating Conditions:**
   None

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

LOADING AREA

EP	EU	Emission Unit/Point Description
M04	M04	**Acetic Acid Loading/Unloading, Methyl Acetate Loading/Unloading, and Vinyl Acetate Unloading Area – Railcar** Operating Scenario #1: Loading/Unloading 15,000 gal/hr Acetic Acid (131,400,000 gal/year) Operating Scenario #2: Loading 15,000 gal/hr Methyl Acetate (131,400,000 gal/year) Unloading 15,000 gal/hr Methyl Acetate (4,320,000 gal/year) Operating Scenario #3: Unloading 15,000 gal/hr Vinyl Acetate (131,400,000 gal/year) Control Device: Vapor recovery system, 75% control efficiency **HON Group 2 Transfer Rack**
M05	M05	**Acetic Acid Loading/Unloading Area-Tank Truck** Operating Scenario #1: 4,050 gal/hr Acetic Acid (35,478,000 gal/year) Operating Scenario #2: Loading 4,050 gal/hr Methyl Acetate (35,478,000 gal/year) Operating Scenario #3: Unloading 4,050 gal/hr Vinyl Acetate (35,478,000 gal/year) **HON Group 2 Transfer Rack**
M06	M06	**Methanol Loading/Unloading Area-Railcar** Maximum Transfer Rate: 171,711 gallons/year **MON Group 2 Transfer Rack**
M12	M12	**MON Equipment Leaks (Loading Area Fugitives)** Light Liquid Valves: 124 Light Liquid Pumps: 6 Connectors: 398

The equipment leak component count for the Loading Area, listed above, as submitted in the application, reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove equipment leak components without a permit revision as long as the components continue to comply with the applicable requirements listed below, and the changes do not: (1) cause a significant increase of emissions; or (2) result in the applicability of an additional standard that is not specified in this permit.

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2 (4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.; (40 CFR 63, Subpart FFFF), applies to the transfer rack at EU M06. 40 CFR 63.2480 applies to the equipment leaks at EU M12.

401 KAR 63:002, Section 2(4)(b), 40 C.F.R. 63.110 to 63.153, Tables 1 to 37 (Subpart G), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 63:002, Section 2.(4)(c), 40 C.F.R. 63.160 to 63.183, Tables 1 to 4 (Subpart H), National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.; 40 CFR 63, Subpart H applies to the equipment leaks from the transfer operations at EU M04 and M05.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations:

a. Pursuant to 40 CFR 63.2445(d), if a 40 CFR 63, Subpart FFFF, Group 2 emission point becomes a Group 1 emission point, the permittee must comply with the Group 1 requirements beginning on the date the switch occurs. An initial compliance demonstration as specified in 40 CFR 63, Subpart FFFF must be conducted within 150 days after the switch occurs.

b. Refer to 40 CFR 63.103(a) for general provisions.

c. Refer to 40 CFR 63.2540 and 40 CFR 63, Subpart FFFF, Table 12, for general provisions.

~~c.~~d. Pursuant to 40 CFR 63.2450(u), the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Equipment Leaks

~~d.~~e. Pursuant to 40 CFR 63.2480(a), the permittee shall meet each requirement in 40 CFR 63, Subpart FFFF, Table 6, item 1.(b.). The permittee shall comply with the requirements of 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d)-(f).

(1) Pursuant to 40 CFR 63.162(c), each piece of equipment in a process unit to which 40 CFR 63, Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to its requirements. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification.

(2) Pursuant to 40 CFR 63.162(f), when a leak is detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168 and 40 CFR 63.169; and 40 CFR 63.172 through 40 CFR 63.174, the permittee shall:

(i) Clearly identify the leaking equipment.

(ii) The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 40 CFR 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the permittee elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored and no leak is detected during that monitoring.

(iii) The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to 40 CFR 63.174(c)(1)(i), may be removed after it is repaired.

~~(iii)~~(3) Pursuant to 40 CFR 63.2480(b)(7) for each piece of equipment subject to 40 CFR 63, Subpart FFFF that is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, the permittee must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this requirement.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(1) and (2) for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of 40 CFR 63.165 of Subpart H. [40 CFR 63.2480(e)]

g. Pursuant to 40 CFR 63.2480(e), except as specified in 40 CFR 63.2480(e)(4) and (5), the permittee must comply with the requirements specified in 40 CFR 63.2480(e)(3), (6), (7), and (8) for all pressure relief devices in organic HAP service.

(1) Pursuant to 40 CFR 63.2480(e)(3), implement the pressure release management requirements outlined in 40 CFR 63.2480(e)(3)(i) – (v).

(2) Pursuant to 40 CFR 63.2480(e)(6), a root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in 40 CFR 63.2480(e)(6)(i) – (iii).

(3) Pursuant to 40 CFR 63.2480(e)(7), the permittee must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in 40 CFR 63.2480(e)(7)(i) – (iii)

(4) Pursuant to 40 CFR 63.2480(e)(8), the permittee shall not install any flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023.

Compliance Demonstration Method:
Pursuant to 40 CFR 63.162(a), for the equipment leak, compliance shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections.

2. Emission Limitations:

Equipment Leaks

a. Pursuant to 40 CFR 63.2480(a) and 40 CFR 63, Subpart FFFF, Table 6, the permittee shall comply with the fugitive emissions standards of 40 CFR 63, Subpart H as applicable.

(1) Pursuant to 40 CFR 63.163, Standards for Pumps in light liquid service:
40 CFR 63.163(a): Implementation and compliance provisions

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

40 CFR 63.163(b): Monitoring requirements, Leak detection levels, frequency of monitoring
40 CFR 63.163(c) (except (c)(3)):: Repair procedures and time frames
40 CFR 63.163(d): Procedures to determine percent leaking pumps and quality improvement program requirements
40 CFR 63.163(e)-(j): Exemptions for specific types of pumps

(2) Pursuant to 40 CFR 63.164, Standards for Compressors:
40 CFR 63.164(a)-(e): Operational requirements
40 CFR 63.164(f): Criteria for Leak detection
40 CFR 63.164(g): Repair procedures and time frames
40 CFR 63.164(h)-(i): Exemptions for specific types of compressors

(3) Pursuant to 40 CFR 63.165, Standards for Pressure relief devices in gas/vapor service:
40 CFR 63.2480(e)(1)~~40 CFR 63.165(a)~~: Operational requirements
40 CFR 63.2480(e)(2)~~40 CFR 63.165(b)~~: Pressure release procedures
40 CFR 63.2480(e)(4)~~40 CFR 63.165(c)-(d)~~: Exemptions for specific types of pressure relief devices

(4) Pursuant to 40 CFR 63.166, Standards for Sampling Connection Systems:
40 CFR 63.166(a)-(b): Operational requirements
40 CFR 63.166(c): Exemptions for specific types of sampling connection systems

(5) Pursuant to 40 CFR 63.167, Standards for Open-ended valves or lines:
40 CFR 63.167(a)-(c): Operational requirements
40 CFR 63.167(d)-(e): Exemptions for specific types of valves

(6) Pursuant to 40 CFR 63.168, Standards for Valves in gas/vapor service and in light liquid service:
40 CFR 63.168(a): Operational requirements
40 CFR 63.168(b)-(d): Monitoring requirements and intervals
40 CFR 63.168(e): Procedures to determine percent leaking valves
40 CFR 63.168(f): Leak repair time frames
40 CFR 63.168(g): First attempt repair procedures
40 CFR 63.168(h): Exemptions for unsafe-to-monitor valves
40 CFR 63.168(i): Exemptions for difficult-to-monitor valves

(7) Pursuant to 40 CFR 63.169, Standards for Instrumentation systems:
40 CFR 63.169(a): Monitoring frequency
40 CFR 63.169(b): Leak detection levels
40 CFR 63.169(c): Leak repair time frames

(8) Pursuant to 40 CFR 63.171, Standards for Delay of repair:
40 CFR 63.171 Allowances for delay of repair

(9) Pursuant to 40 CFR 63.173, Standards for Agitators in gas/vapor service and in light liquid service:
40 CFR 63.173(a): Operational requirements
40 CFR 63.173(b): Monitoring requirements and intervals
40 CFR 63.173(c): Leak repair time frames
40 CFR 63.173(d)-(g): Exemptions for specific types of agitators
40 CFR 63.173(h)-(j): Exemptions for difficult-to-monitor, inaccessible or unsafe-to-monitor agitators

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(10) Pursuant to 40 CFR 63.174, Standards for connectors in gas/vapor service and in light liquid service:

40 CFR 63.174(a):	Operational requirements
40 CFR 63.174(b):	Monitoring requirements and intervals
40 CFR 63.174(c):	Procedures for open connectors or connectors with broken seals
40 CFR 63.174(d):	Leak repair time frames
40 CFR 63.174(e):	Monitoring frequency for repaired connectors
40 CFR 63.174(f)-(h):	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174(i):	Procedures to determine percent leaking connectors
40 CFR 63.174(j):	Optional credit for removed connectors

(11) Pursuant to 40 CFR 63.175 and in Phase III, Quality improvement program for valves: the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175(a):	Quality improvement program alternatives
40 CFR 63.175(b):	Criteria for ending quality improvement programs
40 CFR 63.175(c):	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175(d):	Quality improvement program to demonstrate further progress
40 CFR 63.175(e):	Quality improvement program of technology review and improvement

(12) Pursuant to 40 CFR 63.176 and 40 CFR 63.163(d)(2), if in Phase III, Quality improvement program for pumps: calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in the Polymerization, Saponification, Polyrectification, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart FFFF MCPU) or in the AAR, Tank Farm, and Loading Areas (that are part of the 40 CFR 63, Subpart H CMPU) leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176(a):	Applicability criteria
40 CFR 63.176(b):	Criteria for ending the quality improvement program
40 CFR 63.176(c):	Criteria for resumption of the quality improvement program
40 CFR 63.176(d):	Quality improvement program elements

(13) Pursuant to 40 CFR 63.2480(b)(1) and 40 CFR 63.178(b), the requirements for pressure testing in 40 CFR 63.178(b) may be applied to all processes, not just batch processes, as stated in 40 CFR 63.2480(b)(1). The permittee may elect to use pressure testing of equipment to demonstrate compliance by meeting the following requirements of 40 CFR 63.178(b). Compliance with the provisions of 40 CFR 63.178(b) exempts the permittee from the monitoring provisions of 40 CFR 63.163, 63.168 and 63.169, and 63.173 through 63.176.

(i) Pursuant to 40 CFR 63.178(a), the permittee may switch among the alternatives provided the change is documented as specified in 40 CFR 63.181.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(ii) For the purposes of 40 CFR 63, Subpart FFFF pressure testing for leaks in accordance with 63.178(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

Compliance Demonstration Method:
Refer to **1. Operating Limitations** Compliance Demonstration

3. Testing Requirements:

a. Pursuant to 40 CFR 63.180(a), for the equipment leaks, the permittee shall comply with the following test methods and procedures requirements:
   (1) 40 CFR 63.180(b) Monitoring procedures, test methods, and calibration procedures
   (2) 40 CFR 63.180(c) Leak detection monitoring procedures (replacing reference to 40 CFR 63.165(a) with 40 CFR 63.2480(e)(1).
   (3) 40 CFR 63.180(d) Procedures for determining organic HAP service applicability

b. Pursuant to 40 CFR 63.2515(c), a notification of performance test at least 60 calendar days before the performance test is scheduled to begin as required in 40 CFR 63.7(b)(1), if applicable.

c. Pursuant to KAR 50:045, Section 1, performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:
For the equipment leaks, refer to **3. Testing Requirements**.

5. Specific Recordkeeping Requirements:

a. All records shall be maintained in accordance with **Section F.2**.
   Pursuant to 40 CFR 63.181(a), the permittee shall comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

b. For the equipment subject to 40 CFR 63 Subparts F, G and H, all records shall be kept in accordance with 40 CFR 63.103(c).

c. Pursuant to 40 CFR 63.2525 for EU-M06 and M12, the permittee shall keep the following records:
   (1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced subparts F, G and SS of 40 CFR Part 63.
   (2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:
      (i) A description of the process and the type of process equipment used.
      (ii) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.
      (iii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the level of required control, and for vents, the level of control for each vent.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(iv) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(v) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(vi) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(vii) Calculations and engineering analyses required to demonstrate compliance.

(viii) For reporting purposes, a change to any of these elements not previously reported, except for 63.2525(b)(5), constitutes a new operating scenario.

~~(3) Pursuant to 40 CFR 63.103(c)(3), 40 CFR 63.2525(j), in the SSMP required by 40 CFR 63.6(e)(3), the permittee is not required to include Group 2 emission points, unless those emission points are used in an emissions average.~~

~~(4) Pursuant to 40 CFR 63.2525(j), for equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.~~

(3) Pursuant to 40 CFR 63.2525(l), for each deviation from an emission limit, operating limit, or work practice standard, the permittee must keep a record of the information specified in 40 CFR 63.2525(l)(1) – (3). The records shall be maintained as specified in 40 CFR 63.10(b)(1) of subpart A. In the event that an affected unit does not meet an applicable standard, record the number of deviations.

(i) For each deviation record the date, time, and duration of each deviation.

(ii) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(iii) Record actions taken to minimize emissions in accordance with 40 CFR 63.2450(u) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

d. Pursuant to 40 CFR 63.126(c), for the Group 2 transfer racks, the permittee shall record, update annually, and maintain the following information in a readily accessible location on site pursuant to 40 CFR 63.130(f).

(1) Pursuant to 40 CFR 63.130(f)(1), an analysis demonstrating the design and actual annual throughput of the transfer rack;

(2) Pursuant to 40 CFR 63.130(f)(2), an analysis documenting the weight-percent organic HAPs in the liquid loaded. Examples of acceptable documentation include but are not limited to analyses of the material and engineering calculations; and

(3) Pursuant to 40 CFR 63.130(f)(3)(i and ii), an analysis documenting the annual rack weighted average HAP partial pressure of the transfer rack.

(i) For Group 2 transfer racks that are limited to transfer of organic HAPs with partial pressures less than 10.3 kilopascals, documentation is required of the organic HAPs (by compound) that are transferred. The rack weighted average partial pressure does not need to be calculated.

(ii) For racks transferring one or more organic HAPs with partial pressures greater than 10.3 kilopascals, as well as one or more organic HAPs with partial pressures less than 10.3 kilopascals, a rack weighted partial pressure shall be

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

documented. The rack weighted average HAP partial pressure shall be weighted by the annual throughput of each chemical transferred.

Equipment Leaks

e. Pursuant to 40 CFR 63.181(a), the permittee may comply with the recordkeeping requirements for the equipment in the Polymerization, Saponification, Polyrectification, AAR, Tank Farm, and Loading Areas in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. Pursuant to 40 CFR 63.181(b), the permittee shall maintain all records pertaining to the equipment required by.

(1) Pursuant to 40 CFR 63.181(b):

(i) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of 40 CFR 63, Subpart H. Pursuant to 40 CFR 63.2480(b)(3), as an existing source under 40 CFR 63, Subpart FFFF the permittee is not required to develop an initial list of identification numbers for connectors that are part of the MCPU as would otherwise be required under 40 CFR 63.181(b)(1)(i).

(ii) A schedule by process unit for monitoring connectors subject to 40 CFR 63.174(a) and valves subject to 40 CFR 63.168(d).

(iii) Physical tagging of the equipment to indicate that it is in organic HAP service is not required. Equipment subject to the provisions of 40 CFR 63, Subpart H may be identified on a plant site plan, in log entries, or by other appropriate methods.

(2) Pursuant to 40 CFR 63.181(b)(2)(i and ii):

(i) A list of identification numbers for equipment that the permittee elects to equip with a closed-vent system and control device, under the provisions of 40 CFR 63.163(g), 40 CFR 63.164(h), 40 CFR 63.165(c), or 40 CFR 63.173(f) as required by 40 CFR 63.181(b)(2)(i).

(ii) A list of identification numbers for compressors that the permittee elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of 40 CFR 63.164(i).

(3) Pursuant to 40 CFR 63.181(b)(3) and 40 CFR 63.2480(f)(18)(iii) and (iv), a list of identification numbers for pressure relief devices subject to 40 CFR ~~63.165(a)~~63.2480(e)(1) and for pressure relief devices equipped with rupture disks, under the provisions of 40 CFR ~~63.165(d).~~63.2480(e)(2)(ii) and (iii).

(4) Pursuant to 40 CFR 63.181(b)(4), individual components in an instrumentation system need not be identified.

(5) Pursuant to 40 CFR 63.181(b)(5), identification of screwed connectors subject to 40 CFR 63.174(c)(2). Identification can be by area or grouping as long as the total number within each group or area is recorded.

(6) Pursuant to 40 CFR 63.181(b)(6)(i and ii), the following information shall berecorded for each dual mechanical seal system:

(i) Design criteria required in 40 CFR 63.163(e)(6)(i), 40 CFR 63.164(e)(2), and 40 CFR 63.173(d)(6)(i) and an explanation of the design criteria; and

(ii) Any changes to these criteria and the reasons for the changes.

(7) Pursuant to 40 CFR 63.181(b)(7)(i through iii), the following information pertaining to all pumps subject to 40 CFR 63.163(j), valves subject to 40 CFR 63.168(h and i), agitators subject to 40 CFR 63.173(h through j), and connectors subject to 40 CFR 63.174(f and g) shall be recorded:

(i) Identification of equipment designated as unsafe to monitor, difficult to monitor, or unsafe to inspect and the plan for monitoring or inspecting this equipment.

(ii) A list of identification numbers for the equipment that is designated as difficult to monitor, an explanation of why the equipment is difficult to monitor, and the planned schedule for monitoring this equipment.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(iii) A list of identification numbers for connectors that are designated as unsafe to repair and an explanation why the connector is unsafe to repair.

(8) Pursuant to 40 CFR 63.181(b)(8):

(i) A list of valves removed from and added to the process unit, as described in 40 CFR 63.168(e)(1), if the net credits for removed valves is expected to be used.

(ii) A list of connectors removed from and added to the process unit, as described in 40 CFR 63.174(i)(1), and documentation of the integrity of the weld for any removed connectors, as required in 40 CFR 63.174(j). This is not required unless the net credits for removed connectors is expected to be used.

(9) Pursuant to 40 CFR 63.181(b)(10), for any leaks detected as specified in 40 CFR 63.163 and 40 CFR 63.164; 40 CFR 63.168; and 40 CFR 63.173 through 40 CFR 63.174, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

g. Pursuant to 40 CFR 63.181(c), for visual inspections of equipment subject to the provisions of 40 CFR 63.163(b)(3) and 40 CFR 63.163(e)(4)(i), the permittee shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in 40 CFR 60.181(d) for leaking equipment identified in this inspection. These records shall be retained for 2 years.

h. Pursuant to 40 CFR 63.181(d), when a leak is detected, the following information shall be recorded and kept for two years.

(1) Pursuant to 40 CFR 63.181(d)(1), the instrument and the equipment identification number and the operator name, initials, or identification number.

(2) Pursuant to 40 CFR 63.181(d)(2),the date the leak was detected and the date of first attempt to repair the leak.

(3) Pursuant to 40 CFR 63.181(d)(3) the date of successful repair of the leak.

(4) Pursuant to 40 CFR 63.181(d)(4), maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(5) Pursuant to 40 CFR 63.181(d)(5), “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(i) The permittee may develop a written procedure that identifies the conditions that justify a delay of repair. ~~The written procedures may be included as part of the SSMP, required by 40 CFR 63.6(e)(3), for the source or may be part of a separate document that is maintained at the plant site.~~ In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(ii) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(6) Pursuant to 40 CFR 63.181(d)(6), dates of process unit shutdowns that occur while the equipment is unrepaired.

(7) Pursuant to 40 CFR 63.181(d)(7)(i and ii):

(i) Identification, either by list, location (area or grouping), or tagging of connectors that have been opened or otherwise had the seal broken since the last monitoring period required in 40 CFR 63.174(b), as described in 40 CFR

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii).

(ii) The date and results of monitoring as required in 40 CFR 63.174(c). If identification of connectors that have been opened or otherwise had the seal broken is made by location under 40 CFR 63.181(d)(7)(i), then all connectors within the designated location shall be monitored.

(8) Pursuant to 40 CFR 63.181(d)(9), copies of the periodic reports as specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.

i. Pursuant to 40 CFR 63.178(b), if the permittee elects to comply with the pressure testing requirements in accordance with **Emission Limitations**, **2.a.(13)** the permittee is exempt from the requirements of paragraphs f, g, h and j of this section. Instead, the permittee shall maintain records as specified in 40 CFR 63.181(e)(1through 6).

j. Pursuant to 40 CFR 63.181(f) and 40 CFR 63.2480(f)(18)(v), the dates and results of compliance tests required for compressors andthe dates and results of monitoring following a pressure relief valve pressure release subject to 40 CFR 63.2480(e)(1) and (2) shallbe recorded. The results shall include:

(1) The background level measured during each compliance test.

(2) The maximum instrument reading measured at each piece of equipment during each compliance test.

k. Pursuant to 40 CFR 63.181(g), the permittee shall maintain records required for closed-vent systems and control devices subject to 40 CFR 63.172.

(1) Pursuant to 40 CFR 63.181(g)(1), the design specifications and performance demonstrations specified in 40 CFR 63.181(g)(1)(i through iv) shall be retained for the life of the equipment.

(i) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(iii) The flare design (i.e., steam-assisted, air-assisted, or non-assisted) and the results of the compliance demonstration required by 40 CFR 63.11(b) of 40 CFR 63 Subpart A.

(iv) A description of the parameter or parameters monitored, as required in 40 CFR 63.172(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(2) Pursuant to 40 CFR 63.181(g)(2), records of operation of closed-vent systems and control devices, as specified in 40 CFR 63.181(g)(2)(i through iii) shall be retained for 2 years.

(i) Dates and durations when the closed-vent systems and control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170 are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(ii) Dates and durations during which the monitoring system or monitoring device is inoperative.

(iii) Dates and durations of start-ups and shutdowns of control devices required in 40 CFR 63.163 through 40 CFR 63.166, and 40 CFR 63.170.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

l. Pursuant 40 CFR 63.181(h), if the permittee implements any of the quality improvement programs required by 40 CFR 63.175 or 40 CFR 63.176, the records specified in 40 CFR 63.181(h) shall be maintained for a period of the quality improvement plan for the process unit.

m. Pursuant to 40 CFR 63.2525(q), for each pressure relief device subject to the pressure release management work practice standards in 40 CFR 63.2480(e), the permittee must keep the records specified in 40 CFR 63.2525(q) (1) - (3).

(1) Records of the prevention measures implemented as required in 40 63.2480(e)(3)(ii).

(2) Records of the number of releases during each calendar year and the number of those releases for which the root cause was determined to be a force majeure event. Keep these records for the current calendar year and the past 5 calendar years.

(3) For each release to the atmosphere, the permittee must keep the records specified in 40 CFR 63.2525(q)(3)(i) - (iv).

(i) The start and end time and date of each pressure release to the atmosphere;

(ii) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event;

(iii) Records of the root cause analysis and corrective action analysis conducted as required in 40 CFR 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under 40 CFR 63.2480(e)(7)(i);

(iv) For any corrective action analysis for which implementation of corrective actions are required in 40 CFR 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.103(d), for the equipment subject to 40 CFR 63 Subparts F, G and H, all reports shall be submitted in as required therein.

b. Pursuant to 40 CFR 63.2520, for equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit the following report:

A Compliance report containing the information specified in 40 CFR 63.2520(e) semiannually according to the requirements in 40 CFR 63.2520(b).

l. Pursuant to 40 CFR 63.2520(e), Once the reporting template for 40 CFR 63, Subpart FFFF has been available on the CEDRI website for 1 year, submit all subsequent reports to the EPA via the CEDRI, which can be accessed through the EPA's CDX(https://cdx.epa.gov/). Report using the appropriate report template located on the CEDRI website (https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under 40 CFR 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in 40 CFR 63 Subpart FFFF, regardless of the method in which the report is submitted. The permittee shall not use CEDRI to submit information claimed as CBI.

m. Pursuant to 40 CFR 63.2520(e), the permittee may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in this paragraph

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(e) provided the permittee meets the requirements outlined in 40 CFR 63.2520(i) or (j), as applicable. To assert a claim of EPA system outage, the permittee must meet the requirements outlined in 40 CFR 63.2520(h)(1) through (7).

c. Pursuant to 40 CFR 63.2520(e)(15), compliance reports for pressure relief devices subject to the requirements 40 CFR 63.2480(e) must include the information specified in 40 CFR 63.2520(e)(15)(i) through (iii).

(1) For pressure relief devices in organic HAP gas or vapor service, pursuant to 40 CFR 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.

(2) For pressure relief devices in organic HAP gas or vapor service subject to 40 CFR 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(3) For pressure relief devices in organic HAP service subject to 40 CFR 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

~~c.~~d. Refer to **Section F.5**.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

Pursuant to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF for the equipment leaks subject to, the permittee may comply with one of the following requirements:

a. 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f);

b. 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 40 CFR 63.2480(b) and (d) -(f); or

c. 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 40 CFR 63.2480(c) and (d) -(f).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

COOLING TOWERS

EP	EU	Emission Unit/Point Description
CT	CT-6 CT-7	**Non-Contact Process Cooling Towers**, CT-6 and CT-7 Description: Provides cooling water to Polymerization, Polyrectification, SAP, and AAR Areas Water Flow Rate: 33,000 gallons/minute total **MON and HON Heat Exchange System**

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2 (4)(lll), 40 C.F.R. 63.2430 to 63.2550, Tables 1 to 12 (Subpart FFFF), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing.

401 KAR 63:002, Section 2.(4)(a), 40 C.F.R. 63.100 to 63.107, Tables 1 to 4 (Subpart F), National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry, as referenced by 40 CFR 63, Subpart FFFF.

401 KAR 59:010, New process operations.

PRECLUDED REGULATIONS:

401 KAR 63:002, Section 2.(4)(j), 40 C.F.R. 63 63.400 to 63.407, Table 1 (Subpart Q), National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers.

1. **Operating Limitations:**
   a. Refer to 40 CFR 63.103(a) for general provisions.
   b. Refer to 40 CFR 63.2540 for general provisions.
   c. Pursuant to 401 KAR 52:020, Section 10, the use of chromium based water treatment chemicals in the cooling towers is prohibited.

2. **Emission Limitations:**
   a. Pursuant to 401 KAR 59:010, Section 3(2), emission of particulate matter from a control device or stack of any affected facility up to a process rate of 1000 lbs/hr shall not exceed 2.34 lbs/hr. For processing rates greater than 1000 lbs/hr up to 60,000 lbs/hr, particulate emissions shall not exceed the emission rate calculated by the following equation:

$$E = 3.59(P)^{0.62}$$

E = the PM emissions rate (pounds/hour)
P = the process rate (tons/hour)

Compliance Demonstration Method:

a. The permittee shall be assumed to be in compliance with the emission limitation based upon emissions information provided to the Division.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 401 KAR 59:010, Section 3(1), no person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity.

Compliance Demonstration Method:
Compliance with the opacity standard shall be determined by the permittee performing a qualitative visual observation during daylight hours of the opacity of emissions at each stack on a monthly basis and maintaining a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee may determine the opacity using Reference Method 9. Refer to **4. d. Specific Monitoring Requirements** and **5. d. Specific Recordkeeping Requirements** below.

3. Testing Requirements:
Pursuant to 401 KAR 50:045, Section 1, performance testing using Reference methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 63.104(b), for HON heat exchange systems ~~and 40 CFR 63.2490(a)~~, the permittee shall comply with theprovisions in 40 CFR 63.104(b) by monitoring the cooling water for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of aleak in the heat exchange system and complying with the following requirements specifiedin 40 CFR 63.104(b)(1 through 6).

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks.

(2) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in Table 4 of 40 CFR 63, Subpart F. For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in Table 9 of 40 CFR 63, Subpart G.

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in 40 CFR 136 as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator.

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers, according to the provisions of 40 CFR 63.104(b)(4)(i through iii).

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in 40 CFR 63.104(b)(4). The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.

b. Pursuant to 40 CFR 63.2490(d)(1), for MON heat exchange systems, perform monitoring to identify leaks of total strippable hydrocarbons from each heat exchange system subject to 40 CFR 63 Subpart FFFF, according to the procedures in 40 CFR 63.2490(d)(1)(i) – (v).

(1) Pursuant to 40 CFR 63.2490(d)(1)(i)(A) and (B), monitor each closed-loop recirculating system at the cooling tower return line or any representative riser within the cooling tower prior to exposure to air for each heat exchange system, or selected heat exchanger exit line(s), so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s).

(2) Pursuant to 40 CFR 63.2490(d)(1)(iii), the permittee must determine the total strippable hydrocarbon concentration in ppmv, as methane, at each monitoring location using the Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" (incorporated by reference – see 40 CFR 63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.

(3) Pursuant to 40 CFR 63.2490(d)(1)(iv), the permittee shall conduct monitoring for each heat exchange system monthly for the first 6 months, and quarterly thereafter using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv. If a leak is detected as specified in paragraph 40 CFR 63.2490(d)(1)(v), then the permittee shall monitor monthly until the leak has been repaired according to the requirements in 40 CFR 63.2490(d)(2) or (3). Once the leak has been repaired, quarterly monitoring for the heat exchange system may resume..

(4) Pursuant to 40 CFR 63.2490(d)(1)(v)(B), a leak is detected if a measurement value of the sample taken from a location specified in 40 CFR 63.2490(d)(1)(i)(A) or (B) equals or exceeds the leak action level.

~~(6)~~

~~b.~~c. Pursuant to 40 CFR 63.104(d) ~~and 40 CFR 63.2490(a)~~, if a leak is detected according to the criteria of 40 CFR 63.104(b), the permittee shall comply with the following requirements in 40 CFR 63.104(d)(1 and 2), except as provided in 40 CFR 63.104(e).

(1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the owner or operator receives results of monitoring tests indicating a leak. The leak shall be repaired unless the owner or operator demonstrates that the results are due to a condition other than a leak.

(2) Once the leak has been repaired, the owner or operator shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.

d. Pursuant to 40 CFR 63.2490(d)(2), if a leak is detected according to the criteria of 40 CFR 63.2490(d)(1), the permittee shall repair the leak to reduce the concentration or mass emissions rate to below the applicable leak action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in 40 CFR 63.2490(d)(4). Repair must include re-monitoring at the monitoring location where the leak was identified according to the method specified in 40 CFR 63.2490(d)(1)(iii) to verify that the total strippable hydrocarbon concentration is below the applicable leak action level. Repair may

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

also include performing the additional monitoring in 40 CFR 63.2490(d)(3). Actions that can be taken to achieve repair include but are not limited to:

(1) Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;

(2) Blocking the leaking tube within the heat exchanger;

(3) Changing the pressure so that water flows into the process fluid;

(4) Replacing the heat exchanger or heat exchanger bundle; or

(5) Isolating, bypassing, or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

e. Pursuant to 40 CFR 63.2490(d)(3), if the permittee detects a leak when monitoring a cooling tower return line under ~~paragraph~~ 40 CFR 63.2490(d)(1)(i)(A), the permittee may conduct additional monitoring of each heat exchanger or group of heat exchangers associated with the heat exchange system for which the leak was detected, as provided in 40 CFR 63.2490(d)(1)(i)(B). If no leaks are detected, the heat exchange system is considered to have met the repair requirements through re-monitoring of the heat exchange system, as provided in 40 CFR 63.2490(d)(2).

f. Pursuant to 40 CFR 63.104(e) ~~and 40 CFR 63.2490(a)~~, delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the conditions in 40 CFR 63.104(e)(1) or 40 CFR 63.104(e)(2) ismet.

g. Pursuant to 40 CFR 63.2490(d)(4), the permittee may delay repair when one of the conditions in 40 CFR 63.2490(d)(4)(i) or (ii) is met and the leak is less than the delay of repair action level of 62 ppmv, as specified in 40 CFR 6~~2~~3.2490(d)(4)(iii). The permittee must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak. If, during subsequent monitoring, the delay of repair action level is exceeded, then the permittee must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(1) If the repair is technically infeasible without a shutdown and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair, then the permittee may delay repair until the next scheduled shutdown of the heat exchange system.

~~c.~~(2) If the permittee demonstrates that the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair, then the permittee may delay the repair for a maximum of 120 calendar days.

~~d.~~h. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform qualitative monthly visual observations of the cooling towers.

5. Specific Recordkeeping Requirements:

a. All records shall be maintained in accordance with **Section F.2.**

b. Pursuant to 40 CFR 63.2525, the permittee shall keep the following records:

(1) Pursuant to 40 CFR 63.2525(a), except as specified in 40 CFR 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and 40 CFR 63.2525(t) and (u), each applicable record required by 40 CFR 63 Subpart A and in referenced Subparts F, G and SS of 40 CFR 63.

(2) Pursuant to 40 CFR 63.2525(b), records of each operating scenario as specified:

(i) A description of the process and the type of process equipment used.

(ii) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR 63.2505;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

wastewater point of determination (POD); storage tanks; and transfer racks.

(iii) The applicable control requirements of 40 CFR 63, Subpart FFFF including the level of required control, and for vents, the level of control for each vent.

(iv) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(v) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(vi) The applicable monitoring requirements of 40 CFR 63, Subpart FFFF and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

(vii) Calculations and engineering analyses required to demonstrate compliance.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(viii) For reporting purposes, a change to any of these elements not previously reported, except for 63.2525(b)(5), constitutes a new operating scenario.

c. Pursuant to 40 CFR 63.104(f)(1), ~~40 CFR 63.2490(a),~~ for the HON heat exchange systems, the permittee shall retain the following records as specified in 40 CFR 63.103(c)(1).
   (1) Monitoring data required by **4. Specific Monitoring Requirements** indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination;
   (2) The dates of efforts to repair leaks; and
   (3) The method or procedure used to confirm repair of a leak and the date repair was confirmed.

d. Pursuant to 40 CFR 63.2525(r), for each MON heat exchange system, keep records in 40 CFR 63.2525(r)(1) through (4).
   (1) Pursuant to 40 CFR 63.2525(r)(1), monitoring data required by **4. Specific Monitoring Requirements** (40 CFR 63.2490(d)) that indicate a leak, the date the leak was detected, or, if applicable, the basis for determining there is no leak.
   (2) Pursuant to 40 CFR 63.2525(r)(2), the dates of efforts to repair leaks.
   (3) Pursuant to 40 CFR 63.2525(r)(3), the method or procedures used to confirm repair of a leak and the date the repair was confirmed.
   (4) Pursuant to 40 CFR 63.2525(r)(4), documentation of delay of repair as specified in 40 CFR 63.2525(r)(4)(i) through (iv).
      (i) The reason(s) for delaying repair.
      (ii) A schedule for completing the repair as soon as practical.
      (iii) The date and concentration or mass emissions rate of the leak as first identified and the results of all subsequent monitoring events during the delay of repair.
      (iv) An estimate of the potential total hydrocarbon emissions from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in 40 CFR 63.2525(r)(4)(iv)(A) through (C).

6. Specific Reporting Requirements:

a. For equipment subject to 40 CFR 63, Subpart FFFF the permittee shall submit the following reports:
b. A Compliance report containing the information specified in 40 CFR 63.2520(e) semiannually according to the requirements in 40 CFR 63.2520(b).
c. The permittee shall furnish reports as specified in **5. Specific Reporting Requirements**.
d. Refer to **Section F.5**.
e. Pursuant to 40 CFR 63.2520(e)(16), the compliance report must include the information specified in 40 CFR 63.2520(e)(16)(i) through (v)
   (1) Pursuant to 40 CFR 63.2520(e)(16)(i), the number of heat exchange systems at the plant site subject to the monitoring requirements in 40 CFR 63.2490(d) during the reporting period;
   (2) Pursuant to 40 CFR 63.2520(e)(16)(ii), the number of heat exchange systems subject to the monitoring requirements in 40 CFR 63.2490(d) at the plant site found to be leaking during the reporting period;
   (3) Pursuant to 40 CFR 63.2520(e)(16)(iii), for each monitoring location where the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate was determined to be equal to or greater than the applicable leak definitions specified in 40 CFR 63.2490(d)(1)(v) during the reporting period, identification of the monitoring

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

location (e.g., unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate, the date the leak was first identified, and, if applicable, the date the source of the leak was identified;

(4) Pursuant to 40 CFR 63.2520(e)(16)(iv), for leaks that were repaired during the reporting period (including delayed repairs), identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate measured during re-monitoring to verify repair, and the re-monitoring date (i.e., the effective date of repair); and

(5) Pursuant to 40 CFR 63.2520(e)(16)(v), for each delayed repair, identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair is expected to be completed (if the leak is not repaired during the reporting period), the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate in pounds of the potential total hydrocarbon emissions over the reporting period associated with the delayed repair.

~~e.~~(6) Pursuant to 40 CFR 63.104(f)(2), 40 CFR 63.2490(a), if an owner or operator invokes thedelay of repair provisions for a heat exchange system, the following information shall be submitted in the next semi-annual periodic report required by 40 CFR 63.152(c) of 40 CFR63, Subpart G. If the leak remains unrepaired, the information shall also be submitted in each subsequent periodic report, until repair of the leak is reported.

~~(1)~~(7)Pursuant to 40 CFR 63.104(f)(2)(i), the presence of the leak and the date that the leak was detected.

~~(2)~~(8) Pursuant to 40 CFR 63.104(f)(2)(ii), whether or not the leak has been repaired.

~~(3)~~(9)Pursuant to 40 CFR 63.104(f)(2)(iii), the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described in 40 CFR 63.104(e)(2), documentationof emissions estimates must also be submitted.

~~(4)~~(10) Pursuant to 40 CFR 63.104(f)(2)(iv), the expected date of repair, if the leak remainsunrepaired.

~~(5)~~(11) Pursuant to 40 CFR 63.104(f)(2)(v), if the leak is repaired, the owner or operator shallreport the date the leak was successfully repaired.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

WAREHOUSE FUGITIVES

EP	Emission Point Description
M10	Warehouse Fugitives

APPLICABLE REGULATIONS:

401 KAR 50:012, General application.

STATE-ORIGIN REQUIREMENTS:
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

1. **Operating Limitations:**
   Pursuant to 401 KAR 50:012 Section 1(2), in the absence of a standard specified in 401 KAR 50 to 65, all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical (RAP).

   Compliance Demonstration Method:
   The permittee shall submit RAP analysis addressing uncontrolled VOC emissions from the Warehouse, within 180 days after issuance of the final permit V-18-035. The Division will notify the permittee in writing within 60 days from the date of submittal of the proposed RAP determination of the approval or denial of the submittal. If the proposed RAP determination is denied, the Division will identify the deficiencies in the written notification, and specify a timeframe to submit a revised RAP determination. Once the RAP determination is approved by the Division, the permittee shall operate according to the selected control procedures in the RAP determination. The RAP determination will be incorporated into the permit at the next significant revision or renewal of the permit.

2. **Emission Limitations:**
   Refer to **Section D.4** for 401 KAR 63:020 requirements.

3. **Testing Requirements:**
   Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using Reference methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
   None

5. **Specific Recordkeeping Requirements:**
   None

6. **Specific Reporting Requirements:**
   None

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EP	GROUP REQUIREMENTS
F01-(11C)	50 Line PK5 Process Condenser
F01-(11E)	50 Line PK6 Process Condenser
F01-(11H)	50 Line Paste Stripper Accumulator
F01-(12C)	100 Line PK1 Process Condenser
F01 (12E)	100 Line PK2 Process Condenser
F01-(13C)	100 Line Paste Stripper Accumulator
F01-(14C)	150 Line PK3 Process Condenser
F01-(14E)	150 Line PK4 Process Condenser
F01-(15H)	150 Line PK4 Paste Stripper Accumulator
P02	Polymerization Line 50 Catalyst Preparation Tanks
P05	Polymerization Line 100 Catalyst Preparation Tanks
P08	Polymerization Line 150 Catalyst Preparation Tanks
S01	Saponification Process Unit
S02	Saponification Process Unit Drying
S04	200 Saponification Line Product Transfer Collector
S08	250 Saponification Line Product Transfer Collector
S12	400 Saponification Line Product Transfer Collector
S16	600 Saponification Line Product Transfer Collector
W14-W25	WEDCO Silos #1 - #4, #7 - #15
W26-W28	WEDCO Ground Silos #15 - #17
W29	WEDCO Bulk Loading
W33	Bagging Operation: Filling - Sackmatic, PA-5716
W34	Bagging Hopper, FB-5723
W36	Bagging Area Fugitives
W37	North Bulk Truck Loading Station
W38	South Bulk Truck Loading Station
F01-(2C), A01	East Methyl Acetate Extraction Tower Vent Condenser, EA-5341
F01-(3C), A02	West Methyl Acetate Extraction Tower Vent Condenser, EA-5339
F01-(5A)	SAP Methanol Tower, DA-5303
F01-(9C)	Vinyl Recovery Tower East Condenser, EA-5108
R02	Vinyl Recovery Tower Startups
F01-(10C)	Vinyl Extraction Tower Vent Absorber, DA-5108
R03	Vinyl Extraction Tower Startups
A07	Dilute Acid Tank Condenser, EA-5340
A08	Two (2) Acetic Acid Rundown Tanks, FA-5322B&C
R04	Inhibitor (BQ) Feed Tank, FA-5109
F01-(18A-18B)	Paste Storage Tank West Nest #3 (2), FB 5509-10
T01	Methyl Acetate/Methanol Storage Tank, FB-1513
T05	Methanol Storage Tank, FB-5531
T06	Four (4) Methanol Saponification Tank System, FB 5532-35
T07	North Mother Liquor Storage Tank, FB-5536
T08	South Mother Liquor Storage Tank, FB-5537
T09	Methyl Acetate/Methanol Storage Tank, FB-5538

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F01-(19A-~~19C~~19B)	Recovered Vinyl Acetate Rework Storage Tanks (~~3~~2), ~~FB-5521, FB-5522~~FA-5522 and FB-5523
T11	Four (4) Acetic Acid Tanks, FB-5101-03, 1517

PRECLUDED REGULATIONS:
This source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD) for volatile organic compounds and particulate matter.

The synthetic minor limits precluding the applicability of 401 KAR 51:017 were included in the following permits:

Permits
Permit No. VF-03-001, issued on September 5, 2003
Permit No. S-95-198R, issued on June 4, 1998
Permit No. S-97-054, issued on May 20, 1997
Permit No. C-86-172 (Revision 1), issued on September 26, 1995
Permit No. O-87-015, issued on March 27, 1987
Permit No. C-84-146, issued on August 21, 1984

1. **Operating Limitations:**
Pursuant to 401 KAR 52:020, Section 10, the permittee shall comply with the operating limitations specified below. Compliance with these operating limitations and the source emission limitations of **2. Emission Limitations** shall preclude the applicability of the requirements of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality:

   a. Pursuant to VF-03-001, issued on September 5, 2003, the loading rates of PVOH shall not exceed the following limitations:
      (1) W29: 75,000 tons per year (tpy), on a twelve (12) consecutive month basis;
      (2) W33: 5,000 tpy, on a twelve (12) consecutive month basis;
      (3) W34: 63,022 tpy, on a twelve (12) consecutive month basis;
      (4) W37: 75,000 tpy, on a twelve (12) consecutive month basis; and
      (5) W38: 75,000 tpy, on a twelve (12) consecutive month basis.

   b. Pursuant to Permit No. S-95-198R, issued on June 4, 1998 and Permit No. C-86-172 (Revision 1), issued on September 26, 1996, the production rates shall not exceed the following limitations:
      (1) A02-3A: 85,000 lbs/hr and 372,300 tpy, on a twelve (12) consecutive month basis;
      (2) R02-9A: 55,420 lbs/hr and 242,748 tpy, on a twelve (12) consecutive month basis; and;
      (3) R03-10A: 55,260 lbs/hr and 242,039 tpy, on a twelve (12) consecutive month basis.

   c. Pursuant to Permit No. S-95-198R, issued on June 4, 1998, the production rates shall not exceed the following limitations determined on a twelve (12) consecutive month basis: (1) A01-2A: 53,000 lbs/hr; and
      (2) A04-5A: 100,000 lbs/hr.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

a. Refer to **4. Specific Monitoring Requirements**.
b. Refer to **7. Specific Control Equipment Operating Conditions**.

2. Emission Limitations:

To preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, the permittee shall comply with the following emission limitations:

a. Pursuant to Permit No. S-95-198R, issued on June 4, 1998, the total emissions of volatile organic compounds (VOC) from the summation of emissions from EP F01-2C, F01-5A, F01-9C, F01-10C, F01-11C, F01-11E, F01-11H, F01-12C, F01-12E, F01-13C, F01-(19A-~~19C~~19B), P08, S01, W14-W25, W29, A08, T05, T07, T08, F01-14C, F01-14E, F01-15C, R02,R03, S02, T01, P02, P05, F01-(18A & 18B), T06, and T11 shall not exceed 127 tpy. NOTE: Methyl acetate is not a VOC as defined by 40 CFR 51.100(s)(1). Therefore, F01-2C and F01-3C have zero VOC emissions.
b. Pursuant to Permit No. C-84-146, issued on August 21, 1984, the total emissions of VOC from the summation of emissions from EP- T01, F01-11C, F01-11E, F01-11H, F01-12C, F01-12E, F01-13C, F01-(19A-~~19C~~19B), P08, S01, A08, T05, T07, T08, P02, P05, F01-14C, F01-14E, F01-15C, S02, A07, F01-(18A & 18B), T06, T09, and T11 shall not exceed 247tpy.
c. Pursuant to Permit No. O-87-015, Condition 18, issued on March 27, 1987, the total VOC emissions from EP-S01 and S02 shall not exceed 37.67 tons per consecutive twelve (12) month period.
d. Pursuant to Permit No. C-84-146 issued on August 21, 1984, the total emissions of PM from the summation of emissions from EP-W14-W25, W26-W28, W29, S04, S08, S12 and S16 shall not exceed 25 tons per consecutive twelve (12) month period.
e. The permittee shall also comply with the production limitations established in **1. Operating Limitations** for EU-A01-2A, A02-3A, A04-5A, R02-9A, R03-10A and W29.

Compliance Demonstration Method:

a. Calculate the VOC emissions from the emission units specified in each limit of **2. Emission Limitations** paragraphs 2.a, 2.b and 2.c, as follows:
   (1) Use of industry specific emissions calculation methodology and associated recordkeeping, or
   (2) Monthly Emission Rate =

$$\sum_{i=1}^{n} \text{[monthly production rate (tons) per emission unit]} \times EF \times (1 - CE/100)$$

Where: i = the emission unit
n = the number of emission units included in the emission limit
EF = emission factor (lbs/ton process weight, based on the most recent stack test, material balance, engineering estimates, or other factor approved by the Division or U.S. EPA)
CE = control efficiency (%)

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Annual Emission Rate =

$\sum_{i=1}^{n}$ [VOC emitted this month + VOC emitted previous 11 consecutive months]

b. Calculate the PM emissions from the emission units specified in **2.c. Emission Limitations** as follows:

Monthly Emission Rate =

$\sum_{i=1}^{n}$ [monthly PVOH production rate (tons) per emission unit] x EF x (1 – CE/100)

Where: i = the emission unit
n = the number of emission units included in the emission limit
EF = emission factor (lbs PM / ton PVOH produced)
CE = control efficiency (%)

Annual Emission Rate =

$\sum_{i=1}^{n}$ [PM emitted this month + PM emitted previous 11 consecutive months]

c. Refer to **4. Specific Monitoring Requirements.**
d. Refer to **7. Specific Control Equipment Operating Conditions.**

3. Testing Requirements:

Pursuant to 401 KAR 50:045, Section 1, performance testing using Reference methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information, on a monthly and consecutive twelve (12) month basis:
(1) The catalyst throughput for the Line 50 Catalyst Preparation Tanks EU-P02;
(2) The feed rate and the paste throughput for Line 100 Stripper and Auxiliary Equipment EU-13;
(3) The feed rate and paste throughput for Line 150 Stripper and Auxiliary Equipment EU-15;
(4) The processing rate from each EU-S01-A, S01-B, S01-C, S01-D, SO2-A, S02-B, S02-C, and S02-D;
(5) The production rate from each EU-A01-2A, A02-3A, A04-5A, R02-9A, and R03-10A;
(6) The PVOH production rate from each EU-W14-W25, W26-W28, W29, S04, S08, S12 and S16;
(7) The throughput for the Paste Storage Tanks West Nest #3 EU-T04-18A, 18B;
(8) The throughput for the Methanol Storage Tank EU-T05;
(9) The throughput for the Methanol Saponification Tank System EU-T06;
(10) The throughput for the N. Mother Liquor Storage Tank EU-T07;
(11) The throughput for the S. Mother Liquor Storage Tank EU-T08;
(12) The throughput for the Methyl Acetate/Methanol Storage Tank EU-T09;
(13) The throughput for the Recovered Vinyl Acetate Storage Tanks EU-T10, 19A-~~19C~~19B;
(14) The throughput for the Acetic Acid Tanks EU-T11;
(15) The throughput for the Dilute Acid Tank EU-A07;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(16) The throughput for the Acetic Acid Rundown Tanks EU-A08; and
(17) The throughput for the Inhibitor (BQ) Feed Tank EU R04
(18) The throughput for Methyl Acetate/Methanol Storage Tank, FB-1513 EP-T01,
(19) The number of startups for Vinyl Recovery Tower EU-R02,
(20) The number of startups for Vinyl Extraction Tower EU-R03,
(21) The throughput for Polymerization Line 100 Catalyst Preparation Tanks EU-P05.
(22) The throughput for Polymerization Line 150 Catalyst Preparation Tanks EU-P08.

b. The following parameters shall be continuously monitored for the Process Condensers of Polykettles PK1-PK6: EU-P01-11C, P01-11E, P03-12C, P03-12E, P06-14C and P06-14E.
(1) Pressure,
(2) Vent valve position, and
(3) Inlet coolant temperature.

5. Specific Recordkeeping Requirements:
a. Records shall be kept in accordance with **4. Specific Monitoring Requirements**.
b. Actual VOC and particulate matter emissions shall be determined and recorded on a monthly and consecutive 12-month basis in accordance with **2. Emission Limitations, Compliance Demonstration Method**.
c. The permittee shall maintain records of preventive maintenance and inspections of the control devices in accordance with **7. Specific Control Equipment Operating Conditions**.
d. All records shall be maintained in accordance with **Section F.2**.

6. Specific Reporting Requirements:
For the emission points in **2. Emission Limitations**, the permittee shall report to the Division in accordance with **Section F,** the consecutive 12-month totals of VOC and particulate matter emissions.

7. Specific Control Equipment Operating Conditions:
a. The process condensers at EU P01-11C, P01-11E, P03-12C, P03-12E, P06-14C and P06-14E shall be in operation at all times the emission units exhausting to these condensers are operating.
b. The permittee shall maintain the flow rate and temperature of the scrubbing liquid at the scrubbers at EU S01 and S02 within the range recommended by the manufacturer or the range based on process engineering assessments that result in normal operation of the equipment.
c. The 600 SAP Vent Scrubber at EU-S01 and the Main Vent Scrubber at EP S02 shall be in operation at all times when emissions are vented to them.
d. Refer to **7. Specific Control Equipment Operating Conditions** in **Section B, WEDCO Area**, for specific baghouse operating conditions.
e. Refer to **Section B**, EP-F01.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Plant ID	Description	Generally Applicable Regulation
W31	Vacuum Cleaning System (Bulk Area) and Baghouse (FD-5758)	401 KAR 59:010 401 KAR 63:020
W35	Bagging Operation Vacuum Cleaning System (Bulk Area) and Baghouse (FD-5763)	401 KAR 59:010 401 KAR 63:020
W39	Silo #13 and #14 Product Collector (FD-5775)	401 KAR 59:010 401 KAR 63:020
W40	Silos # 11 and #12 Product Collector (FD-5777)	401 KAR 59:010 401 KAR 63:020
W41	Silos # 9 and # 10 Product Collector (FD-57)	401 KAR 59:010 401 KAR 63:020
M09	Diesel UST and Auxiliary Equipment, FB-0004	None
M11	Off-Spec/ Rework Pollution Control Trailers (Splash Loading from Processes), 390,000 gallons/yr Acetic Acid, 60,000 gallons/yr Mother Liquor, 30,000 gallons/yr Vinyl Acetate or 120,000 gallons/yr Methyl Acetate	None
TBD	Sekisui Polymatech America (SPA) Process	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND SOURCE REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Volatile organic compound, hazardous air pollutant (HAP) and particulate emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

3. In order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), the permittee shall comply with **Section B, Group Requirements**.

4. 401 KAR 63:020, Potentially Hazardous Matter and Toxic Substances. Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. Evaluation of such facilities as to adequacy of controls and/or procedures and emission potential will be made on an individual basis by the cabinet. The source is assumed to be in compliance with 401 KAR 63:020 based on the rates of emissions of airborne toxics provided in the application submitted by the source.

SECTION E - SOURCE CONTROL EQUIPMENT AND REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), 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 Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
   a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
   b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
   c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2.].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) 1.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and;
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit isissued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtaina new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

No construction authorized by this permit V-18-035.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) The permitted facility was at the time being properly operated;
(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

The alternate operating scenarios set forth below have been approved by the Division based on information supplied with the application and during the application review process. The terms and conditions of each alternate operating scenario have been developed to ensure compliance with the applicable regulations. The permittee, when making a change from one operating scenarioto another, shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. The permit shield, as provided in **Section G** shall extend to each alternate operating scenario set forth in this Section. All conditions not specified under an alternate operating scenario shall remain unchanged from their permit values or requirements.

For the equipment leaks in the Polymerization, Polyrectification, SAP, Tank Farm, and Loading Areas, subject to 40 CFR 63.2480(a) and Table 6 to 40 CFR 63, Subpart FFFF the permittee may comply with one of the following requirements.

a. 40 CFR 63, Subpart UU and the requirements referenced therein, except as specified in 63.2480(b) and (d) -(f);
b. 40 CFR 63, Subpart H and the requirements referenced therein, except as specified in 63.2480(b) and (d) -(f); or
c. 40 CFR 65, Subpart F and the requirements referenced therein, except as specified in 63.2480(c) and (d) -(f).

SECTION I - COMPLIANCE SCHEDULE

None

APPENDIX E. SUPPORTING EMISSION CALCULATIONS

The following sections within Appendix E detail the as-submitted emission calculation methodologies presented in each permit application submitted during the lifetime of the current Title V permit. These calculations are presented with this permit renewal application for convenience and do not present any updated methodologies.

- VAM Storage Tank Replacement
- PVOH Grinding Operation – 600 Line
- PVOH Grinding Operation – 400 Line
- Thermal Gap Filler Production

Appendix E-1. Section 502(b)(10) Change Notification for VAM Storage Tank Replacement, Attachment B

B-1. PSD Applicability Summary

Project Emissions Increases

The PSD applicability summary for the project provided below demonstrates that the project does not trigger PSD review because the total annual emissions increases of all regulated NSR pollutants emitted by units affected by the project are less than the SERs.

Table B-1.1 Project Emissions Increases for Regulated NSR Pollutants

Title V Emission Unit ID	Emission Unit Description	Emissions Basis	VOC PTE (tpy)
T10/19B	Vinyl Acetate Rework Tank (FA-5522)	PTE for breathing/working losses of new tank only, scenario #1, with 98% control from F01 Flare	0.18
		PTE for cleaning losses of new tank only, scenario #1	0.01
		PTE for breathing/working losses of new tank only, scenario #2, with 98% control from F01 Flare	0.01
		PTE for cleaning losses of new tank only, scenario #2	0.01
T14	Equipment Leak Components (Tank Farm)	PTE of added components	0.11
		Total Project Emissions Increase	0.31
		PSD Significant Emission Rate (SER)	40
		Project Emissions Increase > SER?	No

B-2. Tank Farm Storage Area Equipment Leak Component Emission Factors Derivation

B-2.1 Potential Fugitive Equipment Leak Emissions Calculation

B-2.1.1 Calculation Methodology -- Correlation Approach

Component Type	KYEIS Details	Number of New Components[1]	Total Emission Factor[2]	Pollutant	CAS Number	Pollutant-Specific Emission Factor[3]	Emission Rates[4]	
--	--	#	lb/hr/comp	--	--	lb/hr/comp	lb/hr	tpy
Valves	EQPT109; Process ID 3	9	2.42E-04	VOC	-	2.42E-04	2.18E-03	9.54E-03
Light Liquid	# of Valves			Vinyl Acetate	108-05-4	4.02E-06	3.62E-05	1.58E-04
	SCC: 3-01-800-03							
Flanges/Connectors	EQPT109; Process ID 4	36	6.15E-04	VOC	-	6.15E-04	2.22E-02	9.70E-02
All Streams	# of Flanges/Connectors			Vinyl Acetate	108-05-4	1.02E-05	3.68E-04	1.61E-03
	SCC: 3-01-800-07							

1. Component counts are all added components for FA-5522, the net change in components is a decrease in valves by 3 and an increase in flanges by 2. The PTE submitted with the Title V renewal included 110% of April 2018 component counts, which will remain conservative after the implementation of this project.
2. The Total Emission Factor is developed by binning all component/service type combinations into the concentration ranges provided in the table below, and applying the SOCMI correlation equations provided in *Table 2-9. SOCMI Industry Leak Rate/Screening Value Correlations* in the Protocol for Equipment Leak Emission Estimates, EPA 453/R-95-017, November 1995. The basis for the correlation concentration bins was to aggregate all component monitoring values from five (5) years of actual monitoring data at Sekisui exported from Guideware® and applying the scaling methodology described in the application narrative.
3. The Pollutant-Specific Emission Factors were calculated by multiplying the Total Emission Factor by the average percent composition in the process area stream, which is presumed to be in vinyl acetate service (operating scenario #1).
4. The lb/hr emission rate was calculated by multiplying the Pollutant-Specific Emission Factor (lb/hr/comp) by the total number of components for the component/service type combination. The tpy emission rate was calculation by mutliplying the lb/hr emission rate by 8,760 hr/yr operating schedule and dividing by 2,000 lb/ton.

B-2.1.2 Tank Farm Storage Area Binning and Correlation Values Methodology

Component Type	Service Type	Concentration Range	Components Within PTE Range		Emission Factor[1]
--	--	<= ppm	%	#	lb/hr/comp
Valves	LL	10	78.45%	488	8.86E-05
Valves	LL	50	20.05%	125	3.19E-04
Valves	LL	100	0.77%	5	5.55E-04
Valves	LL	500	0.36%	3	2.00E-03
Valves	LL	5,000	0.36%	3	1.25E-02
Valves	LL	10,000	0.02%	1	2.18E-02
Valves	LL	100,000	-	-	1.37E-01
Flanges/Connectors	All	50	96.60%	2,392	2.14E-04
Flanges/Connectors	All	100	1.48%	37	3.96E-04
Flanges/Connectors	All	500	1.30%	33	1.65E-03
Flanges/Connectors	All	5,000	0.27%	7	1.26E-02
Flanges/Connectors	All	10,000	0.22%	6	2.33E-02
Flanges/Connectors	All	100,000	0.13%	4	1.79E-01

1. The Emission Factors were calculated by using a modified version of the equation provided in *Table 2-9. SOCMI Industry Leak Rate/Screening Value Correlations* in the Protocol for Equipment Leak Emission Estimates, EPA 453/R-95-017, November 1995, and using the values provided in the table below as follows: Emission Factor (lb/hr/comp) = Correlation Coefficient (lb/hr) x Upper Value of Concentration Range (ppm) ^ Correlation EQ Factor.

B-3. T10, FB-5522 Operating Scenario #1 Sample Calculation of Estimated Emissions - Fixed-Roof Tank Breathing/Working Losses

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations,

Company: **Sekisui**
Location: **Nashville, TN**
Calculations for Tank No.: **FA 5522**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for: **annual**
2019

Meteorological Data:
- Avg Atmos Pressure, Pa: **14.45** psia
- Avg Ambient Temp, Taa: **59.1906849** degrees F
- Avg Daily Temp Range, ΔTa: **21.3824658** degrees F
- Avg Daily Solar Insolation, I: **1386.29589** Btu / ft^2 day

Tank Data:
- Tank Type: **FixedRoof**
- Average alpha: **0.68**
- Tank Diameter: **15** ft
- Tank Height: **23** ft
- Maximum Fill Height: **23** ft
- Minimum Liquid Level: **1** ft
- Net Working Height: **22** ft
- Fixed Roof Type: **self-supporting (dome)**
- Average outage, H_{VO}: **12.0288568** ft
- Max Vent Setting: **0.03** psig
- Min Vent Setting: **-0.03** psig

shell color: **medium gray paint**
shell condition: **New**
shell alpha: **0.68**
roof color: **medium gray paint**
roof condition: **New**
roof alpha: **0.68**
effective roof height: **1.02886** ft
Hvo: **12.0289** ft

Service Data:
- Service (stored liquid): **Vinyl Acetate**
- Product Factor, K_P: **1**
- Reid VaporPressure: _____ psi (if specified)
- ASTM Distillation Slope: _____ (if specified)
- Molecular Weight, M_V: **86.09** lb/lb-mol
- Liquid Bulk Temp, Tb: **62.0** degrees F
- Constant Temp Tank? **NO** tank must be insulated for temperature to be constant
- Liquid Bulk Temp Basis? calculated from ambient, per AP-42 equation 1-31
- Liquid Surface Temp, Tla: **64.5** degrees F per AP-42 equation 1-27, 1-28, 1-29
- True Vapor Pressure, P: **1.5821** psia per AP-42 equation 1-24, 1-25, 1-26
- Stock Vapor Density, W_V: **0.02410** lb/ft^3 per AP-42 equation 1-22

Vapor Pressure Constants:
A: _____
B: _____
C: _____

Heating Cycles: Vapor Space Temp., Tv: 66.93712 degree F per AP-42 equation 1-32, 1-33, 1-34
- Max Liquid Bulk Temp: _____ degrees F
- Min Liquid Bulk Temp: _____ degrees F
- Heating cycle frequency: _____ days

Operational Data:
- Throughput: **625,714** bbl per year
- Days this Period: **365** days
- Turnover Rate: **903.6** turnovers per year
- Turnover Factor, K_N: **0.200**

Calculated Values:

Vapor Space Expansion Factor, $K_E = \{\Delta T_V / (T + 459.57)\} + \{(\Delta P_V - \Delta P_B) / (P_A - P)\}$ AP-42 eqn 1-5

where:

ΔT_V = 32.7734 deg F (deg R); daily temperature range in the vapor space AP-42 eqn 1-6, 1-7, 1-8
- Tlx = 72.67 deg F; Pvx = 1.977 psia
- Tln = 56.28 deg F; Pvn = 1.256 psia

ΔP_V = **0.7210482** psia

ΔP_B = 0.06 psi; vent setting range

K_E = **0.1138988**

Vented Vapor Saturation Factor, $K_S = 1 / (1 + 0.053 P H_{VO})$ AP-42 eqn 1-21

K_S = **0.4978544**

Vent Setting Correction Factor, K_B:

K_B = 1; except when:

$K_N [(P_{BP} + P_A) / (P_I + P_A)] > 1$ AP-42 eqn 1-40

$K_B = [(P_I + P_A)/K_N - P] / [P_{BP} + P_A - P]$ AP-42 eqn 1-41

where:

P_{BP} = 0.03 psig; vent pressure setting

P_I = 0 psig; initial gauge pressure (nominal operating pressure)

K_B = **1**

Emissions Estimate for:	annual 2019			
Standing Storage Loss:	**1,060.39**	lb per	year	AP-42 eqn 1-4
Working Loss:	**16,921.81**	lb per	year	AP-42 eqn 1-35
Total Emissions:	**17,982.19**	lb per	year	AP-42 eqn 1-1
	9.0	tons per	year	

B-4. T10, FB-5522 Operating Scenario #2 Sample Calculation of Estimated Emissions - Fixed-Roof Tank Breathing/Working Losses

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations,

Company: **Sekisui**
Location: **Nashville, TN**
Calculations for Tank No.: **FA 5522**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for: **annual**
2019

Meteorological Data:
- Avg Atmos Pressure, Pa: **14.45** psia
- Avg Ambient Temp, Taa: **59.1906849** degrees F
- Avg Daily Temp Range, ΔTa: **21.3824658** degrees F
- Avg Daily Solar Insolation, I: **1386.29589** Btu / ft^2 day

Tank Data:
- Tank Type: **FixedRoof**
- Average alpha: **0.68**
- Tank Diameter: **15** ft
- Tank Height: **23** ft
- Maximum Fill Height: **23** ft
- Minimum Liquid Level: **1** ft
- Net Working Height: **22** ft
- Fixed Roof Type: **self-supporting (dome)**
- Average outage, H_{VO}: **12.0288568** ft
- Max Vent Setting: **0.03** psig
- Min Vent Setting: **-0.03** psig
- shell color: **medium gray paint**
- shell condition: **New**
- shell alpha: **0.68**
- roof color: **medium gray paint**
- roof condition: **New**
- roof alpha: **0.68**
- effective roof height: **1.02886** ft
- Hvo: **12.0289** ft

Service Data:
- Service (stored liquid): **Paste Stripper**
- Product Factor, K_P: **1**
- Reid VaporPressure: psi (if specified)
- ASTM Distillation Slope: (if specified)
- Molecular Weight, M_V: **42.206151** lb/lb-mol
- Liquid Bulk Temp, Tb: **62.0** degrees F
- Constant Temp Tank? **NO** tank must be insulated for temperature to be constant
- Liquid Bulk Temp Basis? calculated from ambient, per AP-42 equation 1-31
- Liquid Surface Temp, Tla: **64.5** degrees F per AP-42 equation 1-27, 1-28, 1-29
- True Vapor Pressure, P: **1.6721** psia per AP-42 equation 1-24, 1-25, 1-26
- Stock Vapor Density, W_V: **0.01249** lb/ft^3 per AP-42 equation 1-22

Vapor Pressure Constants:
- A:
- B:
- C:

Heating Cycles:
- Vapor Space Temp., Tv: 66.93712 degree F per AP-42 equation 1-32, 1-33, 1-34
- Max Liquid Bulk Temp: degrees F
- Min Liquid Bulk Temp: degrees F
- Heating cycle frequency: days

Operational Data:
- Throughput: **5,638** bbl per year
- Days this Period: **365** days
- Turnover Rate: **8.1** turnovers per year
- Turnover Factor, K_N: **1.000**

Calculated Values:

Vapor Space Expansion Factor, $K_E = \{\Delta T_V / (T + 459.57)\} + \{(\Delta P_V - \Delta P_B) / (P_A - P)\}$ AP-42 eqn 1-5

where:

ΔT_V = 32.7734 deg F (deg R); daily temperature range in the vapor space AP-42 eqn 1-6, 1-7, 1-8

Tlx = 72.67 deg F Pvx = 2.128 psia

Tln = 56.28 deg F Pvn = 1.303 psia

ΔP_V = **0.8252604** psia

ΔP_B = 0.06 psi; vent setting range

K_E = **0.1224164**

Vented Vapor Saturation Factor, $K_S = 1 / (1 + 0.053\ P\ H_{VO})$ AP-42 eqn 1-21

K_S = **0.4840247**

Vent Setting Correction Factor, K_B:

K_B = 1; except when:

$K_N\ [(P_{BP} + P_A) / (P_I + P_A)] > 1$ AP-42 eqn 1-40

$K_B = [(P_I + P_A)/K_N - P] / [P_{BP} + P_A - P]$ AP-42 eqn 1-41

where:

P_{BP} = 0.03 psig; vent pressure setting

P_I = 0 psig; initial gauge pressure (nominal operating pressure)

K_B = **0.9976577**

Emissions Estimate for:	annual 2019			
Standing Storage Loss:	**574.13**	lb per	year	AP-42 eqn 1-4
Working Loss:	**394.36**	lb per	year	AP-42 eqn 1-35
Total Emissions:	**968.49**	lb per	year	AP-42 eqn 1-1
	0.5	tons per	year	

B-5. T10, FB-5522 Operating Scenario #1 Sample Calculation of Estimated Emissions - Fixed-Roof Tank Cleaning Losses

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations,

Company:
Location: **Sekisui**
Calculations for Tank No.: **FA 5522**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for: **2019**

Meteorological Data:

Avg Atmos Pressure, Pa:	**14.45**	psia
Avg Ambient Temp, Taa:	**79.15**	degrees F
Avg Daily Temp Range, ΔTa:	**20.5**	degrees F
Avg Daily Solar Insolation, I:	**1997**	Btu / ft^2 day

Tank Data:

Tank Type:	**FixedRoof**		shell color:	**medium gray paint**
Average alpha:	**0.68**		shell condition:	**New**
Tank Diameter:	**15**	ft	shell alpha:	**0.68**
Tank Height:	**23**	ft	roof color:	**medium gray paint**
Maximum Fill Height:	**23**	ft	roof condition:	**New**
Minimum Liquid Level:	**1**	ft	roof alpha:	**0.68**
Net Working Height:	**22**	ft		
Fixed Roof Type:	**self-supporting (dome)**		effective roof height:	**1.02886** ft
Outage, H_{VO}:	**24.028857**	ft		
Max Vent Setting:	**0.03**	psig		
Min Vent Setting:	**-0.03**	psig		
Volume of vapor space, Vv:	**4246.2495**	ft^3		

Service Data:

Service (stored liquid):	**Vinyl Acetate**			
Product Factor, K_P:	**1**		Vapor Pressure Constants:	
Reid VaporPressure:		psi	(if specified)	A:
ASTM Distillation Slope:			(if specified)	B:
Molecular Weight, M_V:	**86.09**	lb/lb-mol		C:
Liquid Bulk Temp, Tb:	**79.2**	degrees F		
Constant Temp Tank?	**NO**		tank must be insulated for temperature to be constant	
Liquid Bulk Temp Basis?	calculated from ambient			
Liquid Surface Temp, Tla:	**79.2**	degrees F	per AP-42 equation 1-28	
True Vapor Pressure, P:	**2.3439**	psia	per AP-42 equation 1-24, 1-25, 1-26	
Stock Vapor Density, W_V:	**0.03490**	lb/ft^3	per AP-42 equation 1-22	
Vapor Space Temp., Tv:	**79.15**	degree F		
Liquid density, Wl:	**7.83**	lb/ft^3		

Operational Data:

Days of this Period, nd:	**1**	day(s)
Heel Condition:	**DrainDry**	

Calculated Values:

Vapor Space Purge

Initial Purge:

Sa:	**0**	
Loss from Resident Vapors :	**22.228328**	lb
Vapor control efficientcy for Initial Purge:	**0**	
Initial Purge Loss with control:	**22.228328**	

Daily Vapor Purge:

Purge Day (exclude initial purge):	**0**	
Saturation factor, S:	**0.250**	
Daily Purge loss:	**0**	

Continued Forced Ventilation:

Average vapor concentration, CV:	**0**		
Continued forced ventilation emissions, LCV:	**0**	lb	per AP-42 equation 4-10
Vapor Limit:	**8.7171539**	lb	per AP-42 equation 4-12, 4-13
Cleaning Loss:	**0**		
Vapor control efficiency:	**0**		
Cleaning Loss with control:	**0**		per AP-42 equation 4-1
Total Losses with control:	**22.228328**		

B-6. T10, FB-5522 Operating Scenario #2 Sample Calculation of Estimated Emissions - Fixed-Roof Tank Cleaning Losses

The emissions estimates calculated below are based on EPA's AP-42 Chapter 7.1 (Post 2018) emission factors and equations,

Company:
Location: **Sekisui**
Calculations for Tank No.: **FA 5522**
Emission estimates per EPA's AP-42 Chapter 7.1 (Post 2018), for:
2019

Meteorological Data:

Avg Atmos Pressure, Pa:	**14.45**	psia
Avg Ambient Temp, Taa:	**79.15**	degrees F
Avg Daily Temp Range, ΔTa:	**20.5**	degrees F
Avg Daily Solar Insolation, I:	**1997**	Btu / ft^2 day

Tank Data:

Tank Type:	**FixedRoof**		shell color:	**medium gray paint**
Average alpha:	**0.68**		shell condition:	**New**
Tank Diameter:	**15**	ft	shell alpha:	**0.68**
Tank Height:	**23**	ft	roof color:	**medium gray paint**
Maximum Fill Height:	**23**	ft	roof condition:	**New**
Minimum Liquid Level:	**1**	ft	roof alpha:	**0.68**
Net Working Height:	**22**	ft		
Fixed Roof Type:	**self-supporting (dome)**		effective roof height:	**1.02886** ft
Outage, H_{VO}:	**24.028857**	ft		
Max Vent Setting:	**0.03**	psig		
Min Vent Setting:	**-0.03**	psig		
Volume of vapor space, Vv:	**4246.2495**	ft^3		

Service Data:

Service (stored liquid):	**Paste Stripper**			
Product Factor, K_P:	**1**		Vapor Pressure Constants:	
Reid VaporPressure:		psi (if specified)	A:	
ASTM Distillation Slope:		(if specified)	B:	
Molecular Weight, M_V:	**41.878925**	lb/lb-mol	C:	
Liquid Bulk Temp, Tb:	**79.2**	degrees F		
Constant Temp Tank?	**NO**	tank must be insulated for temperature to be constant		
Liquid Bulk Temp Basis?	calculated from ambient			
Liquid Surface Temp, Tla:	**79.2**	degrees F	per AP-42 equation 1-28	
True Vapor Pressure, P:	**2.5597**	psia	per AP-42 equation 1-24, 1-25, 1-26	
Stock Vapor Density, W_V:	**0.01854**	lb/ft^3	per AP-42 equation 1-22	
Vapor Space Temp., Tv:	**79.15**	degree F		
Liquid density, Wl:	**6.99**	lb/ft^3		

Operational Data:

Days of this Period, nd:	**1**	day(s)
Heel Condition:	**DrainDry**	

Calculated Values:

Vapor Space Purge

Initial Purge:

Sa:	**0**	
Loss from Resident Vapors :	**11.808439**	lb
Vapor control efficientcy for Initial Purge:	**0**	
Initial Purge Loss with control:	**11.808439**	

Daily Vapor Purge:

Purge Day (exclude initial purge):	**0**	
Saturation factor, S:	**0.250**	
Daily Purge loss:	**0**	

Continued Forced Ventilation:

Average vapor concentration, CV:	**0**		
Continued forced ventilation emissions, LCV:	**0**	lb	per AP-42 equation 4-10
Vapor Limit:	**7.7819803**	lb	per AP-42 equation 4-12, 4-13
Cleaning Loss:	**0**		
Vapor control efficiency:	**0**		
Cleaning Loss with control:	**0**		per AP-42 equation 4-1
Total Losses with control:	**11.808439**		

Appendix E-2. Section 502(b)(10) Change Notification for PVOH Grinding Operation – 600 Line, Attachment C

C.1. PVOH Grinding Operations Project Emissions Increase Summary

Emission Unit ID	Process ID	Sekisui ID	Process Description	VOC (MeOH) Emissions Increase	MeAc Emissions Increase	PM Emissions Increase	PM_{10} Emissions Increase	$PM_{2.5}$ Emissions Increase
				tpy	tpy	tpy	tpy	tpy
W10	1	FD-5630 / GB-5605	PVOH Hopper Transfer	--	--	0.38	0.38	0.38
	2		Evaporative Losses	0.86	2.93	**--**	**--**	**--**
W11	1	FD-5632 / GB-5622	PVOH Screener Transfer	**--**	**--**	1.50	1.50	1.50
	2		Evaporative Losses	0.86	2.93	--	--	--
W12	1	FD-5631 / GB-5632	PVOH Recycle Transfer	**--**	**--**	1.50	1.50	1.50
	2		Evaporative Losses	0.86	2.93	--	--	--
Insignificant Activity		--	Off-spec Material Bagging	**--**	--	3.69E-04	3.69E-04	3.69E-04
Total Project Emissions Increase				2.58	8.79	3.38	3.38	3.38
PSD Significant Emission Rate (SER)				40	NA	25	15	10
Project Emissions Increase > SER?				No	NA	No	No	No

C.2. Emissions Calculation Detail for PVOH Grinding Operations

> Emissions are calculated for particulate and evaporative emissions associated with the dry material handling to support the PVOH grinding operations.

C.2.1 Process Rates and Unit Conversions

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	--
Maximum Total Throughput	8,000	lb/hr	Design specification for PVOH grinding operation
	4	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	35,040	ton/yr	Assuming continuous production
Outlet Grain Loading (W10, W11, W12)	0.01	gr/dscf	Conservative assumptions for minimum product collection efficiency. The manufacturer provides a >99% efficiency for capturing small product particles and test data shows virtually 100% of all particles greater than 1 micron will be collected in the baghouse an retained within the process equipment. TCEQ guidance on material handling provides that Plastic Pellet BACT would be an outlet grain loading of less than 0.005 gr/scf or efficiency of 99%. Therefore, equating this greater than 99% efficient product collection baghouse to 0.01 gr/dscf results in a conservative estimate of emissions. https://www.tceq.texas.gov/assets/public/permitting/air/info/materialhandling-outline.docx
Unit Conversions	7,000	gr/lb	--
	60	min/hr	
	2,000	lb/ton	

Pneumatic Transfer Equipment Description	EPID	Baghouse ID	Blower ID
Hopper Transfer Baghouse and Blower	W10	FD-5630	GB-5605
Screener Transfer Baghouse and Blower	W11	FD-5632	GB-5622
Recycle Transfer Baghouse and Blower	W12	FD-5631	GB-5632

C.2.1 Potential Particulate Matter Emissions

C.2.1.1 W10, W11, and W12 Grinding Operation Pneumatic Handling Emissions

> Emissions associated with the pneumatic transfer of PVOH through PVOH grinding system.

> The product transfer baghouses are inherent process equipment; therefore, emissions calculated are uncontrolled.

> All particles greater than 1 micron are retained in the system by the baghouse filters; therefore PM=PM10=PM2.5.

> The emission factor in SCC units is calculated based on operation at full system capacity. Due to constant outlet grain loading from the system vents, the actual emission factor in lb/ton throughput will fluctuate depending on actual throughput.

Parameter	Value	Units	Basis
W10 - Hopper Transfer Baghouse and Blower Rating	1,000	scfm	Blower GB-5605 Manufacturer's Specifications
W10 Hourly Particulate Emissions	0.09	lb/hr	= 0.01 gr/dscf Outlet Grain Loading (W10, W11, W12) x 1000 scfm W10 - Hopper Transfer Baghouse and Blower Rating x 60 min/hr / 7000 gr/lb
W10 Annual Particulate Emissions	0.38	ton/yr	= 0.09 lb/hr W10 Hourly Particulate Emissions x 8760 hr/yr / 2000 lb/ton
W10 Emission Factor in SCC Units	0.021	lb/ton	= 0.09 lb/hr W10 Hourly Particulate Emissions / 4 ton/hr Maximum Total Throughput
W11 - Screener Transfer Baghouse and Blower Rating	4,000	scfm	Blower GB-5622 Manufacturer's Specifications
W11 Hourly Particulate Emissions	0.34	lb/hr	= 0.01 gr/dscf Outlet Grain Loading (W10, W11, W12) x 4000 scfm W11 - Screener Transfer Baghouse and Blower Rating x 60 min/hr / 7000 gr/lb
W11 Annual Particulate Emissions	1.50	ton/yr	= 0.34 lb/hr W11 Hourly Particulate Emissions x 8760 hr/yr / 2000 lb/ton
W11 Emission Factor in SCC Units	0.086	lb/ton	= 0.34 lb/hr W11 Hourly Particulate Emissions / 4 ton/hr Maximum Total Throughput
W12 - Recycle Transfer Baghouse and Blower Rating	4,000	scfm	Blower GB-5632 Manufacturer's Specifications
W12 Hourly Particulate Emissions	0.34	lb/hr	= 0.01 gr/dscf Outlet Grain Loading (W10, W11, W12) x 4000 scfm W12 - Recycle Transfer Baghouse and Blower Rating x 60 min/hr / 7000 gr/lb
W12 Annual Particulate Emissions	1.50	ton/yr	= 0.34 lb/hr W12 Hourly Particulate Emissions x 8760 hr/yr / 2000 lb/ton
W12 Emission Factor in SCC Units	0.086	lb/ton	= 0.34 lb/hr W12 Hourly Particulate Emissions / 4 ton/hr Maximum Total Throughput

C.2.0.1 Off-Spec Material Bagging Process Emissions

> Emissions associated with bagging off-spec product. Calculation methodology and emission factors derived as presented in the Original Title V Application for similar operations.

> All emissions are assumed to be <2.5 microns in diameter.

> Annual emissions assume 100% of the material through the grinding system is bagged; however, actual bag filling will occur only periodically.

Parameter	Value	Units	Basis
Avg. Wt.% of PVOH <140 microns (100 mesh)	5.40%	wt.%	Ground % obtained from 5/2000 - 5/2001 PVOH Finished Product Analysis.
Avg. Wt.% of PVOH <5 microns (400 mesh)	1.95%	wt.%	
Hourly Maximum Product Throughput	4.00	ton/hr	Design specification for PVOH grinding operation
Emission Factor for Open Drop	2.11	lb/ton	= 5.40% wt.% Avg. Wt.% of PVOH <140 microns (100 mesh) x 1.95% wt.% Avg. Wt.% of PVOH <5 microns (400 mesh) x 2,000 lb/ton
Dust Retained By System	99.999%	%	"Cinched" bagging, which retains nearly all particles within the system
Emission Factor for "Cinched" Bag Drop	0.00002	lb/ton	= 2.11 lb/ton Emission Factor for Open Drop x (100%-99.999%)
Hourly PM/PM10/PM2.5 Emissions	0.00008	lb/hr	= 0.000021 lb/ton x 4.00 ton/hr
Annual PM/PM10/PM2.5 Emissions	0.00037	ton/yr	= 0.00008 lb/hr Hourly PM/PM10/PM2.5 Emissions x 8760 hr/yr / 2000 lb/ton

C.2.1 Potential VOC and HAP Emissions

C.2.1.1 Grinding Process and Handling Evaporative Losses Methanol / VOC / HAP

> Emissions associated with the evaporation of solvent methanol (MeOH) during dry grinding and product handling of PVOH.

> Methanol is the only VOC and HAP contained in the PVOH product, thus, VOC and HAP emissions are equal to methanol emissions.

Parameter	Value	Units	Basis
Content of MeOH / VOC in PVOH Product	0.67%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Methanol Emitted as % of Methanol in Final Product	1.10%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Vents on Grinding System	3		Number of vents on grinding system
MeOH / VOC Emission Factor	0.0491	lb/ton	= 0.67% wt.% Content of MeOH / VOC in PVOH Product x 1.10% wt.% Methanol Emitted as % of Methanol in Final Product / 3 Vents on Grinding System x 2,000 lb/ton
Hourly MeOH/ VOC Emissions Per Vent (W10, W11, W12)	0.197	lb/hr	= 0.0491 lb/ton x 8,000 lb/hr Maximum Total Throughput / 2,000 lb/ton
Annual W10 Hopper Transfer Baghouse and Blower FD-5630 Vent Emissions	0.86	ton/yr	= 0.197 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W11 Screener Transfer Baghouse and Blower FD-5632 Vent Emissions	0.86	ton/yr	= 0.197 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W12 Recycle Transfer Baghouse and Blower FD-5631 Vent Emissions	0.86	ton/yr	= 0.197 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton

C.2.1.2 Grinding Process and Handling Evaporative Losses MeAc

> Emissions associated with the evaporation of byproduct methyl acetate (MeAc) during dry grinding and product handling of PVOH.

> Methyl acetate is not regulated as HAP and does not meet the definition of VOC.

Parameter	Value	Units	Basis
Content of MeAc in PVOH Product	0.33%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
MeAc Emitted as % of MeAc in Final Product	7.60%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Vents on Grinding System	3		Number of vents on grinding system
MeAc Emission Factor	0.167	lb/ton	= 0.33% wt.% Content of MeAc in PVOH Product x 7.60% wt.% MeAc Emitted as % of MeAc in Final Product / 3 Vents on Grinding System x 2,000 lb/ton
Hourly MeAc Emissions Per Vent (W10, W11, W12)	0.67	lb/hr	= 0.167 lb/ton x 8,000 lb/hr Maximum Total Throughput / 2,000 gr/dscf
Annual W10 Hopper Transfer Baghouse and Blower FD-5630 Vent Emissions	2.93	ton/yr	= 0.669 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W11 Screener Transfer Baghouse and Blower FD-5632 Vent Emissions	2.93	ton/yr	= 0.669 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W12 Recycle Transfer Baghouse and Blower FD-5631 Vent Emissions	2.93	ton/yr	= 0.669 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton

Appendix E-3. Section 502(b)(10) Change Notification for PVOH Grinding Operation – 400 Line, Attachment C

C.1. PVOH Grinding Operations Project Emissions Increase Summary

Emission Unit ID	Process ID	Sekisui ID	Process Description	VOC (MeOH) Emissions Increase tpy	MeAc Emissions Increase tpy	PM Emissions Increase tpy	PM_{10} Emissions Increase tpy	$PM_{2.5}$ Emissions Increase tpy
W07	1	FD-5404 / GB-5405 and GB-5422	PVOH Grinding and Recycle Transfers	--	--	1.88	1.88	1.88
	2		Evaporative Losses	1.29	4.39	**--**	**--**	**--**
W08	1	FD-5407 / GB-5408	PVOH Screener Transfer	**--**	**--**	1.50	1.50	1.50
	2		Evaporative Losses	1.29	4.39	--	--	--
Insignificant Activity		--	Off-spec Material Bagging	**--**	--	3.69E-04	3.69E-04	3.69E-04
Total Project Emissions Increase				2.58	8.79	3.38	3.38	3.38
PSD Significant Emission Rate (SER)				40	NA	25	15	10
Project Emissions Increase > SER?				No	NA	No	No	No

C.2. Emissions Calculation Detail for PVOH Grinding Operations

> Emissions are calculated for particulate and evaporative emissions associated with the dry material handling to support the PVOH grinding operations.

C.2.1 Process Rates and Unit Conversions

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	--
Maximum Total Throughput	8,000	lb/hr	Design specification for PVOH grinding operation provided in original Title V application N form (pg. 179 of 479)
	4.00	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	35,040	ton/yr	Assuming continuous production
Outlet Grain Loading	0.01	gr/dscf	Conservative assumptions for minimum product collection efficiency. The manufacturer provides a >99% efficiency for capturing small product particles and test data shows virtually 100% of all particles greater than 1 micron will be collected in the baghouse and retained within the process equipment. TCEQ guidance on material handling provides that Plastic Pellet BACT would be an outlet grain loading of less than 0.005 gr/scf or efficiency of 99%. Therefore, equating this greater than 99% efficient product collection baghouse to 0.01 gr/dscf results in a conservative estimate of emissions. https://www.tceq.texas.gov/assets/public/permitting/air/info/materialhandling-outline.docx
Unit Conversions	7,000	gr/lb	
	60	min/hr	
	2,000	lb/ton	

Pneumatic Transfer Equipment Description	EPID	Baghouse ID	Blower ID
Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	W07	FD-5404	GB-5405 and GB-5422
Screener Feed Baghouse Blower	W08	FD-5407	GB-5408

C.2.1 Potential Particulate Matter Emissions

C.2.1.1 W07 and W08 Grinding Operation Pneumatic Handling Emissions

> Emissions associated with the pneumatic transfer of PVOH through PVOH grinding system.

> The main baghouse and screener feed baghouse are inherent process equipment; therefore, emissions calculated are uncontrolled.

> All particles greater than 1 micron are retained in the system by the baghouse filters; therefore PM=PM10=PM2.5.

> The emission factors in SCC units for the main baghouse and screener feed baghouse are calculated based on operation at full system capacity. Due to constant outlet grain loading from the system vents, the actual emission factor in lb/ton throughput will fluctuate depending on actual throughput.

Parameter	Value	Units	Basis
W07 - Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse Rating	5,000	scfm	Total volumetric flow rate from blower GB-5405 and GB-5422 design specifications
W07 Hourly Particulate Emissions	0.43	lb/hr	= 0.01 gr/dscf Outlet Grain Loading x 5000 scfm W07 - Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse Rating x 60 min/hr / 7000 gr/lb
W07 Annual Particulate Emissions	1.88	ton/yr	= 0.43 lb/hr W07 Hourly Particulate Emissions x 8760 hr/yr / 2000 lb/ton
W07 Emission Factor in SCC Units	0.107	lb/ton	= 0.43 lb/hr W07 Hourly Particulate Emissions / 4 ton/hr Maximum Total Throughput
W08 - Screener Feed Baghouse Blower Rating	4,000	scfm	Blower GB-5408 design specifications
W08 Hourly Particulate Emissions	0.34	lb/hr	= 0.01 gr/dscf Outlet Grain Loading x 4000 scfm W08 - Screener Feed Baghouse Blower Rating x 60 min/hr / 7000 gr/lb
W08 Annual Particulate Emissions	1.50	ton/yr	= 0.34 lb/hr W08 Hourly Particulate Emissions x 8760 hr/yr / 2000 lb/ton
W08 Emission Factor in SCC Units	0.086	lb/ton	= 0.34 lb/hr W08 Hourly Particulate Emissions / 4 ton/hr Maximum Total Throughput

C.2.1.2 Off-Spec Material Bagging Process Emissions

> Emissions associated with bagging off-spec product. Calculation methodology and emission factors derived as presented in the Original Title V Application for similar operatic

> All emissions are assumed to be <2.5 microns in diameter.

> Annual emissions assume 100% of the material through the grinding system is bagged; however, actual bag filling will occur only periodically.

Parameter	Value	Units	Basis
Avg. Wt.% of PVOH <140 microns (100 mesh)	5.40%	wt.%	Ground % obtained from 5/2000 - 5/2001 PVOH Finished Product Analysis.
Avg. Wt.% of PVOH <5 microns (400 mesh)	1.95%	wt.%	
Hourly Maximum Product Throughput	4.00	ton/hr	Design specification for PVOH grinding operation
Emission Factor for Open Drop	2.11	lb/ton	= 5.40% wt.% Avg. Wt.% of PVOH <140 microns (100 mesh) x 1.95% wt.% Avg. Wt.% of PVOH <5 microns (400 mesh) x 2,000 lb/ton
Dust Retained By System	99.999%	%	"Cinched" bagging, which retains nearly all particles within the system
Emission Factor for "Cinched" Bag Drop	0.00002	lb/ton	= 2.11 lb/ton Emission Factor for Open Drop x (100%-99.999%)
Hourly PM/PM10/PM2.5 Emissions	0.00008	lb/hr	= 0.000021 lb/ton x 4.00 ton/hr
Annual PM/PM10/PM2.5 Emissions	0.00037	ton/yr	= 0.00008 lb/hr Hourly PM/PM10/PM2.5 Emissions x 8760 hr/yr / 2000 lb/ton

C.2.2 Potential VOC and HAP Emissions

C.2.2.1 Grinding Process and Handling Evaporative Losses Methanol / VOC / HAP

> Emissions associated with the evaporation of solvent methanol (MeOH) during dry grinding and product handling of PVOH.

> Methanol is the only VOC and HAP contained in the PVOH product, thus, VOC and HAP emissions are equal to methanol emissions.

Parameter	Value	Units	Basis
Content of MeOH / VOC in PVOH Product	0.67%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Methanol Emitted as % of Methanol in Final Product	1.10%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Vents on Grinding System	2		Number of vents on grinding system
MeOH / VOC Emission Factor	0.0737	lb/ton	= 0.67% wt.% Content of MeOH / VOC in PVOH Product x 1.10% wt.% Methanol Emitted as % of Methanol in Final Product / 2 Vents on Grinding System x 2,000 lb/ton
Hourly MeOH/ VOC Emissions Per Vent (W07, W08)	0.295	lb/hr	= 0.0737 lb/ton x 8,000 lb/hr Maximum Total Throughput / 2,000 lb/ton
Annual W07 Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse FD-5404 Vent Emissions	1.29	ton/yr	= 0.295 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W08 Screener Feed Baghouse Blower GB-5408 Vent Emissions	1.29	ton/yr	= 0.295 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton

C.2.2.2 Grinding Process and Handling Evaporative Losses MeAc

> Emissions associated with the evaporation of byproduct methyl acetate (MeAc) during dry grinding and product handling of PVOH.

> Methyl acetate is not regulated as HAP and does not meet the definition of VOC.

Parameter	Value	Units	Basis
Content of MeAc in PVOH Product	0.33%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
MeAc Emitted as % of MeAc in Final Product	7.60%	wt.%	Engineering estimate from testing conducted for Original Title V Application.
Vents on Grinding System	2		Number of vents on grinding system
MeAc Emission Factor	0.251	lb/ton	= 0.33% wt.% Content of MeAc in PVOH Product x 7.60% wt.% MeAc Emitted as % of MeAc in Final Product / 2 Vents on Grinding System x 2,000 lb/ton
Hourly MeAc Emissions Per Vent (W07, W08)	1.00	lb/hr	= 0.251 lb/ton x 8,000 lb/hr Maximum Total Throughput / 2,000 gr/dscf
Annual W07 Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse GB-5405 and GB-5422 Vent Emissions	4.39	ton/yr	= 1.003 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton
Annual W08 Screener Feed Baghouse Blower FD-5407 Vent Emissions	4.39	ton/yr	= 1.003 lb/hr x 8,760 hr/yr Annual Hours of Operation / 2,000 lb/ton

Appendix E-4. Off-Permit Change Notification for Thermal Gap Filler Production, Attachment B

1. Emissions Calculation Details for Initial Manual Additions to Mixers

> During the initial phase of Polymatech production, the big bag to mixer hopper pneumatic transfer will be bypassed and raw material powders will be added to two of the six mixers manually. Dust from these drop transfers will be captured by vacuum filter units and exhausted outdoors to minimize worker exposure.

1.1 Process Rates and Unit Conversions

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	Assumed continuous operation
Total Batch Time	5	hr/batch	Process knowledge
Total Powder Throughput	1,710	kg/batch	Sum of individual raw material masses per batch
	3,770	lb/batch	Unit conversion
	0.38	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	3,303	ton/yr	Continuous production (i.e., 8,760 hr/yr) assumed
Total Liquid Throughput	224	kg/batch	Total liquid silicones and additives added per batch
	494	lb/batch	Unit conversion
	0.05	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	433	ton/yr	Continuous production (i.e., 8,760 hr/yr) assumed
Unit Conversions	7,000	gr/lb	
	60	min/hr	
	35.31	ft^3/m^3	
	2,000	lb/ton	
System Temperature	68	°F	Assumed ambient conditions within Polymatech process area
	528	°R	Unit conversion

1.2 Potential Particulate Matter Emissions

> PM emissions are associated with the manual drop transfer of raw material powders to the six mixers.

> The emission factors in SCC units for the drop transfers to the mixers are calculated based on continuous operation at full system capacity. The actual emission factor in lb/ton throughput will fluctuate depending on actual batch throughput via manual addition.

Parameter	Value	Units	Basis
Mean Wind Speed (U)	1.3	mph	AP-42 Section 13.2.4 Equation 1 is an empirical expression which retains its assigned quality rating if applied within a specified range of source conditions. The minimum wind speed that allows for this expression to apply has been chosen. The resulting emissions calculated are conservative estimates since the drop point will be located indoors with negligible wind and within a vessel.
Moisture Content (M)	0.25	%	AP-42 Section 13.2.4 Equation 1 retains its assigned quality rating to a minimum 0.25% moisture content. The actual moisture content of the raw material powders is expected to vary.
Aerodynamic Particle Size Multipliers (k)	0.35	--	<10 micron aerodynamic particle size multiplier for AP-42 Section 13.2.4 Equation 1
	0.053	--	<2.5 micron aerodynamic particle size multiplier for AP-42 Section 13.2.4 Equation 1
PM_{10} Emission Factor (E)	1.04E-02	lb/ton	AP-42 Section 13.2.4 Equation 1
$PM_{2.5}$ Emission Factor (E)	1.57E-03	lb/ton	$E = k(0.0032)\ [(U/2.2)^{1.3}]/[M/2)^{1.4}]$
PM_{10} Hourly Particulate Emissions from One Unit	3.92E-03	lb/hr	= 1.04E-02 lb/ton PM10 Emission Factor (E) x 0.38 ton/hr Total Powder Throughput
$PM_{2.5}$ Hourly Particulate Emissions from One Unit	5.93E-04	lb/hr	= 1.57E-03 lb/ton PM2.5 Emission Factor (E) x 0.38 ton/hr Total Powder Throughput
PM_{10} Annual Particulate Emissions from One Unit	1.72E-02	tpy	= 3.92E-03 lb/hr PM10 Hourly Particulate Emissions from One Unit x 8760 hr/yr Annual Hours of Operation
$PM_{2.5}$ Annual Particulate Emissions from One Unit	2.60E-03	tpy	= 5.93E-04 lb/hr PM2.5 Hourly Particulate Emissions from One Unit x 8760 hr/yr Annual Hours of Operation
Operational Mixers	2	--	Fully automatic process design
PM_{10} Hourly Particulate Emissions from All Units	7.83E-03	lb/hr	= 3.92E-03 lb/hr PM10 Hourly Particulate Emissions from One Unit x 2 Operational Mixers
$PM_{2.5}$ Hourly Particulate Emissions from All Units	1.19E-03	lb/hr	= 5.93E-04 lb/hr PM2.5 Hourly Particulate Emissions from One Unit x 2 Operational Mixers
PM_{10} Annual Particulate Emissions from All Units	3.43E-02	tpy	= 1.72E-02 tpy PM10 Annual Particulate Emissions from One Unit x 2 Operational Mixers
$PM_{2.5}$ Annual Particulate Emissions from All Units	5.20E-03	tpy	= 2.60E-03 tpy PM2.5 Annual Particulate Emissions from One Unit x 2 Operational Mixers

1.3 Potential Volatile Organic Compound Emissions

> VOC emissions are associated with the displacement of raw material vapors occupying the mixer vapor space above the liquid surface to which the powder raw materials are added. Additional displacement of the vapor space occurs due to the addition of the liquid silicone raw materials.

> For simplicity and conservatism, the worst-case vapor pressure of all pure components within all potential volatile liquid raw materials that are added to the mixer has been chosen.

Parameter	Value	Units	Basis
Vapor Molecular Weight (M)	186.399	lb/lbmol	Molecular weight of highest vapor pressure pure component in liquid raw materials
Vapor Pressure of Liquid Raw Material (P)	8.2	mmHg	Assumed highest vapor pressure pure component from liquid raw materials in vapor space. Note this highest vapor pressure material represents <.01% of the total liquid throughput, which the remainderd have vapor pressure <1 mmHg
	0.159	psi	Unit conversion
Expelled Vapor Saturation Factor (S)	1.45	--	AP-42, Table 5.2-1: Splash loading -- dedicated normal service
Liquid Raw Material Loading Loss Emission Factor	1.011	lb/Mgal	AP-42, Section 5.2, Equation 1: L_L = 12.46 x (SxPxM)/T
Density of Powder Raw Material	2.420	g/cm^3	Lowest density of pure components in powder raw materials
	20.196	lb/gal	Unit conversion (1 g/cm^3 = 8.3454 lb/gal)
Annual Volumetric Flow Rate of Powder Raw Materials	327.1	Mgal/yr	= 3,303 tpy Powder Throughput x 2,000 lb/ton / 20.196 lb/gal / 1,000 gal/Mgal
VOC Annual Emissions from One Unit from Powder Loading	330.8	lb/yr	= 1.011 lb/Mgal x 327.1 Mgal/yr
	0.1654	tpy	= 330.8 lb/yr / 2,000 lb/ton
VOC Annual Emissions from All Units from Powder Loading	0.331	tpy	= 0.1654 tpy x 2 Operational Mixers
Density of Liquid Raw Material	0.800	g/cm^3	Lowest density of pure components in liquid raw materials
	6.676	lb/gal	Unit conversion (1 g/cm^3 = 8.3454 lb/gal)
Annual Volumetric Flow Rate of Liquid Raw Materials	129.7	Mgal/yr	= 433 tpy Liquid Silicone Throughput x 2,000 lb/ton / 6.676 lb/gal / 1,000 gal/Mgal
VOC Annual Emissions from One Unit from Liquid Loading	131.2	lb/yr	= 1.011 lb/Mgal x 129.7 Mgal/yr
	0.0656	tpy	= 131.2 lb/yr / 2,000 lb/ton
VOC Annual Emissions from All Units from Liquid Loading	0.131	tpy	= 0.0656 tpy x 2 Operational Mixers
Total VOC Annual Emissions from All Units from Loading	0.462	tpy	= 0.331 VOC Annual Emissions from All Units from Powder Loading + 0.131 VOC Annual Emissions from All Units from Liquid Loading
Total VOC Annual Emissions from Transfer to Storage Drums	0.462	tpy	Once the liquid and powder raw materials have been mixed, the mixture from each unit will be transferred to an individual storage drum. Each drum will receive the full contents of the associated mixer; as such, displacing the air within the empty drum will effectively result in an equal amount of emissions as those from the liquid/powder loading into the mixer.

2. Emissions Calculation Details for Pnuematic Transfer to Six Mixer Hoppers

> Emissions are calculated for particulate emissions associated with the pneumatic transfer of raw material powders from the big bag station to the mixer hoppers.

2.1 Process Rates and Unit Conversions

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	Assumed continuous operation
Total Batch Time	5	hr/batch	1 hour for loading, 3.5 hours for mixing, 0.5 hours for unloading
Total Powder Throughput	1,710	kg/batch	Total solid powders added per batch
	3,770	lb/batch	Unit conversion
	0.38	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	3,303	ton/yr	Continuous production (i.e., 8,760 hr/yr) assumed
J-Tec Filter Outlet Grain Loading	0.01	gr/dscf	Conservative assumptions for minimum product collection efficiency based on the Texas Commission on Environmental Quality's (TCEQ) current Tier I BACT requirements of 99% control and 0.01 gr/dscf, whereby the filters employed will actually achieve higher control nearing 100% down to sub-micron particles.
Unit Conversions	7,000	gr/lb	
	60	min/hr	
	35.31	ft^3/m^3	
	2,000	lb/ton	

2.2 Potential Particulate Matter Emissions

> Emissions are associated with the pneumatic transfer of raw material powders to the six mixer hoppers.

> All particles greater than 1 micron are expected to be retained in the system by the J-Tec filters; therefore PM=PM10=PM2.5.

> The emission factors in SCC units for the mixer hoppers are calculated based on continuous operation at full system capacity. Note that actual operations allow for one hour of loading/pneumatic transfer per 5-hour batch. Due to constant outlet grain loading from the system vents, the actual emission factor in lb/ton throughput will fluctuate depending on actual batch throughput.

Parameter	Value	Units	Basis
Mixer Hopper Blower Rating	300	m^3/hr	Total volumetric flow rate from one mixer hopper blower based on design specifications
	177	scfm	Unit conversion
Hourly Particulate Emissions from One Unit	0.02	lb/hr	= 0.01 gr/dscf J-Tec Filter Outlet Grain Loading x 177 scfm Mixer Hopper Blower Rating x 60 min/hr / 7000 gr/lb
Annual Particulate Emissions from One Unit	0.07	ton/yr	= 0.02 lb/hr Hourly Particulate Emissions from One Unit x 8760 hr/yr / 2000 lb/ton
Emission Factor in SCC Units	0.040	lb/ton	= 0.02 lb/hr Hourly Particulate Emissions from One Unit / 0.38 ton/hr Total Powder Throughput
Total Mixer Hoppers	6	--	Fully automatic process design
Hourly Particulate Emissions from All Units	0.091	lb/hr	= 0.02 lb/hr Hourly Particulate Emissions from One Unit x 6 Total Mixer Hoppers
Annual Particulate Emissions from All Units	0.40	ton/yr	= 0.07 ton/yr Annual Particulate Emissions from One Unit x 6 Total Mixer Hoppers

2.2.1 Maximum Allowable Emission Rate for New Process Operations

> Pursuant to 401 KAR 59:010, the emission points associated with the mixer hopper pneumatic transfer operations are subject to a mass emissions standard as calculated below according to 401 KAR 59:010, Section 5 (Process Weight Rule).

Parameter	Value	Units	Basis
Allowable Rate of Particulate Emission Based on Process Weight Rate	1.96	lb/hr	401 KAR 59:010, Section 5: Equation for process rates up to 60,000 lb/hr $E = 3.59P^{0.62}$, P = process weight rate in tons/hr

3. Emissions Calculation Details for Raw Material Transfer to Six Mixers

> Emissions are calculated for particulate emissions associated with dropping raw material powders from the mixer hoppers into the mixers.

3.1 Process Rates and Unit Conversions

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	Assumed continuous operation
Total Batch Time	5	hr/batch	Process knowledge
Total Powder Throughput	1,710	kg/batch	Sum of individual raw material masses per batch
	3,770	lb/batch	Unit conversion
	0.38	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	3,303	ton/yr	Continuous production (i.e., 8,760 hr/yr) assumed
Total Liquid Throughput	224	kg/batch	Total liquid silicones and additives added per batch
	494	lb/batch	Unit conversion
	0.05	ton/hr	Conversion to SCC units based on 2,000 lb/ton.
	433	ton/yr	Continuous production (i.e., 8,760 hr/yr) assumed
Unit Conversions	7,000	gr/lb	
	60	min/hr	
	35.31	ft^3/m^3	
	2,000	lb/ton	
System Temperature	68	°F	Assumed ambient conditions within Polymatech process area
	528	°R	Unit conversion

3.2 Potential Particulate Matter Emissions

> PM emissions are associated with the drop transfer of raw material powders to the six mixers.

> The emission factors in SCC units for the drop transfers to the mixers are calculated based on continuous operation at full system capacity. The actual emission factor in lb/ton throughput will fluctuate depending on actual batch throughput.

Parameter	Value	Units	Basis
Mean Wind Speed (U)	1.3	mph	AP-42 Section 13.2.4 Equation 1 is an empirical expression which retains its assigned quality rating if applied within a specified range of source conditions. The minimum wind speed that allows for this expression to apply has been chosen. The resulting emissions calculated are conservative estimates since the drop point will be located indoors with negligible wind and within a vessel.
Moisture Content (M)	0.25	%	AP-42 Section 13.2.4 Equation 1 retains its assigned quality rating to a minimum 0.25% moisture content. The actual moisture content of the raw material powders is expected to vary.
Aerodynamic Particle Size Multipliers (k)	0.35	--	<10 micron aerodynamic particle size multiplier for AP-42 Section 13.2.4 Equation 1
	0.053	--	<2.5 micron aerodynamic particle size multiplier for AP-42 Section 13.2.4 Equation 1
PM_{10} Emission Factor (E)	1.04E-02	lb/ton	AP-42 Section 13.2.4 Equation 1
$PM_{2.5}$ Emission Factor (E)	1.57E-03	lb/ton	$E = k(0.0032)\ [(U/2.2)^{1.3}]/[M/2)^{1.4}]$
PM_{10} Hourly Particulate Emissions from One Unit	3.92E-03	lb/hr	= 1.04E-02 lb/ton PM10 Emission Factor (E) x 0.38 ton/hr Total Powder Throughput
$PM_{2.5}$ Hourly Particulate Emissions from One Unit	5.93E-04	lb/hr	= 1.57E-03 lb/ton PM2.5 Emission Factor (E) x 0.38 ton/hr Total Powder Throughput
PM_{10} Annual Particulate Emissions from One Unit	1.72E-02	tpy	= 3.92E-03 lb/hr PM10 Hourly Particulate Emissions from One Unit x 8760 hr/yr Annual Hours of Operation
$PM_{2.5}$ Annual Particulate Emissions from One Unit	2.60E-03	tpy	= 5.93E-04 lb/hr PM2.5 Hourly Particulate Emissions from One Unit x 8760 hr/yr Annual Hours of Operation
Operational Mixers	6	--	Fully automatic process design
PM_{10} Hourly Particulate Emissions from All Units	2.35E-02	lb/hr	= 3.92E-03 lb/hr PM10 Hourly Particulate Emissions from One Unit x 6 Operational Mixers
$PM_{2.5}$ Hourly Particulate Emissions from All Units	3.56E-03	lb/hr	= 5.93E-04 lb/hr PM2.5 Hourly Particulate Emissions from One Unit x 6 Operational Mixers
PM_{10} Annual Particulate Emissions from All Units	1.03E-01	tpy	= 1.72E-02 tpy PM10 Annual Particulate Emissions from One Unit x 6 Operational Mixers
$PM_{2.5}$ Annual Particulate Emissions from All Units	1.56E-02	tpy	= 2.60E-03 tpy PM2.5 Annual Particulate Emissions from One Unit x 6 Operational Mixers

3.3 Potential Volatile Organic Compound Emissions

> VOC emissions are associated with the displacement of raw material vapors occupying the mixer vapor space above the liquid surface to which the powder raw materials are added. Additional displacement of the vapor space occurs due to the addition of the liquid silicone raw materials.

> For simplicity and conservatism, the worst-case vapor pressure of all pure components within all potential volatile liquid raw materials that are added to the mixer has been chosen.

Parameter	Value	Units	Basis
Vapor Molecular Weight (M)	186.399	lb/lbmol	Molecular weight of highest vapor pressure pure component in liquid raw materials
Vapor Pressure of Liquid Raw Material (P)	8.2	mmHg	Assumed highest vapor pressure pure component from liquid raw materials in vapor space. Note this highest vapor pressure material represents <.01% of the total liquid throughput, which the remainderd have vapor pressure <1 mmHg
	0.159	psi	Unit conversion
Expelled Vapor Saturation Factor (S)	1.45	--	AP-42, Table 5.2-1: Splash loading -- dedicated normal service
Liquid Raw Material Loading Loss Emission Factor	1.011	lb/Mgal	AP-42, Section 5.2, Equation 1: $L_L = 12.46 \times (SxPxM)/T$
Density of Powder Raw Material	2.420	g/cm^3	Lowest density of pure components in powder raw materials
	20.196	lb/gal	Unit conversion (1 g/cm^3 = 8.3454 lb/gal)
Annual Volumetric Flow Rate of Powder Raw Materials	327.1	Mgal/yr	= 3,303 tpy Powder Throughput x 2,000 lb/ton / 20.196 lb/gal / 1,000 gal/Mgal
VOC Annual Emissions from One Unit from Powder Loading	330.8	lb/yr	= 1.011 lb/Mgal x 327.1 Mgal/yr
	0.1654	tpy	= 330.8 lb/yr / 2,000 lb/ton
VOC Annual Emissions from All Units from Powder Loading	0.992	tpy	= 0.1654 tpy x 6 Operational Mixers
Density of Liquid Raw Material	0.800	g/cm^3	Lowest density of pure components in liquid raw materials
	6.676	lb/gal	Unit conversion (1 g/cm^3 = 8.3454 lb/gal)
Annual Volumetric Flow Rate of Liquid Raw Materials	129.7	Mgal/yr	= 433 tpy Liquid Silicone Throughput x 2,000 lb/ton / 6.676 lb/gal / 1,000 gal/Mgal
VOC Annual Emissions from One Unit from Liquid Loading	131.2	lb/yr	= 1.011 lb/Mgal x 129.7 Mgal/yr
	0.0656	tpy	= 131.2 lb/yr / 2,000 lb/ton
VOC Annual Emissions from All Units from Liquid Loading	0.394	tpy	= 0.0656 tpy x 6 Operational Mixers
Total VOC Annual Emissions from All Units from Loading	1.386	tpy	= 0.992 VOC Annual Emissions from All Units from Powder Loading + 0.394 VOC Annual Emissions from All Units from Liquid Loading
Total VOC Annual Emissions from Transfer to Storage Drums	1.386	tpy	Once the liquid and powder raw materials have been mixed, the mixture from each unit will be transferred to an individual storage drum. Each drum will receive the full contents of the associated mixer; as such, displacing the air within the empty drum will effectively result in an equal amount of emissions as those from the liquid/powder loading into the mixer.

4. Emissions Calculation Details for Cleaner Usage

> Emissions of VOC associated with the application of cleaning solvents on the Polymatech process between batch cycles are detailed below.

4.1 Process Rates and Key Parameters

> The expected annual production rate and batch volume have been used to estimate the total amount of cleaning solvents to be prepared. The total batches per year and derived annual cleaning solvent usages that are used in the subsequent emissions calculations are conservative estimates as they have been extrapolated to 8,760 hours of continuous operation rather than 5-hour batch cycles.

Parameter	Value	Units	Basis
Annual Hours of Operation	8,760	hr/yr	Assumed continuous operation
Basis for Total Volume of Cleaner Prepared	1,502	batches	Expected 700,000 liters of production / 466 liters per batch
Volume of Parts Cleaner Prepared	100	L/1,502 batches	Process knowledge
Volume of Parts Cleaner Applied	0.067	L/batch	= 100 L/1,502 batches / 1502 batches
Volume of Ultrasonic Cleaner Prepared	1,080	L/1,502 batches	Process knowledge
Volume of Ultrasonic Cleaner Utilized	0.719	L/batch	= 1080 L/1,502 batches / 1502 batches
Total Batch Time	5	hr/batch	Process knowledge
Operational Mixers	6	--	
Total Batches Prepared Annually	10,512	batches/yr	= 8,760 hr/yr / 5 hr/batch x 6 Operational Mixers
Annual Parts Cleaner Applied	699.9	L/yr	= 0.067 L Parts Cleaner/batch x 10,512 batches/yr
	184.9	gal/yr	Unit conversion
Annual Ultrasonic Cleaner Applied	7,559	L/yr	= 0.719 L Ultrasonic Cleaner/batch x 10,512 batches/yr
	1,997	gal/yr	Unit conversion

4.2 Potential Volatile Organic Compound Emissions

> Using the annual cleaning solvent usages estimated above, VOC emissions are calculated using the VOC content and cleaning solvent densities provided on the respective cleaning solvent SDS. Similarly, the ultrasonic cleaning agent contains small amounts of VOC, which are presumed to evaporate onsite.

Parameter	Value	Units	Basis
Parts Cleaner VOC Content	95	wt. %	SDS
Parts Cleaner Density	0.742	g/cm^3	SDS
	6.192	lb/gal	Unit conversion (1 g/cm3 = 8.3454 lb/gal)
Ultrasonic Cleaner VOC Content	2.11	wt. %	SDS (not a solvent cleaner)
Ultrasonic Cleaner Relative Density	1.047	--	SDS
	8.738	lb/gal	Relative density x 8.3454 lb/gal
VOC Emissions from Parts Cleaner Application	0.544	tpy	= 184.9 gal/yr x 6.192 lb/gal x 95% by wt. VOC / 2,000 lb/ton
VOC Emissions from Ultrasonic Cleaner Application	0.184	tpy	= 1996.8 gal/yr x 8.738 lb/gal x 2.11% by wt. VOC / 2,000 lb/ton
Total VOC Emissions from Cleaner Application	0.728	tpy	= 0.544 tpy VOC Emissions from Parts Cleaner Application + 0.184 VOC Emissions from Ultrasonic Cleaner Application

From: Margot Fosnaugh
To: Patil, Durga D (EEC)
Cc: Austin Angeline; Lagan.Croft@sekisui-sc.com
Subject: RE: AI 40292 applications review
Date: Wednesday, March 19, 2025 2:35:19 PM
Attachments: image001.png
image002.png

Durga – After our call yesterday, I confirmed there is no impact on Sekisui's permit or regulatory applicability as a result of EPA's lifting of the stay on and revising the definition of "process unit", removal of 60.482-1(g), and addition of CEDRI reporting requirements. Pursuant to 40 CFR 60.160(b) and (c), Sekisui complies only with the HON for equipment leak components subject to NSPS VV.

Regards,
Margot Fosnaugh
Senior Consultant
P 859.341.8100 ext. 1807 M 513.218.3272

From: Patil, Durga D (EEC) <Durga.Patil@ky.gov>
Sent: Tuesday, March 18, 2025 11:41 AM
To: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>
Cc: Austin Angeline <AAngeline@trinityconsultants.com>; Erin Holland <erin.holland@sekisui-pmt-us.com>; Lagan.Croft@sekisui-sc.com
Subject: RE: AI 40292 applications review

Good afternoon:
Per the permit V-18-035. the warehouse fugitives with emissions of 214 tpy of VOC is subject to 401 KAR 50:012. I did not find any RAP analysis submitted upon the issuance of the final permit,
Could you please let me know when a RAP analysis was submitted either to permit review or to field operations and provide me with the submittal ID or date of submittal.

Thanks
Durga Patil
502 782 6730

From: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>
Sent: Thursday, March 13, 2025 2:53 PM
To: Patil, Durga D (EEC) <Durga.Patil@ky.gov>
Cc: Austin Angeline <AAngeline@trinityconsultants.com>; Erin Holland <erin.holland@sekisui-pmt-us.com>; Lagan.Croft@sekisui-sc.com
Subject: RE: AI 40292 applications review

Hi Durga,

In response to your questions regarding the Sekisui Polymatech operations, please see the following information and attached calculations and SDS.

Please provide the emissions profile from the insignificant activity paint-wetting impairment substance testing... it may be listed as an insignificant activity in the list maintained by the Division, however I still need to identify the emissions profile.

> The PWIS testing is conducted using aerosol paint cans within a small bench-top box with filtration and external ventilation for worker protection. The actual amount of paint used and resulting emissions is very small and in support of quality testing for each new lot of silicone A/B received. Attached is the SDS for the paint used, as well as a calculation showing the PTE from this source. Actual total paint usage since June 2023 totaled 1 x 10 oz can.

Please review the applicability of 401 KAR 59:185 to the parts cleaner and the ultrasonic cleaner used, as both have VOC content in their sds that are emitted and the facility is a major source of VOC.

> There is no 401 KAR 59:185 affected source associated with the Polymatech operations. There are two types of cleaning:
>
> 1. Manual cleaning of equipment using aerosol can cleaners that contain VOC. This type of cleaning operation is not a "cold cleaner", "open top vapor degreaser" or "conveyorized degreaser", as those terms are defined in Section 1 of the rule. There is no "degreaser" or vessel associated with the VOC-containing cleaning product.
> 2. Ultrasonic cleaning using a water-based detergent cleaning product. Initial calculations conservatively assumed some organics in a proposed cleaning solution could potentially be emitted as VOC; however, the cleaning solution finally planned for use in this machine contains 0% VOC, as documented in the attached SDS. Note this ultrasonic cleaner is not yet operational; however, once operation begins it will not meet the definition of "affected facility" because it will not utilize VOC to remove soluble impurities.

Please let us know if you have any further questions.

Regards,
Margot Fosnaugh
Senior Consultant
P 859.341.8100 ext. 1807 M 513.218.3272

From: Patil, Durga D (EEC) <Durga.Patil@ky.gov>
Sent: Tuesday, March 11, 2025 11:27 AM
To: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>; Lagan.Croft@sekisui-sc.com
Cc: Austin Angeline <AAngeline@trinityconsultants.com>; Erin Holland <erin.holland@sekisui-pmt-us.com>
Subject: RE: AI 40292 applications review

Good morning:
Any updates?

Durga Patil
502 782 6730

From: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>

Sent: Thursday, February 27, 2025 7:11 AM
To: Patil, Durga D (EEC) <Durga.Patil@ky.gov>; Lagan.Croft@sekisui-sc.com
Cc: Austin Angeline <AAngeline@trinityconsultants.com>; Erin Holland <erin.holland@sekisui-pmt-us.com>
Subject: RE: AI 40292 applications review

Hi Durga – I am coordinating with the EHS coordinator for Sekisui Polymatech, Erin Holland, so we can get you a response timely. Things move a little slower this time of year with all of the end of month reports, but we are prioritizing this.

Regards,
Margot Fosnaugh
Senior Consultant
P 859.341.8100 ext. 1807 M 513.218.3272

From: Patil, Durga D (EEC) <Durga.Patil@ky.gov>
Sent: Wednesday, February 26, 2025 11:25 AM
To: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>; Lagan.Croft@sekisui-sc.com
Cc: Austin Angeline <AAngeline@trinityconsultants.com>
Subject: RE: AI 40292 applications review

Good morning:
Can you send me response to the queries on the 502(b)(10) notification operated by Sekisui Polymatech America LLC.

Thanks
Durga Patil

From: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>
Sent: Tuesday, February 18, 2025 12:26 PM
To: Patil, Durga D (EEC) <Durga.Patil@ky.gov>; Lagan.Croft@sekisui-sc.com
Cc: Austin Angeline <AAngeline@trinityconsultants.com>
Subject: RE: AI 40292 applications review

Durga –

Below are responses to you questions about Sekisui Chemicals. We will respond separately to questions regarding Sekisui Polymatech.

We do agree that all of the submittals for the PVOH grinding would be a single project, which was the reason for incorporating all into the last application. As we noted in the introduction to the application submitted in December 2024, the emission rates shown in that application were refined based on a calculation of the inlet particulate loading and collection efficiency, rather than the overly conservative estimate of outlet grain loading used in the prior applications. The emission rates in the December 2024 application supersede the prior estimates.

The cyclone IDs are all correct. FC-5203 and FC-5205 are for the 200 line, while FC-5253 and FC-5255 are for the 250 line.

The blower IDs are provided on pages 42 of 61 and 45 of 61 of the December 2024 application (Appendix C.2.1 and C.3.1), for the 200 and 250 line, respectively.

Pneumatic Transfer Equipment Description	EPID	Baghouse ID	Blower ID
Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	W01	FD-5204	GB-5205 and GB-5222
Screener Feed Baghouse Blower	W02	FD-5207	GB-5208

Pneumatic Transfer Equipment Description	EPID	Baghouse ID	Blower ID
Transfer Cyclone Blower and Recycle Cyclone Blower to Main Baghouse	W04	FD-5254	GB-5255 and GB-5272
Screener Feed Baghouse Blower	W05	FD-5527	GB-5258

Let us know if you have further questions on the applications.

Regards,
Margot Fosnaugh
Senior Consultant
P 859.341.8100 ext. 1807 M 513.218.3272

From: Patil, Durga D (EEC) <Durga.Patil@ky.gov>
Sent: Tuesday, February 11, 2025 11:26 AM
To: Lagan.Croft@sekisui-sc.com
Cc: Margot Fosnaugh <MFosnaugh@trinityconsultants.com>
Subject: RE: AI 40292 applications review

Good morning:
I am reviewing the various 502(b)(10) change notifications submitted for AI 40292 Sekisui Chemicals and have a couple of questions:
There are 3 notifications submitted between November 2021 through December 2024 all for the addition of a new PVOH grinding operations in the 600 Line; 400 Line and 200/250 Line.
Each one of these showed the emissions increase from the project does not trigger significant emissions increase rate and so is not subject to further review under 401 KAR 52:017.
However, please explain why these 3 projects should not be considered a single project all of which have occurred with 3 years, just on different lines but at the same area at the facility, and thus triggering further review under 401 KAR 51:017. Table 1 of the application submitted Dec 2024 does show a comprehensive project emissions increase from W01, 02, 04, 05, 07, 08, 10, 11 and 12 but the numbers int eh table are different from the previous applications submitted.

For the last project on Line 200/250, the application description identified 2 transfer cyclone (FC-5203 or FC-5253) and two recycle cyclones (FC-5205 or FC-5255) to be used, is this because it was yet to be determined which one is going to be repaired and reused? If so please provide the cyclone IDs being used. In addition, I need the blower IDs as shown in previous other 2 applications.

With regards to the off-permit change notification for the new manufacturing process to be operated by operated by Sekisui Polymatech America LLC:

- please provide the emissions profile from the insignificant activity paint-wetting impairment substance testing… it may be listed as an insignificant activity in the list maintained by the Division, however I still need to identify the emissions profile.

- Please review the applicability of 401 KAR 59:185 to the parts cleaner and the ultrasonic cleaner used, as both have VOC content in their sds that are emitted and the facility is a major source of VOC.

I am yet to review the renewal application and may have additional questions.
Thanks

Durga Patil
Environmental Scientist Consultant
Phone: (502)- 782-6730