

**Title V Operating Permit
Renewal Application
Emission Source Reference 82-0510**

**Primester GP
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PN#0452379

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TABLE OF CONTENTS

1.0	INTRODUCTION	1-1
1.1	APPLICATION PURPOSE	1-1
2.0	EMISSION SOURCE DESCRIPTIONS	2-1
2.1	EMISSION SOURCE REFERENCE NUMBER 82-0510-01: ESTER PRODUCTION	2-2
2.2	EMISSION SOURCE REFERENCE NUMBER 82-0510-02: ACID RECOVERY PROCESS	2-5
2.3	EMISSION SOURCE REFERENCE NUMBER 82-0510-03: CELLULOSE SCRAP RECOVERY PROCESS	2-5
2.4	EMISSION SOURCE REFERENCE NUMBER 82-0510-04: TANK FARM	2-6
2.5	EMISSION SOURCE REFERENCE NUMBER 82-0510-05: COOLING TOWER	2-6
3.0	INSIGNICANT ACTIVITIES	3-1
4.0	REGULATORY REVIEW	4-1
4.1	APPLICABLE STANDARDS	4-19
4.1.1	Emission Source Reference Number 82-0510-01: Ester Production (B-440-1)	4-19
4.1.2	Emission Source Reference Number 82-0510-02: Acid Recovery Process (B-441-1)	4-23
4.1.3	Emission Source Reference Number 82-0510-03: Cellulose Scrap Recovery Process (B-441-2)	4-26
4.1.4	Emission Source Reference Number 82-0510-04: Tank Farm (B-442-1)	4-33
4.1.5	Emission Source Reference Number 82-0510-05: Cooling Tower (B-447-1)	4-36
4.2	RISK MANAGEMENT PLAN	4-37

LIST OF TABLES

1-1	<i>Changes to Title V Operating Permit 567676 since Renewal Issuance</i>	1-1
2-1	<i>Tanks Used at Source 82-0510-01 (Cellulose Esterification</i>	2-4
4-1	<i>Inapplicable Requirements</i>	4-1
4-2	<i>Applicability of State of Tennessee Regulations</i>	4-16
4-3	<i>Applicability of Storage Tanks in Source 82-0510-03 to 40 CFR 60 Subpart Kb</i>	4-28
4-4	<i>Product Manufactured at this CMPU.</i>	4-32
4-5	<i>NSPS for Volatile Organic Liquid Storage Tanks</i>	4-35

LIST OF APPENDICES

A	<i>FACILITY LOCATION MAPS</i>
B	<i>TITLE V PERMIT APPLICATION FORMS</i>
C	<i>CAM PLAN SUMMARY EMISSION SOURCE REFERENCE NUMBER 82-0510-01 SCRUBBER FPC-12 AT VENT N</i>
D	<i>SPECIFIC APPLICABILITY DETERMINATIONS FOR 40 CFR 60 (NSPS) AND 40 CFR 63 (MACT) PROVIDED IN ATTACHMENT 2 OF THE TITLE V PERMIT</i>
E	<i>NSPS APPROVED ALTERNATIVE MONITORING PLAN 40 CFR 60 SUBPART VV ACETIC ACID SERVICE</i>
F	<i>NSPS APPROVED ALTERNATIVE MONITORING PLAN 40 CFR 60 SUBPART RRR §60.702(a)</i>
G	<i>OPERATING PLAN FOR TANK SRD-70</i>

1.0 INTRODUCTION

1.1 APPLICATION PURPOSE

Primester GP (Primester) owns and operates a cellulose acetate flake manufacturing site located in Kingsport, Sullivan County, Tennessee. The site, Emission Source Reference Number: 82-0510 currently operates under Title V Permit No. 567676. The current Title V operating permit was originally issued on March 21, 2014. The permit has undergone six Administrative Amendments (AA) and a summary of these amendments were obtained from the most recent Title V Statement of Basis and are provided in Table 1-1.

Table 1-1. Fluctuations to Title V Operating Permit 567676 since Renewal Issuance

Permit Modification	Issue Date	Condition or Section	Modification
Administrative Amendment #1 (AA1)	September 5, 2014	E1	Updated annual accounting periods for fees.
		E2-1	Corrected semiannual reporting requirements by adding Condition E3-13 (CAM for PES B-440-1, Vent N) to E2-1(a)(1) and by adding Conditions E6-8 (MACT General Provisions applicability to PES B-442-1) and E6-9 (MACT FFFF applicability to PES B-442-1) to E2-1(a)(2).
		E3-11	Corrected periodic monitoring to reference E3-13 instead of E3-14.
		E5-9, Attachment 2	Corrected NSPS NNN requirements for PES B-441-2. Added Condenser SRC-42 (affected condenser with low flow exemption). This change was included in the renewal application dated August 28, 2013, but was not added to the Title V renewal.
AA2	January 26, 2015	Cover page, E2-6	Updated Responsible Official & Technical Contact information and moved this information from cover page to new condition E2-6.
		E1	Edited beginning year of Current Annual Accounting Period
AA3	February 22, 2016	A12	Updated A12(a) to clarify the deadlines for submittal of a renewal application.
		B5, E2-1	Updated annual certification requirements. Removed the requirement for the ACC to state whether compliance methods provide continuous or intermittent data.
		E1	Updated annual accounting periods for fees.
		E2-6	Updated Responsible Official.

Permit Modification	Issue Date	Condition or Section	Modification
AA4	May 31, 2016	Cover page	Updated to reflect new owner/operator.
		E2-1(a)(3)	Corrected a minor error in reporting requirement (no NSPS Kb reporting requirement for B-442-1)
		E2-6	Updated facility contact information.
		Sections E3, E4, E5, E6, and E7	Updated facility information in table headers.
		E3-3, E3-12, E7-1	Added Solvay agreement letter date.
AA5	February 17, 2017	Cover Page	Updated facility name and address.
		B5, E2-1	Updated underlying applicable requirement for annual compliance certification.
		E1	Updated annual accounting period dates.
		E2-1(a)	Updated semiannual reporting requirements. Deleted the requirement for submittal of the first semiannual report.
		E3-16, Attachment 2	Minor corrections to MACT FFFF specific applicability determinations (correct one rule citation and one unit conversion)
AA6	November 17, 2017	Cover page	Updated permittee name
		A8, E1	Updated fee language to match current regulation.
		B6	Updated U. S. EPA information.
		B10	Updated language to match current regulation.
		Note:	For Condition E2-1(a)(3), NSPS Subpart Kb doesn't have any reporting requirements. Need to remove in future modification or renewal. However, they are required to monitor the scrubber flow rate for one NSPS Kb tank, so that monitoring and recordkeeping needs to be included in the general SAR condition (E2-1(a)(1)).

The permit has an expiration date of March 20, 2019. The permit, requires a renewal permit application be submitted between June 23, 2018, and September 21, 2018. Provided the renewal application is complete and submitted in a timely fashion, the site will be operating legally under the application shield by following the most recent issued permit requirements until superseded by the renewed permit.

This renewal permit application has been prepared to provide the information required by the Tennessee Division of Air Pollution Control. The application presents descriptions of the source and its control equipment, process flow diagrams, supporting calculation summaries, and a review of applicable requirements.

2.0

EMISSION SOURCE DESCRIPTIONS

Primester manufactures flaked cellulose acetate at its Kingsport site. A location map is included in Appendix A in Figure A-1. Cellulose acetate is manufactured from the acetylation of cellulose with acetic anhydride and acetic acid using a sulfuric acid catalyst.

Raw materials such as acetic acid, acetic anhydride, sulfuric acid (catalyst), and sodium hydroxide are received and stored on-site in tanks. Cellulose is received in rolls and stored in bins. These raw materials progress into the continuous process, Ester Production, Emission Source Reference Number (ESRN) 82-0510-01. The site also recovers acetic acid from the process for reuse in the Acid Recovery Process, ESRN 82-0510-02. The acid recovery feed stream and organic raw materials for this recycling process are piped from storage tanks. The recovered acetic acid is stored in tank(s) prior to reuse in ESRN 82-0510-01. Cellulose Scrap Recovery, ESRN 82-0510-03 processes reject cellulose acetate dope and other organic byproducts from ESRN 82-0510-01 and degrades it to compounds suitable for discharge to an offsite wastewater treatment facility. Liquid raw materials, intermediate products and recovered products are held in storage tanks located at Tank Farm, ESRN 82-0510-04. Cooling water is required at various locations within the site. The cooled water is produced at Cooling Tower, ESRN 82-0510-05. Makeup water is produced from river water. A simplified process flow diagram depicts these sources in Figure B-1.

The site is classified as a Major Source under the Title V permitting regulations for Particulate Matter (PM), Sulfur Dioxide (SO₂), Volatile Organic Compounds (VOC), Nitrogen Oxides (NO_x), Carbon Monoxide (CO) and Hazardous Air Pollutants (HAP) because the Eastman Chemical Company (Eastman) adjacent to the site has been a support facility to Primester. Eastman is a major source for all the pollutants listed above. No recent determination has been made by the Tennessee Division of Air Pollution Control (TDAPC) to the change in dependency of Primester on Eastman. The Emission Sources listed in the current permit and therefore this permit renewal application include:

- Emission Source Reference Number 82-0510-01:
Ester Production (Source ID B-440-1)
- Emission Source Reference Number 82-0510-02:
Acid Recovery Process (Source ID B-441-1)
- Emission Source Reference Number 82-0510-03:
Cellulose Scrap Recovery Process (Source ID B-441-2)

- Emission Source Reference Number 82-0510-04:
Tank Farm (Source ID B-442-1)
- Emission Source Reference Number 82-0510-05:
Cooling Tower (Source ID B-447-1)

Fugitive emissions from piping components and equipment associated with each process within an Emission Source are permitted under that source. In addition to the listed point sources, there are also several insignificant emission sources included in the application.

A brief description of each permitted source is given below. Process flow diagrams of the permitted sources are included following permit application form APC 2 and identified as Figures B-1 through B-6 in Appendix B. The necessary permit application forms are included in Appendix B. The supporting calculation summaries are included with the application forms and follow permit form APC 28 for each source. Supporting Maximum Allowable emission calculations for Primester follow the APC 29 form.

2.1 ***EMISSION SOURCE REFERENCE NUMBER 82-0510-01: ESTER PRODUCTION***

Acetic acid, acetic anhydride, sulfuric acid (a catalyst) and cellulose are introduced at different points in the process to convert cellulose to cellulose acetate by chemical reactions. The manufacturing process is continuous. This process also results in cellulose sludge that is recovered for degradation at Source 82-0510-03 to a wastewater that is transported offsite for further treatment and disposal.

The catalyst solution, acetic acid and acetic anhydride are stored in tanks. The cellulose in the form of rolled paper is mechanically pulped (shredded) in hammermills before further processing downstream. Though ESRN 82-0510-04 is a tank farm, this source also includes storage tanks that are not included by the tank farm source. Baghouse-controlled particulate matter (PM) emissions, scrubber-controlled Volatile Organic Compound (VOC) emissions and fugitive VOC emissions from piping component leaks occur at this source.

The cellulosic material is shredded in hammermills. Cellulose dust is controlled by two identical baghouses, ACY-15 and ACY-25 that exhaust to respective emission points, G and H.

Following the Hammermill process, the chemical reaction is initiated in the Activation operation. Acetic acid is combined with the pulped cellulose in the presence of a pretreat acid (a solution of acetic acid and sulfuric acid). Ethylene glycol is used as a non-contact coolant in this process. Acetic anhydride is also used in this operation. Scrubbers ACC-10 (emission point A) and ACC- 12 (emission point B) are used to control VOC emissions.

Following Activation is the Acetylation operation. In this operation the chemical reaction above is allowed to go to completion. The product of this operation is in a concentrated form (dope). This operation uses process vessels, reactors, drum flakers, and blenders. VOC emissions from this operation are controlled by Scrubber ACC-12 which exhausts through emission point B. Storage tanks in this operation include sulfuric and pretreat acid tanks, which also vent through Scrubber ACC-12 (emission point B)

Following Acetylation is the Hydrolysis operation. In Hydrolysis, the cellulose acetate in the dope is cleaved to a desired molecular chain length. Blenders and process vessels are used in this operation. VOC emissions are controlled by scrubber ACC-12 (emission point B).

Following Hydrolysis is the Dope Concentration operation. The dope passes through a stripper in where acetic flashes off rendering the dope more concentrated. . In another area of the plant, this acetic acid is recovered downstream for reuse. This operation is accomplished by distillation columns, heat exchangers, and a stripper. Dope Concentration VOC emissions are also controlled by Scrubber CHC-13. Scrubber CHC-13 exhausts from emission point C.

Following Dope Concentration is the Precipitation and Maturation operation. The dope is concentrated for subsequent processing in extrusion devices (precipitators). The concentrated dope is passed through precipitators, and the dope emerges in spaghetti-like strands. The emergent product is wet; however, it is brittle enough to be chopped into pellets. The pellets, in an acid/water solution, are dropped in a tray column with an agitator. This action further hardens the pellets. The wet pellets are moved to a conveyor belt where the organic material is rinsed off. This waste water is transferred to the Acid Recovery facility. After rinsing, the pellets are conveyed to rotary dryers. Once dried these pellets are transferred to storage silos for shipment as product offsite. VOC and emissions from this source are controlled by Scrubber FPC-12 which exhausts from Emission Point N.

Table 2-1 lists tanks at Source 82-0510-01. The storage tanks at this source are uncontrolled.

Table 2-1. Tanks Used at Source 82-0510-01 (Cellulose Esterification)

Tank ID	Tank Name	Emission Point
ACD-01	Sulfuric Acid Head Tank	Insignificant Activity
ACD-10	Activation Solution Mix Tank	B
ACD-11	Mix Tank	B
ACD-20	Mix Tank	B
ACD-21	Mix Tank	B
CAC-20	Wash Acid Tank	B
CAD-11	Reject Tank	B
DCD-81	Holdup Tank	C
DCD-82	Holdup Tank	C
DCD-83	Holdup Tank	C
FPD-12	Holdup	N
CAD-40	Acetic Anhydride Holdup	Q
UTD-60	Ethylene Glycol Holdup Tank	R

VOC emissions from leaking piping equipment vented into the building containing the activation, acetylation, hydrolysis, dope concentration and precipitation operations are controlled through building Scrubber UTD-40 which exhausts through emission point E. The building has another scrubber, UTD-30 which exhausts from emission point D; however, this scrubber is only used as a backup to UTD-40.

Fugitive VOC emissions released inside the building in the manufacturing area are controlled by building Scrubber UTD-40 or UTD-30 when operating. Otherwise, VOC and refrigerant fugitive emissions outside of the building manufacturing area are uncontrolled and are released as emission point F.

2.2 ***EMISSION SOURCE REFERENCE NUMBER 82-0510-02:
ACID RECOVERY PROCESS***

In this process, spent acetic acid from Cellulose Esterification is recovered for reuse. The spent acid is processed in solvent extractors to migrate the acetic acid from the spent solution into the extractor solvent. The acetic acid is then separated from the extraction solvent by an azeotropic distillation column. A two-scrubber system is used to control VOC for the acid recovery source. The extractors, distillation columns, decanters, solvent storage and process vessels are VOC-controlled by Water Scrubber ARC-11 followed by ARC-12. Scrubber ARC-11's scrubbing medium is approximately 30% acetic acid. ARC-11 exhausts directly into Scrubber ARC-12 which is a water scrubber. ARC-12 exits through emission point A. Fugitive VOC emissions from piping components occur at this source.

2.3 ***EMISSION SOURCE REFERENCE NUMBER 82-0510-03:
CELLULOSE SCRAP RECOVERY PROCESS***

Reject dope from various points in the acetylation operation at ESRN 82-0510-01 is processed at this source for recovery of cellulose sludge. Materials are recovered from this stream at the distillation columns for reuse at the plant. Once the recoverable materials are removed from the cellulose sludge, it is processed in heated and pressurized reactors in the presence of sulfuric acid to degrade the sludge into smaller solids for subsequent management offsite at an NPDES wastewater treatment plant.

VOC and sulfur dioxide are released from the equipment and conveyors at this source. This source uses Scrubber SRC-23 to control VOC. The process water effluent is not subject to air pollution control requirements; therefore, it flows uncontrolled to the NPDES waste water treatment facility located offsite. The scrubber exhausts through emission point C (Scrubber SRC-23). Among the controlled equipment are Storage Tanks SRD-40 & SRD-70. The scrubbing medium used in SRC-23 is a water solution with caustic added.

Fugitive VOC emissions occur from piping components. The fugitive emission point is identified as B.

2.4 ***EMISSION SOURCE REFERENCE NUMBER 82-0510-04:
TANK FARM***

Storage tanks release VOC. Some tanks are vented to water Scrubber CAC-15; and others are vented through a two scrubber system including acid Scrubber CAC-14 which in turn vents to Scrubber CAC-15. The acid scrubber uses approximately a 30% acetic acid solution as a scrubbing medium. Piping associated with these storage tanks also emit fugitive VOC emissions from its components. Storage Tank CAD-30 which contains a strong acid is uncontrolled. CHD-60 (caustic solution) is also uncontrolled.

The tank farm has transfer racks and piping which has components that are a source of fugitive emissions.

2.5 ***EMISSION SOURCE REFERENCE NUMBER 82-0510-05:
COOLING TOWER***

A Cooling Tower is used to cool water for ESRN 82-0510-01, 82-0510-02 and 82-0510-03. Sulfuric acid, a water treatment chemical is added to the water supply to the cooling towers. This sulfuric acid is stored in a 2115 gallon storage tank. Cooling towers are a source of particulate matter from primarily dissolved solids naturally occurring in the water supply and water treatment chemicals. Sulfuric acid is a water additive, as is bleach and de-scaler that is mixed with the water *en route* to the cooling tower.

3.0

INSIGNIFICANT ACTIVITIES

According to the Tennessee Division of Air Pollution Control (TDAPC) regulations, "Insignificant activity" or "insignificant emissions unit" means any activity or emissions unit at a stationary source for which the emissions unit or activity has a potential to emit less than 5 tons per year of each air contaminant and each regulated air pollutant that is not a hazardous air pollutant, and less than 1,000 pounds per year of each hazardous air pollutant. However, at the discretion of the TDAPC, no emissions unit or activity subject to a federally enforceable applicable requirement (other than generally applicable requirements of the state implementation plan and federal New Source Performance Standards) shall qualify as an insignificant emissions unit or activity.

The following insignificant sources are located at the facility.

- Laboratory Equipment
- Equipment and activities with the potential to emit less than 5 tons per year of any regulated air pollutant that is not a hazardous air pollutant or less than 1,000 pounds per year of any hazardous air pollutant, including the following types:
 - Welding equipment
 - Diesel fuel or fuel oil storage tanks with a storage capacity of 40,000 gallons or less.
 - Storage tanks, not inclusive of tanks permitted in ESRN 82-0501-04
 - Process tanks
 - Internal Combustion Engines used for emergency replacement or standby service
 - On-site remediation of soil or water contaminated with organic compounds
 - Demolition of buildings or structures
 - Packaging activities
 - Miscellaneous dusty activities such as sweeping conveying, and truck loading and shipping & receiving.

4.0

REGULATORY REVIEW

A regulatory analysis is provided in this section for each process emission source. Applicable requirements are provided to support content in the APC 30 forms. Primester requests the coverage of its entire site by the permit shield offered by the TDAPC for Title V major sources of emissions. Non-Applicable requirements are provided to document the negative declarations required for the application of the permit shield.

Applicable requirements are addressed by source in the following sections. A comprehensive tabulation of applicable requirements appears in Appendix D that was extracted from the current Title V permit. Some requirements in Appendix D reference more detailed requirements that appear in Appendices E, F & G.

The applicable requirements in this section mirror those stated in the current Title V permit. Some requirements stated in this section are also noted as inapplicable in the current Title V permit.

Inapplicable requirements have been prepared to apply to the permit shield requested in this permit application. Table 4-1 addresses inapplicable requirements for New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP) and other requirements.

Table 4-1. Inapplicable Requirements

Citation	Requirement Description	Reason for Inapplicability
40 CFR 60 Subparts D, Da, Db & Dc	Boilers	No boilers or indirect heaters using fossil fuel are present at the plant. Heat is supplied by steam from an outside source. Applicability would have to equal or exceed the thresholds provided in §60.40(a)(1) & (2); §60.40Da(a)(1); §60.40b(a) & (b); and §60.40c(a).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 60 Subparts E, Ea, Eb & Ec	Incinerators	No incinerators are used onsite. The thresholds for applicability are provided in §60.50(a); §60.50a(a); §60.50b(a); and §60.50c(a)
40 CFR 60 subpart G & Ga	Nitric Acid Plant	There are no nitric acid production units at the plant as per §60.70(a) & §60.70a(a).
40 CFR 60 subpart H	Sulfuric Acid Plant	There are no sulfuric acid production units generating the acid by contact processes such as burning elemental sulfur, alkylation acid, hydrogen sulfide, organic sulfides and mercaptans, or acid sludge at the site as per §60.80(a).
40 CFR 60 Subpart VVa	Equipment Leaks of VOC In the Synthetic Organic Chemical Manufacturing Industry	There have been no modifications or new construction impacting SOCOMI equipment leaks since November 7, 2006 as provided in §60.480a(b).
40 CFR 60 Subpart DDD	VOC Emissions from the Polymer Manufacturing Industry	No manufacture of polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate) occurs at the site as per §60.560.
40 CFR 60 Subpart HHH	Synthetic Fiber Production Facility	No solvent-spun synthetic fiber process exists at the site that produces more than 500 Mg (551 ton) of fiber per year as provided in §60.600(a).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 60 Subpart III	Air Oxidation Unit Processes	The plant does not use air (or oxygen) oxidation reactors at the plant such as air oxidizing ammoxidation reactors and oxychlorination reactors. Therefore according to 40 CFR §60.610 (b), this plant is not subject to this standard.
40 CFR 61 Subpart J	Equipment Leaks of Benzene	No known benzene is expected to be present at the site. Any equipment in benzene service that is located at a plant site designed to produce or use less than 1,000 megagrams (1,102 tons) of benzene per year is exempt from the requirements of this rule as provided in §61.110(c)(2).
40 CFR 61 Subpart V	Equipment Leaks	This site neither processes benzene nor vinyl chloride which are Volatile Hazardous Air Pollutants. Therefore in accordance with §61.240(a), this source is not subject to this standard.
40 CFR 63 Subpart B	New Construction MACT and MACT Hammer standards	This site does not have any limits established in accordance with these permitting requirements.
40 CFR 63 Subpart D	Early Voluntary Reduction MACT	This source does not have any limits from early voluntary reductions MACT

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subparts F, G & H	Organic Hazardous Air Pollutants from Synthetic Organic Manufacturing Industry	The plant does not manufacture as a primary product any of the chemicals listed in Table 1 of Subpart F, tetrahydrobenzaldehyde or crotonaldehyde as provided in §63.100(b)(1)
40 CFR 63 Subpart I	Certain Processes Subject to the Negotiated Regulation for Equipment Leaks	The site does not produce Styrene-butadiene rubber; Polybutadiene rubber; Captafol®, Captan®, Chlorothalonil, Dacthal, and Tordon™ acid; Hypalon®, Oxybisphenoxarsine/1,3-diisocyanate (OBPA®), Polycarbonates, Polysulfide rubber, Chlorinated paraffins, and Symmetrical tetrachloropyridine; Pharmaceutical production processes using carbon tetrachloride or methylene chloride; and Methylmethacrylate-butadiene-styrene resins (MBS), Butadiene-furfural cotrimer, Methylmethacrylate-acrylonitrile-butadiene-styrene (MABS) resins, and Ethylidene norbornene as provided in §63.190(b).
40 CFR 63 Subpart Q	Industrial Cooling Towers	This site does not use chromium-based water treatment chemicals for the cooling towers as provided in §63.400(a).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart U	Group I Polymers and Resins	The site does not manufacture the following elastomer products: Butyl Rubber; Epichlorohydrin Elastomer; Ethylene Propylene Rubber; Hypalon™; Neoprene; Nitrile Butadiene Rubber; Nitrile Butadiene Latex; Polybutadiene Rubber/Styrene Butadiene Rubber by Solution; Polysulfide Rubber; Styrene Butadiene Rubber by Emulsion; and Styrene Butadiene Latex as provided in §63.480(a)(3).
40 CFR 63 Subpart W	Epoxy Resins and Non-Nylon Polyamide Production	The site does not manufacture resins made by reacting epichlorohydrin and bisphenol A to form diglycidyl ether of bisphenol-A (DGEBA) as provided by §63.520. The site also does not manufacture polyamide/epichlorohydrin condensates as provided by §63.520.
40 CFR 63 Subpart DD	Off-site Waste Recovery Operations	The site does not receive offsite materials for waste management or recovery as provided in §63.680(a)(2).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subparts OO, PP, QQ, RR, SS, TT, UU, VV & WW.	Tanks - Level 1; Containers; Surface Impoundments; Individual Drain Systems; Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process; Equipment Leaks - Control Level 1; Equipment Leaks - Control Level 2; Oil-Water Separators and Organic Water Separators; Storage Vessels (Tanks) - Control Level 2,	Applicable only if referenced by another standard. No other applicable standard references these requirements.
40 CFR 63 Subpart GGG	Pharmaceutical Production	The site does not manufacture any material that is described with a 2833 or 2834 SIC Code; that is described with a 324311 or 325412 NAICS code; a finished dosage form of a drug; any material whose primary use is an active ingredient or precursor to a drug as provided in §63.1250(a)(1)(i).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart JJJ	Group IV Polymers and Resins	This site does not manufacture a thermoplastic product such as ABS latex; ABS using a batch emulsion process; ABS using a batch suspension process; ABS using a continuous emulsion process; ABS using a continuous mass process; ASA/ AMSAN; EPS; MABS; MBS; nitrile resin; PET using a batch dimethyl terephthalate process; PET using a batch terephthalic acid process; PET using a continuous dimethyl terephthalate process; PET using a continuous terephthalic acid process; PET using a continuous terephthalic acid high viscosity multiple end finisher process; polystyrene resin using a batch process; polystyrene resin using a continuous process; SAN using a batch process; or SAN using a continuous process as provided §63.1310(a)(3).
40 CFR 63 Subpart MMM	Pesticide Active Ingredient Production	The site does not manufacture pesticide active ingredients defined as insecticide, herbicide or fungicide end use pesticide product as provided in §63.1360(a).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart OOO	Manufacture of Amino/Phenolic Resins	This site does not manufacture amino resins or phenolic resins as specified in §63.1400(a).
40 CFR 63 Subpart PPP	Polyether Polyol Production	This site does not manufacture polyether polyols defined as a compound formed through the polymerization of Ethylene Oxide or Propylene Oxide or other cyclic ethers with compounds having one or more reactive hydrogens (<i>i.e.</i> , a hydrogen atom bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers (<i>i.e.</i> , compounds with two or more ether bonds). This definition of <i>polyether polyol</i> excludes cellulose ethers (such as methyl cellulose, carboxymethyl cellulose, hydroxyethyl cellulose, hydroxy ethyl cellulose, and hydroxypropyl methyl cellulose) and materials regulated under 40 CFR part 63, subparts F, G, and H (the HON), such as glycols and glycol ethers.

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart EEEE	Organic Liquid Distribution (Excluding Gasoline)	<p>Though this site distributes and stores ethylene glycol (listed in Table 1 of 40 CFR 63 Subpart EEEE) at the plant, its vapor pressure does not exceed 0.7 kPa. Ethylene glycol is present at the plant at ambient atmospheric temperatures. Assuming a conservative maximum summer temperature of 53°C, The corresponding vapor pressure is 1 mm Hgⁱ (or 0.13 kilopascals). Therefore the ethylene glycol at the plant by definition provided in §63.2406 is not an “Organic Liquid;” and therefore does not have an “Organic Liquid Distribution Operation” (OLD operation). This plant has no knowledge of any other listed Table 1 substances that are stored or distributed at its location. In accordance with §63.2334(a), this plant is not subject to 40 CFR 63 Subpart EEEE.</p>

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart UUUU	Cellulose Product Manufacturing	<p>This site is not subject to this standard because it is neither has a Miscellaneous Viscose Process nor carries out a Cellulose Ethers Production as provided in §63.5485(a). Miscellaneous Viscose Processes are defined to include cellulose food casing, rayon, cellulosic sponge, and cellophane operations. Cellulose Ethers Production is defined as the collection of manufacturing processes that include the following steps: Reaction of cellulose (e.g., wood pulp or cotton linters) with sodium hydroxide to produce alkali cellulose; Reaction of the alkali cellulose with a chemical compound(s), such as ethylene oxide, propylene oxide, methyl chloride, or chloroacetic acid, to produce a particular cellulose ether; Washing and purification of the cellulose ether; and Drying of the cellulose ether.</p>

ⁱ Perry & Chilton, Chemical Engineers' Handbook, 5th Edition, Table 3-8.

Citation	Requirement Description	Reason for Inapplicability
40 CFR 63 Subpart LLLLLL	Acrylic and Modacrylic Fibers Production	This site is not subject to this standard because it is not the source category and the site is a major source of HAP as provided in §63.11393(a). Acrylic and modacrylic fibers production is defined to be the production of synthetic fibers composed of acrylonitrile units: acrylic fiber or modacrylic fiber.
40 CFR 63 Subpart VVVVVV	Chemical Manufacturing Area Source	This site is a major source of HAP while considering the Total Eastman complex (even though Eastman is under different ownership); however, is still considered a support facility by the TDAPC. Therefore, Primester is not subject to this standard as provided in §63.11494(a)(1).
40 CFR 63 Subpart BBBB	Chemical Preparations Industry	This site is not subject to this standard because this site does not use the NAICS classification of 325998 and is not an area source of emissions as provided in §63.11579(a)(1) & (2).

Citation	Requirement Description	Reason for Inapplicability
40 CFR 64	Title V Compliance Assurance Monitoring	<p>For Process B-440-1, except for Emission Point N, Emission Points A, B, C, D, E, F, G, H, Q & R are not subject to Compliance Assurance Monitoring as provided in the Title V permit.</p> <p>Process B-441-1 is not subject to Compliance Assurance Monitoring as provided in the Title V permit</p> <p>Process B-441-2 is not subject to Compliance Assurance Monitoring as provided in the Title V permit.</p> <p>Process B-442-1 is not subject to Compliance Assurance Monitoring as provided in the Title V permit.</p> <p>Process B-447-1 is not subject to Compliance Assurance Monitoring as provided in the Title V permit.</p> <p>No modifications have been made other than administrative amendments since the last permit renewal.</p>
40 CFR 98	Mandatory Greenhouse Gas Reporting	This site is not subject to this reporting rule. This is not a rule subject to air permitting.

Applicability of the State of Tennessee regulations are addressed in Table 4-2.

Table 4-2. Applicability of State of Tennessee Regulations

Chapter	Description	Applicability
1200-03-1	General Provisions	Generally Applicable
1200-03-2	Definitions	Generally Applicable
1200-03-3	Ambient Air Quality Standards	Generally Applicable
1200-03-4	Open Burning	Generally Applicable
1200-03-5	Visible Emissions	Generally Applicable
1200-03-6	Non-Process Emission Standards	Generally Applicable. TAPCR 1200-03-.05 & 1200-03-06-.06 are not applicable because the site does not operate wood-fired fuel burning equipment and does not operate a solid waste incineration unit.

Chapter	Description	Applicability
1200-03-7	Process Emission Standards	<p>Generally Applicable.</p> <p>TAPCR 1200-03-07-.02 is not applicable because the sources of emissions were constructed in 1992.</p> <p>TAPCR 1200-03-07-.08 is not applicable because the site does not operate a ferrous jobbing cupola, a nitric acid plant, a cotton gin, a Kraft Mill, or an asphalt plant. TAPCR 1200-03-07-.09 is not applicable because the site does not operate a sulfuric acid plant. TAPCR 1200-03-07-.10 does not apply because the plant was constructed in 1992. TAPCR 1200-03-07-.11 and TAPCR 1200-03-07-.12 do not apply to this site because the plant is located in Sullivan County.</p>
1200-03-8	Fugitive Dust	Generally Applicable
1200-03-9	Construction and Operating Permits	Generally Applicable
1200-03-10	Required Sampling, Recording, and Reporting	Generally Applicable
1200-03-11	Hazardous Air Contaminants	Generally Applicable
1200-03-12	Methods of Sampling and Analysis	Generally Applicable
1200-03-13	Violations	Generally Applicable

Chapter	Description	Applicability
1200-03-14	Control Sulfur Dioxide Emissions	Generally Applicable to Sullivan (Class III) County only. TAPCR 1200-03-14-.02(1) is not applicable because the site was constructed in 1992. TAPCR 1200-03-14-.04 is not applicable because the CAIR program is obsolete.
1200-03-15	Emergency Episode Plan	Generally Applicable
1200-03-16	New Source Performance Standards	These standard reference the federal NSPS standards and are addressed in Table 4-1.
1200-03-17	Repealed	Not Applicable

Chapter	Description	Applicability
1200-03-18	Volatile Organic Compounds	<p>TAPCR 1200-03-18-.33 is not applicable because the site does not manufacture of pharmaceutical products and intermediates by chemical synthesis. TAPCR 1200-03-18-.38 does not apply because the site is located in Sullivan County. TAPCR 1200-03-18-.39 does not apply because the site does not manufacture of high-density polyethylene, polypropylene, and polystyrene and is located in Sullivan County. TAPCR 1200-03-18-.40 does not apply because the source is located in Sullivan County. TAPCR 1200-03-18-.48, TAPCR 1200-03-18-.78 & TAPCR 1200-03-.79 do not apply because this source is located in Sullivan County.</p>

Chapter	Description	Applicability
1200-03-19	Emission Standards and Monitoring Requirements for Additional Control Areas	Not Applicable, This site is located near an additional control area for particulate matter and sulfur dioxide in Kingsport, TN. The emissions are not considered to be a significant impact on the areas of additional control as provided by the site's Title V permit.
1200-03-20	Limits of Emissions Due to Malfunctions, Startups, and Shutdowns	Generally Applicable
1200-03-21	General Alternate Emission Standards	Not Applicable
1200-03-22	Lead Emission Standard	Not Applicable
1200-03-23	Visibility Protection	Not Applicable, the site was not singled out as causing a source of visibility impairment upon a Class I Area as provided in the Title V air permit.
1200-03-24	Good Engineering Practice Stack Height Regulations	Generally Applicable
1200-03-25	Standards for Infectious Waste Incinerators	Not Applicable, The site does not operated a medical waste incinerator.
1200-03-26	Administrative Fees Schedule	Generally Applicable

Chapter	Description	Applicability
1200-03-27	Nitrogen Oxides	Not Applicable, Specifically, TAPRC 1200-03-27-.03 does not apply because this site is located in Sullivan County. Also this site does not operate a tangentially-fired coal burning boiler having a heat input capacity of 600 million BTU per hour. TAPCR 1200-03-27-.04 does not apply because the site does not operate a cement kiln; TAPCR 1200-03-27-.07 does not apply because the site did not volunteer to reduce its NOx emissions; TAPCR 1200-03-27-.08 does not apply because it does not have stationary internal combustion engines; TAPCR 1200-03-27-.10 & -.11 does not apply because the CAIR Rule is obsolete;
1200-03-28	Reserved	--
1200-03-29	Light-Duty Motor Vehicle Inspection and Maintenance	Not Applicable
1200-03-30	Acidic Precipitation Control	Not Applicable because the site does not participate in the acid rain program.
1200-03-31	Case By Case Determination of Hazardous Air Pollutant Control Requirements	This is addressed in the federal NESHAP rules in Table 1.
1200-03-32	Prevention of Accidental Releases	This is addressed in the federal requirements of Table 1

Chapter	Description	Applicability
1200-03-33	Repealed	--
1200-03-34	Conformity	Not Applicable, The site is not a federally funded project.
1200-03-35	Reserved	--
1200-03-36	Motor Vehicle Tampering	Not Applicable to the air permitting program.
1200-03-37	Clean Air Mercury Rule	Not Applicable because this source is not a part of the Clean Mercury Program.

4.1 *APPLICABLE STANDARDS*

In this section, Federal and State Applicable Requirements will be examined by source.

4.1.1 *Emission Source Reference Number 82-0510-01: Ester Production (B-440-1)*

4.1.1.1 *New Source Performance Standard (NSPS) of 40 CFR Part 60*

This source is subject to several NSPS standards. Specific applicability is addressed in the following. A summary is provided in Appendix D.

Subpart A: General Provisions

The general provisions apply to the extent that the specific applicable standards refer to Subpart A. Also, Subpart A applies to the extent the State Implementation Plan (SIP) references Subpart A for the operations at this source.

Subpart VV: Equipment Leaks of VOC in SOCFI

This source is an "affected facility" within a synthetic organic chemical manufacturing industry (SOCFI) because it manufactures cellulose acetate, Chemical Abstract Service (CAS) number 9004-35-7 as provided in §60.489(a). This standard is also applicable because production of this SOCFI substance commenced after January 5, 1981 yet "on or before November 7, 2006" as provided in §60.489(b). Therefore this process emission source is subject to Subpart VV.

This standard applies to the following equipment in VOC service:

- Pumps
- Compressors
- Pressure relief devices
- Sampling connection systems
- Open-ended valves or lines
- Valves
- Flanges or other connectors

The standards for pumps in light liquid service; compressors; pressure relief devices in gas/vapor service; pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and connectors; delay of repair; and closed vent systems and control devices of §60.482-1 through -10 apply. The standard options in §60.483-1 & -2 apply.

The recordkeeping and reporting requirements in §60.486 and §60.487 apply.

For equipment in acetic acid service, an alternative monitoring plan was devised and approved. This plan was devised in accordance with §60.13(i). The plan approval is stated in a letter from Beverly Banister of EPA Region 4 addressed to Barry Stephens of the TDAPC dated January 23, 2004. The plan applies if the piping equipment is in "acetic acid service" that is not in "heavy liquid service" or "in vacuum service." Acetic acid service is defined in the plan to contain or contact a process fluid that is at least 10% acetic acid by weight and less than 10% other

VOC by weight. The plan calls for monitoring to be performed once per calendar quarter, except that pumps shall be inspected weekly. The plan is referenced in the permit application forms. The Plan is provided in Appendix E of this Permit Application.

Subpart NNN: SOCFI Distillation Operations

This standard applies to the four distillation columns, DCC-80, DCC-90, DCC-70 and DCC-30. These distillation units do not vent into recovery systems and were constructed after December 30, 1983, and are "affected facilities" as provided in §60.660(b)(1). The source is a SOCFI "affected facility" because it produces acetic acid as co-product chemical listed by §60.667 in the flakers.

Three options are available to comply with the standard. Currently the plant is complying with this standard by reducing Total Organic Carbon (TOC) by 98% or by emitting 20 ppmv as provided in §60.662(a).

The monitoring, recordkeeping and reporting requirements in §60.663 and §60.665 apply as provided in the current Title V permit.

Subpart RRR: SOCFI Reactor Processes

With the exception of the test method and procedure and the recordkeeping and reporting requirements in §60.704(g) and §60.705(h), (l)(4) and (o), this source is exempt from this standard. This source is exempt from this standard because its reactors each have a vent stream flow rate less than the 0.011 standard cubic meters per minute (0.39 scfm). These reactors were constructed after June 29, 1990 and are "affected facilities" as provided in §60.700(b)(1). The source is a SOCFI "affected facility" because it produces acetic acid as an intermediate which is a chemical listed in §60.707 as one that makes the process applicable notwithstanding the exemption mentioned above.

Reactors CAC-01, CAC-02, CAC-03, CAC-04, CHC-10, CHC-20, CHC-30, CHC-40, CHC-50 (all vented from Emission Point B) qualify for the Low Flow Exemption provided in §60.700(c)(4). This is also noted in the current Title V permit.

The monitoring recordkeeping and reporting requirements in §60.703 and §60.705 apply.

4.1.1.2 *National Emission Standards for Hazardous Air
Pollutants (NESHAP) of 40 CFR Part 63*

This source is subject to a NESHAP. Specific applicability is addressed in the following. A summary is provided in Appendix D.

Subpart FFFF: Miscellaneous Organic Chemical Manufacturing

This source is subject to Subpart FFFF because in accordance with §63.2435(a), it operates a Miscellaneous Organic Chemical Manufacturing Process Unit (MCPU) at a major stationary source of emissions that commenced construction prior to April 4, 2002. Therefore, the source is an existing source. According to §63.2435(b), an MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems. Additionally, among other criteria, an MCPU must be classified as one of the specified first three digits of the 1987 SIC codes in §63.2435(b)(1)(i). In this source's case, the SIC code is 282. The emission units at this source subject to this standard are Group 1 continuous process vents (four distillation columns); piping equipment subject to lead detection and repair requirements; and a scrubber water effluent.

Columns DCC-80 & DCC-90, DCC-70 and DCC-30 have Group 1 continuous process vents which are limited to the standards referenced in §63.2455. Although this NESHAP addresses HAP, the standards for process vents may use Total Organic Carbon (TOC) as a surrogate pollutant since these distillation columns are also subject to 40 CFR 60 Subpart NNN which address VOC and not HAP. A Group 1 continuous process vent must have:

- An exhaust flow rate is greater than or equal to 0.005 standard cubic meter per minute (0.18 acfm), and
- The total resource effectiveness index value, calculated according to §63.2455(b), is less than or equal to 1.9 at an existing source. This source also has Group 1 vents with recovery systems and has Group 2 process vents with and without recovery systems.

Equipment leak detection and repair provided in §63.2480(a) of this standard references procedures for equipment in OHAP service to comply with 40 CFR 63 Subpart H. Compliance with this standard may be based on TOC monitoring since this source is subject to 40 CFR 60 Subpart VV

which addresses VOC and not just HAP. These piping components are located in Flow Diagram Emission Point F of Figure B-2.

The Process Wastewater Stream identified as Scrubber CHC-13 underflow is a Group 2 Wastewater Stream and is regulated by §63.2485. A Group 2 Process Wastewater Stream meets the following criteria if startup occurred prior to November 10, 2003:

- The total annual average concentration of partially soluble HAP compounds (identified in Table 8 to this subpart) is less than 10,000 ppmw at any flowrate, and the total annual load of these compounds is less than 200 lb/yr.
- The total annual average concentration of these partially soluble HAP compounds to this subpart is less than 1,000 ppmw, and the annual average flowrate is less than 1 liter per minute.
- The combined total annual average concentration of partially soluble HAP compounds and soluble HAP compounds (identified in Table 9 to this subpart) is less than 30,000 ppmw, and the combined total annual load of these compounds is less than or equal to 1 tpy.

4.1.1.3 *Compliance Assurance Monitoring (CAM) of 40 CFR 64*

The site operates 4 scrubber systems and two baghouses at this source. Only Scrubber FPC-12 at the precipitation and maturation operation that vents from emission point N is subject to CAM controls. A summary of the CAM Plan transcribed as is from Attachment 3 of the Title V permit appears in Appendix C of this permit application.

4.1.1.4 *Tennessee Applicable Requirements*

These requirements are provided in the APC 30 forms for this source.

**4.1.2 *Emission Source Reference Number 82-0510-02:
Acid Recovery Process (B-441-1)***

4.1.2.1 *New Source Performance Standard (NSPS) of 40 CFR Part 60*

Subpart A: General Provisions

The general provisions apply to the extent that the specific applicable standards refer to Subpart A. Also, Subpart A applies to the extent the State Implementation Plan (SIP) references Subpart A for the operations at this source.

Subpart VV: Equipment Leaks of VOC in SOCFI

This source is an “affected facility” within a synthetic organic chemical manufacturing industry (SOCFI) because it processes raw material for the manufacturing of cellulose acetate, Chemical Abstract Service (CAS) number 9004-35-7 as provided in §60.489(a). This standard is also applicable because production of this SOCFI substance commenced after January 5, 1981 yet “on or before November 7, 2006” as provided in §60.489(b). Therefore this process emission source is subject to Subpart VV.

The standards for pumps in light liquid service; compressors; pressure relief devices in gas/vapor service; pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and connectors; delay of repair; and closed vent systems and control devices of §60.482-1 through -10 apply. The standard options in §60.483-1 & -2 apply.

The recordkeeping and reporting requirements in §60.486 and §60.487 apply.

For equipment in acetic acid service, an alternative monitoring plan was devised and approved. This plan was devised in accordance with §60.13(i). The plan approval is stated in a letter from Beverly Banister of EPA Region 4 addressed to Barry Stephens of the TDAPC dated January 23, 2004. The plan appears in the permit application forms in Appendix E to this permit application.

Portions of Point B on the flow diagram in Figure B-3 is affected by this standard.

Subpart NNN: SOCFI Distillation Operations

This standard applies to the distillation columns. These distillation units do not vent into recovery systems and were constructed after December 30, 1983, and are “affected facilities” as provided in §60.660(b)(1). The

source is a SOCFI “affected facility” because this source produces acetic acid as a product chemical listed by §60.667.

Three options are available to comply with the standard. However, none currently apply as Distillation Columns ARC-40, ARC-90, ARC-100, SVC-10, SVC-20 and SVC-30 vent to Emission Point A depicted in Figure B-3 and qualify for the Low Flow exemption provided in §60.660(c)(6). The low flow exemption is a flow rate of less than 0.008 standard cubic meter per minute (0.28 standard cubic feet per minute) which exempt these emission units from all provisions of this subpart except for the test method and procedure and the recordkeeping and reporting requirements.

The recordkeeping and reporting requirements in §60.663 and §60.665 apply as applicable.

Subpart RRR: SOCFI Reactor Processes

This standard applies to the SOCFI reactors constructed after June 29, 1990 and are “affected facilities” as provided in §60.700(b)(1). One reactor, ARC-100 at this source is subject to this standard. Its air emissions release directly into a distillation column subject to 40 CFR 60 Subpart NNN. Reactors that vent to distillation columns subject to 40 CFR 60 Subpart NNN are exempt from the reactor standard as provided in §60.700(c)(5). However this reactor is still required to comply with §60.705(r) which requires the maintenance of a description of the reactor showing that the reactor is vented to a Subpart NNN distillation column that shall be retained for the life of the reactor. Aside from the air releases into the Subpart NNN distillation column, another egress point for the air emissions from the ARC-100 is its pressure relief valve. The air emissions from the pressure relief valve are subject to the 40 CFR 60 Subpart RRR.

The recordkeeping and reporting requirements in §60.703 and §60.705 apply to emissions that are released from the pressure relief valve on the reactor.

4.1.2.2 *National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR Part 63*

None apply.

4.1.2.3 *Compliance Assurance Monitoring (CAM) of 40 CFR 64*

None apply.

4.1.2.4 *Tennessee Applicable Requirements*

These requirements are provided in the APC 30 forms for this source.

**4.1.3 *Emission Source Reference Number 82-0510-03:
Cellulose Scrap Recovery Process (B-441-2)***

4.1.3.1 *New Source Performance Standard (NSPS) of 40 CFR Part 60*

Subpart A: General Provisions

The general provisions apply to the extent that the specific applicable standards refer to Subpart A. Also, Subpart A applies to the extent the State Implementation Plan (SIP) references Subpart A for the operations at this source.

Subpart Kb: Volatile Organic Liquid Storage Vessels

Storage Tanks SRD-70 and SRD-40 apply to this standard. An applicability summary is provided in Table 4-3.

TABLE 4-3. *Applicability of Storage Tanks in Source 82-0510-03 to 40 CFR 60 Subpart Kb*

Tank ID	Capacity, V and True Vapor Pressure, P	Actual Capacity and Maximum True Vapor Pressure	Requirement
SRD-40	For $V \geq 151 \text{ m}^3$ (40,000 gal) and $5.2 \leq P < 76.6$ or For $75 \text{ m}^3 \leq V \leq 151 \text{ m}^3$ and $27.6 \leq P < 76.6$	$V = 24,065 \text{ gal}$ (91 m^3) $P = 26.1 \text{ kPa}$	Subject to 40 CFR 60 Subpart Kb with no requirements (hollow permit)

Tank ID	Capacity, V and True Vapor Pressure, P	Actual Capacity and Maximum True Vapor Pressure	Requirement
SRD-70	<p>For $V \geq 151 \text{ m}^3$ (40,000 gal)</p> <p>or</p> <p>For $75 \text{ m}^3 \leq V \leq 151 \text{ m}^3$</p> <p>$V = 47,000 \text{ gal}$</p>	<p>and $5.2 \leq P < 76.6$</p> <p>or</p> <p>and $27.6 \leq P < 76.6$</p> <p>$P = 6.9 \text{ kPa}$</p>	<p>One of the following in §60.112b(a):</p> <ol style="list-style-type: none"> 1. Internal floating roof 2. External floating roof 3. Closed vent system and control device One of the following in §60.112b(b): <ul style="list-style-type: none"> (i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, §60.485(b). (ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§60.18) of the General Provisions.

Compliance Assurance for Storage Tank SRD-70 is subject to the monitoring and recordkeeping in accordance with 40 CFR 60.115b and 60.116b. The scrubber controlling VOC and sulfur dioxide from the process must comply with the operating plan referenced in the current Title V permit and appears in Appendix G of this permit application.

Subpart VV: Equipment Leaks of VOC in SOCFI

This source is an “affected facility” within a synthetic organic chemical manufacturing industry (SOCFI) because it processes raw material for the manufacturing of cellulose acetate, Chemical Abstract Service (CAS) number 9004-35-7 as provided in §60.489(a). This standard is also applicable because production of this SOCFI substance commenced after January 5, 1981 yet “on or before November 7, 2006” as provided in §60.489(b). Therefore this process emission source is subject to Subpart VV.

The standards for pumps in light liquid service; compressors; pressure relief devices in gas/vapor service; pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and connectors; delay of repair; and closed vent systems and control devices of §60.482-1 through -10 apply. The standard options in §60.483-1 & -2 apply.

Only the sensory monitoring portions of the LDAR program have been required for this source. Method 21 monitoring has not been required.

The recordkeeping and reporting requirements in §60.486 and §60.487 apply.

For equipment in acetic acid service, an alternative monitoring plan was devised and approved. This plan was devised in accordance with §60.13(i). The plan approval is stated in a letter from Beverly Banister of EPA Region 4 addressed to Barry Stephens of the TDAPC dated January 23, 2004. The plan is referenced in the current Title V permit and is provided in Appendix E of this permit application.

The piping components to which these LDAR requirements apply are designated as emission point B depicted on Figure B-4.

Subpart NNN: SOCFI Distillation Operations

This standard applies to the distillation columns. These distillation units do not vent into recovery systems and were constructed after December 30, 1983, and are “affected facilities” as provided in §60.660(b)(1). The source is a SOCFI “affected facility” because it produces acetic acid chemical listed by §60.667.

Three options are available to comply with the standard. However, none currently apply as Distillation Columns SRC-10, SRC-60 and SRC-42

qualify for the Low Flow exemption provided in §60.660(c)(6). The low flow exemption is a flow rate of less than 0.008 standard cubic meter per minute (0.28 standard cubic feet per minute) which exempt these emission units from all provisions of this subpart except for the test method and procedure and the recordkeeping and reporting requirements.

The recordkeeping and reporting requirements in §60.663 and §60.665 apply as applicable.

Subpart RRR: SOCFI Reactor Processes

This standard applies to the reactors at this source. These reactors do not vent into a recovery systems. These reactors were constructed after June 29, 1990 and are “affected facilities” as provided in §60.700(b)(1). The source is a SOCFI “affected facility” because it produces acetic acid as a product chemical listed by §60.707.

Reactors SRC-40 and SCR-41 apply to this standard. The TRE for these two reactors is less than or equal to 1.0. §60.702(a) requires that these emission units reduce TOC by 98% or emit a maximum of 20 ppmv TOC. Compliance with this standard is provided in the approved alternative monitoring plan appearing in Appendix F of this permit application.

The recordkeeping and reporting requirements in §60.703 and §60.705 apply as necessary.

4.1.3.2 National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR Part 63

None apply.

40 CFR 63 Subpart FFFF does not apply because the applicability criteria for this source category appearing in 40 CFR §63.2435(b) does not match this Chemical Manufacturing Process Unit (CMPU, emission source) as provided in Table 4-4.

Table 4-4. Product Manufactured at this CMPU.

Family of Chemicals Described By:	Applicability
<p>Any of the §63.2435(b)(1) apply and all §63.2435(b)(1) through (3) must apply for the CMPU to apply to 40 CFR 63 Subpart FFFF</p>	<p>Applicable</p>
<p>§63.2435(b)(1)(i):</p> <p>Manufacturing that falls under the following SIC Codes:</p> <p>SIC Code 282: Plastics, Resins, synthetic cellulosic manmade fibers and manmade organic fibers</p> <p>SIC Code 283: Medicinal Chemicals and Botanical Products, Pharmaceutical Preparations, In Vitro and In Vivo Diagnostic Substances, Biological Products</p> <p>SIC Code 284: Soap and Other Detergents, Specialty Cleaning, Polishing, and Sanitation Preparations, Surface Active Agents, Finishing Agents, Sulfonated Oils, and Assistants, Perfumes, Cosmetics, and Other Toilet Preparations</p> <p>SIC Code 285: Paints, Varnishes, Lacquers, Enamels, and Allied Products</p> <p>SIC Code 286: Gum and Wood Chemicals, Cyclic Organic Crudes and Intermediates, and Organic Dyes and Pigments, Industrial Organic Chemicals, Not Elsewhere Classified</p>	<p>None apply</p>

Family of Chemicals Described By:	Applicability
<p>SIC Code 287: Nitrogenous Fertilizers, Phosphatic Fertilizers, Fertilizers, Pesticides and Agricultural Chemicals, Not Elsewhere Classified</p> <p>SIC Code 289: Adhesives and Sealants, Explosives, Printing Ink, Carbon Black, Chemicals and Chemical Preparations, Not Elsewhere Classified</p> <p>SIC Code 386: Photographic equipment and supplies</p>	
<p>§63.2435(b)(1)(ii):</p> <p>NAICS Code: 325</p> <p>Chemical Manufacturing</p>	<p>Though a chemical reaction occurs, it does not make a usable product. It breaks the cellulose sludge down to elemental carbon for waste water treatment.</p> <p>None apply</p>
<p>§63.2435(b)(1)(iii):</p> <p>Quaternary ammonium compounds and ammonium sulfate produced with caprolactam.</p>	<p>None apply</p>
<p>§63.2435(b)(1)(iv):</p> <p>Hydrazine</p>	<p>Does not apply</p>
<p>§63.2435(b)(1)(v):</p> <p>Organic solvents classified in any of the SIC or NAICS codes listed in paragraph (b)(1)(i) or (ii) of this section that are recovered using nondedicated solvent recovery operations</p>	<p>Solvents recovered during this process use dedicated solvent recovery operations.</p> <p>None apply</p>

Family of Chemicals Described By:	Applicability
<p>§63.2435(b)(2):</p> <p>The MCPU processes, uses, or generates any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP</p>	<p>Acetic acid is generated in this process;</p>
<p>§63.2435(b)(3):</p> <p>The MCPU is not an affected source or part of an affected source under another subpart of this part 63, except for process vents from batch operations within a chemical manufacturing process unit (CMPU), as identified in §63.100(j)(4). For this situation, the MCPU is the same as the CMPU as defined in §63.100, and you are subject only to the requirements for batch process vents in this subpart.</p>	<p>No batch process vents in this CMPU</p>

This source is not subject to 40 CFR 63 Subpart FFFF.

4.1.3.3 *Compliance Assurance Monitoring (CAM) of 40 CFR 64*

This requirement does not apply because the controlled and uncontrolled VOC emissions are less than 100 tons per year and the OHAP emissions are less than 10 tons per year.

4.1.3.4 *Tennessee Applicable Requirements*

These requirements are provided in the APC 30 forms for this source.

**4.1.4 Emission Source Reference Number 82-0510-04:
Tank Farm (B-442-1)**

**4.1.4.1 New Source Performance Standard (NSPS) of 40
CFR Part 60**

Subpart A: General Provisions

The general provisions apply to the extent that the specific applicable standards refer to Subpart A. Also, Subpart A applies to the extent the State Implementation Plan (SIP) references Subpart A for the operations at this source.

Subpart Kb: Volatile Organic Liquid Storage Vessels

The storage tanks at this source are not subject to this subpart. Although the capacities of the 8 storage tanks containing Volatile Organic Liquids exceed 40,000 gallons (151 m³) in capacity, their true vapor pressures are below the applicability threshold (5.2 kPa). Therefore, Storage Tanks ARD-07A, ARD-07B, ARD-08, FPD-74 and SVD-01, are not applicable to 40 CFR 60 Subpart Kb. The applicability criteria for the storage tanks are tabulated below in Table 4-5.

Table 4-5. NSPS for Volatile Organic Liquid Storage Tanks

Tank ID	Capacity, V	True Vapor Pressure, P (kPa)	Requirement
Set 1	$\geq 151 \text{ m}^3$ (40,000 gal) $75 \text{ m}^3 \leq V \leq 151 \text{ m}^3$	$5.2 \leq P < 76.6$ $27.6 \leq P < 76.6$	One of the following in §60.112b(a): <ol style="list-style-type: none"> 1. Internal floating roof 2. External floating roof 3. Closed vent system and control device

Tank ID	Capacity, V	True Vapor Pressure, P (kPa)	Requirement
Set 2	≥ 75 m ³ (20,000 gal)	P ≥ 76.6	One of the following in §60.112b(b): <ol style="list-style-type: none"> 1. Closed vent system and control device 2. Alternative means as described in §60.114b

Column Feed Tanks SVD-02 and SVD-04 each with a capacity exceeding 40,000 gallons (158,620 gallons, each) have a maximum true vapor pressure exceeding 5.2 kPa (11.24 kPa and 12.55 kPa, respectively). These storage tanks are subject to 40 CFR 60 Subpart Kb. This currently does not appear in the current Title V air permit. With the exception of Storage Tank CAD-30, the storage tanks are controlled by a two scrubber system for VOC and OHAP.

Subpart VV: Equipment Leaks of VOC in SOCFI

This source is an “affected facility” within a synthetic organic chemical manufacturing industry (SOCMI) because it stores chemicals for the manufacturing of cellulose acetate, Chemical Abstract Service (CAS) number 9004-35-7 as provided in §60.489(a). This standard is also applicable because production of this SOCFI substance commenced after January 5, 1981 yet “on or before November 7, 2006” as provided in §60.489(b). Therefore this process emission source (tank farm) is subject to Subpart VV.

The standards for pumps in light liquid service; compressors; pressure relief devices in gas/vapor service; pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service and connectors; delay of repair; and closed vent systems and control devices of §60.482-1 through -10 apply. The standard options in §60.483-1 & -2 apply.

The recordkeeping and reporting requirements in §60.486 and §60.487 apply.

For equipment in acetic acid service, an alternative monitoring plan was devised and approved. This plan was devised in accordance with §60.13(i). The plan approval is stated in a letter from Beverly Banister of

EPA Region 4 addressed to Barry Stephens of the TDAPC dated January 23, 2004. The plan appears in Appendix E.

Portions of Point B on the flow diagram in Figure B-5 is affected by this standard.

4.1.4.2 *National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR Part 63*

Subpart A: General Provisions

This source is subject to the General Provisions of MACT standard 40 CFR 63 Subpart FFFF where referenced by the rule.

Subpart FFFF: Miscellaneous Organic Chemical Manufacturing

This source is subject to Subpart FFFF because in accordance with §63.2435(a), it operates a Miscellaneous Organic Chemical Manufacturing Process Unit (MCPU) at a major stationary source of emissions that commenced construction prior to April 4, 2002. Therefore, the plant is an existing source. According to §63.2435(b), an MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems. Additionally, among other criteria, an MCPU must be classified as one of the specified first three digits of the 1987 SIC codes in §63.2435(b)(1)(i). In this source's case, the SIC code is 282. Transfer racks, storage tanks and piping equipment are subject to this standard.

The transfer racks at this source are Group 2. This means that the HAP-containing throughput is either less than or equal to 0.65 million liters per year (171,172 gallons per year) or has a rack-weighted average partial pressure of less than 1.5 pounds per square inch absolute as defined by §63.111. Work practice standards apply. The rack emissions occur at Flow Diagram Point D.

Storage Tank SVD-01, Tank FPD -71, ARD-08, ARD-07A, ARD-07B and FPD-074 are controlled by a water scrubber. Tanks SVD-02 and SVD-04 are controlled first by an acid scrubber then followed by the water scrubber. The scrubber system is used to assure compliance of the storage

tanks with 40 CFR 63 Subpart FFFF. Storage Tank CAD-30 does not contain VOC or HAP and it is uncontrolled.

Some piping components at this source are also covered by this MACT standard. 40 CFR §63.2480(a) requires the compliance of piping components in OHAP service with the leak detection and repair standards of 40 CFR 63 Subpart H.

Recordkeeping and reporting requirements of this MACT standard apply to the affected MCPU.

4.1.4.3 *Compliance Assurance Monitoring (CAM) of 40 CFR 64*

This source is subject to 40 CFR 63 Subpart FFFF. A source subject to a federal standard after 1990 is not subject to CAM because the standard's compliance assurance is based on continuous monitoring. CAM does not apply to this source.

4.1.4.4 *Tennessee Applicable Requirements*

These requirements are provided in the APC 30 forms for this source.

**4.1.5 *Emission Source Reference Number 82-0510-05:
Cooling Tower (B-447-1)***

4.1.5.1 *New Source Performance Standard (NSPS) of 40 CFR Part 60*

None apply.

4.1.5.2 *National Emission Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR Part 63*

None apply. The cooling tower NESHAP in 40 CFR 63 Subpart Q applies only to cooling towers using chromium in its corrosion inhibitor.

4.1.5.3 *Compliance Assurance Monitoring (CAM) of 40 CFR 64*

None apply.

4.1.5.4 Tennessee Applicable Requirements

These requirements are provided in the APC 30 forms for this source.

4.2 RISK MANAGEMENT PLAN

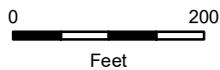
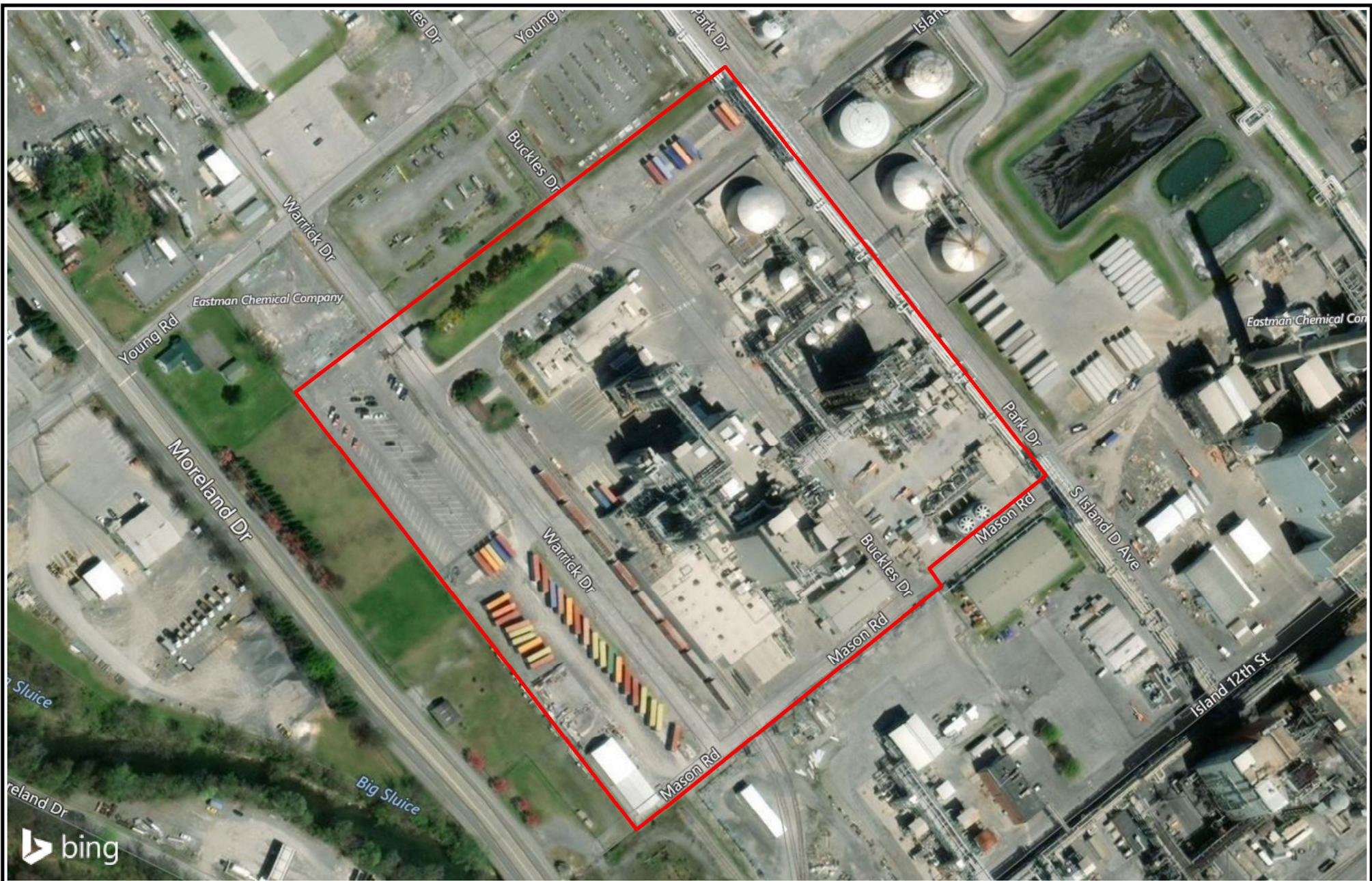
CAA Section 112(r) requires EPA to publish rules and guidance for chemical accident prevention. The rules promulgating the list of regulated substances (published January 31, 1994) and the Risk Management Program provisions (published June 20, 1996) are found at 40 CFR Part 68. The Risk Management Program contains three elements: a hazard assessment, a prevention program, and an emergency response program. The entire program is to be described and documented in a Risk Management Plan (RMP) which is submitted to EPA (delegated state and local implementing agencies receive RMP data from EPA). Owners or operators of a facility with more than a threshold quantity of a regulated substance (one of the 140 listed toxic and flammable substances in 40 CFR Section §68.130) in a process, as determined under section §68.115, must submit an RMP.

The chemical inventory of materials, intermediates, by-products and products at the Primester plant are less than the threshold of regulated substances referenced in 40 CFR Section §68.130. Therefore a Risk Management Plan is not required for Primester.

The Company is subject to the General Duty Clause of Section 112(r)(1) which states:

"The owners and operators of stationary sources producing, processing, handling or storing such substances [i.e., a chemical in 40 CFR part 68 or any other extremely hazardous substance] have a general duty [in the same manner and to the same extent as the general duty clause in the Occupational Safety and Health Act (OSHA)] to identify hazards which may result from (such) releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur."

Appendix A
Facility Location Map



Legend

- Approximate Primester Property Boundary



Environmental Resources Management
www.erm.com

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Figure A-1
Site Layout Map
Primester
1801 Warrick Drive
Kingsport, Tennessee

Appendix B
Title V Permit Application
Forms



**TITLE V PERMIT APPLICATION
 INDEX OF AIR POLLUTION PERMIT APPLICATION FORMS**

Section 1: Identification and Diagrams

This application contains the following forms:	APC Form 1, Facility Identification
	APC Form 2, Operations and Flow Diagrams

Section 2: Emission Source Description Forms

	Total number of this form	
This application contains the following forms (one form for each incinerator, printing operation, fuel burning installation, etc.):	APC Form 3, Stack Identification	15
	APC Form 4, Fuel Burning Non-Process Equipment	0
	APC Form 5, Stationary Gas Turbines or Internal Combustion Engines	0
	APC Form 6, Storage Tanks	27
	APC Form 7, Incinerators	0
	APC Form 8, Printing Operations	0
	APC Form 9, Painting and Coating Operations	0
	APC Form 10, Miscellaneous Processes	5
	APC Form 33, Stage I and Stage II Vapor Recovery Equipment	0
APC Form 34, Open Burning	0	

Section 3: Air Pollution Control System Forms

	Total number of this form	
This application contains the following forms (one form for each control system in use at the facility):	APC Form 11, Control Equipment - Miscellaneous	0
	APC Form 13, Adsorbers	0
	APC Form 14, Catalytic or Thermal Oxidation Equipment	0
	APC Form 15, Cyclones/Settling Chambers	0
	APC Form 17, Wet Collection Systems	0
	APC Form 18, Baghouse/Fabric Filters	9

(OVER)

Section 4: Compliance Demonstration Forms

	Total number of this form	
This application contains the following forms (one form for each incinerator, printing operation, fuel burning installation, etc.):	APC Form 19, Compliance Certification - Monitoring and Reporting - Description of Methods for Determining Compliance	5
	APC Form 20, Continuous Emissions Monitoring	0
	APC Form 21, Portable Monitors	0
	APC Form 22, Control System Parameters or Operating Parameters of a Process	9
	APC Form 23, Monitoring Maintenance Procedures	0
	APC Form 24, Stack Testing	0
	APC Form 25, Fuel Sampling and Analysis	0
	APC Form 26, Record Keeping	19
	APC Form 27, Other Methods	6
	APC Form 28, Emissions from Process Emissions Sources / Fuel Burning Installations / Incinerators	5
	APC Form 29, Emissions Summary for the Facility or for the Source Contained in This Application	1
	APC Form 30, Current Emissions Requirements and Status	24
	APC Form 31, Compliance Plan and Compliance Certification	1
APC Form 32, Air Monitoring Network	0	

Section 5: Statement of Completeness and Certification of Compliance

I have reviewed this application in its entirety and to the best of my knowledge, and based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete. I have provided all the information that is necessary for compliance purposes and this application consists of 261 pages and they are numbered from page 1 to G-2. The status of this facility's compliance with all applicable air pollution control requirements, including the enhanced monitoring and compliance certification requirements of the Federal Clean Air Act, is reported in this application along with the methods to be used for compliance demonstration.

Arnaud Thermoz-Lorciere, Managing Director, Primester GP

(423) 246-5999

Name and Title of Responsible Official

Telephone Number with Area Code



September 20, 2018

Signature of Responsible Official

Date of Application

(For definition of responsible official, see instructions for APC Form 1)



**TITLE V PERMIT APPLICATION
 FACILITY IDENTIFICATION**

SITE INFORMATION			
1. Organization's legal name Primester		For APC Use Only	APC company point no.
2. Site name (if different from legal name)			APC Log/Permit no.
3. Site address (St./Rd./Hwy.) 1861 Warrick Drive		NAICS or SIC Code 28	
City or distance to nearest town Kingsport, TN		Zip code 37662	County name Sullivan
4. Site location (in Lat./Long)	Latitude 36° 30' 57''	Longitude 82° 32' 50''	
CONTACT INFORMATION (RESPONSIBLE OFFICIAL)			
5. Responsible official contact Arnaud Thermozy-Lorciere		Phone number with area code (423) 246-5999	
6. Mailing address (St./Rd./Hwy.) 1801 Warrick Drive		Fax number with area code (423)246-5352	
City Kingsport	State TN	Zip code 37660	Email address arnaud.thermoz-lorciere@rhodia-acetow.com
CONTACT INFORMATION (TECHNICAL)			
7. Principal technical contact Bret Beach		Phone number with area code (423)246-5905	
8. Mailing address (St./Rd./Hwy.) 1801 Warrick Drive		Fax number with area code (423)246-5349	
City Kingsport	State TN	Zip code 37660	Email address bret.beach@rhodia-acetow.com
CONTACT INFORMATION (BILLING)			
11. Billing contact Dawn Warren		Phone number with area code (423)246-5910	
12. Mailing address (St./Rd./Hwy.) 1801 Warrick Drive		Fax number with area code (423)246-5352	
City Kingsport	State TN	Zip code 37660	Email address dawn.warren@rhodia-acetow.com
TYPE OF PERMIT REQUESTED			
13. Permit requested for:			
Initial application to operate :	<input type="checkbox"/>	Minor permit modification :	<input type="checkbox"/>
Permit renewal to operate :	<input checked="" type="checkbox"/>	Significant modification :	<input type="checkbox"/>
Administrative permit amendment :	<input type="checkbox"/>	Construction permit :	<input type="checkbox"/>

(OVER)

HAZARDOUS AIR POLLUTANTS, DESIGNATIONS, AND OTHER PERMITS ASSOCIATED WITH FACILITY

14. Is this facility subject to the provisions governing prevention of accidental releases of hazardous air contaminants contained in Chapter 1200-03-32 of the Tennessee Air Pollution Control regulations? Yes No

If the answer is Yes, are you in compliance with the provisions of Chapter 1200-03-32 of the Tennessee Air Pollution Control regulations? Yes No

15. If facility is located in an area designated as "Non-Attainment" or "Additional Control", indicate the pollutant(s) for the designation.
Not Applicable

16. List all valid Air Pollution permits issued to the sources contained in this application [identify all permits with most recent permit numbers and emission source reference numbers listed on the permit(s)].

<u>SOURCE IDENTIFICATION</u>	<u>MOST RECENT PERMIT NUMBER</u>	<u>EMISSION SOURCE REFERENCE NUMBER</u>
B-440-1	AA#6 567676	82-0510-01
B-441-1	AA#6 567676	82-0510-02
B-441-2	AA#6 567676	82-0510-03
B-442-1	AA#6 567676	82-0510-04
B-447-1	AA#6 567676	82-0510-05

(See Form 1a for continuation)

17. Page number: Revision number: Date of revision:



**TITLE V PERMIT APPLICATION
 OPERATIONS AND FLOW DIAGRAMS**

1. Please list, identify, and describe briefly process emission sources, fuel burning installations, and incinerators that are contained in this application. Please attach a flow diagram for this application.

<u>FORMER PES NUMBER</u>	<u>CURRENT ESRN</u>	<u>DESCRIPTION</u>
B-440-1	82-0510-01	Ester Production
B-441-1	82-0510-02	Acid Recovery Process
B-441-2	82-0510-03	Cellulose Scrap Recovery Process
B-442-1	82-0510-04	Tank Farm
B-447-1	82-0510-05	Cooling Tower

(See Figures B-1 through B-6 in the following pages for more detail)

2. List all insignificant activities which are exempted because of size or production rate and cite the applicable regulations.

<u>TYPE OF INSIGNIFICANT ACTIVITY</u>	<u>APPLICABLE REGULATION</u>
<input checked="" type="checkbox"/> Laboratory equipment	1200-3-9-.04(5)(f)19
<input checked="" type="checkbox"/> Pilot plants	1200-3-9-.04(5)(f)84
<input checked="" type="checkbox"/> Potential to emit less than 5 tons per year of any regulated air pollutant that is not a hazardous air pollutant or less than 1,000 pounds per year of any hazardous air pollutant including the following types: Welding equipment Diesel fuel or fuel oil storage tanks with a maximum storage capacity of 40,000 gal ea. Storage tanks Process tanks Internal Combustion Engines used for emergency replacement or standby Service On-site remediation of soil or water contaminated with organic compounds Asbestos renovation, demolition, and disposal operations Demolition of buildings or structures Miscellaneous dirty activities, such as sweeping, conveying, truck loading, shipping and receiving	1200-3-9-.04(5)(a)4.(i)

3. Are there any storage piles?

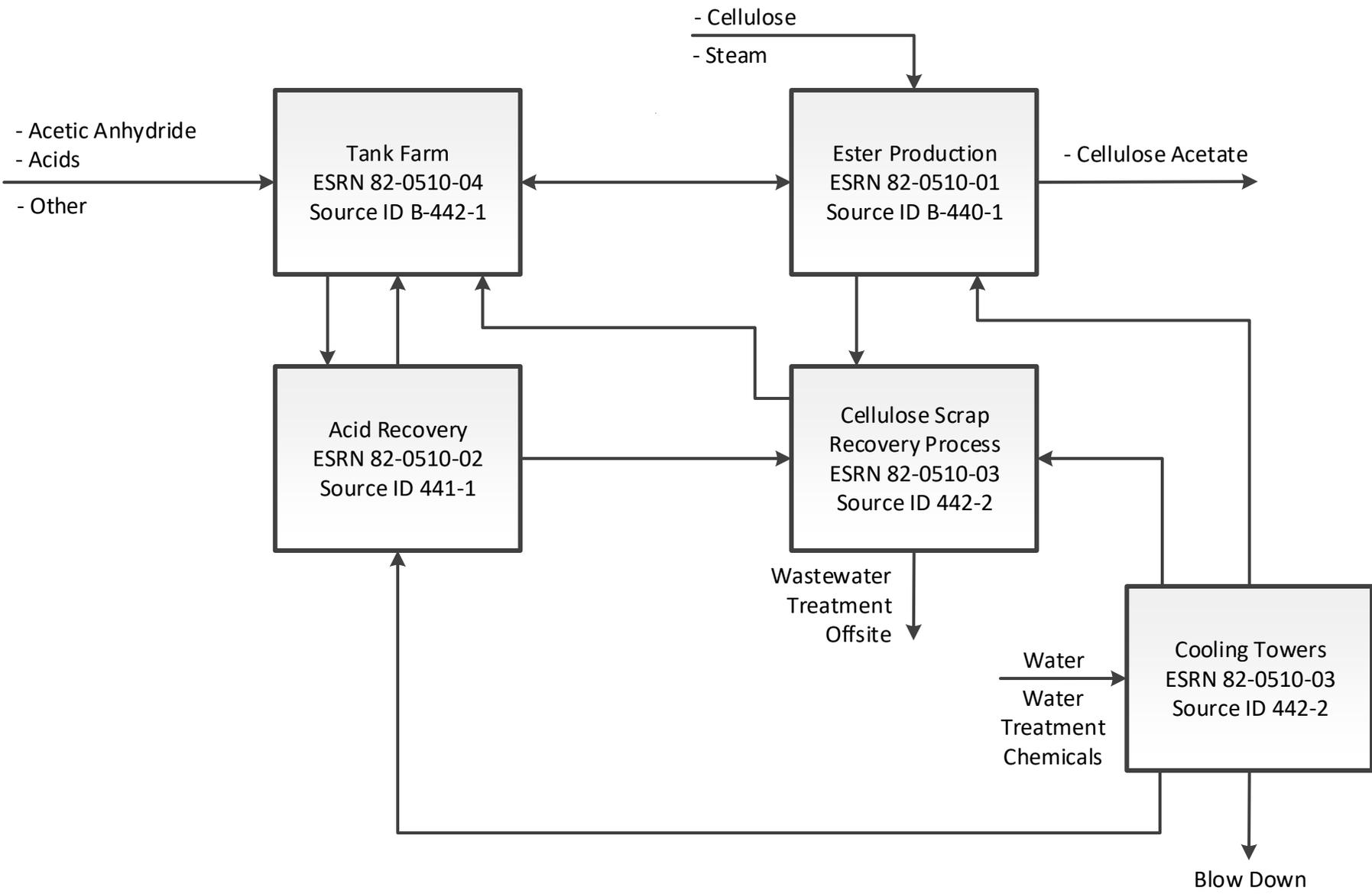
YES _____ NO X _____

4. List the states that are within 50 miles of your facility.
 Kentucky, North Carolina, and Virginia

5. Page number:

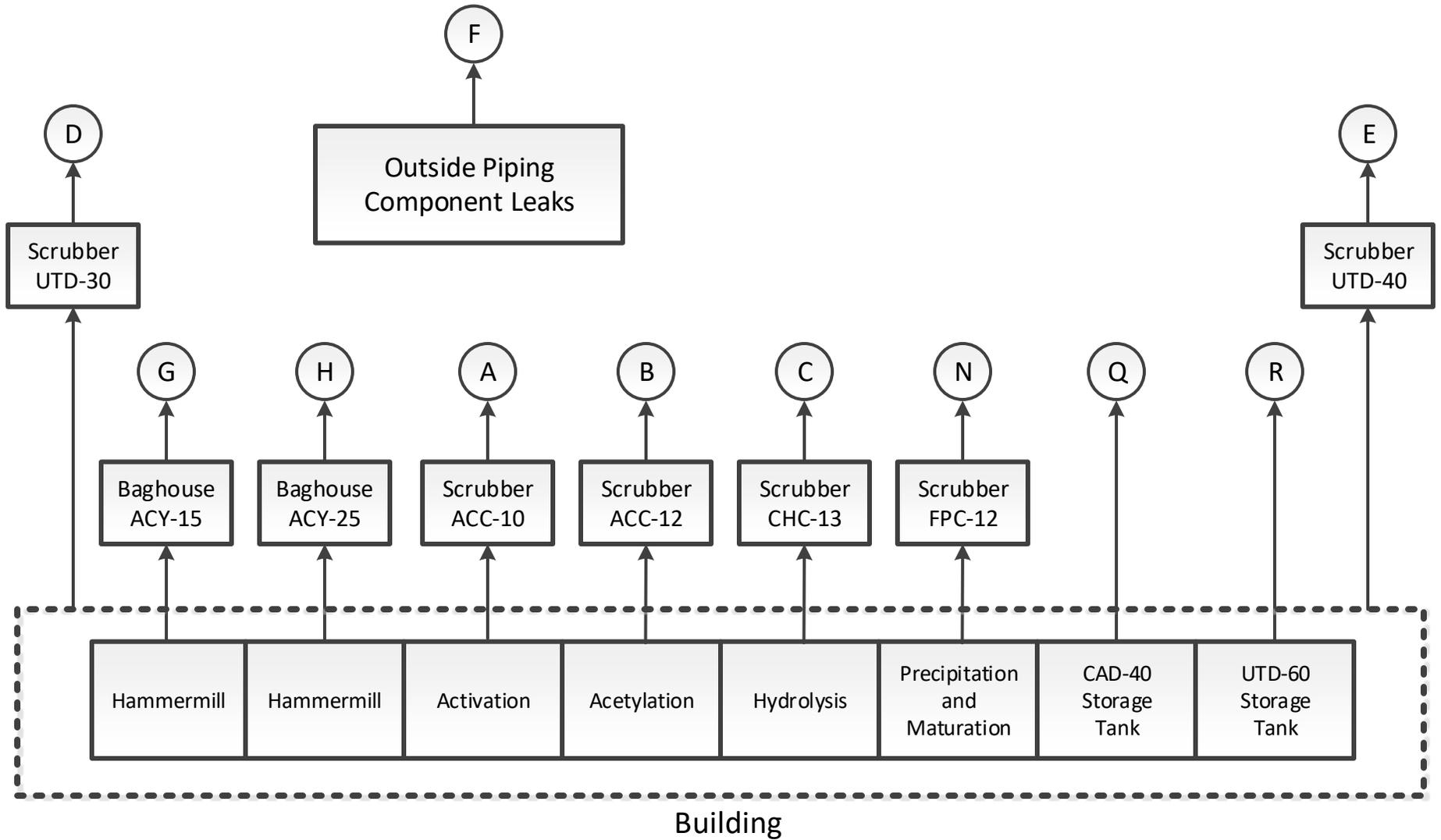
Revision Number:

Date of Revision:



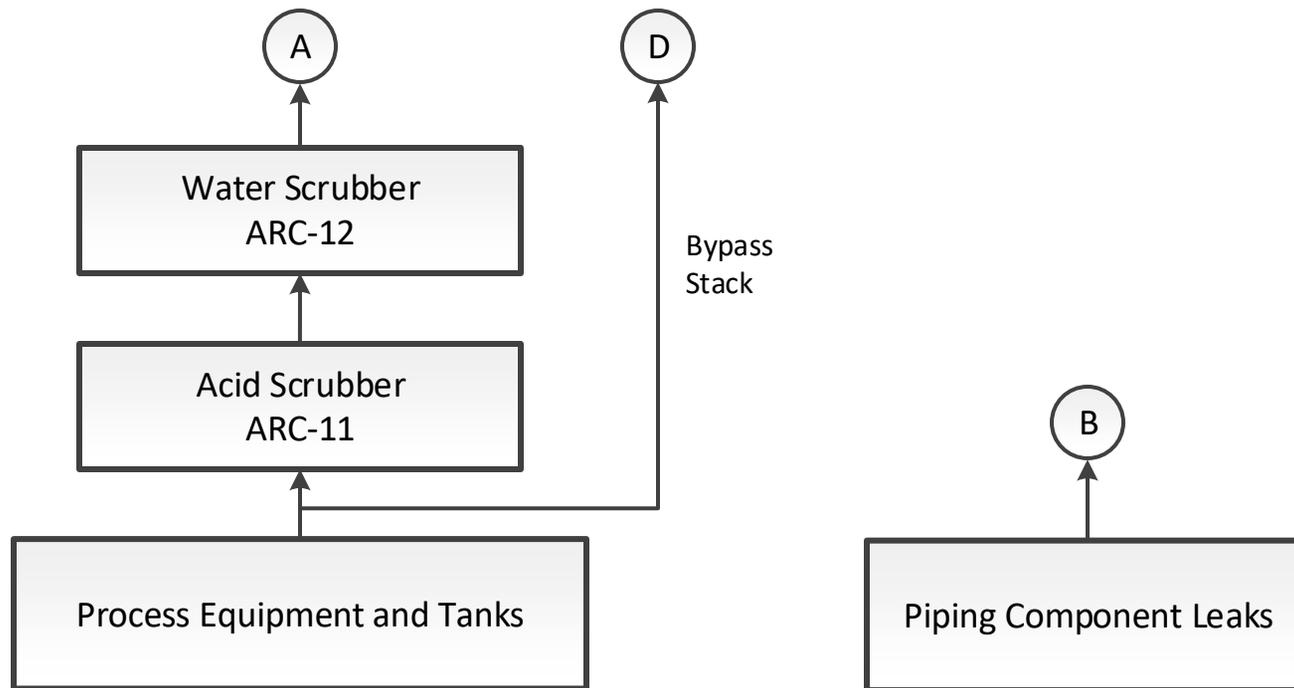
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Figure B-1
Overview of Emission Sources
 Primester
 1801 Warrick Drive
 Kingsport, Tennessee
 Revision Date: N/A



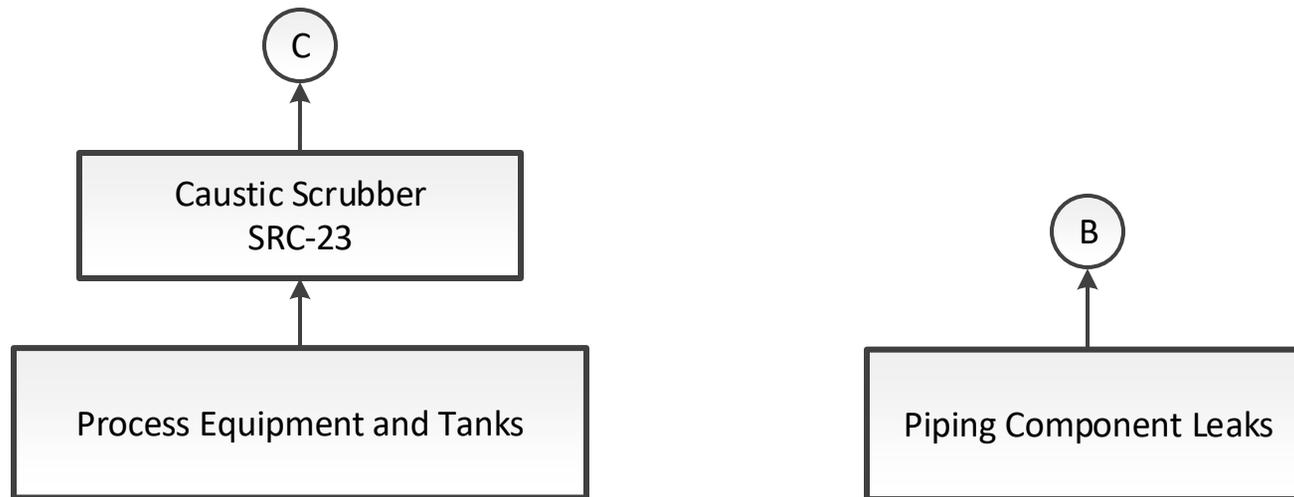
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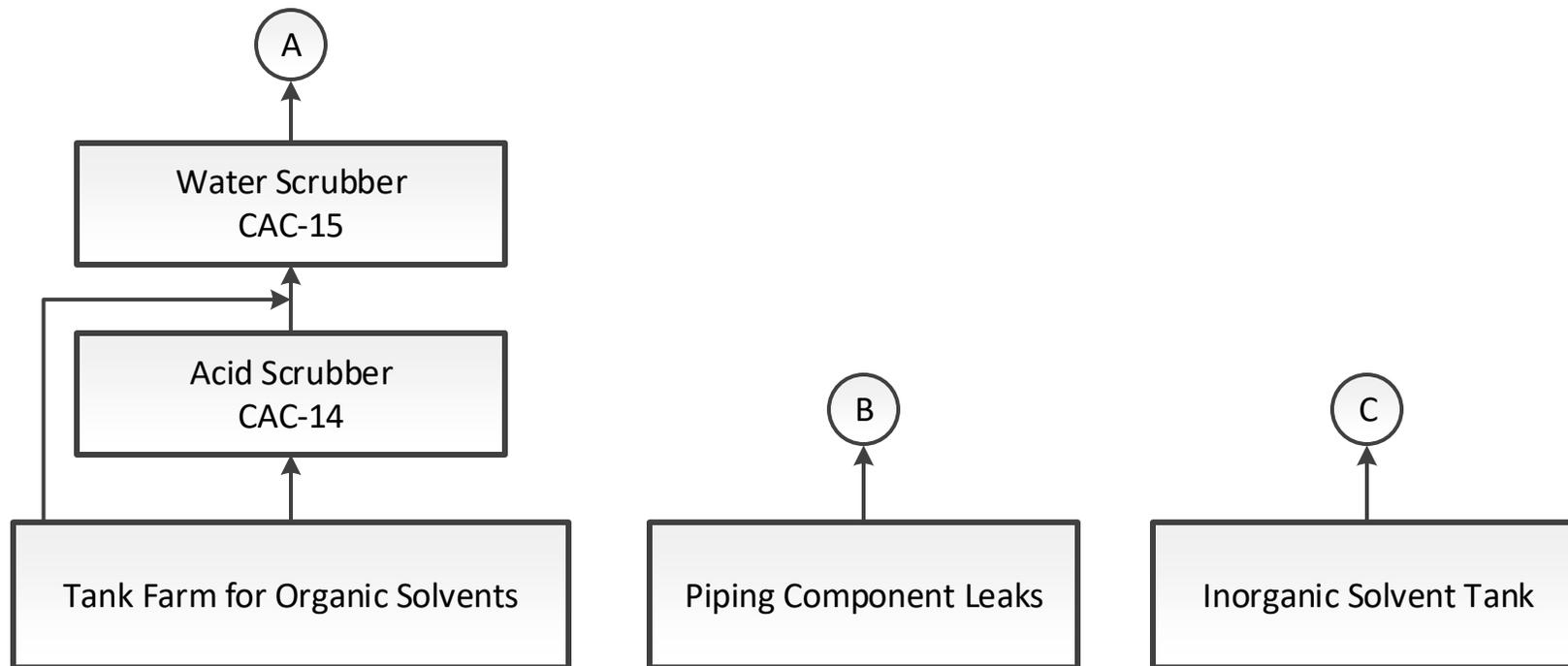
Figure B-2
Emission Flow Diagram
Ester Production, ESRN: 82-0151-01, PES: B-440-1
 Primester
 1801 Warrick Drive
 Kingsport, Tennessee



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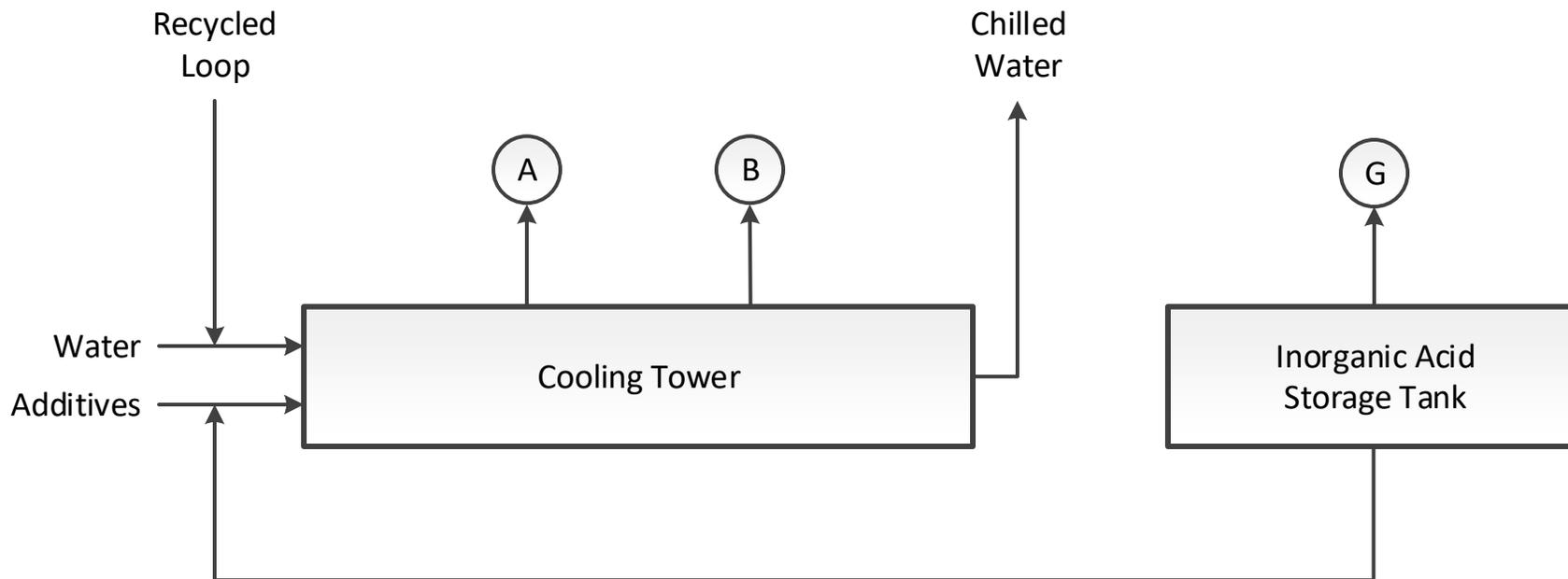
Figure B-3
Emission Flow Diagram
Acid Recovery Process, ESRN: 82-0151-02, PES: B-441-1
 Primester
 1801 Warrick Drive
 Kingsport, Tennessee





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Figure B-5
Emission Flow Diagram
Tank Farm, ESRN: 82-0151-04, PES: B-442-1
 Primester
 1801 Warrick Drive
 Kingsport, Tennessee



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Figure B-6
Emission Flow Diagram
Cooling Tower, ESRN: 82-0151-05, PES: B-447-1
 Primester
 1801 Warrick Drive
 Kingsport, Tennessee

Tennessee Air Pollution Control Division Ballot to Declare Major Source Fee Choices

Primester

Emission Source Number 82-0510

Major source annual air emission for the source(s) contained in the permit application shall be based on the following:

Allowable Emissions Basis

List of Sources:

82-0510-01

82-0510-02

82-0510-03

82-0510-04

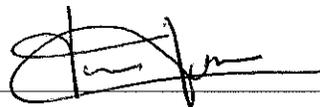
82-0510-05

Actual Emissions Basis*

List of Source:

Fee Due Date: July 1, annually
Annual Accounting Period: July 1 - June 30

Responsible Official Name: Arnaud Thermoiz-Lorciere

Signature: 

Date: September 20, 2018

Plant: Primester GP

*Narrative attached describing verifiable and replicable procedures to quantify actual emissions, if applicable



**TITLE V PERMIT APPLICATION
 EMISSION SUMMARY FOR THE FACILITY OR FOR THE
 SOURCES CONTAINED IN THIS APPLICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name:
Primester

EMISSIONS SUMMARY TABLE – CRITERIA AND SELECTED POLLUTANTS

2. Complete the following emissions summary for regulated air pollutants at this facility or for the sources contained in this application.

Air Pollutant	Summary of Maximum Allowable Emissions		Summary of Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour- Item 4, APC 28)	Tons per Year	Reserved for State use (Pounds per Hour- Item 4, APC 28)
Particulate Matter (TSP)	7.1		N/A	
Sulfur Dioxide	1.1		N/A	
Volatile Organic Compounds	45.6		N/A	
Carbon Monoxide	39.3		N/A	
Lead	N/A		N/A	
Nitrogen Oxides	N/A		N/A	
Total Reduced Sulfur	N/A		N/A	
Mercury	N/A		N/A	
Asbestos	N/A		N/A	
Beryllium	N/A		N/A	
Vinyl Chlorides	N/A		N/A	
Fluorides	N/A		N/A	
Gaseous Fluorides	N/A		N/A	
Greenhouse Gases in CO ₂ Equivalents	93.6		N/A	
(Continued on next page)				

Emission Source Description: Ester Production B-440-1
Emission Source Reference Number: 82-0510-01
APC 28 Backup

Regulated Air Pollutant	Basis of Emissions	Numerical Limit	Maximum Allowable (ton/yr)
Particulate Matter	Permit Condition E3-12		
	Entire Source Excluding Fugitives	1.6 ton/yr	1.6
Volatile Organic Compounds	Permit Condition E3-11		
	Entire Source Excluding Fugitives	8.1 ton/yr	8.1
	Permit Condition E3-5		
Carbon Monoxide	Fugitive Emission Point F	2.7 ton/yr	2.7
	Condition E3-4		
Carbon Monoxide	Vent C	0.21 lb/hr	0.9
Ozone Depleting Substances	Emission Point F	4.0 ton/yr	4.0
Carbon Dioxide Equivalents	Estimated	1.6 ton/yr	1.6
Acetaldehyde	Estimated	1.85 ton/yr	1.85

Emission Source Description: Acid Recovery B-441-1
Emission Source Reference Number: 82-0510-02
APC 28 Backup

Regulated Air Pollutant	Basis of Emissions	Numerical Limit	Maximum Allowable (ton/yr)
Pariculate Matter		Not Applicable	Not Applicable
Volatile Organic Compounds	Permit Condition E4-8		
	Entire Source Excluding Fugitives	2.8 ton/yr	2.8
Carbon Monoxide	Permit Condition E4-2		
	Fugitive Emission Point F	9.1 ton/yr	9.1
Ozone Depleting Substances		Not Applicable	Not Applicable
Carbon Dioxide Equivalents		Not Applicable	Not Applicable
HAP		Not Applicable	Not Applicable

Emission Source Description: Cellulose Scrap Recovery B-441-2
Emission Source Reference Number: 82-0510-03
APC 28 Backup

Regulated Air Pollutant	Basis of Emissions	Numerical Limit	Maximum Allowable (ton/yr)
Pariculate Matter		Not Applicable	Not Applicable
Volatile Organic Compounds	Permit Condition E5-3 Entire Source Excluding Fugitives	0.6 ton/yr	2.8
	Permit Condition E4-2 Fugitive Emission Point B	10.44 ton/yr	10.44
Carbon Monoxide	Permit Condition E5-4 Entire Source Excluding Fugitives	38.4 ton/yr	38.4
	Permit Condition E5-11		
Sulfur Dioxide	Entire Source Excluding Fugitives	0.25 lb/hr	1.1
Ozone Depleting Substances		Not Applicable	Not Applicable
Carbon Dioxide Equivalents		92 ton/yr	92
HAP		Not Applicable	Not Applicable

Emission Source Description: Tank Farm B-442-1
Emission Source Reference Number: 82-0510-04
APC 28 Backup

Regulated Air Pollutant	Basis of Emissions	Numerical Limit	Maximum Allowable (ton/yr)
Pariculate Matter		Not Applicable	Not Applicable
Volatile Organic Compounds	Permit Condition E6-2 from Point A Entire Source Excluding Fugitives	3.9 ton/yr	2.8
	Permit Condition E6-3 Fugitive Emission Point B	9.4 ton/yr	9.4
Carbon Monoxide		Not Applicable	Not Applicable
Sulfur Dioxide		Not Applicable	Not Applicable
Ozone Depleting Substances		Not Applicable	Not Applicable
Carbon Dioxide Equivalents		Not Applicable	Not Applicable
HAP		Not Applicable	Not Applicable

Emission Source Description: Cooling Tower B-447-1
Emission Source Reference Number: 82-0510-05
APC 28 Backup

Regulated Air Pollutant	Basis of Emissions	Numerical Limit	Maximum Allowable (ton/yr)
Pariculate Matter	Permit Condition E7-1 from Points A & B	5.5 ton/yr	5.5
Volatile Organic Compounds	Permit Condition E7-2 from Points A & B	0.2 ton/yr	0.2
Carbon Monoxide		Not Applicable	Not Applicable
Sulfur Dioxide		Not Applicable	Not Applicable
Ozone Depleting Substances		Not Applicable	Not Applicable
Carbon Dioxide Equivalents		Not Applicable	Not Applicable
HAP		Not Applicable	Not Applicable

**Plant Maximum Allowable Emissions
Primester**

Emission Source Reference Number	Process Emission Source	Emission Source Description	PM Emissions (ton/yr)	VOC	NOx	CO Emissions (ton/yr)	SO ₂ Emissions (ton/yr)	ODS	CO ₂ e	HAP
				Emissions (ton/yr)	Emissions (ton/yr)			Emissions (ton/yr)	Emissions (ton/yr)	Emissions (ton/yr)
82-0510-01	B-440-1	Ester Production	1.6	8.1	Not Applicable	0.9	Not Applicable	4	1.6	1.85
82-0510-02	B-441-1	Acid Recovery Process	Not Applicable	11.9	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
82-0510-03	B-441-2	Cellulose Scrap Recovery Process	Not Applicable	13.2	Not Applicable	38.4	1.1	Not Applicable	92.0	Not Applicable
82-0510-04	B-442-1	Tank Farm	Not Applicable	12.2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
82-0510-05	B-447-1	Cooling Tower	5.5	0.2	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
82-0510		APC 29 Form	7.1	45.6	0.0	39.3	1.1	4.0	93.6	1.85

Compliance Statement Attachment to APC 30 Form.

A notice of violation was issued by the Tennessee Division of Air Pollution Control (TDAPC) on September 15, 2017 with regard to:

1. A timely notification of change in responsible official and billing contact required by Condition E2-6 of Permit 567676 (Amendment #6) was not made.

Notifications have been submitted advising the TDAPC of replacements. This notice of violation was referenced in the most recent periodic Title V reports due on August 29, 2017. This condition is in currently in compliance; however, the TDAPC is in the process of assessing enforcement action.

2. At Source 82-0510-04 (Tank Farm), a deficiency was noted by a TDEC inspector of the logging of repair and replacement of two pieces of VOC leaking equipment for:

- a. Valve ID 102V1

Primester detected a leak exceeding the screening threshold of 10,000 ppm. However, no documentation regarding the repair/replacement was made with respect to 40 CFR 60 Subpart VV (Fugitive VOC from Leaking Components at SOCFI Facilities). Even after the repair was made, there was no confirmation of a successful repair. This issue has been rectified, and this source is currently in compliance as noted in the most recent Title V reports due August 29, 2018. However, the TDAPC is currently in the process of assessing enforcement action.

- b. Pressure Relief Device ID VS04R1

Primester detected a VOC leak. Although it had a delayed repair (as acceptable under certain circumstances by the applicable standard), the repair was not confirmed to be successful. However, no documentation regarding the repair/replacement was made with respect to 40 CFR 60 Subpart VV (Fugitive VOC from Leaking Components at SOCFI Facilities). Even after the repair was made, there was no confirmation of a successful repair. A log was devised to track and manage leaking equipment. This issue has been rectified, and this source is currently in compliance as noted in the most recent Title V reports due August 29, 2018. However, the TDAPC is currently in the process of assessing enforcement action.

c. Pressure Relief Device ID VS12R1

Primester detected a VOC leak that exceeded the screening threshold of 500 ppm. Although it had a delayed repair (as acceptable under certain circumstances by the applicable standard); however, no documentation regarding the repair/replacement was made with respect to 40 CFR 63 Subpart FFFF and H (for Miscellaneous Organic NESHAP facilities). A log was devised to track and manage leaking equipment. This issue has been rectified, and this source is currently in compliance as noted in the most recent Title V reports due August 29, 2018. However, the TDAPC is currently in the process of assessing enforcement action.

Source 82-0510-04 (Tank Farm) is currently in compliance with its applicable emission standards. The summary of deviations on this page has been included to indicate that enforcement is currently being assessed. Closure to these deviations are forthcoming.

Permit Shield

Primester requests the Title V permit shield offered by the Tennessee Division of Air Pollution Control. Regulatory negative declarations are provided in Section 4 and Appendix D of their permit application.



**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - WET COLLECTION SYSTEMS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): B-440-1 (Activation Operation)
3. Stack ID or flow diagram point identification(s): A to ACC-10 Scrubber	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
 Single Pass countercurrent packed tower type Water Scrubber.

KEY OPERATING PARAMETERS:
 Normal Water Stream Flow Rate: 2 - 17 GPM
 Minimum Water Stream Flow Rate: 1.5 GPM

5. Manufacturer and model number (if available): Fabricated Products	6. Year of installation: 1992
--	--------------------------------------

7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	99	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal..

Scrubber water managed offsite at an NPDES permitted wastewater treatment system.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.): **Water**

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Not Applicable

11. Page number:	Revision Number:	Date of Revision:
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TITLE V PERMIT APPLICATION

CONTROL EQUIPMENT - WET COLLECTION SYSTEMS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): B-440-1 (Used for the Acetylation Operation)
3. Stack ID or flow diagram point identification(s): B to Scrubber ACC-12	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
Single Pass countercurrent packed tower type Water Scrubber.

KEY OPERATING PARAMETERS:

Normal Water Stream Flow Rate: 1 to 5 GPM

Minimum Water Stream Flow Rate: 0.8 GPM

5. Manufacturer and model number (if available): Kopetz (or Equivalent)	6. Year of installation: 1992
---	---

7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	99	Engineering Model
Particulates	99	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal:

Scrubber water managed offsite at an NPDES permitted wastewater treatment system.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.):

Water

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Not applicable

11. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - WET COLLECTION SYSTEMS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): B-440-1 (Hydrolysis and Dope Concentration Operations)
3. Stack ID or flow diagram point identification(s): C to CHC-13 Scrubber	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
 Recirculating countercurrent packed tower type Water/Caustic Scrubber.

KEY OPERATING PARAMETERS:
 Normal Water Stream Flow Rate: 5.0 – 13.0 GPM
 Minimum Water Stream Flow Rate: 5.0 GPM
 Normal 50% by wt. Sodium Hydroxide Slurry Flow Rate: 0 - 0.05 GPM

5. Manufacturer and model number (if available): Eastman	6. Year of installation: 2013
---	--------------------------------------

7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	98*	Engineering Model and Performance Test
Particulates	99	Engineering Model

*Caustic is not needed to meet VOC efficiency.

8. Discuss how collected material and effluent is handled for reuse or disposal:

Scrubber water managed offsite at an NPDES permitted wastewater treatment system.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.):

Aqueous Sodium Hydroxide is used; however alkaline medium is not required to meet the control efficiency of 98% for VOC.

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Not Applicable

11. Page number:	Revision Number:	Date of Revision:
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TITLE V PERMIT APPLICATION

CONTROL EQUIPMENT - WET COLLECTION SYSTEMS

GENERAL IDENTIFICATION AND DESCRIPTION		
1. Facility name: Primester	2. Emission source (identify): B-440-1 (Building fugitive emissions)	
3. Stack ID or flow diagram point identification(s): D to Scrubber UTD-30 (currently not in use) & E to Scrubber UTD-40 (currently in use)		
WET COLLECTION SYSTEM DESCRIPTION		
4. Describe the device in use. List the key operation parameters of this device and their normal operating range. <u>WET SCRUBBER HIGH EFFICIENCY</u> Single pass vapor, closed loop liquid countercurrent spray type, caustic/water scrubber. <u>KEY OPERATING PARAMETERS:</u> Normal Water Flow Rate: 0.5 to 4.0 GPM, each Control pH: > 7.0		
5. Manufacturer and model number (if available): Harrington Industrial Plastics Ins., ECV 913-5 lbs. (or Equivalent)	6. Year of installation: Vent E - 1992 Vent D – Scrubber put back into service in 2012, but currently not used.	
7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
VOC	95	Vendor Guarantee
8. Discuss how collected material and effluent is handled for reuse or disposal: Scrubber water managed in offsite at an NPDES permitted wastewater treatment system.		
9. Scrubbing medium (water, sodium hydroxide slurry, etc.): Water with 50% by weight caustic.		
10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency. Not Applicable		
11. Page number:	Revision Number:	Date of Revision:
Page Number: B-29	Revision Number: N/A	Revision Date: N/A



TITLE V PERMIT APPLICATION

CONTROL EQUIPMENT - WET COLLECTION SYSTEMS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): B-440-1 (Precipitation & Maturation Operation)
3. Stack ID or flow diagram point identification(s): N to Scrubber FPC-12	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
 Single pass countercurrent packed tower type Water Scrubber.

KEY OPERATING PARAMETERS:

Normal Water Stream Flow Rate: 3 to 8 GPM

Minimum Water Stream Flow Rate: 3.0 GPM

Subject to Compliance Assurance Monitoring requirements of 40 CFR 64 in Appendix C of this permit application.

5. Manufacturer and model number (if available): Fabricated Products (or Equivalent)	6. Year of installation: 1992
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7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
VOC	99	Engineering Model
Particulates	99	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal:

Scrubber water is managed in offsite at an NPDES permitted wastewater treatment system.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.):
Water

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Not Applicable

11. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - BAGHOUSES/FABRIC FILTERS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): B-440-1 (Activation Equipment)
3. Stack ID or flow diagram point identification (s): G for Baghouse ACY-15 and H for Baghouse ACY-25	

BAGHOUSE/FABRIC FILTER DESCRIPTION

4. Describe the device in use. List the key operating parameters of this device and their normal operating range.

This baghouse will control particulate matter from cellulose fines which are approximated to be > 10 microns

5. Manufacturer and model number (if available): MAC Equip. Inc. Model Number: 72ST49	6. Year of installation: 1992
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7. List of pollutant(s) to be controlled and the expected control efficiency for each pollutant (see instructions).

Pollutant	Efficiency (%)	Source of data
Particulate Matter	≥ 99%	Vendor

8. Discuss how collected material is handled for reuse or disposal.

The collected material from the fabric filters are disposed of offsite.

9. If the bags are coated, specify the material used for coating and frequency of coating

Bags are not coated

10. Does the baghouse collect asbestos containing material?

Yes No

If "Yes", provide data as outlined in Item 10, Instructions for this form.

11. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Not applicable

12. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Emission source (identify): **B-440-1 (Refrigeration Equipment Leaks and Leaking Piping Components outside of manufacturing building)**

STACK DESCRIPTION

3. Stack ID (or flow diagram point identification): **F**
4. Stack height above grade in feet: **Variable**
- | | |
|--|---|
| 5. Velocity (data at exit conditions):
<u>Not applicable</u> (Actual feet per second) | 6. Inside dimensions at outlet in feet:
Not Applicable |
| 7. Exhaust flowrate at exit conditions (ACFM):
Not Applicable | 8. Flow rate at standard conditions (DSCFM):
Not Applicable |
| 9. Exhaust temperature:
<u>Ambient</u> Degrees Fahrenheit (F) | 10. Moisture content (data at exit conditions):
_____ Percent _____ N/A foot (gr/dscf) |

11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only):
 _____ N/A (F)

12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO₂, NO_x, etc.)? **N/A**

Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.

BYPASS STACK DESCRIPTION

13. Do you have a bypass stack?
 _____ Yes X No

If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.

14. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Emission source (identify): **B-440-1 (Acetic Anhydride Holdup, CAD-40 Storage Tank)**

STACK DESCRIPTION

3. Stack ID (or flow diagram point identification): **Q**
4. Stack height above grade in feet: **12 (assume equal to height of shell)**
- | | |
|--|--|
| 5. Velocity (data at exit conditions):
<u>variable</u> (Actual feet per second) | 6. Inside dimensions at outlet in feet:
Not Applicable |
| 7. Exhaust flowrate at exit conditions (ACFM):
Maximum is equal to fill rate | 8. Flow rate at standard conditions (DSCFM):
Maximum is equal to fill rate |
| 9. Exhaust temperature:
<u>Ambient</u> Degrees Fahrenheit (F) | 10. Moisture content (data at exit conditions):
_____ Percent _____ N/A _____ foot (gr/dscf)
Grains per dry standard cubic |

11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only):
 _____ N/A (F)

12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO₂, NO_x, etc.)? **N/A**

Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.

BYPASS STACK DESCRIPTION

13. Do you have a bypass stack?
 _____ Yes X No

If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.

14. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ACD-10 vented to Emission Point B			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 6363 (Gallons)	6. Year of installation: 1992	7. Tank height: 12.0 (Feet)	8. Tank diameter: 9.5 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
<input type="checkbox"/> Open toptank <input checked="" type="checkbox"/> Fixed roof <input type="checkbox"/> Fixed roof w/internal floating roof <input type="checkbox"/> Other (specify) <input type="checkbox"/> Pressurized tank <input type="checkbox"/> External floating roof <input type="checkbox"/> Variable vapor space			
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) _____ Dome roof – indicate tank roof height _____ (ft) Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable _____ Light rust _____ Dense rust _____ Gunit lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
<input type="checkbox"/> Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary <input type="checkbox"/> Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary <input type="checkbox"/> Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield			
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical Actuation Gasketed _____ Weighted Mechanical Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical Actuation Gasketed _____ Weighted Mechanical Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	96	-	5090	60.05	0.27	14.10	75
Sulfuric Acid	3	-	5090	98.08	Not Quantified	14.10	75
Water	1	-	5090	18.02	0.0142	14.10	75

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Activation Solution Mix Tank

19. Page number:

Revision Number:

Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ACD-11 vented to Emission Point B			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 8484 (Gallons)	6. Year of installation: 1992	7. Tank height: 16.0 (Feet)	8. Tank diameter: 9.5 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	96	8,407,000	6787	60.05	0.32	14.10	81
Sulfuric Acid	3	8,407,000	6787	98.08	Not Quantified	14.10	81
Water	1	8,407,000	6787	18.02	0.0173	14.10	81

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Mix Tank

19. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ACD-20 vented to Emission Point B			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 6363 (Gallons)	6. Year of installation: 1992	7. Tank height: 12.0 (Feet)	8. Tank diameter: 9.5 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	96	-	5090	60.05	0.27	14.10	75
Sulfuric Acid	3	-	5090	98.08	Not Quantified	14.10	75
Water	1	-	5090	18.02	0.0142	14.10	75

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Mix Tank

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ACD-21 vented to Emission Point B			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 8484 (Gallons)	6. Year of installation: 1992	7. Tank height: 16.0 (Feet)	8. Tank diameter: 9.5 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	96	8,407,000	6787	60.05	0.30	14.10	79
Sulfuric Acid	3	8,407,000	6787	98.08	Not Quantified	14.10	79
Water	1	8,407,000	6787	18.02	0.0162	14.10	79

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Mix Tank

19. Page number: Revision Number: Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: CAC-20 vented to Emission Point B			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 3008 (Gallons)	6. Year of installation: 1992	7. Tank height: 8.0 (Feet)	8. Tank diameter: 8.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	124,564,000	2557	60.05	0.40	14.10	86

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Wash Acid Tank

19. Page number: _____ Revision Number: _____ Date of Revision: _____



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION												
1. Facility name: Primester												
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)												
STORAGE TANK DESCRIPTION												
3. Storage tank identification: CAD-11 vented to Emission Point B												
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E												
5. Storage tank capacity: 23000 (Gallons)	6. Year of installation: 1992	7. Tank height: 20 (Feet)	8. Tank diameter: 14 (Feet)									
9. Color of tank: _____ White _____ x Other Specify <u>STAINLESS ROOF, STAINLESS SHELL</u>												
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No												
11. Type of storage tank: _____ Open toptank <input checked="" type="checkbox"/> Fixed roof _____ Fixed roof w/internal floating roof _____ Other (specify) _____ Pressurized tank _____ External floating roof _____ Variable vapor space												
12. For fixed roof tanks: A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) _____ Dome roof – indicate tank roof height _____ (ft) Indicate shell radius _____ (ft)												
FLOATING ROOF TANK DESCRIPTION												
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u> _____ Light rust _____ Dense rust _____ Gunite lined												
14. For External Floating Roof tanks: <u>Not Applicable</u> A. Tank construction (check one): _____ Welded tank _____ Riveted tank B. Rim Seal system description (check one): _____ Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary _____ Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary _____ Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield C. Roof type (check one): : _____ Pontoon roof _____ Double Deck roof D. Roof fitting types (indicate the number of each type): <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed </td> <td style="width: 33%; vertical-align: top;"> Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover </td> <td style="width: 33%; vertical-align: top;"> Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed </td> </tr> <tr> <td style="vertical-align: top;"> Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed </td> <td style="vertical-align: top;"> Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed </td> <td style="vertical-align: top;"> Roof Drain _____ Open _____ 90% Closed </td> </tr> <tr> <td style="vertical-align: top;"> Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float </td> <td style="vertical-align: top;"> Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed </td> <td style="vertical-align: top;"> Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed </td> </tr> </table>				Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed										
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed										
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed										

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	74.3	483,000	18,394	60.05	1.55	14.10	151
Sulfuric Acid	0.5	483,000	18,394	98.08	Not Quantified	14.10	151
Water	9.1	483,000	18,394	18.02	1.07	14.10	151
Cellulose Triacetate	16.1	483,000	18,394	288	Not Quantified	14.10	151

Multipurpose tank with variable composition:

Yes No

18. Describe the operation this tank will serve:

Reject Tank

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: DCD-81 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 13,535 (Gallons)	6. Year of installation: 1992	7. Tank height: 16 (Feet)	8. Tank diameter: 12 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unpainted Stainless Steel</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	73.0	171,082,000	10,151	60.05	1.37	14.10	148
Water	11.0	171,082,000	10,151	18.02	1.15	14.10	148
Sodium Sulfate	0.5	171,082,000	10,151	142.04	Not Quantified	14.10	148
Cellulose Acetate	15.5	171,082,000	10,151	275	Not Quantified	14.10	148

Multipurpose tank with variable composition:

Yes No

18. Describe the operation this tank will serve:

Holdup Tank

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: DCD-82 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 3008 (Gallons)	6. Year of installation: 1992	7. Tank height: 8 (Feet)	8. Tank diameter: 8 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Stainless Steel Roof and Shell</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	124,564,000	2406	60.05	0.4	14.10	86

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Holdup Tank

19. Page number: _____ Revision Number: _____ Date of Revision: _____



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: DCD-83 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 30,080 (Gallons)	6. Year of installation: 1992	7. Tank height: 20 (Feet)	8. Tank diameter: 16 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Stainless Steel Roof and Shell</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	73.5	90,000	24,064	60.05	1.38	14.10	148
Water	10.5	90,000	24,064	18.02	1.1057	14.10	148
Sodium Sulfate	0.5	90,000	24,064	142.04	Not Applicable	14.10	148
Cellulose Acetate	15.5	90,000	24,064	275	Not Applicable	14.10	148

Multipurpose tank with variable composition:

Yes No

18. Describe the operation this tank will serve:

Holdup Tank

19. Page number:

Revision Number:

Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION												
1. Facility name: Primester												
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)												
STORAGE TANK DESCRIPTION												
3. Storage tank identification: FPD-12 vented to Emission Point N												
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E												
5. Storage tank capacity: 30,081 (Gallons)	6. Year of installation: 1992	7. Tank height: 20 (Feet)	8. Tank diameter: 16 (Feet)									
9. Color of tank: _____ White _____ x Other Specify <u>Stainless Steel Roof and Shell</u>												
10. Is this tank equipped with a submerged fill pipe? Yes _____ <u>X</u> No												
11. Type of storage tank: _____ Open top tank <u>X</u> Fixed roof _____ Fixed roof w/internal floating roof _____ Other (specify) _____ Pressurized tank _____ External floating roof _____ Variable vapor space												
12. For fixed roof tanks: A. Tank configuration (check one): <u>X</u> Vertical (upright cylinder) _____ Horizontal B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) _____ Dome roof – indicate tank roof height _____ (ft) Indicate shell radius _____ (ft)												
FLOATING ROOF TANK DESCRIPTION												
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable _____ Light rust _____ Dense rust _____ Gunite lined												
14. For External Floating Roof tanks: Not Applicable A. Tank construction (check one): _____ Welded tank _____ Riveted tank B. Rim Seal system description (check one): _____ Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary _____ Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary _____ Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield C. Roof type (check one): : _____ Pontoon roof _____ Double Deck roof D. Roof fitting types (indicate the number of each type): <table style="width:100%; border: none;"> <tr> <td style="width:33%; vertical-align: top;"> Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed </td> <td style="width:33%; vertical-align: top;"> Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover </td> <td style="width:33%; vertical-align: top;"> Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed </td> </tr> <tr> <td style="vertical-align: top;"> Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed </td> <td style="vertical-align: top;"> Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed </td> <td style="vertical-align: top;"> Roof Drain _____ Open _____ 90% Closed </td> </tr> <tr> <td style="vertical-align: top;"> Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float </td> <td style="vertical-align: top;"> Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed </td> <td style="vertical-align: top;"> Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed </td> </tr> </table>				Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed										
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed										
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed										

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	28.3	613,592,000	25,268	60.05	0.09	14.10	86
Water	66.1	613,592,000	25,268	18.02	0.56	14.10	86
Sodium Sulfate	0.4	613,592,000	25,268	142.04	Not Applicable	14.10	86
Cellulose Acetate	5.2	613,592,000	25,268	246	Not Applicable	14.10	86

Multipurpose tank with variable composition:

Yes No

18. Describe the operation this tank will serve:

Holdup

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: CAD-40 vented to Emission Point Q			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 13,817 (Gallons)	6. Year of installation: 1992	7. Tank height: 12 (Feet)	8. Tank diameter: 14 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Insulated Roof and Shell</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
<input type="checkbox"/> Open toptank <input checked="" type="checkbox"/> Fixed roof <input type="checkbox"/> Fixed roof w/internal floating roof <input type="checkbox"/> Other (specify) <input type="checkbox"/> Pressurized tank <input type="checkbox"/> External floating roof <input type="checkbox"/> Variable vapor space			
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) _____ Dome roof – indicate tank roof height _____ (ft) Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u> _____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one): _____ Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary _____ Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary _____ Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield			
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	43,205,000	11,053	102.09	0	14.10	0

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Acetic Anhydride Holdup

19. Page number: Revision Number: Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: UTD-60 vented to Emission Point R			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 7050 (Gallons)	6. Year of installation: 1992	7. Tank height: 12 (Feet)	8. Tank diameter: 10 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Insulated Roof and Shell</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
<input type="checkbox"/> Open toptank <input checked="" type="checkbox"/> Fixed roof <input type="checkbox"/> Fixed roof w/internal floating roof <input type="checkbox"/> Other (specify) <input type="checkbox"/> Pressurized tank <input type="checkbox"/> External floating roof <input type="checkbox"/> Variable vapor space			
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) _____ Dome roof – indicate tank roof height _____ (ft) Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u> _____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one): _____ Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary _____ Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary _____ Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield			
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical _____ Actuation Gasketed _____ Weighted Mechanical _____ Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC (Ethylene Glycol)	50	365,000,000	2820	62.07	0	14.10	33
Water	50	365,000,000	2820	18.02	0.07	14.10	33

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Ethylene Glycol Holdup

19. Page number:

Revision Number:

Date of Revision:



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: B-440-1
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3. Describe the process emission source / fuel burning installation / incinerator. **Ester Production**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
See Attachment	Visible Emissions	TAPCR 1200-03-05: Permit Number 567676, Condition E3-1	20% Opacity	< 20%	IN
Vents A, B, C, D, E, & N	VOC	TAPCR 1200-03-07-.07(2): Permit Number 567676, Condition E3-2	1.85 lb/hr	1.85 lb/hr	IN
Vent B, C, G, H	Particulates	TAPCR 1200-03-07-.01(5): Permit Number 567676, Condition E3-3	0.13 lb/hr	0.13 lb/hr	IN
Vent C	CO	TAPCR 1200-03-07-.07(2): Permit Number 567676, Condition E3-4	0.21 lb/hr	0.21 lb/hr	IN
Flow Diagram Point F - Equipment Leaks	VOC	TAPCR 1200-03-07-.07(2): Permit Number 567676, Condition E3-5	Annual Leak Detection and Repair (Fugitive VOC emissions from pumps, valves, flanges, etc. are estimated at 2.7	2.7 TPY	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

Not Applicable					
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11. Page number: Revision number: Date of revision:



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: B-440-1
3. Describe the process emission source / fuel burning installation / incinerator. Ester Production	

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Portion of Source Subject to NSPS	VOC	40 CFR 60 Subpart A – General Provisions, Condition E3-6 of Permit Number 567676	N/A	N/A	N/A
Flow Diagram Point F - Equipment in VOC Service	VOC	40 CFR 60 Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 to the permit. Changes that result in a change of applicability shall follow the applicable procedures in Section C of the permit and shall include an update to Attachment 2. Condition E3-7 of Permit Number 567676.	N/A	N/A	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: B-440-1
3. Describe the process emission source / fuel burning installation / incinerator. Ester Production	

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Vent Q (Tank CAD-40)	VOC	TAPCR 1200-03-07-.07(2): Permit Number 567676, Condition E3-8	0.04 TPY	0.04 TPY	IN
Portions of Source Subject to NSPS	VOC	40 CFR 60 Subpart RRR - Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes. A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 to the permit. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2. Permit Number 567676, Condition E3-9.	N/A	N/A	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: B-440-1
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Ester Production**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Entire Source, excluding fugitive equipment leaks from pumps, valves, flanges, etc.	Particulate	TAPCR 1200-03-07-.01(5)-Letter dated May 18, 2016. Permit Number 567676 Condition E3-12	1.6 ton/yr	1.6 ton/yr	IN
Vents C and N	VOC	40 CFR Part 64 – Compliance Assurance Monitoring Vent C: §64.2(b)(1)(i) Exempt emission limitations or standards proposed by the Administrator after November 15, 1990 – Vent subject to Group 1 MACT control requirements. Vent N: See Attachment 3 to the permit. Permit Number 567676 Condition E3-13.	N/A	N/A	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: B-440-1
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Ester Production**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Designated Miscellaneous Organic Manufacturing Chemical Process Unit: MCPU Primester	HAPs	40 CFR 63 Subpart A – General Provisions. Permit Number 567676 Condition E3-15	N/A	N/A	IN
Designated Miscellaneous Organic Manufacturing Chemical Process Unit: MCPU Primester	HAPs	40 CFR 63 Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 of the permit. Changes that result in a change of applicability shall follow the procedures specified in Section C of this permit and shall include an update to Attachment 2. Permit Number 567676 Condition E3-16 (AA-1)	N/A	N/A	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number: _____ Revision number: _____ Date of revision: _____

FORM V30 ATTACHMENT

NEW SOURCE PERFORMANCE STANDARDS 40 CFR Part 60

Specific Applicability Determinations 82-0510-01: Ester Production (Source ID B-440-1)

Identification	Category	Rule Citation
Subpart Kb – Storage Vessels		
-	Storage Vessels storing a VOL having a maximum true vapor pressure less than 76.7 kPa and must meet	40 CFR 60.112b(a)
-	Storage Vessels storing a VOL having a maximum true vapor pressure equal to or greater than 76.7 kPa and must meet standards.	40 CFR 60.112b(b)
-	Storage Vessels that are not required to meet standards.	40 CFR 60.110b
Kb subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.115b, 60.116b
Subpart VV – Equipment Leaks		
Portions of Flow Diagram Point F	Alternative monitoring for equipment in acetic acid service (letter from Beverly Banister, EPA Region 4 to Barry Stephens, TDAPC, January 23, 2004.*)	
Portions of Flow Diagram Point F	Work practice standards for pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, etc.	40 CFR 60.482, 60.483
-	Equivalence of means of emission limitation	40 CFR 60.484
VV subject points as applicable	Recordkeeping and reporting	40 CFR 60.486, 60.487
Subpart III – Air Oxidation		
-	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.612(b)
-	TRE greater than 1.0 but less than or equal to 4.0	40 CFR 60.612(c)
-	TRE greater than 4.0	40 CFR 60.610(c)
III subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.613, 60.615
Subpart NNN – Distillation		
$\Delta 2$ (Columns DCC-80/DCC-90) $\Delta 1$ (Column DCC-70)	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.662(a)
-	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.662(b)
-	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.662(c)
-	TRE greater than 8.0	40 CFR 60.660(c)(4)
-	Low Flow Exemption	40 CFR 60.660(c)(6)
-	Design Capacity Exemption	40 CFR 60.660(c)(5)
NNN subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.663, 60.665
Subpart RRR – Reactors		
-	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.702(a)
-	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.702(b)
-	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.702(c)
-	TRE greater than 8.0	40 CFR 60.700(c)(2)
Reactors CAC-01, CAC-02, CAC-03, CAC-04, CHC-10, CHC-20, CHC-30, CHC-40, CHC-50	Low Flow Exemption	40 CFR 60.700(c)(4)

Identification	Category	Rule Citation
-	Design Capacity Exemption	40 CFR 60.700(c)(3)
-	Concentration Exemption	40 CFR 60.700(c)(8)
-	Routed to distillation unit subject to subpart NNN except for a pressure relief valve	40 CFR 60.700(c)(5)
RRR subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.703, 60.705

*See Appendix E of this permit application for the Alternative Monitoring Plan for equipment in acetic acid service.

Page Number:

Revision Number:

Date of Revision:

**MON Requirements 40 CFR Part 63 Subpart FFFF Specific
Applicability Determinations**

82-0510-01: Ester Production (Source ID B-440-1): Primester MCPU

Identification	Category	Rule Citation from 40 CFR 63
Continuous Process Vents		
Δ2 (Columns DCC-80/DCC-90) Δ1 (Column DCC-70) Δ3 (Column DCC-30)	Group 1 Continuous Process Vent and applicable monitoring	2455
-	Continuous Process vent combined with a Group 1 batch vent before a control or recovery device	2455(b)(1)
-	Existing Group 2 Process Vents with a TRE > 5	2455(b)(2)
-	New Group 2 Process Vents with a TRE > 8	2455(b)(2)
-	Existing Group 2 Continuous Process Vent with $1.9 < TRE \leq 5$	2455(c)(1)
-	New Group 2 Continuous Process Vent with $5 < TRE \leq 8$	2455(c)(1)
-	Gaseous streams routed to a Fuel Gas System are not process vents and have no applicable requirements under 40 CFR 63 Subparts FFFF.	2550
Process Vents Emitting Hydrogen Halide or Halogen HAPs		
-	Process with collective sum of hydrogen halide and halogen HAPs emissions < 1000 lb/yr	2465(b), 1257(d)(2)(i)
-	Process with collective sum of hydrogen halide and halogen HAPs emissions ≥ 1000 lb/yr	2465(c), 994
-	New Process Vents that emit HAP metals	2465(d)
Batch Process Vents		
-	Group 1 Process Vents and applicable monitoring	2460
-	Group 2 Process Vents	2460, 2525(e)
-	Process with non-reactive HAP usage < 10,000 lbs/yr.	2460(b)(7)
-	Halogenated Group 1 Batch Process Vents for which a combustion device is used to control organic HAP emissions	2460
Vessels (Storage, Surge Control Vessels, and Bottoms Receivers)		
-	Group 1 Vessel storing a liquid for which the maximum true vapor pressure of organic HAPs > 76.6 kPa (11.1 psi)	2470, 2450(r), 982
-	Group 1 Vessel storing a liquid for which the maximum true vapor pressure of organic HAPs < 76.6 kPa (11.1 psi)	2470, 2450(r), Subpart WW
-	Group 2 Vessel (Storage, Surge Control, and Bottoms Receivers)	2470, 2450(r)
-	Halogenated Group 1 Vessels for which a combustion device is used to control organic HAP emissions	2470
Transfer Operations		
-	Group 1 Transfer Rack and applicable monitoring and testing	2475
-	Group 2 Transfer Rack	2550
-	Halogenated Group 1 Transfer Rack for which a combustion device is used to control organic HAP emissions	2475

Form V.30 Attachment

Identification	Category	Rule Citation from 40 CFR 63
Equipment Leaks		
Flow Diagram Point F	Equipment in OHAP Service complying with 40 CFR Part 63 Subpart H	2480(a)
-	Equipment in OHAP Service complying with 40 CFR Part 63 Subpart UU	2480(a)
-	Equipment in OHAP Service complying with 40 CFR Part 65 Subpart F	2480(a)
Process Wastewater		
-	Group 1 Wastewater Stream	2485(c), (n), 132-149
Hexagon Point 1	Group 2 Wastewater Stream	2485
-	Standards for Waste Management Units Managing Group 1 Wastewater Stream or Residuals Removed from Group 1 Streams	2485(d)
-	Liquid Streams in Open Systems	2485(l), 149
Process Unit Group		
-	Comply with the Process Unit Group Provisions for selected Emission Points	2435(e), 2535(l)
Emissions Averaging		
-	Comply with the Emissions Averaging Plan for selected Emission Points	2500, 150
Recordkeeping and Reporting		
-	Recordkeeping and Reporting for applicable MON Emission Points	2520, 2525

Page Number:

Revision Number:

Date of Revision:

**MON Overlap
Provisions 40 CFR Part
63 Subpart FFFF
Specific Applicability Determinations
MAJOR SOURCE OPERATING PERMIT
(MSOP) - 28 PES B-440-1**

Identificati on	MON Category	Overlap	Compliance Requirement	Rule Citation
-	Group 1 MON Batch	MCPU containing Batch Process Vent is also part	Comply with MON for Batch vent and MON for all other MON	2535(a)(1)
-	MON Group 1 Process Vent	Subject to NSPS Part 60 Subpart DDD	Comply with MON Group 1 Process Vent provisions, but must apply to TOC, not just HAP	2535(h)
-		Subject to NSPS Part 60 Subpart III		
Δ2 (Columns DCC- 80/DCC- 90)		Subject to NSPS Part 60 Subpart NNN		
-		Subject to NSPS Part 60 Subpart PPP		
-	MON Group 2 Process Vent	Subject to NSPS Part 60 Subpart DDD	Comply with MON Group 2 Process Vent provisions, but must apply to TOC, not just HAP	2535(h)
-		Subject to NSPS Part 60 Subpart III		
-		Subject to NSPS Part 60 Subpart NNN		
-		Subject to NSPS Part 60 Subpart PPP		
-	MON Equipment Subject to Leak Detection and	Subject to RCRA parts 264 or 265 subpart DD	Comply with MON Leak Detection and	2535(b)(2)
-		Subject to Part 60, Subpart VV or Part 61,	May comply with recordkeeping and reporting requirements in	
Flow diagram		Subject to Part 60, Subpart VV or Part 61,	Comply with MON Leak Detection and Repair but must	2535(k)
-	MON Group 1	Subject to Part 60, Subpart	Comply with MON	2535(c)
-	MON Group 1 wastewat	Subject to Part 61, Subpart	Comply with MON	2535(e)
-		Subject to Part 63, Subpart GGG (Pharma MFG)	Comply with MON, except that the 99%reduction requirements	2535(f)
-		Subject to Part 63, Subpart MMM Group 1 (Pesticide MFG)	Comply with most stringent Notify	2535(g)
-		Subject to Parts 260	Comply with MON Group 1	2535(j)
-		Subject to Part 61, Subpart	Comply with MON Group 2	2535(j)
-	MON Group 2	Subject to Part 61, Subpart EE reporting and	Comply with MON Group 2 reporting and	2535(j)
-	MON Group 1	Subject to Part 61, Subpart	Comply with MON Group 1 Transfer Peak	2535(i)(1)
-	MON Group 2	Subject to Part 61, Subpart	Comply with MON Group 1 Transfer Peak provisions or	2535(i)(2)(i)
-		Subject to Part 61, Subpart DD reporting and	Continue to comply with BB	2535(i)(2)(ii)
-	MON Group 1 Control	Subject to RCRA parts 264 or 265 subpart AA	May comply with either rule, but must report per	2535(b)(1)
-	Offsite reloading or	Subject to any other Subpart of part	Satisfies MON. Notify alternate Subpart in MON	2535(a)(2)



**TITLE V PERMIT APPLICATION
 COMPLIANCE CERTIFICATION - MONITORING AND REPORTING
 DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE**

All sources that are subject to 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance. This statement must include a description of the monitoring, recordkeeping, and reporting requirements and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the Technical Secretary.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Process emission source, fuel burning installation, or incinerator (identify): **B-440-1**
3. Stack ID or flow diagram point identification(s): **A, B, C, D, E, F, G, H, N, Q & R**

METHODS OF DETERMINING COMPLIANCE

4. This source as described under Item #2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions from an existing permit). Check all that apply and attach the appropriate form(s)

- Continuous Emission Monitoring (CEM) - APC 20
Pollutant(s): _____
- Emission Monitoring Using Portable Monitors - APC 21
Pollutant(s): _____
- Monitoring Control System Parameters or Operating Parameters of a Process - APC 22
Pollutant(s): VOC
- Monitoring Maintenance Procedures - APC 23
Pollutant(s): _____
- Stack Testing - APC 24
Pollutant(s): _____
- Fuel Sampling & Analysis (FSA) - APC 25
Pollutant(s): _____
- Recordkeeping - APC 26
Pollutant(s): VOC
- Other (please describe) - APC 27
Pollutant(s): VOC, PM & CO, and Opacity: Visual Emissions Evaluation

5. Compliance certification reports will be submitted to the Division according to the following schedule:

Start date: As provided in Condition E2 of the Title V permit.
 And every _____ days thereafter.

6. Compliance monitoring reports will be submitted to the Division according to the following schedule:

Start date: As provided in Condition E2 of the Title V permit.
 And every _____ days thereafter.

7. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
 MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) A
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3. Emission source: **82-0510-01: Ester Production (Source ID B-440-1)**

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **VOC**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL: Monitor scrubber water flow rate.
 Monitor daily production rate

EQUIPMENT: Flow meter to measure water flow.

INSTALLATION: Flow meter in the scrubber water feed line.

PARAMETRIC RELATIONSHIP: An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the fresh water flow rate to the scrubber is greater than or equal to 1.5 gpm. The daily production rate will not exceed the rate stated on this source's APC 10 form.

MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): **24-hour block average.**

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY

MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

- | | |
|---|--|
| 1. Facility name: Primester | 2. Stack ID or flow diagram point identification(s) B |
| 3. Emission source: 82-0510-01: Ester Production (Source ID B-440-1) | |

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **VOC**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL: Monitor scrubber water flow rate.
 Monitor daily production rate

EQUIPMENT: Flow meter to measure water flow.

INSTALLATION: Flow meter in the scrubber water feed line.

PARAMETRIC RELATIONSHIP: An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the fresh water flow rate to the scrubber is greater than or equal to 1.5 gpm. The daily production rate will not exceed the rate stated on this source's APC10 form.

MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): **24-hour block average.**

- | | | |
|-----------------|------------------|-------------------|
| 7. Page number: | Revision number: | Date of revision: |
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TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY

MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) C
3. Emission source: 82-0510-01: Ester Production (Source ID B-440-1)	

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: VOC and OHAP	
5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant: DESCRIPTION OF PROTOCOL: Monitor scrubber water flow rate. Monitor daily production rate EQUIPMENT: Flow meter to measure water flow. INSTALLATION: Flow meter in the scrubber water feed line. PARAMETRIC RELATIONSHIP: An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the fresh water flow rate to the scrubber is greater than or equal to 5 gpm. The daily production rate will not exceed the rate stated in this source's APC 10 form. MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).	

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): 24-hour block average.	
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7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY

MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) D & E
3. Emission source: 82-0510-01: Ester Production (Source ID B-440-1)	

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: VOC	
5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant: DESCRIPTION OF PROTOCOL: Monitor scrubber pH. Monitor daily production rate. EQUIPMENT: Flow meter to measure 50% (by wt.) caustic/water flow. pH meter in scrubber. INSTALLATION: Flow meter in the scrubber caustic feed line. pH meter in scrubber PARAMETRIC RELATIONSHIP: An engineering analysis of the system was performed using the scrubber vendor who guaranteed a 95% efficiency based on a pH that was greater than or equal to 7.0. The daily production rate will not exceed the rate on this source's APC 10 form. MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).	

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): 24-hour block average.	
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7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY

MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) N
3. Emission source: 82-0510-01: Ester Production (Source ID B-440-1)	

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: VOC	
5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:	
DESCRIPTION OF PROTOCOL:	Monitor scrubber water flow rate. Monitor daily production rate
EQUIPMENT:	Flow meter to measure water flow.
INSTALLATION:	Flow meter in the scrubber water feed line.
PARAMETRIC RELATIONSHIP:	An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the fresh water flow rate to the scrubber is greater than or equal to 1.5 gpm. The daily production rate will not exceed the rate stated on this source's APC 10 form.
QA/QC:	Flow meters are routinely calibrated once every calendar year. Flow meters are also self-checking and automatically notify operating personnel if there is an electrical problem. Alarm limits also notify operating personnel if the flow meters signal drifts or drops out of the expected range. Instrument mechanics are available.
MEASUREMENT FREQUENCY:	Continuous (measurement taken at least once every 15 minutes).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): 24-hour block average.

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): F
3. Emission source (identify): 82-0510-01: Ester Production (Source ID B-440-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
--

5. Material or parameter being monitored and recorded: Emission work practice standards are notated as "Quarterly Leak Inspection and Repair" or "Annual Leak Inspection and Repair" are detailed below:

6. Method of monitoring and recording: <p>Quarterly Leak Inspection: A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not "in heavy liquid service" or "in vacuum service" shall be performed once per calendar quarter. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. "Equipment" includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. "In heavy liquid service" means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. "In vacuum service" means equipment that is operating at an internal pressure that is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 300 hours in a calendar quarter is exempt from this inspection for that quarter.</p> <p>Annual Leak Inspection: A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not "in heavy liquid service" or "in vacuum service" shall be performed once per calendar year. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. "Equipment" includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. "In heavy liquid service" means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. "In vacuum service" means equipment that is operating at an internal pressure which is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 720 hours in a calendar year is exempt from this inspection for that year.</p>
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7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY RECORDKEEPING**

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): F (Continued from previous page)
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3. Emission source (identify): **82-0510-01: Ester Production (Source ID B-440-1)**

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **VOC**

5. Material or parameter being monitored and recorded:
 Emission work practice standards notated as "Repair" is detailed below:

6. Method of monitoring and recording:

When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided below.

1. Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
2. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.
3. Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
4. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
5. Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): **Annual**

8. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): F (Continued from previous page)
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3. Emission source (identify): **82-0510-01: Ester Production (Source ID B-440-1)**

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **VOC**

5. Material or parameter being monitored and recorded:
 Emission work practice standards notated as "Recordkeeping" is detailed below:

6. Method of monitoring and recording:

Recordkeeping Requirements:

- 1) Records must be maintained that identify piping systems or process areas subject to this plan.
- 2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.
- 3) When a leak is detected during the quarterly inspection, the following information shall be recorded:
 - i) Component identifier or description of location and operator name, initials, or identification number.
 - ii) The date the leak was detected.
 - iii) The date the initial attempt at repair is made.
 - iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a) of the permit.
 - v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): **Annual**



**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): Entire Source
------------------------------------	---

3. Emission source(identify): **82-0510-01: Ester Production (Source ID B-440-1)**

MONITORING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **Opacity**

5. Description of the method of monitoring: **Opacity will be determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974 (6 minute average).**

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

- Equipment Leaks (e.g. pumps, valves, connectors, etc.): No VEEs required.
- Natural Gas or No. 2 Oil-Fired Combustion Sources: No VEEs required.
- Each Allowable Emission is Less Than 10 Tons per Year: No VEEs required
- Colorless Pollutant emissions such as CO, HCl, HF, methane, colorless VOCs, colorless HAPs: No VEEs required.

Other pollutants with allowable emissions greater Than or equal to 10 Tons per Year: Base the frequency of periodic VEEs on an initial 30 minute VEE conducted on the emission unit during normal operation within one year of issuance of the major source operating permit. VEE is to be conducted within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

If the initial VEE results in the highest six minute average at less than ten percent opacity, conduct another VEE prior to the submittal of the major source operating permit renewal application.

If the initial VEE results in the highest six minute average greater than or equal to ten percent but less than twenty percent opacity, conduct semiannual VEEs. If a semi-annual VEE results in the highest six-minute average greater than or equal to twenty percent, go to monthly VEEs. If three consecutive months' VEEs are less than twenty percent, revert to semi-annual VEEs.

If the initial VEE results in the highest six minute average greater than or equal to twenty percent, conduct monthly VEEs. If three consecutive months' VEEs are less than twenty percent, go to semi-annual VEEs. If a subsequent semi-annual VEE yields a highest six-minute average greater than or equal to twenty percent, revert to monthly VEEs.

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)

GENERAL IDENTIFICATION AND DESCRIPTION

- | | |
|---|---|
| 1. Facility name: Primester | 2. Stack ID or flow diagram point identification(s): Entire Source |
| 3. Emission source(identify): 82-0510-01: Ester Production (Source ID B-440-1) | |

MONITORING DESCRIPTION

- | |
|--|
| 4. Pollutant(s) or parameter being monitored: Particulate Matter and Carbon Monoxide |
| 5. Description of the method of monitoring: Compliance is assured by annual certification of compliance. |
| 6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

Annually |

- | | | |
|-----------------|------------------|-------------------|
| 7. Page number: | Revision number: | Date of revision: |
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TITLE V PERMIT APPLICATION
EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A, B, C, D, E, F, G, H, N, Q & R
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3. Process emission source / Fuel burning installation / Incinerator (identify): 82-0510-01: Ester Production (Source ID B-440-1)
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EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
*PM-2.5 (includes condensable fraction)	1.0		N/A	
*(Fugitive Emissions)	N/A		N/A	
*PM-10 (includes condensable fraction)	1.0		N/A	
*(Fugitive Emissions)	N/A		N/A	
Particulates (TSP)	1.6		N/A	
(Fugitive Emissions)	N/A		N/A	
Sulfur Dioxide	N/A		N/A	
Volatile Organic Compounds	8.1		N/A	
(Fugitive Emissions)	2.7		N/A	
Carbon Monoxide	0.9		N/A	
(Fugitive Emissions)	N/A		N/A	
Nitrogen Oxides	N/A		N/A	
(Fugitive Emissions)	N/A		N/A	
Total Reduced Sulfur	N/A		N/A	
(Fugitive Emissions)	N/A		N/A	
Mercury	N/A		N/A	

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AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
(Fugitive Emissions)	N/A		N/A	
Asbestos	N/A		N/A	
(Fugitive Emissions)	N/A		N/A	
Beryllium	N/A		N/A	
(Fugitive Emissions)	N/A		N/A	
Fluorides				
(Fugitive Emissions)				
(Fugitive Emissions)				
Gaseous Fluorides				
(Fugitive Emissions)				
Carbon Dioxide Equivalents C02e	1.6		N/A	
(Fugitive Emissions)				
(Fugitive Emissions)				

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant & CAS	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
* Total Particulate Hazardous Air Pollutants	N/A		N/A	
* Total Gaseous Hazardous Air Pollutants Acetaldehyde	1.85		N/A	

6. Page number: Revision number: Date of revision

* These emissions are included in the emissions under item 4 (this is to avoid double counting of emissions for fee determinations).

Footnotes:

1. The term "maximum allowable emissions" as used here represents the "allowable emissions" as defined in subparagraph 1200-3-26-.02(2)(d). These emission rates are intended solely for the purposes fee computation. In no way are to be considered the setting of binding emission limitations.
2. "Not applicable" (N/A) is indicated unless the responsible official chooses to pay annual emission fees based on actual emissions rather than allowable emissions pursuant to subparagraph 1200-3-26-.02(9)(b).



TITLE V PERMIT APPLICATION MISCELLANEOUS PROCESSES

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)			
3. Stack ID or flow diagram point identification(s): A, B, C, D		4. Year of construction or last modification: 1992	
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form.			
5. Normal operating schedule: <u>24</u> Hrs./Day <u>7</u> Days/Wk. <u>365</u> Days/Yr.			
6. Location of this process emission source in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
7. Describe this process (Please attach a flow diagram of this process) and check one of the following: <div style="display: flex; justify-content: space-around; margin-top: 5px;"> Batch <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> </div>			
PROCESS MATERIAL INPUT AND OUTPUT			
8. List the types and amounts of raw materials input to this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
Not Applicable			
This permit is based on production rate			
9. List the types and amounts of primary products produced by this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
Acetic Acid	Tank/Closed Pipe	1,515,000 LB/DAY	
10. Process fuel usage:			
Type of fuel	Max heat input (10 ⁶ BTU/Hr.)	Average usage (units)	Maximum usage (units)
Not Applicable	Not Applicable	Not Applicable	Not Applicable
11. List any solvents, cleaners, etc., associated with this process: Not Applicable			
If the emissions and/or operations of this process are monitored for compliance, please attach the appropriate Compliance Demonstration form.			
12. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (please attach a separate sheet if necessary). <input checked="" type="checkbox"/> EQUIPMENT LEAKS SUCH AS PUMPS, VALVES, FLANGES, ETC. <input type="checkbox"/> OTHER, DESCRIBE			
13. Page number: Revision Number: Date of Revision:			



**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - WET COLLECTION SYSTEMS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)
3. Stack ID or flow diagram point identification(s): A	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY

Single Pass countercurrent packed tower type Acid Scrubber.

KEY OPERATING PARAMETERS:

Normal Acid Solution Stream Flow Rate: 11 GPM

Minimum Acid Solution Stream Flow Rate: 10 GPM

Normal Acid Solution Stream Concentration: ~30 wt%

5. Manufacturer and model number (if available): Kopetz (or Equivalent)	6. Year of installation: 1992
--	--------------------------------------

7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	>98	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal..

The acid scrubber underflow is returned to the process.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.): **Approximately 30/70 wt% Organic Acid/Water solution.**

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Acid scrubber preceding a water scrubber in series configuration. Overall efficiency > 98%.

11. Page number:	Revision Number:	Date of Revision:
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TITLE V PERMIT APPLICATION

CONTROL EQUIPMENT - WET COLLECTION SYSTEMS

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)
3. Stack ID or flow diagram point identification(s): A	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
 Single Pass countercurrent packed tower type Water Scrubber.

KEY OPERATING PARAMETERS:

Normal Water Stream Flow Rate: **1-3 GPM**

Minimum Water Stream Flow Rate: **0.8 GPM**

5. Manufacturer and model number (if available): Kopetz (or Equivalent)	6. Year of installation: 1992
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7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	>96	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal..

Scrubber water managed in on-site NPDES permitted Wastewater Treatment System.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.): **Water.**

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Acid scrubber preceding a water scrubber in series configuration. Overall efficiency > 98%.

11. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION	
1. Facility name: Primester	
2. Emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)	
STACK DESCRIPTION	
3. Stack ID (or flow diagram point identification): A	
4. Stack height above grade in feet: 90 feet	
5. Velocity (data at exit conditions): <u>6.3</u> (Actual feet per second)	6. Inside dimensions at outlet in feet: <u>0.5</u>
7. Exhaust flowrate at exit conditions (ACFM): <u>74.7</u>	8. Flow rate at standard conditions (DSCFM): <u>69.3</u>
9. Exhaust temperature: <u>86</u> Degrees Fahrenheit (F)	10. Moisture content (data at exit conditions): Grains per dry standard cubic <u>4.2</u> Percent N/A foot (gr/dscf)
11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only): <u>Not Applicable</u> (F)	
12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO ₂ , NO _x , etc.)? <u>Not Applicable</u>	
Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.	
BYPASS STACK DESCRIPTION	
13. Do you have a bypass stack? <u> X </u> Yes <u> </u> No If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack. Vent A has a by-pass (Vent D) which can be operated for 48 hours per year to allow for inspection and service of scrubbers associated with Vent A.	
14. Page number:	Revision Number:
Date of Revision:	



**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION	
1. Facility name: Primester	
2. Emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)	
STACK DESCRIPTION	
3. Stack ID (or flow diagram point identification): D	
4. Stack height above grade in feet: 90 feet	
5. Velocity (data at exit conditions): <u>6.3</u> (Actual feet per second)	6. Inside dimensions at outlet in feet: 0.5
7. Exhaust flowrate at exit conditions (ACFM): 74.7	8. Flow rate at standard conditions (DSCFM): 69.3
9. Exhaust temperature: <u>95</u> Degrees Fahrenheit (F)	10. Moisture content (data at exit conditions): Grains per dry standard cubic <u>4.2</u> Percent N/A foot (gr/dscf)
11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only): <u>Not Applicable</u> (F)	
12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO ₂ , NO _x , etc.)? Not Applicable	
Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.	
BYPASS STACK DESCRIPTION	
13. Do you have a bypass stack? <div style="text-align: center;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.</p> <p>*Vent D is a by-pass vent for Vent A.</p>	
14. Page number:	Revision Number:
Date of Revision:	



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ARD-12 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 1269 (Gallons)	6. Year of installation: 1993	7. Tank height: 6.0 (Feet)	8. Tank diameter: 6.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unpainted STAINLESS STEEL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	87.9	0	1015	71.24	2.63	14.10	128
Water	12.1	0	1015	18.02	0.74	14.10	128

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Isopropyl Alcohol Hold-Up Tank

19. Page number:

Revision Number:

Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SVD-03 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 10,152 (Gallons)	6. Year of installation: 1993	7. Tank height: 12.0 (Feet)	8. Tank diameter: 12.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Not Determined</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	3.3	262,794,000	8122	97.7	0.02	14.10	108
Water	96.7	262,794,000	8122	18.02	1.20	14.10	108

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Decanter

19. Page number:

Revision Number:

Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SVD-05 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 1269 (Gallons)	6. Year of installation: 1993	7. Tank height: 6.0 (Feet)	8. Tank diameter: 6.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Not Determined</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	97.3	23,140,000	1015	100.44	3.13	14.10	122
Water	2.7	23,140,000	1015	18.02	0.2399	14.10	122

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Decanter

19. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number 82-0510-02: Acid Recovery Process (Source ID B-441-1)
------------------------------------	--

3. Describe the process emission source / fuel burning installation / incinerator. **Acid Recovery Process**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Vent A	VOC	TAPCR 1200-03-07-.07(2): Permit Number 738842P, Condition 10, (Modified in Permit Number 955108P): Permit Number 567676, Condition E4-6.	0.1 lb/hr	0.1 lb/hr	IN
Portion of Source Subject to NSPS	VOC	40 CFR 60 Subpart A – General Provisions; Permit Number 567676, Condition E4-7.	Not Applicable	Not Applicable	IN
Entire Source, excluding fugitive leaks from pumps, valves, flanges, etc.	VOC	TAPCR 1200-03-07-.07(2): Permit Number 738842P, Condition 10 (Modified in Permit Number 955108P). Permit Number 567676, Condition E4-8.	2.8 ton/yr	2.8 ton/yr	IN
Vent D	VOC	TAPCR 1200-03-07-.07(2): Permit Number 567676, Condition E4-9.	2.36 ton/yr	2.36 ton/yr	IN
Vent D	VOC	The by-pass vent for equipment associated with Vent A (Vent D) shall be operated for no more than 48 hours per year. Permit Number 567676, Condition E4-10.	Not Applicable	Not Applicable	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

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11. Page number: **Page Number: B-105** Revision number: **Revision Number: N/A** Date of revision: **Revision Date: N/A**



**TITLE V PERMIT APPLICATION
 COMPLIANCE CERTIFICATION - MONITORING AND REPORTING
 DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE**

All sources that are subject to 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance. This statement must include a description of the monitoring, recordkeeping, and reporting requirements and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the Technical Secretary.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Process emission source, fuel burning installation, or incinerator (identify): **82-0510-02: Acid Recovery Process (Source ID B-441-1)**
3. Stack ID or flow diagram point identification(s): **A, B, C, D**

METHODS OF DETERMINING COMPLIANCE

4. This source as described under Item #2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions from an existing permit). Check all that apply and attach the appropriate form(s)
 - Continuous Emission Monitoring (CEM) - APC 20
Pollutant(s): _____
 - Emission Monitoring Using Portable Monitors - APC 21
Pollutant(s): _____
 - Monitoring Control System Parameters or Operating Parameters of a Process - APC 22
Pollutant(s): VOC
 - Monitoring Maintenance Procedures - APC 23
Pollutant(s): _____
 - Stack Testing - APC 24
Pollutant(s): _____
 - Fuel Sampling & Analysis (FSA) - APC 25
Pollutant(s): _____
 - Recordkeeping - APC 26
Pollutant(s): _____
 - Other (please describe) - APC 27
Pollutant(s): _____

5. Compliance certification reports will be submitted to the Division according to the following schedule:
 Start date: As provided in condition E2 of the current permit.
 And every _____ days thereafter.

6. Compliance monitoring reports will be submitted to the Division according to the following schedule:
 Start date: As provided in condition E2 of the current permit.
 And every _____ days thereafter.

7. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
 MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) A
------------------------------------	--

3. Emission source: **82-0510-02: Acid Recovery Process (Source ID B-441-1)**

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **VOC**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL: Monitor scrubber acid and water flow rate.

EQUIPMENT: Flow meters to measure acid and water flow.

INSTALLATION: Flow meters in the scrubber acid and water feed lines.

PARAMETRIC RELATIONSHIP An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the 30% acetic acid scrubbing medium flow rate is greater than 10 gpm and the fresh water flow rate to the scrubber is greater than or equal to 0.8 gpm.

PRODUCTION RATE: Maximum production rate is provided in this source's APC 10 form.

QA/QC: Flow meters are routinely calibrated once every calendar year. Flow meters are also self-checking and automatically notify operating personnel if there is an electrical problem. Alarm limits also notify operating personnel if the flow meters signal drifts or drops out of the expected range. Instrument mechanics are available.

MEASUREMENT FREQUENCY: Continuous, at least one reading every 15 minutes.

(Continued on next page, if necessary.)

6. COMPLIANCE DEMONSTRATION FREQUENCY (SPECIFY THE FREQUENCY WITH WHICH COMPLIANCE WILL BE DEMONSTRATED):
24-hour block averages.

7. Page number: Revision number: Date of revision:



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

- | | |
|---|---|
| 1. Facility name: Primester | 2. Stack ID or flow diagram point identification(s): B
(Continued from previous page) |
| 3. Emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1) | |

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **VOC**
5. Material or parameter being monitored and recorded:
Emission work practice standards notated as "Repair" is detailed below:

6. Method of monitoring and recording:

When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided below.

1. Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
2. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.
3. Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
4. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
5. Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): **Annual**



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): B (Continued from previous page)
3. Emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Emission work practice standards notated as "Recordkeeping" is detailed below:
6. Method of monitoring and recording: Recordkeeping Requirements: 1) Records must be maintained that identify piping systems or process areas subject to this plan. 2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result. 3) When a leak is detected during the quarterly inspection, the following information shall be recorded: i) Component identifier or description of location and operator name, initials, or identification number. ii) The date the leak was detected. iii) The date the initial attempt at repair is made. iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a) of the permit. v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): C
3. Emission source (identify): 82-0510-02: Acid Recovery (Source ID B-441-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Periodic Monitoring
6. Method of monitoring and recording: Periodic Monitoring: <p style="text-align: center;">Refer to Item 12(d) of the current Title V air permit on Page 36 through 39.</p>

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): D
3. Emission source (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: Yearly operational time (VOC)
5. Material or parameter being monitored and recorded: Total time that Vent D operates while the process continues to operate.
6. Method of monitoring and recording: A log will be maintained of the time that Vent D (which is the by-pass stack for Vent A) operates while the process continues to operate. The by-pass vent shall be operated no more than 48 hours per year.
7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Yearly

8. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): Entire Source
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3. Emission source(identify): **82-0510-02: Acid Recovery Process (Source ID B-441-1)**

MONITORING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **Opacity**

5. Description of the method of monitoring: **Opacity will be determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974 (6 minute average).**

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

The following logic is used to determine the frequency of opacity readings (Visible Emissions Evaluation (VEE)) for each emission unit within the source:

Equipment Leaks (e.g. pumps, valves, connectors, etc.): No VEEs required.

Natural Gas or No. 2 Oil-Fired Combustion Sources: No VEEs required.

Each Allowable Emission is Less Than 10 Tons per Year: No VEEs required.

Only Allowable Emission Greater Than or Equal to 10 Tons per Year are Colorless Pollutants such as CO, HCl, HF, methane, colorless VOCs, colorless HAPs: No VEEs required.

Other Pollutants with Allowable Emissions Greater Than or Equal to 10 Tons per Year: Base the frequency of periodic VEEs on an initial 30 minute VEE conducted on the emission unit during normal operation within one year of issuance of the major source operating permit. The initial VEE is to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

If the initial VEE results in the highest six minute average at less than ten percent opacity, conduct another VEE prior to the submittal of the major source operating permit renewal application.

If the initial VEE results in the highest six minute average greater than or equal to ten percent but less than twenty percent opacity, conduct semiannual VEEs. If a semi-annual VEE results in the highest six-minute average greater than or equal to twenty percent, go to monthly VEEs. If three consecutive months' VEEs are less than twenty percent, revert to semi-annual VEEs.

If the initial VEE results in the highest six minute average greater than or equal to twenty percent, conduct monthly VEEs. If three consecutive months' VEEs are less than twenty percent, go to semi-annual VEEs. If a subsequent semi-annual VEE yields a highest six-minute average greater than or equal to twenty percent, revert to monthly VEEs.

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION
EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A, B, C, D
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3. Process emission source / Fuel burning installation / Incinerator (identify): 82-0510-02: Acid Recovery Process (Source ID B-441-1)

EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
Particulate Matter (TSP)	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Sulfur Dioxide	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Volatile Organic Compounds	2.8		NOT APPLICABLE	
(Fugitive Emissions)	9.1		NOT APPLICABLE	
Carbon Monoxide	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Lead	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Nitrogen Oxides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Total Reduced Sulfur	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Mercury	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	

(Continued on next page)

(Continued from last page)

AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item
Asbestos	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Beryllium	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
VinylChloride	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Gaseous Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Greenhouse Gases in CO ₂	NOT APPLICABLE		NOT APPLICABLE	

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant & CAS	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7,	Tons per Year	Reserved for State use (Pounds per Hour- Item
Not Applicable	NOT APPLICABLE		NOT APPLICABLE	

Page number:

Revision number:

Date of revision:



**TITLE V PERMIT APPLICATION
 MISCELLANEOUS PROCESSES**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	
2. Process emission source (identify): Cellulose Scrap Recovery Process (Source ID B-441-2)	
3. Stack ID or flow diagram point identification (s): B and C	4. Year of construction or last modification: 2000
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form.	
5. Normal operating schedule: _____ 24 Hrs./Day _____ 7 Days/Wk. _____ 365 Days/Yr.	
6. Location of this process emission source in UTM coordinates: UTM Vertical : _ 4042200 N UTM Horizontal: __ 361600 E __	
7. Describe this process (Please attach a flow diagram of this process) and check one of the following: <input type="checkbox"/> Batch <input checked="" type="checkbox"/> Continuous	

PROCESS MATERIAL INPUT AND OUTPUT

8. List the types and amounts of raw materials input to this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
Cellulose Sludge	Tank/Closed Pipe		Confidential Business Info
9. List the types and amounts of primary products produced by this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
10. Process fuel usage:			
Type of fuel	Max heat input (10 ⁰ BTU/Hr.)	Average usage (units)	Maximum usage (units)
Not Applicable	Not Applicable	Not Applicable	Not Applicable
11. List any solvents, cleaners, etc., associated with this process: NOT APPLICABLE			
If the emissions and/or operations of this process are monitored for compliance, please attach the appropriate Compliance Demonstration form.			
12. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (please attach a separate sheet if necessary). <input checked="" type="checkbox"/> EQUIPMENT LEAKS SUCH AS PUMPS, VALVES, FLANGES, ETC. <input type="checkbox"/> Not Applicable <input type="checkbox"/> Other, Describe			
13. Page number:	Revision Number:	Date of Revision:	



**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - WET COLLECTION SYSTEMS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): Cellulose Scrap Recovery Process (Source ID B-441-2)
3. Stack ID or flow diagram point identification(s): C	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER – HIGH EFFICIENCY
COUNTERCURRENT PACKED TOWER TYPE, CAUSTIC/WATER SCRUBBER WITH RECIRCULATION

KEY OPERATING PARAMETERS:

Minimum Fresh Water Stream Flow Rate: 1.0 GPM

Effluent pH: 6

5. Manufacturer and model number (if available): KOPETZ OR EQUIVALENT	6. Year of installation: 1992
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7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.		
Pollutant	Efficiency (%)	Source of data
VOC	98	ENGINEERING MODEL AND PERFORMANCE TEST
SO ₂	95	ENGINEERING MODEL AND PERFORMANCE TEST

* Caustic is not needed to meet VOC efficiency

8. Discuss how collected material and effluent is handled for reuse or disposal.

SCRUBBER WATER MANAGED IN ON-SITE NPDES PERMITTED WASTEWATER TREATMENT SYSTEM.

9. Scrubbing medium (water, sodium hydroxide slurry, etc.): **WATER, CAUSTIC (50 wt%)**

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

NOT APPLICABLE

11. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION	
1. Facility name: Primester	
2. Emission source (identify): Cellulose Scrap Recovery Process (Source ID B-441-2)	
STACK DESCRIPTION	
3. Stack ID (or flow diagram point identification): C	
4. Stack height above grade in feet: 40	
5. Velocity (data at exit conditions): _____ 11.9 (Actual feet per second)	6. Inside dimensions at outlet in feet: 0.5
7. Exhaust flowrate at exit conditions (ACFM): 140.5	8. Flow rate at standard conditions (DSCFM): 131.1
9. Exhaust temperature: _____ 92 Degrees Fahrenheit (F)	10. Moisture content (data at exit conditions): _____ 3.6 Percent <u>Not Applicable</u> foot (gr/dscf) Grains per dry standard cubic
11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only): _____ Not Applicable (°F)	
12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO ₂ , NO _x , etc.)? NOT APPLICABLE	
Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.	
BYPASS STACK DESCRIPTION	
13. Do you have a bypass stack? _____ Yes <u>X</u> No If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.	
14. Page number:	Revision Number:
Date of Revision:	



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 85-0152-03: Cellulose Scrap Recovery (Source ID B-441-2)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SRD-40 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 24,065 (Gallons)	6. Year of installation: 1992	7. Tank height: 16.0 (Feet)	8. Tank diameter: 16.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>UNPAINTED STAINLESS STEEL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-03: Cellulose Scrap Recovery (Source ID B-441-2)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SRD-40 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 24,065 (Gallons)	6. Year of installation: 1992	7. Tank height: 16.0 (Feet)	8. Tank diameter: 16.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>UNPAINTED STAINLESS STEEL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-03: Cellulose Scrap Recovery (Source ID B-441-2)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SRD-70 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 47,001 (Gallons)	6. Year of installation: 1992	7. Tank height: 20.0 (Feet)	8. Tank diameter: 20.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>UNPAINTED STAINLESS STEEL</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	82	14,600,000	37,601	60.05	0.99	14.10	120
Cellulosic Sludge	18	1,804,000	19,252	250	-	14.10	177

Multipurpose tank with variable composition:

_____ Yes No

18. Describe the operation this tank will serve:

Holdup

19. Page number:

Revision Number:

Date of Revision:



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number Cellulose Scrap Recovery Process (Source ID B-441-2)
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Cellulose Scrap Recovery Process**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Flow Diagram Point B- Equipment Leaks "in VOC Service"	VOC	40 CFR 60 Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 of Permit. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2 of Permit. Permit Number 567676; Condition E5-8.	NOT APPLICABLE	NOT APPLICABLE	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number:	Revision number:	Date of revision:
Page Number: B-126	Revision Number: N/A	Revision Date: N/A



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number Cellulose Scrap Recovery Process (Source ID B-441-2)
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Cellulose Scrap Recovery Process**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Portion of Source Subject to NNN	VOC	40 CFR 60 Subpart NNN – Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations. A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 of Permit. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2 of Permit. Permit Number 567676, Condition E5-9 (AA-1).	NOT APPLICABLE	NOT APPLICABLE	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number: **Page Number: B-127** Revision number: **Revision Number: N/A** Date of revision: **Revision Date: N/A**



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number Cellulose Scrap Recovery Process (Source ID B-441-2)
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Cellulose Scrap Recovery Process**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Portion of Source Subject to RRR	VOC	40 CFR 60 Subpart RRR – Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes. A listing of specific applicability determinations for 40 CFR Parts 60 and 63 in effect as of the issuance date of this permit is found in Attachment 2 of Permit. Changes that result in a change of applicability shall follow the applicable procedures in Section C of this permit and shall include an update to Attachment 2 of Permit. Permit Number 567676, Condition E5-10.	NOT APPLICABLE	NOT APPLICABLE	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number: **Page Number: B-128** Revision number: **Revision Number: N/A** Date of revision: **Revision Date: N/A**



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number Cellulose Scrap Recovery Process (Source ID B-441-2)
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Cellulose Scrap Recovery Process**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Vent C	SO2	TAPCR 1200-03-14-.03(5); Permit Number 567676, Condition E5-11.	0.25 lb/hr	0.25 lb/hr	IN
Vent C	SO2	TAPCR 1200-03-14-.03(2); Permit Number 567676, Condition E5-12.	1,000 ppmv, dry basis (one-hour average)	1,000 ppmv, dry basis (one-hour average)	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

11. Page number: Revision number: Date of revision:



**TITLE V PERMIT APPLICATION
 COMPLIANCE CERTIFICATION - MONITORING AND REPORTING
 DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE**

All sources that are subject to 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance. This statement must include a description of the monitoring, recordkeeping, and reporting requirements and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the Technical Secretary.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester
2. Process emission source, fuel burning installation, or incinerator (identify): Cellulose Scrap Recovery Process (Source ID B-441-2)
3. Stack ID or flow diagram point identification(s): B,C

METHODS OF DETERMINING COMPLIANCE

4. This source as described under Item #2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions from an existing permit). Check all that apply and attach the appropriate form(s)
 - Continuous Emission Monitoring (CEM) - APC 20
Pollutant(s): _____
 - Emission Monitoring Using Portable Monitors - APC 21
Pollutant(s): _____
 - Monitoring Control System Parameters or Operating Parameters of a Process - APC 22
Pollutant(s): _VOC, CO, SO₂_
 - Monitoring Maintenance Procedures - APC 23
Pollutant(s): _____
 - Stack Testing - APC 24
Pollutant(s): _____
 - Fuel Sampling & Analysis (FSA) - APC 25
Pollutant(s): _____
 - Recordkeeping - APC 26
Pollutant(s): _VOC_
 - Other (please describe) - APC 27
Pollutant(s): _OPACITY_

5. Compliance certification reports will be submitted to the Division according to the following schedule:
 Start date: As provided in condition E2 of the current permit.
 And every _____ days thereafter.

6. Compliance monitoring reports will be submitted to the Division according to the following schedule:
 Start date: As provided in condition E2 of the current permit.
 And every _____ days thereafter.

7. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
 MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) C
------------------------------------	--

3. Emission source: **Cellulose Scrap Recovery Process (Source ID B-441-2)**

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **SO₂ for Current permit conditions E5-11 and E5-12.**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL: Monitor fresh water flow and effluent pH

EQUIPMENT and INSTALLATION: Fresh Water flow and effluent pH are indicated on distributed control system.

PARAMETRIC RELATIONSHIP: In order to assure proper operation of the scrubber, the following minimum parameter values will be adhered to:
 Fresh water flow > or = 1.0 gpm Effluent pH > or = 6.0 gpm

MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

3-hour moving average of water flow*
 24-hour block average of pH

*Refer to attachments A1-A2 and A5-A6 of the permit for further details.

7. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
 MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) C
------------------------------------	--

3. Emission source: **Cellulose Scrap Recovery Process (Source ID B-441-2)**

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **CO**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL: Monitor process material input rate.
EQUIPMENT and INSTALLATION: Process material inputs are indicated on distributed control system.
PARAMETRIC RELATIONSHIP: To maintain CO emissions at 8.76 lb/hr, material input rate will not exceed the rate on this source's APC 10 Form.
MEASUREMENT FREQUENCY: Continuous (measurement taken at least once every 15 minutes).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):
24-hour block average

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): B
3. Emission source (identify): 82-0510-03: Cellulose Recovery (Source ID B-441-2)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
--

5. Material or parameter being monitored and recorded: Emission work practice standards are notated as “Quarterly Leak Inspection and Repair” or “Annual Leak Inspection and Repair” are detailed below:

6. Method of monitoring and recording: <p>Quarterly Leak Inspection: A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not “in heavy liquid service” or “in vacuum service” shall be performed once per calendar quarter. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. “Equipment” includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. “In heavy liquid service” means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. “In vacuum service” means equipment that is operating at an internal pressure that is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 300 hours in a calendar quarter is exempt from this inspection for that quarter.</p> <p>Annual Leak Inspection: A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not “in heavy liquid service” or “in vacuum service” shall be performed once per calendar year. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. “Equipment” includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. “In heavy liquid service” means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. “In vacuum service” means equipment that is operating at an internal pressure which is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection. Equipment that is in air contaminant service less than 720 hours in a calendar year is exempt from this inspection for that year.</p>
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7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number: _____	Revision number: _____	Date of revision: _____
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

- | | |
|--|---|
| 1. Facility name: Primester | 2. Stack ID or flow diagram point identification(s): B
(Continued from previous page) |
| 3. Emission source (identify): 82-0510-03: Cellulose Recovery (Source ID B-441-2) | |

MONITORING AND RECORDKEEPING DESCRIPTION

- | |
|---|
| 4. Pollutant(s) or parameter being monitored: VOC |
| 5. Material or parameter being monitored and recorded:
Emission work practice standards notated as "Repair" is detailed below: |

6. Method of monitoring and recording:
- When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided below.
1. Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
 2. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.
 3. Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
 4. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
 5. Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

- | |
|---|
| 7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual |
|---|



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): B (Continued from previous page)
3. Emission source (identify): 82-0510-03: Cellulose Recovery (Source ID B-441-2)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Emission work practice standards notated as "Recordkeeping" is detailed below:
6. Method of monitoring and recording: Recordkeeping Requirements: 1) Records must be maintained that identify piping systems or process areas subject to this plan. 2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result. 3) When a leak is detected during the quarterly inspection, the following information shall be recorded: i) Component identifier or description of location and operator name, initials, or identification number. ii) The date the leak was detected. iii) The date the initial attempt at repair is made. iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a) of the permit. v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.
7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): C
3. Emission source (identify): 82-0510-03: Cellulose Recovery (Source ID B-441-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Periodic Monitoring
6. Method of monitoring and recording: Periodic Monitoring: <p style="text-align: center;">Refer to Item 12(d) of the current Title V air permit on Page 36 through 39.</p>

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): ENTIRE SOURCE
------------------------------------	---

3. Emission source(identify): **Cellulose Scrap Recovery Process (Source ID B-441-2)**

MONITORING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **OPACITY**

5. Description of the method of monitoring:
Opacity will be determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974 (6-minute average).

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

The following logic is used to determine the frequency of opacity readings (Visible Emissions Evaluation (VEE)) for each emission unit within the source:

Equipment Leaks (e.g. pumps, valves, connectors, etc.): No VEEs required.

Natural Gas or No. 2 Oil-Fired Combustion Sources: No VEEs required.

Each Allowable Emission is Less Than 10 Tons per Year: No VEEs required.

Only Allowable Emission Greater Than or Equal to 10 Tons per Year are Colorless Pollutants such as CO, HCl, HF, methane, colorless VOCs, colorless HAPs: No VEEs required.

Other Pollutants with Allowable Emissions Greater Than or Equal to 10 Tons per Year: Base the frequency of periodic VEEs on an initial 30 minute VEE conducted on the emission unit during normal operation within one year of issuance of the major source operating permit. The initial VEE is to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

If the initial VEE results in the highest six minute average at less than ten percent opacity, conduct another VEE prior to the submittal of the major source operating permit renewal application

If the initial VEE results in the highest six minute average greater than or equal to ten percent but less than twenty percent opacity, conduct semiannual VEEs. If a semi-annual VEE results in the highest six-minute average greater than or equal to twenty percent, go to monthly VEEs. If three consecutive months' VEEs are less than twenty percent, revert to semi-annual VEEs.

If the initial VEE results in the highest six minute average greater than or equal to twenty percent, conduct monthly VEEs. If three consecutive months' VEEs are less than twenty percent, go to semi-annual VEEs. If a subsequent semi-annual VEE yields a highest six-minute average greater than or equal to twenty percent, revert to monthly VEEs.

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION
EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): B, C
------------------------------------	--

3. Process emission source / Fuel burning installation / Incinerator (identify): **Cellulose Scrap Recovery Process (Source ID B-441-2)**

EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
Particulate Matter (TSP)	NEGLIGIBLE		NOT APPLICABLE	
(Fugitive Emissions)	NEGLIGIBLE		NOT APPLICABLE	
Sulfur Dioxide	1.1		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Volatile Organic Compounds	0.6		NOT APPLICABLE	
(Fugitive Emissions)	10.4		NOT APPLICABLE	
Carbon Monoxide	38.4		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Lead	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Nitrogen Oxides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Total Reduced Sulfur	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Mercury	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	

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AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
Asbestos	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Beryllium	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Vinyl Chloride	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Gaseous Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Greenhouse Gases in CO ₂ Equivalents	92		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant & CAS	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
* Total Particulate Hazardous Air Pollutants ³	NOT APPLICABLE		NOT APPLICABLE	
* Total Gaseous Hazardous Air Pollutants ³	NOT APPLICABLE		NOT APPLICABLE	

6. Page number: Revision number: Date of revision

* These emissions are included in the emissions under item 4 (this is to avoid double counting of emissions for fee determinations).

Footnotes:

1 The term "maximum allowable emissions" as used here represents the "allowable emissions" as defined in subparagraph 1200-3-26-.02(2)(d). These emission rates are intended solely for the purposes fee computation. In no way are to be considered the setting of binding emission limitations.

2 "Not applicable" (N/A) is indicated unless the responsible official chooses to pay annual emission fees based on actual emissions rather than allowable emissions pursuant to subparagraph 1200-3-26-.02(9)(b).



TITLE V PERMIT APPLICATION MISCELLANEOUS PROCESSES

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
3. Stack ID or flow diagram point identification(s): A, B, and C		4. Year of construction or last modification: 1993	
If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form.			
5. Normal operating schedule: <u>24</u> Hrs./Day <u>7</u> Days/Wk. <u>365</u> Days/Yr.			
6. Location of this process emission source in UTM coordinates: UTM Vertical : 4042200 N UTM Horizontal: 361600 E			
7. Describe this process (Please attach a flow diagram of this process) and check one of the following: <div style="border: 1px solid black; width: 100px; height: 15px; margin-bottom: 5px;"></div> Batch <input checked="" type="checkbox"/> Continuous			
PROCESS MATERIAL INPUT AND OUTPUT			
8. List the types and amounts of raw materials input to this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
NOT APPLICABLE			
9. List the types and amounts of primary products produced by this process:			
Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
NOT APPLICABLE			
10. Process fuel usage:			
Type of fuel	Max heat input (10 ⁶ BTU/Hr.)	Average usage (units)	Maximum usage (units)
NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE
11. List any solvents, cleaners, etc., associated with this process: NOT APPLICABLE			
If the emissions and/or operations of this process are monitored for compliance, please attach the appropriate Compliance Demonstration form.			
12. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (please attach a separate sheet if necessary). <input checked="" type="checkbox"/> EQUIPMENT LEAKS SUCH AS PUMPS, VALVES, FLANGES, ETC. <input type="checkbox"/> OTHER, DESCRIBE			
13. Page number:		Revision Number:	
Page Number: B-140		Revision Number: N/A	
		Date of Revision:	
		Revision Date: N/A	



**TITLE V PERMIT APPLICATION
 CONTROL EQUIPMENT - WET COLLECTION SYSTEMS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)
3. Stack ID or flow diagram point identification(s): A	

WET COLLECTION SYSTEM DESCRIPTION

4. Describe the device in use. List the key operation parameters of this device and their normal operating range.

WET SCRUBBER HIGH EFFICIENCY
 Single Pass countercurrent packed tower type Tower Type Water Scrubber
 Single Pass countercurrent packed tower type Tower Type Acid Scrubber

KEY OPERATING PARAMETERS:
 Water Scrubber:
 Minimum Water Stream Flow Rate: 1.8 GPM
 Acid Scrubber:
 Normal 30% acetic acid stream flow rate: 12 GPM
 Minimum 30% acetic acid stream flow rate: 4.0 GPM

5. Manufacturer and model number (if available): Kopetz (or Equivalent)	6. Year of installation: Acid Scrubber: 1992 Water Scrubber: 1992
--	---

7. List of pollutant (s) to be controlled and the expected control efficiency for each pollutant.

Pollutant	Efficiency (%)	Source of data
VOC	97	Engineering Model

8. Discuss how collected material and effluent is handled for reuse or disposal:

Scrubber water managed in on-site NPDES permitted Wastewater Treatment System

9. Scrubbing medium (water, sodium hydroxide slurry, etc.):

Water Scrubber: Water
Acid Scrubber: Approximately 30 wt% Acetic Acid/Water solution.

10. If this control equipment is in series with some other control equipment, state and specify the overall efficiency.

Acid recovery scrubber preceding a water scrubber in series configuration. Overall efficiency > 97%.

11. Page number:	Revision Number:	Date of Revision:
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**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION	
1. Facility name: Primester	
2. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)	
STACK DESCRIPTION	
3. Stack ID (or flow diagram point identification): Stack A to Scrubbers CAC-14 and CAC-15	
4. Stack height above grade in feet: 20	
5. Velocity (data at exit conditions): 5.1 (Actual feet per second)	6. Inside dimensions at outlet in feet: 0.667
7. Exhaust flowrate at exit conditions (ACFM): 107.6	8. Flow rate at standard conditions (DSCFM): 100.0
9. Exhaust temperature: 86 Degrees Fahrenheit (F)	10. Moisture content (data at exit conditions): 4.2 Percent N/A foot (gr/dscf) Grains per dry standard cubic
11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only): Not Applicable (F)	
12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO ₂ , NO _x , etc.)? Not Applicable	
Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.	
BYPASS STACK DESCRIPTION	
13. Do you have a bypass stack? <div style="text-align: center;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.</p>	
14. Page number:	Revision Number:
Date of Revision:	



**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. **Facility name:** Primester

2. **Emission source (identify):** 82-0510-04: Tank Farm (Source ID B-442-1)

STACK DESCRIPTION

3. Stack ID (or flow diagram point identification): Stack C to Storage Tank CAD-30

4. Stack height above grade in feet: 20

5. Velocity (data at exit conditions):
 Not applicable (Actual feet per second)

6. Inside dimensions at outlet in feet: Not quantified

7. Exhaust flowrate at exit conditions (ACFM): equals filling rate

8. Flow rate at standard conditions (DSCFM): equals filling rate

9. Exhaust temperature:

 70 Degrees Fahrenheit (F)

10. Moisture content (data at exit conditions):

 Ambient Percent N/A foot (gr/dscf)
 Grains per dry standard cubic

11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only):

 Not Applicable (F)

12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO₂, NO_x, etc.)? Not Applicable

Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.

BYPASS STACK DESCRIPTION

13. Do you have a bypass stack?

 ___ Yes __X__ No

If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.

14. Page number: Revision Number: Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ARD-07A vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 47,000 (Gallons)	6. Year of installation: 1992	7. Tank height: 20.0 (Feet)	8. Tank diameter: 20.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	52,546,000	37,600	60.05	0.39	14.10	85

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

HOAc Holdup

19. Page number: _____ Revision Number: _____ Date of Revision: _____



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ARD-07B vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 47,000 (Gallons)	6. Year of installation: 1992	7. Tank height: 20.0 (Feet)	8. Tank diameter: 20.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	26,273,000	37,600	60.05	0.41	14.10	87

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

HOAc Holdup

19. Page number: _____ Revision Number: _____ Date of Revision: _____



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: ARD-08 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 47,000 (Gallons)	6. Year of installation: 1992	7. Tank height: 20.0 (Feet)	8. Tank diameter: 20.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	100	5,217,000	37,600	60.05	0.40	14.10	86

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

HOAc Holdup

19. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: FPD-71 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 81,218 (Gallons)	6. Year of installation: 1992	7. Tank height: 24.0 (Feet)	8. Tank diameter: 24.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	11	157,644,000	64,974	60.05	0.22	14.10	149
Water	89			18.02	3.50		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

HOAc Holdup

19. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: FPD-74 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 81,210 (Gallons)	6. Year of installation: 1993	7. Tank height: 24.0 (Feet)	8. Tank diameter: 24.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	30	0	64,966	60.05	0.04	14.10	80
Water	70			18.02	0.45		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

30% HOAc Holdup

19. Page number: Revision Number: Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SVD-01 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 1,000,000 (Gallons)	6. Year of installation: 1992	7. Tank height: 32.0 (Feet)	8. Tank diameter: 73.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open toptank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) <input checked="" type="checkbox"/> Dome roof – indicate tank roof height <u>9.78</u> (ft)			
Indicate shell radius <u>36.50</u> (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	30	184,000,000	345,647	60.05	0.08	14.10	80
Water	70			18.02	0.46		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

30% HOAc Holdup

19. Page number: Revision Number: Date of Revision:



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SVD-02 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 158,620 (Gallons)	6. Year of installation: 1992	7. Tank height: 30.0 (Feet)	8. Tank diameter: 30.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	89	341,508,000	126,894	99.50	1.63	14.10	100
Water	11			18.02	0.76		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Column Feed Tank

19. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: SVD-04 vented to Emission Point A			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 158,620 (Gallons)	6. Year of installation: 1992	7. Tank height: 30.0 (Feet)	8. Tank diameter: 30.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Unknown</u>			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes _____ No			
11. Type of storage tank:			
_____ Open to tank	<input checked="" type="checkbox"/> Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) _____ Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC	97	341,508,000	126,894	102.13	1.82	14.10	100
Water	3			18.02	0.14		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Column Feed Tank

19. Page number: _____ Revision Number: _____ Date of Revision: _____



TITLE V PERMIT APPLICATION STORAGE TANKS

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: CAD-30 vented to Emission Point C			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: 21,151 (Gallons)	6. Year of installation: 1992	7. Tank height: 25.0 (Feet)	8. Tank diameter: 12.0 (Feet)
9. Color of tank: _____ White _____ x Other Specify <u>Light Gray Shell, Light Gray Roof</u>			
10. Is this tank equipped with a submerged fill pipe? Yes _____ X No			
11. Type of storage tank:			
_____ Open toptank	X Fixed roof	_____ Fixed roof w/internal floating roof	_____ Other (specify)
_____ Pressurized tank	_____ External floating roof	_____ Variable vapor space	
12. For fixed roof tanks:			
A. Tank configuration (check one): _____ Vertical (upright cylinder) X Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft)			
(check one) _____ Dome roof – indicate tank roof height _____ (ft)			
Indicate shell radius _____ 6 (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): <u>Not Applicable</u>			
_____ Light rust _____ Dense rust _____ Gunite lined			
14. For External Floating Roof tanks: <u>Not Applicable</u>			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
_____ Shoe Mounted Primary	_____ Vapor Mounted Primary	_____ Liquid Mounted Primary	
_____ Shoe Primary, Rim Secondary	_____ Vapor Primary, Rim Secondary	_____ Liquid Primary, Rim Secondary	
_____ Liquid Primary w/Weather Shield	_____ Shoe Primary and Secondary	_____ Vapor Primary w/Weather Shield	
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well)	Unslotted Guide-Pole Well	Gauge-Float Well (20" Diameter)	
_____ Bolted cover, gasketed	(8" Diameter Unslotted Pole, 21" Dia. Well)	_____ Unbolted cover, ungasketed	
_____ Unbolted cover, gasketed	_____ Ungasketed sliding cover	_____ Unbolted cover, gasketed	
_____ Unbolted cover, ungasketed	_____ Gasketed sliding cover	_____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.)	Vacuum Breaker (10" Dia. Well)	Roof Drain	
_____ Weighted Mechanical	_____ Weighted Mechanical	_____ Open	
_____ Actuation Gasketed	_____ Actuation Gasketed	_____ 90% Closed	
_____ Weighted Mechanical	_____ Weighted Mechanical		
_____ Actuation Ungasketed	_____ Actuation Ungasketed		
Slotted Guide-Pole/Sample Well	Roof Leg (3" Dia.)	Roof Leg (2 1/2" Dia.)	
(8" Slotted Pole, 21" Dia. Well)	_____ Adjustable, Pontoon area	_____ Adjustable, Pontoon area	
_____ Ungasketed Sliding Cover, without Float	_____ Adjustable, Center area	_____ Adjustable, Center area	
_____ Ungasketed Sliding Cover, with Float	_____ Adjustable, Double-Deck roofs	_____ Adjustable, Double-Deck roofs	
_____ Gasketed Sliding Cover, without Float	_____ Fixed	_____ Fixed	
_____ Gasketed Sliding Cover, with Float			

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: _____ D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: _____ (Feet) E. Total Deck Seam length: _____ (Feet)

F. Deck Area: _____ (Square Feet)

G. Deck Fitting types (indicate the number of each type):

Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity _____ (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
VOC							
Sulfuric Acid	95	930,000	10,576	98.08	0.00	14.10	57
Water	5			18.02	0.07		

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

Sulfuric Acid Tank

19. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number 82-0510-04: Tank Farm (Source ID B-442-1)
------------------------------------	--

3. Describe the process emission source / fuel burning installation / incinerator. **Tank Farm**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Entire Source	Visible Emissions	1200-3-5.01: Permit Condition 2 Permit Condition E6-1 of permit number 567676	Visible emissions from this source shall not exceed 20 percent or greater opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, Number 219 on November 12, 1974. (6 minute average)	20 % opacity	IN
Vent A	VOC	1200-3-7-.07(2): Process Gaseous Emission Standard for sources constructed or modified after April 3, 1972 – Reasonable and proper control equipment and technology. Permit Condition 4. (Modified in Permit Number 955108P). Condition E6-2 of Permit Number 567676.	3.9 TPY	3.9 TPY	IN

11. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number 82-0510-04: Tank Farm (Source ID B-442-1)
------------------------------------	--

3. Describe the process emission source / fuel burning installation / incinerator. **Tank Farm**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Flow Diagram Point B (Equipment Leaks)	VOC	TAPCR 1200-03-07-.07(2): Permit Number 038920P, Condition 5 (Modified in Permit Number 955108P). Permit Condition E6-3 of Permit Number 567676	Quarterly Leak Detection and Repair (Fugitive VOC Emissions from pumps, valves, flanges, etc. are estimated at 9.4 tons/year	Not Applicable	IN
Portion of Source Subject to NSPS	VOC	40 CFR 60 Subparts A – General Provisions. Permit Condition E6-4 to Permit Number 567676	Not Applicable	Not Applicable	IN

11. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION - COMPLIANCE DEMONSTRATION BY
 MONITORING CONTROL SYSTEM PARAMETERS OR OPERATING PARAMETERS OF A PROCESS**

The monitoring of a control system parameter or a process parameter shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value and the emission rate of a particular pollutant is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s) A
------------------------------------	--

3. Emission source: **82-0510-04: Tank Farm (Source ID B-442-1)**

MONITORING DESCRIPTION

4. Pollutant(s) being monitored: **VOC**

5. Description of the method of monitoring and establishment of correlation between the parameter value and the emission rate of a particular pollutant:

DESCRIPTION OF PROTOCOL:	Monitor scrubber acid and water flow rate.
EQUIPMENT:	Flow meters to measure acid and water flow.
INSTALLATION:	Flow meters in the scrubber acid and water feed lines.
PARAMETRIC RELATIONSHIP:	An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the 30% acetic acid scrubbing medium flow rate is greater than or equal to 4 gpm and the fresh water flow rate to the scrubber is greater than or equal to 1.8 gpm.
MAINTENANCE PROVISIONS:	During periodic process-wide maintenance shutdowns, the acid flow to Scrubber CAC-14 will be turned off, but the water flow to Scrubber CAC-15 will continue to absorb acetic acid vapors. Although the process will not be operating during these periods, the tanks will continue to store inventory with little (if any) level changes. Therefore, there will be minimal emissions from breathing and purge losses from tanks SVD-02 and SVD-04 during these periods. Also, either of the scrubbers may be bypassed for up to 200 hours per calendar year with the process operating for scrubber cleaning or maintenance. These events when scrubber flows must be terminated or scrubbers bypassed shall not be considered parameter excursions as defined in the Table Notes to the permit.

6. COMPLIANCE DEMONSTRATION FREQUENCY (SPECIFY THE FREQUENCY WITH WHICH COMPLIANCE WILL BE DEMONSTRATED):
 24-hour block averages.
 Annual review of bypass hours.

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): B
3. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
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5. Material or parameter being monitored and recorded: Number and type of equipment leak points.

<p>6. Method of monitoring and recording:</p> <p><Continued from previous page></p> <p>(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.</p> <p>(5) Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.</p> <p>(e) Recordkeeping Requirements</p> <p>(1) Records must be maintained that identify piping systems or process areas subject to this plan.</p> <p>(2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.</p> <p>(3) When a leak is detected during the quarterly inspection, the following information shall be recorded:</p> <p>(i) Component identifier or description of location and operator name, initials, or identification number.</p> <p>(ii) The date the leak was detected.</p> <p>(iii) The date the initial attempt at repair is made.</p> <p>(iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 6(a).</p> <p>(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak</p>

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Quarterly
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8. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A (Continued from previous page)
3. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Emission work practice standards notated as "Repair" is detailed below:

6. Method of monitoring and recording:

When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided below.

1. Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
2. Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.
3. Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
4. Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
5. Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual



TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A (Continued from previous page)
3. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Emission work practice standards notated as "Recordkeeping" is detailed below:

6. Method of monitoring and recording:

Recordkeeping Requirements:

- 1) Records must be maintained that identify piping systems or process areas subject to this plan.
- 2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.
- 3) When a leak is detected during the quarterly inspection, the following information shall be recorded:
 - i) Component identifier or description of location and operator name, initials, or identification number.
 - ii) The date the leak was detected.
 - iii) The date the initial attempt at repair is made.
 - iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a) of the permit.
 - v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number: Page Number: B-172	Revision number: Revision Number: N/A	Date of revision: Revision Date: N/A
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TITLE V PERMIT APPLICATION

COMPLIANCE DEMONSTRATION BY RECORDKEEPING

Recordkeeping shall be acceptable as a compliance demonstration method provided that a correlation between the parameter value recorded and the applicable requirement is established.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A
3. Emission source (identify): 82-0510-04: Tank Farm (Source ID B-442-1)	

MONITORING AND RECORDKEEPING DESCRIPTION

4. Pollutant(s) or parameter being monitored: VOC
5. Material or parameter being monitored and recorded: Periodic Monitoring
6. Method of monitoring and recording: Periodic Monitoring: <p style="text-align: center;">Refer to Item 12(d) of the current Title V air permit on Page 36 through 39.</p>

7. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): Annual

8. Page number:	Revision number:	Date of revision:
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**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): Entire Source
3. Emission source(identify): 82-0510-04: Tank Farm (Source ID B-442-1)	

MONITORING DESCRIPTION

4. Pollutant(s) or parameter being monitored: Opacity
5. Description of the method of monitoring: Opacity will be determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974 (6 minute average).
6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated): <p>The following logic is used to determine the frequency of opacity readings (Visible Emissions Evaluation (VEE)) for each emission unit within the source:</p> <p><u>Equipment Leaks (e.g. pumps, valves, connectors, etc.):</u> No VEEs required.</p> <p><u>Natural Gas or No. 2 Oil-Fired Combustion Sources:</u> No VEEs required.</p> <p><u>Each Allowable Emission is Less Than 10 Tons per Year:</u> No VEEs required.</p> <p><u>Only Allowable Emission Greater Than or Equal to 10 Tons per Year are Colorless Pollutants such as CO, HCl, HF, methane, colorless VOCs, colorless HAPs:</u> No VEEs required.</p> <p><u>Other Pollutants with Allowable Emissions Greater Than or Equal to 10 Tons per Year:</u> Base the frequency of periodic VEEs on an initial 30 minute VEE conducted on the emission unit during normal operation within one year of issuance of the major source operating permit. The initial VEE is to be repeated within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.</p> <p>If the initial VEE results in the highest six minute average at less than ten percent opacity, conduct another VEE prior to the submittal of the major source operating permit renewal application.</p> <p>If the initial VEE results in the highest six minute average greater than or equal to ten percent but less than twenty percent opacity, conduct semiannual VEEs. If a semi-annual VEE results in the highest six-minute average greater than or equal to twenty percent, go to monthly VEEs. If three consecutive months' VEEs are less than twenty percent, revert to semi-annual VEEs.</p> <p>If the initial VEE results in the highest six minute average greater than or equal to twenty percent, conduct monthly VEEs. If three consecutive months' VEEs are less than twenty percent, go to semi-annual VEEs. If a subsequent semi-annual VEE yields a highest six-minute average greater than or equal to twenty percent, revert to monthly VEEs.</p>

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION
EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A, B, and C
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3. Process emission source / Fuel burning installation / Incinerator (identify): **82-0510-04: Tank Farm (Source ID B-442-1)**

EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions ¹		Actual Emissions ²	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour - Item 8, APC 30)
Particulates (TSP)	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Sulfur Dioxide	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Volatile Organic Compounds	3.9		Not Applicable	
(Fugitive Emissions)	9.4		Not Applicable	
Carbon Monoxide	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Lead	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Nitrogen Oxides	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Total Reduced Sulfur	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Mercury	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	

Footnotes:

1 The term "maximum allowable emissions" as used here represents the "allowable emissions" solely for the purposes of fee computation as defined in subparagraph 1200-3-26-.02(2)(d) and in no way are these values to be considered the setting of binding emission limitations.

2 "Not applicable" (N/A) is indicated unless the responsible official chooses to pay annual emission fees based on actual emissions rather than allowable emissions pursuant to subparagraph 1200-3-26-.02(9)(b). Also, in the case of hazardous air pollutants, estimates of actual annual emissions may be provided unless the source is subject to an applicable requirement relating to the hazardous air pollutant.

(Continued from last page)

AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
Asbestos	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Beryllium	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Vinyl Chloride	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Gaseous Fluorides	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)	NOT APPLICABLE		NOT APPLICABLE	
Greenhouse Gases in CO ₂ Equivalents	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive emissions)	NOT APPLICABLE		NOT APPLICABLE	
(Fugitive Emissions)				
(Fugitive Emissions)				
(Fugitive Emissions)				
(Fugitive Emissions)				

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Complete the following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attach calculations and emission factor references.

* Total Particulate Hazardous Air	NOT APPLICABLE		NOT APPLICABLE	
* Total Particulate Hazardous Air	NOT APPLICABLE		NOT APPLICABLE	

Page number: _____ Revision number: _____ Date of revision: _____

* These emissions are included in the emissions under item 4 (this is to avoid double counting of emissions for fee determinations)



**TITLE V PERMIT APPLICATION
 MISCELLANEOUS PROCESSES**

GENERAL IDENTIFICATION AND DESCRIPTION

1. **Facility name:** Primester

2. **Process emission source (identify):** 82-0510-05: Cooling Towers (Source ID B-447-1)

3. Stack ID or flow diagram point identification (s): A, B & G

4. Year of construction or last modification: 1993

If the emissions are controlled for compliance, attach an appropriate Air Pollution Control system form.

5. Normal operating schedule: 24 Hrs./Day 7 Days/Wk. 365 Days/Yr.

6. Location of this process emission source in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E

7. Describe this process (Please attach a flow diagram of this process) and check one of the following:
 Batch Continuous

PROCESS MATERIAL INPUT AND OUTPUT

8. List the types and amounts of raw materials input to this process:

Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)
1. Cooling Tower Return	Closed Pipe	15,000 gal per min	16,500 gal per min
2. Makeup Water	Closed Pipe	100 gal per min	200 gal per min
3. Water Treatment Chemicals			

8. LIST TYPES AND AMOUNTS OF PRIMARY PRODUCTS PRODUCED BY THIS PROCESS

Material	Storage/Material handling process	Average usage (units)	Maximum usage (units)

9. Process fuel usage:

Type of fuel	Max heat input (10 ⁶ BTU/Hr.)	Average usage (units)	Maximum usage (units)
Not Applicable	Not Applicable	Not Applicable	Not Applicable

11. List any solvents, cleaners, etc., associated with this process:
 Water treatment chemicals

If the emissions and/or operations of this process are monitored for compliance, please attach the appropriate Compliance Demonstration form.

12. Describe any fugitive emissions associated with this process, such as outdoor storage piles, open conveyors, open air sand blasting, material handling operations, etc. (please attach a separate sheet if necessary).
 Equipment leaks such as pumps, valves, flanges, etc.
 Not Applicable Other. Describe.

13. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Emission source (identify): **82-0510-05: Cooling Tower (Source ID B-447-1)**

STACK DESCRIPTION

3. Stack ID (or flow diagram point identification): **A**
4. Stack height above grade in feet: **30**
- | | |
|--|--|
| 5. Velocity (data at exit conditions):
<u>23.5</u> (Actual feet per second) | 6. Inside dimensions at outlet in feet:
1.833 |
| 7. Exhaust flowrate at exit conditions (ACFM):
1,070,000 | 8. Flow rate at standard conditions (DSCFM):
1,052,000 |
| 9. Exhaust temperature:
<u>70</u> Degrees Fahrenheit (F) | 10. Moisture content (data at exit conditions):
Grains per dry standard cubic
<u>3.34</u> Percent <u>Not Applicable</u> foot (gr/dscf) |
11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only):
 Not Applicable (F)
12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO₂, NO_x, etc.)? **Not Applicable**

Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.

BYPASS STACK DESCRIPTION

13. Do you have a bypass stack?
 ___ ___ **Yes** X No
- If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.

14. Page number: _____ Revision Number: _____ Date of Revision: _____



**TITLE V PERMIT APPLICATION
 STACK IDENTIFICATION**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**

2. Emission source (identify): **82-0510-05: Cooling Towers (Source ID B-447-1)**

STACK DESCRIPTION

3. Stack ID (or flow diagram point identification): **B**

4. Stack height above grade in feet: **30**

5. Velocity (data at exit conditions): 23.5 (Actual feet per second)	6. Inside dimensions at outlet in feet: 1.833
--	---

7. Exhaust flowrate at exit conditions (ACFM): 1,070,000	8. Flow rate at standard conditions (DSCFM): 1,052,000
--	--

9. Exhaust temperature: 70 Degrees Fahrenheit (F)	10. Moisture content (data at exit conditions): Grains per dry standard cubic 3.34 Percent Not Applicable foot (gr/dscf)
---	--

11. Exhaust temperature that is equaled or exceeded during ninety (90) percent or more of the operating time (for stacks subject to diffusion equation only):

Not Applicable (F)

12. If this stack is equipped with continuous pollutant monitoring equipment required for compliance, what pollutant(s) does this equipment monitor (e.g., Opacity, SO₂, NO_x, etc.)? **Not Applicable**

Complete the appropriate APC form(s) 4, 5, 7, 8, 9, or 10 for each source exhausting through this stack.

BYPASS STACK DESCRIPTION

13. Do you have a bypass stack?

Yes **No**

If yes, describe the conditions which require its use & complete APC form 4 for the bypass stack. Please identify the stack number(s) of flow diagram point number(s) exhausting through this bypass stack.

14. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 STORAGE TANKS**

GENERAL IDENTIFICATION AND DESCRIPTION			
1. Facility name: Primester			
2. Process emission source (identify): 82-0510-05: Cooling Tower (Source ID B-447-1)			
STORAGE TANK DESCRIPTION			
3. Storage tank identification: Sulfuric Acid Storage Tank CTD-003 vented to Emission Point G			
4. Location of the storage tank or tank farm in UTM coordinates: UTM Vertical : 17S 4,042,286 m N UTM Horizontal: 361,452 m E			
5. Storage tank capacity: <u>2114</u> (Gallons)	6. Year of installation: <u>1992</u>	7. Tank height: <u>7</u> (Feet)	8. Tank diameter: <u>7.17</u> (Feet)
9. Color of tank: <input checked="" type="checkbox"/> White <input type="checkbox"/> Other Specify _____			
10. Is this tank equipped with a submerged fill pipe? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
11. Type of storage tank:			
<input type="checkbox"/> Open toptank <input checked="" type="checkbox"/> Fixed roof <input type="checkbox"/> Fixed roof w/internal floating roof <input type="checkbox"/> Other (specify) <input type="checkbox"/> Pressurized tank <input type="checkbox"/> External floating roof <input type="checkbox"/> Variable vapor space			
12. For fixed roof tanks:			
A. Tank configuration (check one): <input checked="" type="checkbox"/> Vertical (upright cylinder) <input type="checkbox"/> Horizontal			
B. Tank roof type: _____ Cone roof – indicate tank roof height _____ (ft) (check one) <input checked="" type="checkbox"/> Dome roof – indicate tank roof height <u>0.96</u> (ft) Indicate shell radius <u>3.59</u> (ft)			
FLOATING ROOF TANK DESCRIPTION			
13. For Floating Roof tanks (both internal and external) – shell condition (check one): Not Applicable _____ Light rust _____ Dense rust _____ Gunitite lined			
14. For External Floating Roof tanks: Not Applicable			
A. Tank construction (check one): _____ Welded tank _____ Riveted tank			
B. Rim Seal system description (check one):			
<input type="checkbox"/> Shoe Mounted Primary _____ Vapor Mounted Primary _____ Liquid Mounted Primary <input type="checkbox"/> Shoe Primary, Rim Secondary _____ Vapor Primary, Rim Secondary _____ Liquid Primary, Rim Secondary <input type="checkbox"/> Liquid Primary w/Weather Shield _____ Shoe Primary and Secondary _____ Vapor Primary w/Weather Shield			
C. Roof type (check one): _____ Pontoon roof _____ Double Deck roof			
D. Roof fitting types (indicate the number of each type):			
Access Hatch (24" Diameter well) _____ Bolted cover, gasketed _____ Unbolted cover, gasketed _____ Unbolted cover, ungasketed	Unslotted Guide-Pole Well (8" Diameter Unslotted Pole, 21" Dia. Well) _____ Ungasketed sliding cover _____ Gasketed sliding cover	Gauge-Float Well (20" Diameter) _____ Unbolted cover, ungasketed _____ Unbolted cover, gasketed _____ Bolted cover, gasketed	
Gauge-Hatch/Sample Well (8" Dia.) _____ Weighted Mechanical Actuation Gasketed _____ Weighted Mechanical Actuation Ungasketed	Vacuum Breaker (10" Dia. Well) _____ Weighted Mechanical Actuation Gasketed _____ Weighted Mechanical Actuation Ungasketed	Roof Drain _____ Open _____ 90% Closed	
Slotted Guide-Pole/Sample Well (8" Slotted Pole, 21" Dia. Well) _____ Ungasketed Sliding Cover, without Float _____ Ungasketed Sliding Cover, with Float _____ Gasketed Sliding Cover, without Float _____ Gasketed Sliding Cover, with Float	Roof Leg (3" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	Roof Leg (2 1/2" Dia.) _____ Adjustable, Pontoon area _____ Adjustable, Center area _____ Adjustable, Double-Deck roofs _____ Fixed	

15. For Internal Floating Roof tanks: **Not Applicable**

A. Rim Seal system description:

Liquid Mounted Primary
 Vapor Mounted Primary
 Liquid Mounted Primary plus Secondary Seal
 Vapor Mounted Primary plus Secondary Seal

B. Number of Columns: D. Deck Type (check one): Welded Bolted

C. Effective Column diameter: (Feet) E. Total Deck Seam length: (Feet)

F. Deck Area: (Square Feet)

G. Deck Fitting types (indicate the number of each type):

<input type="checkbox"/> Access Hatch (24" Dia.) <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Automatic Gauge Float Well <input type="checkbox"/> Bolted cover, gasketed <input type="checkbox"/> Unbolted cover, gasketed <input type="checkbox"/> Unbolted cover, ungasketed	<input type="checkbox"/> Column Well <input type="checkbox"/> Built-up Column-Sliding cover, gasketed <input type="checkbox"/> Built-up Column-Sliding cover, ungasketed <input type="checkbox"/> Pipe Column-Flexible fabric sleeve seal <input type="checkbox"/> Pipe Column-Sliding cover, gasketed <input type="checkbox"/> Pipe Column-Sliding cover, ungasketed
<input type="checkbox"/> Ladder well <input type="checkbox"/> Sliding cover, gasketed <input type="checkbox"/> Sliding cover, ungasketed	<input type="checkbox"/> Sample Pipe and Well <input type="checkbox"/> Slotted Pipe-Sliding cover, gasketed <input type="checkbox"/> Slotted Pipe-Sliding cover, ungasketed <input type="checkbox"/> Sample Well-Slit fabric seal, 10% open area <input type="checkbox"/> Stub Drain, 1 inch diameter	<input type="checkbox"/> Roof Leg or Hanger Well <input type="checkbox"/> Adjustable <input type="checkbox"/> Fixed
<input type="checkbox"/> Vacuum Breaker <input type="checkbox"/> Weighted Mechanical Actuation, gasketed <input type="checkbox"/> Weighted Mechanical Actuation, ungasketed		

16. For variable vapor space tanks: **Not Applicable**

Volume expansion capacity (Gallons)

TANK CONTENTS AND OPERATION DESCRIPTION

17. Complete the flowing table for materials to be stored in this tank:

Material or component stored	Wt. %	Material Annual Throughput (Gal./Yr.)	Material stored Daily Average (Gallons)	Component Molecular weights (Lb./Lb. Mole)	Component Vapor Pressures (PSIA)	Material storage pressure (PSIA)	Material average storage temp. (Deg. F)
Sulfuric Acid	95	6,000	1057	98.08	0	14.10	70
Water	5	6,000	1057	18.02	0.08	14.10	70

Multipurpose tank with variable composition: Yes No

18. Describe the operation this tank will serve:

19. Page number: Revision Number: Date of Revision:



**TITLE V PERMIT APPLICATION
 CURRENT EMISSIONS REQUIREMENTS AND STATUS**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Emission source number: 82-0510-05: Cooling Tower (Source ID B-447-1)
------------------------------------	---

3. Describe the process emission source / fuel burning installation / incinerator. **Cooling Tower**

EMISSIONS AND REQUIREMENTS

4. Identify if only a part of the source is subject to this requirement	5. Pollutant	6. Applicable requirement(s): TN Air Pollution Control Regulations, 40 CFR, permit restrictions, air quality based standards	7. Limitation	8. Maximum actual emissions	9. Compliance status (In/Out)
Entire Source	Particulates	TAPCR 1200-03-07-.01(5): Permit Number 952404P; Condition 2. Letter dated May 18, 2016: Permit Condition E7-1 of Permit Number 567676	1.62 lb/hr and 5.5 ton/year	1.62 lb/hr and 5.5 ton/year	IN
Entire Source	VOC	TAPCR 1200-03-07-.07(2): Permit Number 952404P, Condition 3: Permit Number 567676, Condition E7-2	0.2 ton/yr	0.2 ton/yr	IN
Entire Source	Visible Emissions	TAPCR 1200-03-05: Permit Number 952404P, Condition 5: Permit Number 567676, Condition E7-3	20% Opacity	20% Opacity	IN

10. Other applicable requirements (new requirements that apply to this source during the term of this permit)

Not Applicable					

11. Page number: Revision number: Date of revision:



**TITLE V PERMIT APPLICATION
 COMPLIANCE CERTIFICATION - MONITORING AND REPORTING
 DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE**

All sources that are subject to 1200-03-09-.02(11) of the Tennessee Air Pollution Control Regulations are required to certify compliance with all applicable requirements by including a statement within the permit application of the methods used for determining compliance. This statement must include a description of the monitoring, recordkeeping, and reporting requirements and test methods. In addition, the application must include a schedule for compliance certification submittals during the permit term. These submittals must be no less frequent than annually and may need to be more frequent if specified by the underlying applicable requirement or the Technical Secretary.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: **Primester**
2. Process emission source, fuel burning installation, or incinerator (identify): **82-0510-05: Cooling Towers (Source ID B-447-1)**
3. Stack ID or flow diagram point identification(s): **A, B & G**

METHODS OF DETERMINING COMPLIANCE

4. This source as described under Item #2 of this application will use the following method(s) for determining compliance with applicable requirements (and special operating conditions from an existing permit). Check all that apply and attach the appropriate form(s)

- Continuous Emission Monitoring (CEM) - APC 20
Pollutant(s): _____
- Emission Monitoring Using Portable Monitors - APC 21
Pollutant(s): _____
- Monitoring Control System Parameters or Operating Parameters of a Process - APC 22
Pollutant(s): _____
- Monitoring Maintenance Procedures - APC 23
Pollutant(s): _____
- Stack Testing - APC 24
Pollutant(s): _____
- Fuel Sampling & Analysis (FSA) - APC 25
Pollutant(s): _____
- Recordkeeping - APC 26
Pollutant(s): _____
- Other (please describe) - APC 27
Pollutant(s):
 ___ Opacity ___

5. Compliance certification reports will be submitted to the Division according to the following schedule:
 Start date: **_As provided in Condition E2 of the Title V permit.**
 And every _____ days thereafter.

6. Compliance monitoring reports will be submitted to the Division according to the following schedule:
 Start date: **As provided in Condition E2 of the Title V permit.**
 And every _____ days thereafter.

7. Page number: _____ Revision number: _____ Date of revision: _____



**TITLE V PERMIT APPLICATION
 COMPLIANCE DEMONSTRATION BY OTHER METHOD(S)**

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A, B, G
------------------------------------	---

3. Emission source(identify): **82-0510-05: Cooling Towers (Source ID B-447-1)**

MONITORING DESCRIPTION

4. Pollutant(s) or parameter being monitored: **Opacity**

5. Description of the method of monitoring: **Opacity will be determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974 (6 minute average).**

6. Compliance demonstration frequency (specify the frequency with which compliance will be demonstrated):

- Equipment Leaks (e.g. pumps, valves, connectors, etc.): No VEEs required.
- Natural Gas or No. 2 Oil-Fired Combustion Sources: Not applicable.
- Each Allowable Emission is Less Than 10 Tons per Year: No VEEs required
- Colorless Pollutant emissions such as CO, HCl, HF, methane, colorless VOCs, colorless HAPs: No VEEs required.

Other pollutants with allowable emissions greater Than or equal to 10 Tons per Year: Base the frequency of periodic VEEs on an initial 30 minute VEE conducted on the emission unit during normal operation within one year of issuance of the major source operating permit. VEE is to be conducted within 90 days of startup of a modified source if a new construction permit is issued for modification of the source.

If the initial VEE results in the highest six minute average at less than ten percent opacity, conduct another VEE prior to the submittal of the major source operating permit renewal application.

If the initial VEE results in the highest six minute average greater than or equal to ten percent but less than twenty percent opacity, conduct semiannual VEEs. If a semi-annual VEE results in the highest six-minute average greater than or equal to twenty percent, go to monthly VEEs. If three consecutive months' VEEs are less than twenty percent, revert to semi-annual VEEs.

If the initial VEE results in the highest six minute average greater than or equal to twenty percent, conduct monthly VEEs. If three consecutive months' VEEs are less than twenty percent, go to semi-annual VEEs. If a subsequent semi-annual VEE yields a highest six-minute average greater than or equal to twenty percent, revert to monthly VEEs.

Emission units requiring initial VEE: **None**

7. Page number:	Revision number:	Date of revision:
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TITLE V PERMIT APPLICATION
EMISSIONS FROM PROCESS EMISSION SOURCE / FUEL BURNING INSTALLATION / INCINERATOR

GENERAL IDENTIFICATION AND DESCRIPTION

1. Facility name: Primester	2. Stack ID or flow diagram point identification(s): A, B & G
------------------------------------	--

3. Process emission source/Fuel burning installation/Incinerator (identify): **82-0510-05: Cooling Towers (Source ID B-447-1)**

EMISSIONS SUMMARY TABLE – CRITERIA AND FUGITIVE EMISSIONS

4. Complete the following emissions summary for regulated air pollutants. Fugitive emissions shall be included. Attach calculations and emission factor references.

Air Pollutant	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
*PM-2.5 (includes condensable fraction)	5.5		Not Applicable	
*(Fugitive Emissions)	5.5		Not Applicable	
*PM-10 (includes condensable fraction)	5.5		Not Applicable	
*(Fugitive Emissions)	Negligible		Not Applicable	
Particulates (TSP)	5.5		Not Applicable	
(Fugitive Emissions)	Negligible		Not Applicable	
Sulfur Dioxide	Not Applicable		Not Applicable	
Volatile Organic Compounds	0.2		Not Applicable	
(Fugitive Emissions)	Negligible		Not Applicable	
Carbon Monoxide	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Nitrogen Oxides	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Total Reduced Sulfur	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Mercury	Not Applicable		Not Applicable	

(Continued on next page)

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AIR POLLUTANT	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
(Fugitive Emissions)	Not Applicable		Not Applicable	
Asbestos	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Beryllium	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Fluorides	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Gaseous Fluorides	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
Carbon Dioxide Equivalents CO ₂ e	Not Applicable		Not Applicable	
(Fugitive Emissions)	Not Applicable		Not Applicable	
(Fugitive Emissions)			Not Applicable	

EMISSIONS SUMMARY TABLE – FUGITIVE HAZARDOUS AIR POLLUTANTS

5. Completethe following emissions summary for regulated air pollutants that are hazardous air pollutant(s). Fugitive emissions shall be included. Attachcalculationsandemissionfactorreferences.

Air Pollutant & CAS	Maximum Allowable Emissions		Actual Emissions	
	Tons per Year	Reserved for State use (Pounds per Hour - Item 7, APC 30)	Tons per Year	Reserved for State use (Pounds per Hour- Item 8, APC 30)
* Total Particulate Hazardous Air Pollutants	Not Applicable		Not Applicable	
* Total Gaseous Hazardous Air Pollutants Acetaldehyde	Not Applicable		Not Applicable	

6. Page number: Revision number: Date of revision

* These emissions are included in the emissions under item 4 (this is to avoid double counting of emissions for fee determinations).

Footnotes:

1. The term "maximum allowable emissions" as used here represents the "allowable emissions" as defined in subparagraph 1200-3-26-.02(2)(d). These emission rates are intended solely for the purposes fee computation. In no way are to be considered the setting of binding emission limitations.
2. "Not applicable" (N/A) is indicated unless the responsible official chooses to pay annual emission fees based on actual emissions rather than allowable emissions pursuant to subparagraph 1200-3-26-.02(9)(b).

Appendix C
CAM Plan Summary
Emission Source Reference Number
82-0510-01
Scrubber FPC-12 at Vent N

Compliance Assurance Monitoring General Requirements

Identification	Requirement	Rule Citation
Operation of Approved Monitoring		
ESRN 82-0510-01, Vent N	Commencement of monitoring upon permit issuance	§64.7(a)
	Commencement of monitoring by date specified in the permit pursuant to §64.6(d).	§64.7(a)
ESRN 82-0510-01, Vent N	Proper maintenance	§64.7(b)
	Continued operation	§64.7(c)
	Response to excursions or exceedances	§64.7(d)
	Documentation of need for improved monitoring	§64.7(e)
Data Availability		
ESRN 82-0510-01, Vent N Comply with the data availability requirements specified in Item 12 of the Table Notes, or with specific requirements established in TAPCR 1200-03, 40 CFR, or permit conditions.	Minimum Data Availability	§64.6(c)(4)
Quality Improvement Plan (QIP)		
ESRN 82-0510-01, Vent N	Requirement to submit QIP	§64.8(a)
	QIP elements	§64.8(b)
	Deadline for QIP development	§64.8(c)
	Reasonable changes to QIP	§64.8(d)
	QIP implementation	§64.8(e)
Reporting and Recordkeeping Requirements		
ESRN 82-0510-01, Vent N	Reporting requirements	§64.9(a)
	Recordkeeping requirements	§64.9(b)

**Compliance Assurance Monitoring (CAM) Plan – 40 CFR 64
ESRN 82-0510-01**

Stack or Flow Diagram Point	Vent N				
Pollutant	VOC				
Description of Monitoring Protocol (§64.4(a)(1), §64.4(b))	Monitor scrubber water flow rate and daily production rate.				
Parametric Relationship (§64.4(a)(2))	<p>An engineering analysis of the system was performed using the SDIST computer simulation program and data from the process. This demonstrated that the emissions from the scrubber would be less than the permit limit whenever the fresh water flow rate to the scrubbers is not less than the values specified below. Compliance with the scrubber water flow rate will be based on a 24-hour block average.</p> <table border="1" data-bbox="786 886 1398 1041"> <thead> <tr> <th>Vent</th> <th>Minimum Scrubber Flow Rate (gallons/minute)</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>3.0</td> </tr> </tbody> </table> <p>The daily production rate will not exceed the maximum cellulose acetate rate in the APC 10 form to ESRN 82-0510-01, as measured by cellulose pulp feed rate multiplied by 1.58 conversion factor.</p>	Vent	Minimum Scrubber Flow Rate (gallons/minute)	N	3.0
Vent	Minimum Scrubber Flow Rate (gallons/minute)				
N	3.0				
Measurement Frequency (§64.4(a)(3))	Continuous (once every 15 minutes)				
QA/QC Practices (§64.4(a)(3))	Flow meters will be calibrated once per calendar year. Flow meters are self-checking and notify operating personnel if there is an electrical problem. Alarm limits also notify personnel if the flow meter signal drifts or drops out of the expected range.				
Reference	Operating Plan in Appendix C of 2018 Title V Permit Renewal Application.				

Appendix D
Specific Applicability
Determinations for 40 CFR 60
(NSPS) and 40 CFR 63 (MACT)
Provided in Attachment 2 of the
Title V Permit

**40 CFR Part 60 Subparts Kb, VV, III, NNN & RRR
Specific Applicability Determinations
Emissions Source Reference Number: 82-0510-01**

Identification	Category	Rule Citation
Subpart Kb - Storage Vessels		
Not Applicable	Storage Vessels storing a VOL having a maximum true vapor pressure less than 76.7 kPa and must meet standards.	40 CFR 60.112b(a)
	Storage Vessels storing a VOL having a maximum true vapor pressure equal to or greater than 76.7 kPa and must meet standards.	40 CFR 60.112b(b)
	Storage Vessels that are not required to meet standards.	40 CFR 60.110b
	Monitoring, recordkeeping, and reporting	40 CFR 60.115b, 60.116b
Subpart VV - Equipment Leaks		
Portions of Flow Diagram Point F (See Figure B-2)	Work practice standards for pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, etc.	40 CFR 60.482, 60.483
Portions of Flow Diagram Point F (See Figure B-2)	Alternative monitoring for equipment in acetic acid service (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, January 23, 2004).*	40 CFR 60.60.13(i)
VV subject points as applicable	Recordkeeping and reporting	40 CFR 60.486, 60.487
Subpart III - Air Oxidation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.612(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.612(b)
	TRE greater than 1.0 but less than or equal to 4.0	40 CFR 60.612(c)
	TRE greater than 4.0	40 CFR 60.610(c)
	Monitoring, recordkeeping, and reporting	40 CFR 60.613, 60.615

Identification	Category	Rule Citation
Subpart NNN - Distillation		
Columns DCC-80/DCC-90, Column DCC-70 & Column DCC-30	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.662(a)
Not Applicable	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.662(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.662(c)
	TRE greater than 8.0	40 CFR 60.660(c)(4)
	Low Flow Exemption	40 CFR 60.660(c)(6)
	Design Capacity Exemption	40 CFR 60.660(c)(5)
	Monitoring, recordkeeping, and reporting	40 CFR 60.663, 60.665
	Alternative monitoring approved for locations of flow indicators (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, March 16, 2004.)*	40 CFR 60.13(i)
Subpart RRR - Reactors		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.702(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.702(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.702(c)
	TRE greater than 8.0	40 CFR 60.700(c)(2)
Reactors CAC-01, CAC-02, CAC-03, CAC-04, CHC-10, CHC-20, CHC-30, CHC-40, CHC-50 (Vent B)	Low Flow Exemption	40 CFR 60.700(c)(4)
Not Applicable	Design Capacity Exemption	40 CFR 60.700(c)(3)
	Low Concentration Exemption	40 CFR 60.700(c)(8)
	Routed to distillation unit subject to subpart NNN except for a pressure relief valve	40 CFR 60.700(c)(5)
RRR subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.703, 60.705

* See Appendix E of this renewal application for the Alternative Monitoring Plan for equipment in acetic acid service.

40 CFR Part 63 Subpart FFFF
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-01

Identification	Category	Rule Citation from 40 CFR 63
Continuous Process Vents		
Columns DCC-80/DCC-90, Column DCC-70 & Column DCC-30	Group 1 Continuous Process Vent and Applicable Monitoring	§2455
Not Applicable	Continuous Process vent combined with Group 1 batch vent before control or recovery device	§2455(b)(1)
	Existing Group 2 Process Vents not requiring monitoring: Vents with no recovery device with TRE >1.9, vents with recovery device with TRE >5	§2455
	New Group 2 Continuous Process Vents not requiring monitoring: Vents with no recovery device with TRE >5, vents with recovery device with TRE >8	§2455(b)(2)
	Existing Group 2 Continuous Process Vents requiring monitoring (vents using a recovery device to maintain $1.9 < TRE \leq 5$).	§2455(c)(1)
	New Group 2 Continuous Process Vents with $5 < TRE \leq 8$ before recovery devices.	§2455(c)(1)
	Gaseous streams routed to a Fuel Gas System are not process vents and have no applicable requirements under 40 CFR 63 Subpart FFFF.	§2550
Process Vents Emitting Hydrogen Halide or Halogen HAPs		
Not Applicable	Process with collective sum of hydrogen halide and hydrogen HAPs < 1,000 lb/year	§2465(b), §1257(d)(2)(i)
	Process with collective sum of hydrogen halide and hydrogen HAPs $\geq 1,000$ lb/year	§2465(c), 994
	New process vents that emit HAP metals	§2465(d)

Identification	Category	Rule Citation from 40 CFR 63
Batch Process Vents		
Not Applicable	Group 1 process vents and applicable monitoring	§2460
	Group 2 process vents	§2460, 2525(e)
	Process with non-reactive HAP usage < 10,000 lb/year	§2460(b)(7)
	Halogenated Group 1 batch process vents for which a combustion device is used to control organic HAP emissions	§2460
Storage Vessels		
Not Applicable	Group 1 storage vessels (storage, surge control, and bottoms receivers) storing a liquid for which the maximum true vapor pressure of organic HAPs > 76.6 kPa (11.1 psi)	§2470, §2450(r), §982
	Group 1 storage vessels (storage, surge control, and bottoms receivers) storing a liquid for which the maximum true vapor pressure of organic HAPs < 76.6 kPa (11.1 psi)	§2470, §2450(r), Subpart WW
	Group 2 Storage Vessels (storage, surge control, and bottoms receivers)	§2470, §2450(r)
	Halogenated Group 1 vessels (storage, surge control, and bottoms receivers) for which a combustion device is used to control organic HAP emissions.	§2470
Transfer Operations		
Not Applicable	Group 1 transfer racks and applicable monitoring and testing	§2475
	Group 2 transfer rack	
	Halogenated Group 1 transfer racks for which a combustion device is used to control organic HAP emissions	§2475

Identification	Category	Rule Citation from 40 CFR 63
Equipment Leaks		
Flow Diagram Point F (See Figure B-2)	Equipment in OHAP service complying with 40 CFR 63 Subpart H.	§2480(a)
Not Applicable	Equipment in OHAP service complying with 40 CFR 63 Subpart UU.	§2480(a)
	Equipment in OHAP service complying with 40 CFR 63 Subpart H or Subpart UU.	§2480(a)
	Equipment in OHAP service complying with 40 CFR 63 Subpart F.	§2480(a)
Process Wastewater		
Not Applicable	Group 1 wastewater stream	§2485(c), (n), §132-§148
Underflow from Scrubber CHC-13 at the Hydrolysis Operation (See Figure B-2)	Group 2 wastewater stream	§2485
Not Applicable	Standards for waste management units managing Group 1 wastewater stream or residuals removed from Group 1 streams	§2485(d)
	Liquid streams in open systems	§2485(l), §149
Emissions Averaging		
Not Applicable	Comply with the emissions averaging plan for selected emission points	§2500, §150
Recordkeeping and Reporting		
MON Subpart FFFF points as applicable	Recordkeeping and reporting applicable MON emission points	§2520, §2525

MON Overlap Provisions - 40 CFR 63 Subpart FFFF with 40 CFR 60 NSPS Provisions
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-01

Identification	MON Category	Overlap	Compliance Requirement	Rule Citation from 40 CFR 63
Not Applicable	Group 1 MON Batch Process Vent	MCPU containing batch process vent is also part of a HON CPU	Comply with MON for batch vent and HON for all other HON equipment.	§2535(a)(1)
Not Applicable	MON Group 1 Process Vent	NSPS Subpart DDD	Comply with MON Group 1 process vent provisions, but must apply to TOC, not just HAP.	§2535(h)
Columns DCC-80/DCC-90, Column DCC-70 & Column DCC-30		NSPS Subpart III		
Not Applicable		NSPS Subpart NNN		
Not Applicable	Group 2 Process Vent	NSPS Subpart RRR	Comply with MON Group 2 process vent provisions, but must apply to TOC, not just HAP	§2535(h)
Not Applicable		NSPS Subpart DDD		
		NSPS Subpart III		
		NSPS Subpart NNN		
Not Applicable	MON equipment subject to leak detection and repair	RCRA Part 264 Subpart BB or Part 265 Subpart BB	Comply with MON Leak Detection and Repair, OR	§2535(b)(2)
			May comply with recordkeeping and reporting requirements in RCRA to the extent that MON requirements are duplicated	
Flow Diagram Point F (See Figure B-2)		NSPS Subpart VV or NESHAP (Part 61) Subpart V	Comply with MON Leak Detection and Repair provisions, but must apply to TOC, not just HAP	§2535(k)
Not Applicable	MON Group 1 Tank	NSPS Subpart Kb	Comply with MON	§2535(c)
		NESHAP (Part 61) Subpart Y		

Identification	MON Category	Overlap	Compliance Requirement	Rule Citation from 40 CFR 63
Not Applicable	MON Group 2 Wastewater	NESHAP (Part 61) Subpart FF, recordkeeping and reporting only	Comply with MON Group 2 recordkeeping and reporting	§2535(j)
Not Applicable	MON Group 1 Transfer Rack	NESHAP (Part 61) Subpart BB	Comply with MON Group 1 transfer rack provisions	§2535(i)(1)
Not Applicable	MON Group 2 Transfer Rack	NESHAP (Part 61) Subpart BB	Comply with MON Group 1 transfer rack provisions, or continue to comply with BB	§2535(i)(2)(i)
		NESHAP (Part 61) Subpart BB, recordkeeping and reporting only	Comply with MON recordkeeping and reporting requirements for Group 2 Transfer Racks	§2535(i)(2)(ii)
Not Applicable	MON Group 1 Control Device	RCRA Parts 264 or 265 Subpart AA, BB, or CC	May comply with either rule, but must report per §63.2520(e)	§2535(b)(1)
Not Applicable	Offsite Reloading or Cleaning Facility	Subject to any other Subpart of Part 63	Satisfies MON, notify alternate subpart in NOC	§2535(a)(2)

40 CFR Part 60 Subparts Kb, VV, III, NNN & RRR
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-02

Identification	Category	Rule Citation
Subpart Kb - Storage Vessels		
Not Applicable	Storage Vessels storing a VOL having a maximum true vapor pressure less than 76.7 kPa and must meet standards.	40 CFR 60.112b(a)
	Storage Vessels storing a VOL having a maximum true vapor pressure equal to or greater than 76.7 kPa and must meet standards.	40 CFR 60.112b(b)
	Storage Vessels that are not required to meet standards.	40 CFR 60.110b
	Monitoring, recordkeeping, and reporting	40 CFR 60.115b, 60.116b
Subpart VV - Equipment Leaks		
Portions of Flow Diagram Point B (see Figure B-3)	Work practice standards for pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, etc.	40 CFR 60.482, 60.483
Portions of Flow Diagram Point B (see Figure B-3)	Alternative monitoring for equipment in acetic acid service (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, January 23, 2004).*	40 CFR 60.60.13(i)
VV subject points as applicable	Recordkeeping and reporting	40 CFR 60.486, 60.487
Subpart III - Air Oxidation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.612(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.612(b)
	TRE greater than 1.0 but less than or equal to 4.0	40 CFR 60.612(c)
	TRE greater than 4.0	40 CFR 60.610(c)
	Monitoring, recordkeeping, and reporting	40 CFR 60.613, 60.615

Identification	Category	Rule Citation
Subpart NNN - Distillation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.662(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.662(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.662(c)
	TRE greater than 8.0	40 CFR 60.660(c)(4)
Vent A (ARC-40, -90, -100; SVC-10, -20, -30)	Low Flow Exemption	40 CFR 60.660(c)(6)
Not Applicable	Design Capacity Exemption	40 CFR 60.660(c)(5)
NNN subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.663, 60.665
Not Applicable	Alternative monitoring approved for locations of flow indicators (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, March 16, 2004.)*	40 CFR 60.13(i)
Subpart RRR - Reactors		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.702(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.702(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.702(c)
	TRE greater than 8.0	40 CFR 60.700(c)(2)
	Low Flow Exemption	40 CFR 60.700(c)(4)
	Design Capacity Exemption	40 CFR 60.700(c)(3)
	Low Concentration Exemption	40 CFR 60.700(c)(8)
Vent A (ARC-100)	Routed to distillation unit subject to subpart NNN except for a pressure relief valve	40 CFR 60.700(c)(5)
RRR subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.703, 60.705

* See Appendix E of this Title V renewal application for the Alternative Monitoring Plan for equipment in acetic acid service.

40 CFR Part 60 Subparts Kb, VV, III, NNN & RRR
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-03

Identification	Category	Rule Citation
Subpart Kb - Storage Vessels		
Tank SRD-70 (Vent C)* (see Figure B-4)	Storage Vessels storing a VOL having a maximum true vapor pressure less than 76.7 kPa and must meet standards.	40 CFR 60.112b(a)
Not Applicable	Storage Vessels storing a VOL having a maximum true vapor pressure equal to or greater than 76.7 kPa and must meet standards.	40 CFR 60.112b(b)
Tank SRD-40 (Vent C) (see Figure B-4)	Storage Vessels that are not required to meet standards.	40 CFR 60.110b
Kb subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.115b, 60.116b
Subpart VV - Equipment Leaks		
Not Applicable	Work practice standards for pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, etc.	40 CFR 60.482, 60.483
Portions of Flow Diagram Point B (see Figure B-4)	Alternative monitoring for equipment in acetic acid service (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, January 23, 2004)**	40 CFR 60.60.13(i)
VV subject points as applicable	Recordkeeping and reporting	40 CFR 60.486, 60.487
Subpart III - Air Oxidation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.612(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.612(b)
	TRE greater than 1.0 but less than or equal to 4.0	40 CFR 60.612(c)
	TRE greater than 4.0	40 CFR 60.610(c)
III subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.613, 60.615

Identification	Category	Rule Citation
Subpart NNN - Distillation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.662(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.662(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.662(c)
	TRE greater than 8.0	40 CFR 60.660(c)(4)
SRC-10, SRC-42, and SRC-60	Low Flow Exemption	40 CFR 60.660(c)(6)
Not Applicable	Design Capacity Exemption	40 CFR 60.660(c)(5)
NNN subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.663, 60.665
Subpart RRR - Reactors		
SRC-40 and SRC-41***	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.702(a)
Not Applicable	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.702(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.702(c)
	TRE greater than 8.0	40 CFR 60.700(c)(2)
	Low Flow Exemption	40 CFR 60.700(c)(4)
	Design Capacity Exemption	40 CFR 60.700(c)(3)
	Low Concentration Exemption	40 CFR 60.700(c)(8)
	Routed to distillation unit subject to subpart NNN except for a pressure relief valve	40 CFR 60.700(c)(5)
RRR subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.703, 60.705

* See Appendix G of this Title V renewal application, for the operating plan for Tank SRD-70 and also referenced in the current Title V permit.

** See Appendix E of this Title V renewal application for the Alternative Monitoring Plan for equipment in acetic acid service and also referenced in the current Title V permit.

*** See Appendix F of this Title V renewal application for the NSPS RRR alternative monitoring plan and also referenced in the current Title V permit.

**40 CFR Part 60 Subparts Kb, VV, III, NNN & RRR
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-04**

Identification	Category	Rule Citation
Subpart Kb - Storage Vessels		
Not Applicable	Storage Vessels storing a VOL having a maximum true vapor pressure less than 76.7 kPa and must meet standards.	40 CFR 60.112b(a)
	Storage Vessels storing a VOL having a maximum true vapor pressure equal to or greater than 76.7 kPa and must meet standards.	40 CFR 60.112b(b)
Vent A: Tanks ARD-07A, ARD-07B, and ARD-08 (see Figure B-5)	Storage Vessels that are not required to meet standards.	40 CFR 60.110b
Kb subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.115b, 60.116b
Subpart VV - Equipment Leaks		
Portions of equipment in Flow Diagram Point B. (see Figure B-5)	Work practice standards for pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, etc.	40 CFR 60.482, 60.483
Not Applicable	Alternative monitoring for equipment in acetic acid service (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, January 23, 2004).	40 CFR 60.60.13(i)
	Recordkeeping and reporting	40 CFR 60.486, 60.487
Subpart III - Air Oxidation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.612(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.612(b)
	TRE greater than 1.0 but less than or equal to 4.0	40 CFR 60.612(c)
	TRE greater than 4.0	40 CFR 60.610(c)
	Monitoring, recordkeeping, and reporting	40 CFR 60.613, 60.615

Identification	Category	Rule Citation
Subpart NNN - Distillation		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.662(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.662(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.662(c)
	TRE greater than 8.0	40 CFR 60.660(c)(4)
	Low Flow Exemption	40 CFR 60.660(c)(6)
	Design Capacity Exemption	40 CFR 60.660(c)(5)
	Monitoring, recordkeeping, and reporting	40 CFR 60.663, 60.665
	Alternative monitoring approved for locations of flow indicators (letter from Beverly Banister, EPA Region 4, to Barry Stephens, TDAPC, March 16, 2004.)	40 CFR 60.13(i)
Subpart RRR - Reactors		
Not Applicable	TRE less than or equal to 1.0 (Reduce TOC by 98% or to 20 ppmv)	40 CFR 60.702(a)
	TRE less than or equal to 1.0 (Combust in a flare)	40 CFR 60.702(b)
	TRE greater than 1.0 but less than or equal to 8.0	40 CFR 60.702(c)
	TRE greater than 8.0	40 CFR 60.700(c)(2)
	Low Flow Exemption	40 CFR 60.700(c)(4)
	Design Capacity Exemption	40 CFR 60.700(c)(3)
	Low Concentration Exemption	40 CFR 60.700(c)(8)
Vent A (ARC-100) (see Figure B-5)	Routed to distillation unit subject to subpart NNN except for a pressure relief valve	40 CFR 60.700(c)(5)
RRR subject points as applicable	Monitoring, recordkeeping, and reporting	40 CFR 60.703, 60.705

Pursuant to TAPCR 1200-03-09-.02(11)(e)6(i)(II), the Technical Secretary has determined that the requirements of 40 CFR 60 Subpart Kb do not apply to the following tanks: SVD-01, SVD-02, and SVD-04. These vessels were previously included as affected equipment in the Title V

Operating Permit. SVD-02 and SVD-04 are exempt pursuant to §60.111b (“storage tanks”, as defined by Subpart Kb, do not include process vessels). SVD-01 is exempt pursuant to §60.110b(b) (storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kPa).

40 CFR Part 63 Subpart FFFF
Specific Applicability Determinations
Emission Source Reference Number: 82-0510-04

Identification	Category	Rule Citation from 40 CFR 63
Continuous Process Vents		
Not Applicable	Group 1 Continuous Process Vent and Applicable Monitoring	§2455
	Continuous Process vent combined with Group 1 batch vent before control or recovery device	§2455(b)(1)
	Existing Group 2 Process Vents not requiring monitoring: Vents with no recovery device with TRE >1.9, vents with recovery device with TRE >5	§2455
	New Group 2 Continuous Process Vents not requiring monitoring: Vents with no recovery device with TRE >5, vents with recovery device with TRE >8	§2455
	Existing Group 2 Continuous Process Vents requiring monitoring (vents using a recovery device to maintain 1.9 < TRE <= 5).	§2455(c)(1)
	New Group 2 Continuous Process Vents with 5 < TRE <= 8 before recovery devices.	§2455(c)(1)
	Gaseous streams routed to a Fuel Gas System are not process vents and have no applicable requirements under 40 CFR63 Subpart FFFF.	§2550
Process Vents Emitting Hydrogen Halide or Halogen HAPs		
Not Applicable	Process with collective sum of hydrogen halide and hydrogen HAPs < 1,000 lb/year	§2465(b), §1257(d)(2)(i)
	Process with collective sum of hydrogen halide and hydrogen HAPs >= 1,000 lb/year	§2465(c), §994
	New process vents that emit HAP metals	§2465(d)
Batch Process Vents		
Not Applicable	Group 1 process vents and applicable monitoring	§2460
	Group 2 process vents	§2460, §2525(e)
	Process with non-reactive HAP usage < 10,000 lb/year	§2460(b)(7)
	Halogenated Group 1 batch process vents for which a combustion device is used to control organic HAP emissions	§2460

Identification	Category	Rule Citation from 40 CFR 63
Storage Vessels		
Not Applicable	Group 1 storage vessels (storage, surge control, and bottoms receivers) storing a liquid for which the maximum true vapor pressure of organic HAPs > 76.6 kPa (527.9 psi)	§2470, §2450(r), §982
	Group 1 storage vessels (storage, surge control, and bottoms receivers) storing a liquid for which the maximum true vapor pressure of organic HAPs < 76.6 kPa (527.9 psi)	§2470, §2450(r), Subpart WW
	Group 2 Storage Vessels (storage, surge control, and bottoms receivers)	§2470, §2450(r)
	Halogenated Group 1 vessels (storage, surge control, and bottoms receivers) for which a combustion device is used to control organic HAP emissions.	§2470
Transfer Operations		
Not Applicable	Group 1 transfer racks and applicable monitoring and testing	§2475
Flow Diagram Point D (see Figure B-5)	Group 2 transfer rack	
Not Applicable	Halogenated Group 1 transfer racks for which a combustion device is used to control organic HAP emissions	§2475
Equipment Leaks		
Portions of Equipment in Flow Diagram Point D (see Figure B-5)	Equipment in OHAP service complying with 40 CFR 63 Subpart H.	§2480(a)
Not Applicable	Equipment in OHAP service complying with 40 CFR 63 Subpart UU.	§2480(a)
	Equipment in OHAP service complying with 40 CFR 63 Subpart H or Subpart UU.	§2480(a)
	Equipment in OHAP service complying with 40 CFR 63 Subpart F.	§2480(a)
Process Wastewater		
Not Applicable	Group 1 wastewater stream	§2485(c), (n), §132-§148
	Group 2 wastewater stream	§2485
	Standards for waste management units managing Group 1 wastewater stream or residuals removed from Group 1 streams	§2485(d)
	Liquid streams in open systems	§2485(l), §149

Identification	Category	Rule Citation from 40 CFR 63
Emissions Averaging		
Not Applicable	Comply with the emissions averaging plan for selected emission points	§2500, §150
Recordkeeping and Reporting		
MON Subpart FFFF points as applicable	Recordkeeping and reporting applicable MON emission points	§2520, §2525

**MON Overlap Provisions – 40 CFR Part 63 Subpart FFFF with 40 CFR 60 NSPS Provisions
 Specific Applicability Determinations
 Emission Source Reference Number: 82-0510-04**

Identification	MON Category	Overlap	Compliance Requirement	Rule Citation from 40 CFR 63
Not Applicable	Group 1 MON Batch Process Vent	MCPU containing batch process vent is also part of a HON CPU	Comply with MON for batch vent and HON for all other HON equipment.	§2535(a)(1)
	MON Group 1 Process Vent	NSPS Subpart DDD	Comply with MON Group 1 process vent provisions, but must apply to TOC, not just HAP.	§2535(h)
		NSPS Subpart III		
		NSPS Subpart NNN		
		NSPS Subpart RRR		
	MON Group 2 Process Vent	NSPS Subpart DDD	Comply with MON Group 2 process vent provisions, but must apply to TOC, not just HAP	§2535(h)
NSPS Subpart III				
NSPS Subpart NNN				
NSPS Subpart RRR				
Flow Diagram Point D (see Figure B-5)	MON equipment subject to leak detection and repair	RCRA Part 264 Subpart BB or Part 265 Subpart BB	Comply with MON Leak Detection and Repair, OR	§2535(b)(2)
Not Applicable			May comply with recordkeeping and reporting requirements in RCRA to the extent that MON requirements are duplicated	
		NSPS Subpart VV or NESHAP (Part 61) Subpart V	Comply with MON Leak Detection and Repair provisions, but must apply to TOC, not just HAP	§2535(k)

Identification	MON Category	Overlap	Compliance Requirement	Rule Citation from 40 CFR 63
Not Applicable	MON Group 1 Tank	NSPS Subpart Kb	Comply with MON	§2535(c)
		NESHAP (Part 61) Subpart Y		
	MON Group 2 Wastewater	NESHAP (Part 61) Subpart FF, recordkeeping and reporting only	Comply with MON Group 2 recordkeeping and reporting	§2535(j)
Not Applicable	MON Group 1 Transfer Rack	NESHAP (Part 61) Subpart BB	Comply with MON Group 1 transfer rack provisions	§2535(i)(1)
Not Applicable	MON Group 2 Transfer Rack	NESHAP (Part 61) Subpart BB	Comply with MON Group 1 transfer rack provisions, or continue to comply with BB	§2535(i)(2)(i)
		NESHAP (Part 61) Subpart BB, recordkeeping and reporting only	Comply with MON recordkeeping and reporting requirements for Group 2 Transfer Racks	§2535(i)(2)(ii)
Not Applicable	MON Group 1 Control Device	RCRA Parts 264 or 265 Subpart AA, BB, or CC	May comply with either rule, but must report per §63.2520(e)	§2535(b)(1)
Not Applicable	Offsite Reloading or Cleaning Facility	Subject to any other Subpart of Part 63	Satisfies MON, notify alternate subpart in NOC	§2535(a)(2)

Appendix E
NSPS Approved Alternative Monitoring
Plan 40 CFR 60 Subpart VV
Acetic Acid Service

Acetic Acid Service

NSPS VV Alternative Monitoring Plan

(Reference: Approval letter from Beverly Banister, EPA Region 4 to Barry Stephens, TDAPC dated January 23, 2004)

(a) A leak inspection of all equipment in acetic acid service (contains or contacts a process fluid that is at least 10% acetic acid by weight and less than 10% other VOCs by weight) that is not “in heavy liquid service” or “in vacuum service” shall be performed once per calendar quarter, except that pumps shall be inspected weekly. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. “Equipment” includes piping, pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. “In heavy liquid service” means when less than 20 weight percent of the process fluid consists of air contaminants having pure component vapor pressures greater than 0.044 psia at 68 degrees F, and the process fluid is not in the gaseous state at operating conditions. “In vacuum service” means equipment that is operating at an internal pressure which is at least

0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is in air contaminant service less than 300 hours in a calendar quarter is exempt from this inspection for that quarter.

(b) When a leak is detected, an initial attempt at repair shall be made no later than 5 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 15 calendar days after detection of each leak, except as provided in paragraph (c) below.

(c) (1) Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.

(3) Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(5) Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

(d) Recordkeeping Requirements

(1) Records must be maintained that identify piping systems or process areas subject to this plan.

(2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.

(3) When a leak is detected during the quarterly inspection, the following information shall be recorded:

(i) Component identifier or description of location and operator name, initials, or identification number.

(ii) The date the leak was detected.

(iii) The date the initial attempt at repair is made.

(iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a).

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak.

Appendix F
NSPS Approved Alternative Monitoring
Plan 40 CFR 60 Subpart RRR
§60.702(a)

Alternative Monitoring for NSPS RRR

PES B-441-2, Vent C

40 CFR 60.702(a): Reduce TOC emissions by 98 weight-percent

Control Device Parameter to be Monitored to Demonstrate Proper Operation	Inlet Scrubbing Water Flow rate: > 1.0 GPM
Monitoring Frequency	Continuous
Compliance Demonstration	3 Hour Moving Average

Introduction:

According to 40 CFR 60.703(e) of subpart NSPS RRR, the owner or operator of an affected facility that seeks to demonstrate compliance with the standards with a control device other than an incinerator, boiler, process heater, or flare shall provide the Administrator with information describing the operation of the control device and the process parameters(s) which would indicate proper operation and maintenance of the device. This submittal serves to provide such information.

Explanation for use of Alternative Emission Control Device (control device other than an incinerator, boiler, process heater, or flare)

Description of the Control Device:

SRC-23 is designed as a dual purpose scrubber. SRC-23 is designed to reduce TOC emissions by 98 wt% and reduce SO₂ emissions to meet state regulations. In order to adequately reduce TOC emissions, only a fresh water feed to the top of the scrubber is needed. However, in order to adequately reduce SO₂ emissions, a 50 wt% caustic solution feed to the top of the scrubber and recirculation of scrubber effluent back to the top of the scrubber are needed. The required 98% TOC removal efficiency will be demonstrated (via performance test) with the scrubber's caustic feed and recirculation system turned off. This effectively reduces the control device to a one-pass scrubber, and will be described as such in the explanation below. The fresh water flow demonstrated during the performance test will be independently maintained with or without fresh caustic and recirculation flow. The presence of the caustic feed and

recirculation loop will only serve to improve the scrubber performance in reducing TOC emitted to the atmosphere.

Monitoring of emissions and operation:

The parameters suggested in 60.703(d)(a) to be monitored to indicate performance for an absorber (serving as a final “recovery” device) are scrubbing liquid temperature or an organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device. Those parameters might be useful for evaluating performance of the absorption devices in which the scrubbing liquid is continually recirculated. However, these parameters are not useful indicators for the one-pass water based scrubber scenario to be used for reduction of TOC at this production facility.

Because scrubbing liquid (fresh water) makes only one-pass through the device, because transfer of TOC components to the scrubbing liquid is not limited by the rate of mass transfer, and because the scrubber was designed to have more stages than necessary, neither the temperature nor the organic concentration level exiting the device are anticipated to be good measures of whether the device is providing the necessary removal efficiency.

Computer modeling for proper operation and maintenance of this device has defined a minimum fresh scrubbing liquid flow rate. Flow instrumentation on the scrubbing water feed line provides a signal to a distributed control system of the actual water flow rate and an alarm when it is below a set minimum level. Modeling indicates if the fresh water flow to the scrubber is above 0.75 gpm, the removal efficiency of TOC is greater than 98%. The scrubber water effluent is treated in the company’s biological wastewater treatment plant.

A performance test will be conducted to verify the removal efficiency of the device and the parameter limit identified in the engineering analysis will be revised as necessary following the performance test.

Appendix G
Operating Plan for Tank SRD-70

OPERATING PLAN FOR TANK SRD-70

1. INTRODUCTION

This operating plan is for storage vessel Tank SRD-70. The vapors from this tank vent through a closed vent system then to a water scrubber, No. SRC-23. Vapors from Tank SRD-70 make up approximately 6.6% of the total flow and 12.4% of the total VOC flow to the scrubber. The remainder of the flow through the Scrubber SRC-23 originates from other equipment in the process.

2. DESCRIPTION OF GAS STREAM WHICH ENTERS CONTROL DEVICE

Typical vapor composition from Tank SRD-70 to Scrubber SRC-23 is the following:

Nitrogen 96.0%

Acetic Acid 4.0%

The maximum total vapor flow from Tank SRD-70 to Scrubber SRC-23 is 17.7 lbs./hr. (0.7 lbs./hr. VOC flow). The maximum total vapor flow from the process to this scrubber is 733 lbs./hr. (6.8 lbs./hr. VOC flow).

3. MANUFACTURER'S DESIGN SPECIFICATIONS FOR CONTROL DEVICE

Scrubber SRC-23 was designed to ASME Section VIII unfired pressure vessel code and has the following specifications:

Maximum Allowable Working Pressure - Full Vacuum and 100 psig.

Maximum Temperature - 350° F

Diameter - 12 in.

Overall Length - 22 ft 11 in.

Packed Bed Length - 15 ft.

Packing Type - No. 1 rings

4. DOCUMENTATION DEMONSTRATING THE CONTROL DEVICE WILL ACHIEVE THE REQUIRED CONTROL EFFICIENCY DURING MAXIMUM LOADING CONDITIONS

Scrubber SRC-23 was simulated in Aspen Plus chemical simulation software. Rigorous stage-to-stage calculations were completed in the software via by calculating equilibrium between the vapor and liquid phases and solving energy and material balances on each stage. The scrubber was modeled using the Wilson-Nothnagel equation to calculate liquid activity coefficients and predict vapor phase association model due to the presence of a carboxylic acid.

Based on these calculations, Scrubber SRC-23 will give a minimum 98% VOC removal efficiency under maximum loading conditions. This scrubber was designed to contain six stages and the calculations demonstrate that six stages will provide the desired scrubbing efficiency.

5. A DESCRIPTION OF THE PARAMETERS TO BE MONITORED

The minimum water flow rate to SRC-23 is 1.0 gpm on a 3-hour moving average. The water flow rate to the scrubber will be monitored continuously by the DCS process control computer system. Whenever the water flow rate goes below the desired range, operations technicians will take necessary corrective action. Records demonstrating the 3-hour moving average will be maintained.

To ensure proper operation and maintenance of the scrubber and to minimize emissions, emissions from the storage vessel may be diverted from the scrubber for up to three days per occurrence to allow for inspections, cleaning, maintenance, or minor modifications required for safe operation provided the following applicable conditions are met:

(A) Upward level movement of liquid within the vessel is restricted to ten percent of the vessel height during the period in which the emissions are diverted from the scrubber, or

(B) Emissions of air contaminants due to working losses and inert gas purge losses are restricted to 100 pounds per day as determined by standard engineering estimation methods during the period in which the emissions are diverted from the scrubber.

Emissions occurring during the period of time the emissions are diverted from the scrubber shall not be considered excess emissions.

All records described above will be kept for a period of not less than five years.

6. EXPLANATION OF THE CRITERIA USED FOR SELECTION OF PARAMETERS

Water flow rate to the scrubber is the single critical factor involved in assuring that the scrubber obtains the desired VOC removal efficiency.