Clark
Cowlitz
Lewis
Skamania
Wahkiakum

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294 • Vancouver, WA 98682-2322
(360) 574-3058 • Fax: (360) 576-0925
www.swcleanair.org

August 24, 2010

Christopher Wrobel
Environmental, Health, Safety & Security Manager
Emerald Kalama Chemical, LLC
1296 Third St NW
Kalama, WA 98625

Re: Administrative Amendments to Air Operating Permit SW99-10-R1

Dear Mr. Wrobel:

The Southwest Clean Air Agency (SWCAA) is issuing an administrative amendment to Title V Air Operating Permit SW99-10-R1 under authority of Washington Administrative Code 173-401-720 in order to correct typographical errors and make minor clarifications. The Permit number will be changed to SW99-10-R1A to reflect the amendment. The following changes were incorporated:

TITLE V PERMIT

- Added Permit Renewal Application due date on cover sheet;
- Added the definition of PTE;
- *Section II: Regulatory Basis table.* Removed Reference to SWCAA 400-111 and SWCAA 400-113 as they are not directly applicable to the facility. SWCAA 400-110 specifies the requirements for the new source review process, which includes additional requirements based on whether the source is located in a maintenance plan area (SWCAA 400-111), a non-attainment area (SWCAA 400-112) or an attainment area (SWCAA 400-113). The only directly applicable regulation is SWCAA 400-110, so references to the other regulations were removed. Also removed duplicate entries from minor NSR program table;
- *Section IV: Permit Provisions*
  - Requirement P5 Insignificant Emission Unit was renumbered to P3;
  - Requirement P9 was removed as it was located in the wrong section (it should be in Section V) and was a repeat of requirement G8;
  - The requirements under this section were renumbered accordingly; and
- *Section V: General Terms and Conditions*
  - Section G8 was split into three requirements for clarity. The first requirement for Permit Renewal was left as requirement G8. The second requirement for Permit Expiration and the third requirement for Permit Revocation were moved into the Permit Provisions section. The language was not changed in any of the

requirements. The original requirement was split for clarity. The subsequent requirements under this section were renumbered accordingly; and

- Typographical errors were corrected:
  - Req-038 should refer to ADP 09-2885 Condition 85;
  - Req-180 omitted the language from the originating permit term and should include "as a 12-month rolling average;"
  - Req-261 had the incorrect unit for the limit, which should be "gph" instead of "gpm;" and
  - Req-294 had the incorrect unit for the limit, which should be "lb/hr," instead of "lb/MMBtu;" and

- *Appendices.* Several appendices were from earlier drafts and were not reordered properly. There references to specific appendices within the Title V Permit did not change; however, some of the appendices were in the incorrect order or referred to an incorrect appendix.

TITLE V BASIS STATEMENT

- *Section I: General Information and Certification.* A clarification statement for all pollutants for which the facility is major was added in the first paragraph. In addition, a table of the potential to emit for criteria air pollutants and hazardous air pollutants was added.

Copies of the final amended Title V Air Operating Permit SW99-10-R1A and Title V Basis Statement are enclosed with this letter. In addition, copies will be available on SWCAA's website under the Permits section at http://www.swcleanair.org. If you have any questions or comments, please contact me at (360) 574-3058 ext. 127.

Sincerely,

John St.Clair
Air Quality Engineer

Enclosures: Title V Air Operating Permit SW99-10-R1A and Title V Basis Statement

Cc: Nancy Helm, Manager; Federal and Delegated Air Programs
US EPA Region 10, Office of Air Waste and Toxics
1200 6th Avenue, MS AWT-107
Seattle, WA 98101

Emerald Kalama Chemical, LLC

Title V Air Operating Permit

Issued: August 24, 2010

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294
Vancouver, WA 98682-2322
Telephone: (360) 574-3058

AIR OPERATING PERMIT #:	SW99-10-R1A

ISSUED TO:	Emerald Kalama Chemical, LLC 1296 3rd St NW Kalama, WA 98625	PLANT SITE:	Emerald Kalama Chemical, LLC 1296 3rd St NW Kalama, WA 98625

NATURE OF BUSINESS:	Synthetic Organic Chemical Manufacturing
SIC CODE:	2869 (NAICS 325199)
AIRS NUMBER:	53-015-00009
EFFECTIVE DATE:	July 9, 2010
EXPIRATION DATE:	July 9, 2015
RENEWAL APPLICATION DUE DATE:	January 9, 2015

PERMIT ENGINEER:

John St.Clair — 8/24/2010

John St.Clair, Air Quality Engineer — Date

Paul T. Mairose — 8/24/10

Paul T. Mairose, Chief Engineer — Date

Robert D. Elliott — 8/24/2010

Robert D. Elliott, Executive Director — Date

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APPENDICES

I. ABBREVIATIONS AND DEFINITIONS

% w/w .....Percent by weight; the mass of the substance as a percentage of the total mass

µg .....Microgram (10^{-6} gram)

µm .....Micrometer (10^{-6} meter)

acfm.....Actual standard cubic foot per minute

ADP.....Air Discharge Permit

AIRS .....Aerometric Information Retrieval Service

ANTS .....Anaerobic Treatment System

AOP.....Air Operating Permit

ASME .....American Society of Mechanical Engineers

ASTM .....American Society for Testing and Materials

AWFCO .....Automatic Waste Feed Cutoff

BACT.....Best Available Control Technology

BIF .....Boiler and Industrial Furnace

BIOX.....Biological oxidation

BOB .....Benzyl benzoate

Btu.....British thermal unit

CAM .....Compliance Assurance Monitoring

CEMS.....Continuous Emission Monitoring System

cfh .....Cubic feet per hour

cfm .....Cubic feet per minute

CFR.....Code of Federal Regulations

CI.....Compression Ignition

CISWI .....Commercial and Industrial Solid Waste Incineration Units

CMS .....Continuous Monitoring System

CO .....Carbon Monoxide

CO_2.....Carbon Dioxide

CPMS.....Continuous Parameter Monitoring System

CPT .....Comprehensive Performance Test

DCS.....Distributed Control System

DRE.....Destruction Resource Effectiveness

dscfm.....Dry standard cubic foot per minute

dscm .....Dry standard cubic meter

EKC.....Emerald Kalama Chemical

EPA .....Environmental Protection Agency

ESV .....Emergency Safety Vent

EU .....Emission Unit

FAP .....Feedstream Analysis Plan

FCAA.....Federal Clean Air Act

FID .....Flame Ionization Detector (Gas chromatography)

FIF.....Fragrance Industrial Facility

gph.....Gallons per hour

gpm .....Gallons per minute

gpy.....Gallons per year

gr/dscf .....Grains per dry standard cubic foot

HAP.....Hazardous Air Pollutant

HCA .....Hexyl Cinnamic Aldehyde

HMCA.....Hydrogenated methyl cinnamic aldehyde

HON.....Hazardous Organic NESHAP

hp-hr.....Horsepower hour

IBA.....Industrial (grade) Benzoic Acid

IEU.....Insignificant Emission Unit

iwc.....Inches water column

KCI.....Kalama Chemical, Inc.

KFC.....Kalama Fragrance Column

kPa.....Kilopascals

lb/hr.....Pounds per hour

lb/yr.....Pounds per year
LVM.....Low Volatility Metal
MACT.....Maximum Achievable Control Technology
MCA .....Methyl Cinnamic Aldehyde
mg .....Milligram (10^{-3} gram)
Mg/yr.....Megagram per year, equivalent to metric ton per year
MGD .....Million Gallons per Day
MGY .....Million Gallons per Year
mm Hg .....Millimeters of Mercury
MMBtu.....Million Btu
MMcf .....Million cubic feet
MMgal.....Million gallons
MPS.....Multi-Purpose System
MSDS.....Material Safety Data Sheet
NAICS.....North American Industry Classification System
NAICS.....North American Industry Classification System
NESHAP .....National Emission Standard for Hazardous Air Pollutants
ng.....Nanogram (10^{-9} gram)
NOC .....Notification of Compliance
NO_x .....Oxides of Nitrogen
NSPS .....New Source Performance Standard
O_2 .....Oxygen
OA.....Order of Approval (equivalent to an ADP)
OLD .....Organic Liquid Distribution
P&ID .....Process and Instrumentation Diagram
PID .....Photoionization Device
PM.....Particulate Matter
PM_{10} .....PM with an aerodynamic diameter of less than 10 microns
$PM_{2.5}$ .....PM with an aerodynamic diameter of less than 2.5 microns
PMC .....Performance Material Column
POHC.....Principle Organic Hazardous Constituent
ppm .....Parts per million
ppm_v .....Parts per million, volume basis
ppm_vd .....Parts per million, dry volume basis
ppm_vw .....Parts per million, wet volume basis
psia .....Pounds per square inch, absolute
psig.....Pounds per square inch, gauge
PTE .....Potential to Emit
RACT.....Reasonably Available Control Technology
RATA.....Relative Accuracy Test Audit
RCRA.....Resource Conservation and Recovery Act
RCW .....Revised Code of Washington
RICE .....Reciprocating Internal Combustion Engine
RTO.....Regenerative Thermal Oxidizer
scfh.....Standard cubic foot per hour
scfm.....Standard cubic foot per minute
SDU.....Specialty Distillation Unit
SIC .....Standard Industry Classification
SIP.....State Implementation Plan
SO_2 .....Sulfur Dioxide
SOCMI.....Synthetic Organic Chemical Manufacturing Industry
SQER .....Small Quantity Emission Rate
SSM.....Startup, Shutdown, and Malfunction
SSMP .....Startup, Shutdown, and Malfunction Plan

Standard .....Temperature of 20°C (68°F) and pressure of 29.92" (760 mm) of mercury as per SWCAA 400-030(113)

SVM.....Semi-Volatile Metal

SWCAA .....Southwest Clean Air Agency

TAP .....Toxic Air Pollutant per WAC 173-460

TBA.....Technical (grade) Benzoic Acid

TEQ.....Toxicity Equivalence Quotient

tpy .....Tons per year

TRE.....Total Resource Effectiveness

TVP.....True Vapor Pressure

VOC .....Volatile Organic Compounds

VOL .....Volatile Organic Liquid

WAC .....Washington Administrative Code

WDOE.....Washington Department of Ecology

Terms not otherwise defined in this permit have the meaning assigned to them in the referenced regulations.

II. REGULATORY BASIS

This Air Operating Permit (AOP) is authorized under the procedures established in WAC 173-401 and Title V of the 1990 Federal Clean Air Act Amendments. The terms and conditions of this Permit describe the emissions limitations, operating requirements, ambient monitoring, recordkeeping requirements, and reporting frequencies for the permitted source.

Permit terms and conditions are divided into the following categories: General Terms and Conditions, Operating Terms and Conditions, Monitoring Terms and Conditions, Recordkeeping Terms and Conditions, and Reporting Terms and Conditions. As used in this permit, there is no distinction between "terms" and "conditions." As such, "condition" shall mean the same as "terms and conditions" as referred to in Title V of the 1990 Federal Clean Air Act Amendments. The conditions required under this permit are determined necessary to assure and provide for certification of compliance with applicable local, state, and federal air pollution regulations and standards.

A comprehensive list of the local, state, and federal air pollution requirements applicable to emissions units and other air pollution sources located at the Permittee's facility is provided in Sections V through X. These requirements were determined applicable based on the equipment specifications and regulatory history of each emissions unit as described in the Basis Statement for this permit. These requirements are drawn from numerous regulations date of each requirement generally coincides with the most recent rulemaking activity. In some cases, there are multiple effective dates that reflect differences in federal versus state/local applicability. This situation is most notable with requirements that are in the Washington SIP. To clarify which version of a requirement is applicable to the facility, the effective dates of applicable requirements are presented in the following table.

Federal Regulations	**SIP Federal Effective Date**	**State/Local Effective Date**
40 CFR 51	—	7/1/2009
40 CFR 52	—	7/1/2009
40 CFR 60	—	7/1/2009
40 CFR 61	—	7/1/2009
40 CFR 63	—	7/1/2009
40 CFR 68	—	4/9/2004

State Regulations	**SIP Federal Effective Date**	**State/Local Effective Date**
WAC 173-400-171	9/20/1993	5/20/2009
WAC 173-400-700	—	5/20/2009
WAC 173-400-710	—	5/20/2009
WAC 173-400-720	—	5/20/2009
WAC 173-401	—	10/17/2002
WAC 173-425	10/18/1990	4/13/2000
WAC 173-460	—	2/14/1994
WAC 173-490	3/22/1991	2/2/1998

	SIP Federal Effective Date	State/Local Effective Date
Local Regulations		
SWCAA 400-040(1)(a)&(b)	9/21/1995	11/15/2009
SWCAA 400-040(2)	—	11/15/2009
SWCAA 400-040(3)(a)	9/21/1995	11/15/2009
SWCAA 400-040(4)	—	11/15/2009
SWCAA 400-040(5)	9/21/1995	11/15/2009
SWCAA 400-040(6)	9/21/1995	11/15/2009
SWCAA 400-040(7)	9/21/1995	11/15/2009
SWCAA 400-040(8)(a)	9/21/1995	11/15/2009
SWCAA 400-050(1)&(3)	9/21/1995	11/15/2009
SWCAA 400-050(2)	9/21/1995	11/15/2009
SWCAA 400-052	9/21/1995	11/15/2009
SWCAA 400-060	9/21/1995	11/15/2009
SWCAA 400-070	9/21/1995	11/15/2009
SWCAA 400-075	—	11/15/2009
SWCAA 400-081	9/21/1995	11/15/2009
SWCAA 400-091	9/21/1995	11/15/2009
SWCAA 400-100(1)	9/21/1995	11/15/2009
SWCAA 400-101	11/21/1996	11/15/2009
SWCAA 400-105	9/21/1995	11/15/2009
SWCAA 400-107	9/21/1995	11/15/2009
SWCAA 400-110	11/21/1996	11/15/2009
SWCAA 400-114	11/21/1996	11/15/2009
SWCAA 400-115	—	11/15/2009
SWCAA 400-120	—	11/15/2009
SWCAA 400-141	—	11/15/2009
SWCAA 400-151	9/21/1995	11/15/2009
SWCAA 400-171	9/21/1995	11/15/2009
SWCAA 400-270	9/21/1995	11/15/2009
SWCAA 425	—	8/1/2002
SWCAA 476	—	3/18/2001

	SIP Federal Effective Date	Local Effective Date
Minor NSR Permits		
OA 94-1670R1	—	9/19/1995
OA 96-1865	—	8/19/1996
OA 95-1799R1	—	12/19/1996
OA 97-2078	—	2/19/1998
OA 99-2202	—	4/19/1999
OA 99-2233	—	1/20/2001
OA 01-2389	—	10/20/2001
OA 01-2402	—	1/20/2002
OA 00-2274R3	—	6/20/2002
OA 96-1864R1	—	9/20/2002

	SIP Federal Effective Date	Local Effective Date
Minor NSR Permits		
OA 00-2270R2	—	12/20/2002
ADP 07-2720	—	5/8/2007
ADP 09-2885	—	9/15/2009

For specific subparts of 40 CFR 60, 40 CFR 61, or 40 CFR 63 for which SWCAA has not been delegated by EPA, all monitoring, reporting, or recordkeeping that is required to be sent to the EPA Administrator shall be sent to both SWCAA and the EPA Administrator. Unless otherwise specified in the delegation agreement, once specific subparts of 40 CFR 60, 40 CFR 61, or 40 CFR 63 have been delegated to SWCAA by EPA, all monitoring, reporting, or recordkeeping that is required to be sent to the EPA Administrator shall be only sent to SWCAA.

III. EMISSION UNIT (EU) IDENTIFICATION

New EU#	Generating Equipment	Emission Control
Toluene Storage Tanks		
EU-01	Tanks T-42, T-70, and T-71	Glycol Chillers and Vent Header System
EU-02	Tanks T-42, T-70, and T-71, Bypass Vent Header System	Glycol Chillers
EU-03	Tanks T-42, T-70, and T-71, Bypass Glycol Chillers and Vent Header System	None
Combustion Units		
EU-04	Hot Oil Heater U-1	None
EU-05	Steam Boiler U-2	1) Baghouse F-13; 2) Baghouse F-14; or 3) None
EU-06	Steam Boiler U-3	1) Baghouse F-13; or 2) None
EU-07	Steam Boiler U-7	1) Baghouse F-14; or 2) None
EU-08	Steam Boiler U-9	Flue Gas Recirculation
EU-09	Steam Boiler U-10	None
EU-10	Steam Boiler U-11	None
EU-11	Hot Oil Heater U-12	None
EU-12	Hot Oil Heater U-14	Low-NO_x Burner
EU-13	Steam Boiler U-15	Low-NO_x Burner
EU-14	Hot Oil Heater U-16	Low NO_x-Burner
EU-15	Steam Boiler U-17	Low-NO_x Burner
EU-16	Temporary Engines	None
EU-17	Emergency Generator Engine	None
EU-18	Emergency Fire Water Pump	None
Benzoic Acid and Benzaldehyde Production		
EU-19	Vent Header System	1) Carbon Beds T-120A/T-120B and RTO X-100 or 2) Carbon Beds T-180/T-181and RTO X-150
EU-20	Vent Header System, bypass RTOs	1) Carbon Beds T-120A/T-120B; or 2) Carbon Beds T-180/T-181
EU-21	Vent Header System, bypass carbon beds and RTOs	None
EU-22	Toluene Oxidizer R-101	Vent Header System
EU-23	Toluene Oxidizer R-151	Vent Header System
EU-24	Benzoic Acid Chipper	Baghouse
EU-25	Tank T-54	River Water Heat Exchanger
EU-26	Tanks T-61, T-62, T-64, and T-65	Scrubber V-61

New EU#	Generating Equipment	Emission Control
EU-27	Tank T-313	T-313 Scrubber
EU-28	Tank T-313A	Vent Header System
Fragrance and Specialty Plants		
EU-29	Batch Distillation Column C-1101 (SDU Column)	Condenser E-1111 and Vent Condenser E-1112
EU-30	Batch Distillation Column C-1151 (FIF Column)	1) Condenser E-1153 and Vent Condenser E-1156; or 2) Condenser E-1153, Vent Condenser E-1156, and Scrubber C-1265
EU-31	Batch Distillation Column C-1181 (KFC Column)	Condenser E-1183 and Vent Condenser E-1184
EU-32	Batch Distillation Column C-1191 (MPS Column)	Condenser E-1193 and Vent Condenser E-1196
EU-33	Batch Distillation Column C-1211 (SDU Column)	Condenser E-1213 and Vent Condenser E-1214
EU-34	Batch Reactor R-1101	1) Condenser E-1100A and seal pot; or 2) Condenser E-1100A and FIF Scrubber C-1180
EU-35	Batch Reactor R-1141	1) Condenser E-1141 and seal pot; 2) Condenser E-1141 and FIF Scrubber C-1180; or 3) Condenser E-1141 and Scrubber C-1265
EU-36	Batch Reactor R-1171	1) Condenser E-1171 and Chilled Water Condenser E-1173; 2) Condenser E-1171, Chilled Water Condenser E-1173, and FIF Scrubber C-1180; or 3) Reflux Column C-1171 (used as a scrubber), Condenser E-1171, and Chilled Water Condenser E-1173
EU-37	Continuous Tube Reactor R-2150	Vent Condenser E-2154
EU-38	Tanks T-1213 and T-1216	Conservation/Emergency Vents
EU-39	Tank T-1115	1) Scrubber C-1265 (when storing methanol); 2) Seal Pot and Conservation/Emergency Vents (when not storing methanol)
EU-40	Tank T-1144	Tank T-1146 and FIF Scrubber C-1180
EU-41	Batch Distillation Column C-8502	Condenser E-8502 and Vent Condenser E-8504
EU-42	Batch Reactor R-8501	Reactor cooled with cooling tower water
EU-43	Batch Reactor R-8502	Seal pot

New EU#	Generating Equipment	Emission Control
EU-44	Batch Reactor R-8521	Reactor cooled with cooling tower water (benzyl alcohol and Liilence™ production)
EU-45	Continuous Distillation Column C-801	Condenser E-805
EU-46	Reactor R-801	Heat Exchangers E-806A/E-806B and Condensers E-812A/E-812B
Hexyl Cinnamic Aldehyde (HCA) Plant		
EU-47	Batch Distillation Column V-1270	1) Condenser E-1271, Chilled Water Vent Condenser E-1273, and Scrubber C-1265; or 2) Condenser E-1271 and Chilled Water Vent Condenser E-1273
EU-48	Continuous Tube Reactor R-1250A	Vent Condenser E-1254
EU-49	Batch Reactor R-1260	Condenser E-1260 and Scrubber C-1265
EU-50	Crude HCA Distillation Column C-1280	Condenser E-1281 and Scrubber C-1265
EU-51	Aldehyde Distillation Column C-1290	Column Condenser E-1291 and Decant Tank Condenser E-1299
EU-52	Tank T-1121	Scrubber C-1265
EU-53	Tank T-1263	Scrubber C-1265
Benzoate Plant		
EU-54	Benzoate Dryer D-901	Scrubber C-901
EU-55	Benzoate Dryer D-902	Scrubber C-902A
EU-56	Benzoate Dryer D-903	Scrubber C-901
EU-57	Benzoate Dryer D-904	Scrubber C-904
EU-58	Benzoate Dryer D-905	Scrubber C-905
EU-59	Benzoate Dryer D-906	Scrubber C-906
EU-60	Benzoate Dryer D-907	Scrubber C-907
EU-61	Benzoate Dryer D-908	Scrubber C-907
EU-62	Benzoate Dryer D-909	Scrubber C-909
EU-63	Benzoate Fluidized Bed Extruder	Baghouse
EU-64	Benzoate Pneumatic Conveyors X-932, X-936, X-937, X-950, X-958, and X-960	Cartridge Filters
EU-65	Benzoate Plant, Fugitives	Scrubber C-920
Plasticizer Plant		
EU-66	Plasticizer Reactor R-8621	Refrigerated Chiller E-8623
EU-67	Plasticizer Reactor R-8601A	Refrigerated Chiller E-8603
Wastewater Treatment		
EU-68	Aerobic Wastewater Treatment System	None
EU-69	Anaerobic Wastewater Treatment System	Flare X-86B
EU-70	Anaerobic Wastewater Treatment System, bypass flare	None

New EU#	Generating Equipment	Emission Control
EU-71	Tanks T-104, T-141, T-164, and T-182	Vent Header System
EU-72	Tanks T-21B and T-21D	Non-regenerative Activated Carbon
Benzene Transfer Operations		
EU-73	Benzene Transfer Rack	Non-regenerative Activated Carbon
Miscellaneous Storage Tanks		
EU-74	Miscellaneous Tanks, Not Elsewhere Classified, Intermediates Plant	Conservation/Emergency Vents
EU-75	Miscellaneous Tanks, Not Elsewhere Classified, Fragrance and Specialty Plants	Conservation/Emergency Vents
EU-76	Miscellaneous Tanks, Not Elsewhere Classified, Benzoate Plant	Conservation/Emergency Vents
EU-77	Miscellaneous Tanks, Not Elsewhere Classified, Wastewater Treatment	Conservation/Emergency Vents

IV. PERMIT PROVISIONS

P1. Credible Evidence

40 CFR 51.12
40 CFR 51.212
40 CFR 52.33
40 CFR 60.11
40 CFR 61.12

For the purposes of submitting compliance certifications or establishing whether a violation of any term or condition of this Permit has occurred or is occurring, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the Permittee would have been in compliance with a specific term or condition if the appropriate performance or compliance test or procedure would have been performed.

P2. Confidentiality of Records and Information

WAC 173-401-500(5)
WAC 173-401-620(2)(e)
SWCAA 400-270

The Permittee is responsible for clearly identifying information that is considered proprietary and confidential prior to submittal to SWCAA. Requests for proprietary and confidential information shall be released only after legal opinion by SWCAA's legal counsel, and notice to the Permittee of the intent to release or deny the release of information [SWCAA 400-270].

In the case where the Permittee has submitted information to SWCAA under a claim of confidentiality, SWCAA may also require the source to submit a copy of such information directly to the EPA Administrator [WAC 173-401-500(5)].

Upon request, the Permittee shall also furnish to the permitting authority copies of records required to be kept by the Permittee or, for information claimed to be confidential, the Permittee may furnish such records directly to the EPA Administrator along with a claim of confidentiality. Permitting authorities shall maintain confidentiality of such information in accordance with Revised Code of Washington (RCW) 70.94.205 [WAC 173-620(2)(e)].

P5. Insignificant Emission Unit – Permit Revision

WAC 173-401-530(6)

Any emission unit or activity that qualifies as insignificant solely on the basis of provisions in WAC 173-401-530(1)(a) shall not exceed the emissions thresholds specified in WAC 173-401-530(4) until this permit is modified pursuant to WAC 173-401-725.

P3. Permit Duration

WAC 173-401-610

This permit shall be valid for a fixed term of five (5) years.

P4. Standard Conditions

WAC 173-401-620(2)

a. *Duty to comply.* The Permittee must comply with all conditions of this Chapter 401 permit. Any permit noncompliance constitutes a violation of RCW 70.94 and, for federally enforceable provisions, a violation of the FCAA. Such violations are grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

b. *Need to halt or reduce activity not a defense.* It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

c. *Permit actions.* This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, a notification of planned changes or anticipated noncompliance does not stay any permit condition.

d. *Property rights.* This permit does not convey any property rights of any sort, or any exclusive privilege.

e. *Duty to provide information.* The Permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the permitting authority copies of records required to be kept by the Permittee or, for information claimed to be confidential, the Permittee may furnish such records directly to the EPA Administrator along with a claim of confidentiality. Permitting authorities shall maintain confidentiality of such information in accordance with RCW 70.94.205.

f. *Permit fees.* The Permittee shall pay fees in accordance with RCW 70.94.162 as a condition of this Permit in accordance with the permitting authority's fee schedule. Failure to pay fees in a timely fashion shall subject the Permittee to civil and criminal penalties as prescribed in RCW 70.94.430 and 70.94.431.

g. *Emissions trading.* No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.

h. *Severability.* If any provision of this Permit is held to be invalid, all unaffected provisions of the permit shall remain in effect and be enforceable.

i. *Permit appeals.* This permit or any conditions in it may be appealed only by filing an appeal with the Pollution Control Hearings Board and serving it on the permitting authority within thirty (30) days of receipt of the permit pursuant to RCW 43.21B.310. This provision for appeal in this section is separate from and additional to any federal rights to petition and review under FCAA §505(b).

j. *Permit continuation.* This permit and all terms and conditions contained herein shall not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. An application shield granted pursuant to WAC 173-401-705(2) shall remain in effect until the renewal permit has been issued or denied if a timely and complete application has been submitted.

P6. Federally Enforceable Requirements

WAC 173-401-625

a. All terms and conditions in an AOP, including any provisions designed to limit a source's potential to emit, are enforceable by the EPA Administrator and citizens under the FCAA.
b. Notwithstanding the above, any terms and conditions included in this permit that are not required under the FCAA or under any of its applicable requirements are specifically designated as "State Only" or "Local Only", and are not federally enforceable under the FCAA. Terms and conditions so designated are not subject to the EPA and affected states review requirements of WAC 173-401-700 through WAC 173-401-820.

P7. Permit Shield

WAC 173-401-640

Compliance with the conditions of this Permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided such applicable requirements are included and are specifically identified in this permit. This provision does not apply to any insignificant emissions units or activities designated under WAC 173-401-530. Nothing in this permit shall alter or affect the following:

a. The provisions of FCAA §303 of the FCAA (emergency orders), including the authority of the EPA Administrator under that section;
b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with FCAA §408(a);
d. The ability of EPA to obtain information from a source pursuant to FCAA §114; and
e. The ability of the permitting authority to establish or revise requirements for the use of reasonably available control technology (RACT) as defined in RCW 70.94.030(19).

P8. Emergency Provision

WAC 173-401-645

An "emergency" as defined in WAC 173-401-645(1) shall constitute an affirmative defense to an action brought for noncompliance with technology based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the Permittee can identify the causes(s) of the emergency;
b. The permitted facility was at the time being properly operated;
c. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
d. The Permittee submitted notice of the emergency to the permitting authority within two working days of the time when emission limitations were exceeded due to the emergency or shorter periods of time specified in an applicable requirement. This notice fulfills the requirement of WAC 173-401-615(3)(b) unless the excess emissions represent a potential threat to human health and safety. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

Burden of proof lies with the Permittee.

P9. Permit Expiration
WAC 173-401-710(3)

Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with subsection (1) of this section and WAC 173-401-500. All terms and conditions of the permit shall remain in effect after the permit itself expires if a timely and complete permit application has been submitted.

This permit expires on **July 9, 2015**.

P10. Permit Revocation

WAC 173-401-710(4)

The permitting authority may revoke a permit only upon the request of the Permittee or for cause. The permitting authority shall provide at least thirty days written notice to the Permittee prior to revocation of the permit or denial of a permit renewal application. Such notice shall include an explanation of the basis for the proposed action and afford the Permittee/applicant an opportunity to meet with the permitting authority prior to the authority's final decision. A revocation issued under this section may be issued conditionally with a future effective date and may specify that the revocation will not take effect if the Permittee satisfies the specified conditions before the effective date.

P11. Reopenings for Cause

WAC 173-401-730

This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements become applicable to a major AOP source with a remaining permit term of three (3) or more years. Such a reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to WAC 173-401-620(2)(j);
b. Additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program. Upon approval by the EPA Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit;
c. The permitting authority or EPA Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
d. The EPA Administrator or the permitting authority determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings under this section shall not be initiated before a notice of such intent is provided to the AOP source by the permitting authority. Such notice shall be made at least thirty (30) days in advance of the date that the permit is to be reopened, except that the permitting authority may provide a shorter time period in the case of an emergency.

P12. Excess Emissions **SWCAA 400-107**

The Permittee shall report excess emissions to SWCAA as soon as possible. Excess emissions due to startup or shutdown conditions or due to scheduled maintenance shall be considered unavoidable provided the source reports as required under SWCAA 400-107(1) and adequately demonstrates that the excess emissions could not have been prevented or avoided.

Excess emissions due to upsets shall be considered unavoidable provided that the Permittee reports as soon as possible but no later than forty-eight (48) hours after discovery, and adequately demonstrates that:

a. The event was not caused by poor or inadequate design, operation, or maintenance, or any other reasonably preventable conditions;
b. The event was not of a recurring pattern indicative of inadequate design, operation, or maintenance;
c. The operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action, including slowing or shutting down the emission unit as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded; and
d. The owner or operator(s) actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs, or other relevant evidence.

V. GENERAL TERMS AND CONDITIONS

G1. Asbestos

40 CFR 61 Subpart M (§61.140 et seq)
SWCAA 400-075
SWCAA 476)

The Permittee shall comply with the provisions of SWCAA 476 "Standards for Asbestos Control, Demolition and Renovation" when conducting any renovation, demolition, or asbestos storage activities at the facility.

G2. Chemical Accident Prevention

40 CFR 68

The Permittee shall comply with the requirements of the Chemical Accident Prevention Provisions of 40 CFR 68 no later than the following dates:

a. Three years after the date on which a regulated substance, present above the threshold quantity, is first listed under 40 CFR 61.130; or
b. The date on which a regulated substance is first present above a threshold quantity in a process under 40 CFR 68.10.

G3. Protection of Stratospheric Ozone

40 CFR 82 Subpart B (§82.30 et seq)
40 CFR 82 Subpart F (§82.150 et seq)

The Permittee shall comply with the standards for recycling and emissions reduction as provided in 40 CFR 82 Subpart B (§82.30 et seq) and Subpart F (§82.150 et seq).

G4. Duty to Supplement or Correct Application

WAC 173-401-500(6)

The Permittee, upon becoming aware that relevant facts were omitted or incorrect information was submitted in a permit application, shall promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

G5. Certification

WAC 173-401-520

All application forms, reports, and compliance certifications must be certified by a responsible official. Certification shall state that, based on information and belief formed after reasonable inquiry, the statements, and information contained in the submittal are true, accurate, and complete.

G6. Inspection and Entry

WAC 173-401-630(2)
SWCAA 400-105(3)
SWCAA 400-106(1)(a)

The Permittee shall allow inspection and entry, upon presentation of credentials and other documents as may be required by law, by the permitting authority or an authorized representative to perform the following:

a. Enter upon the Permittee's premises where an AOP source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
d. As authorized by SWCAA 400-105 and the FCAA, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

G7. Schedule of Compliance

WAC 173-401-630(3)

The Permittee shall continue to comply with all applicable requirements with which the source is currently in compliance, and meet on a timely basis any applicable requirements that become effective during the permit term.

G8. Permit Renewal

WAC 173-401-710(1) – 10/17/02

The Permittee shall submit a complete permit renewal application to SWCAA no later than the date established in the permit. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with WAC 173-401-710(1) and WAC 173-401-500. All terms and conditions of the permit shall remain in effect after the permit expires if a timely and complete permit application has been submitted. Operation under the terms and conditions of the expired permit will be allowed until SWCAA takes final action on the renewal application.

A renewal application is due on **July 9, 2014** and a complete renewal application is due no later than **January 9, 2010**.

G9. Transfer of Ownership or Operational Control

WAC 173-401-720

A change in Permittee due to transfer of ownership or operational control of an affected source requires a request for administrative permit amendment as governed by WAC 173-401-720.

G10. Portable Sources

SWCAA 400-110(6)

Portable sources which locate temporarily at the site of AOP sources shall be allowed to operate at the temporary location without filing an Air Discharge Permit application provided that:

a. The source/emission units are registered with SWCAA;
b. The source/emission units have an Air Discharge Permit to operate as a portable source;

c. The owner(s) or operator(s) notifies SWCAA of the intent to operate at the new location at least ten business days prior to starting the operation;
d. The owner(s) or operator(s) supplies sufficient information including production quantities and hours of operation, to enable SWCAA to determine that the operation will comply with the emission standards for a new source, and will not cause a violation of applicable ambient air quality standards and, if in a nonattainment area, will not interfere with scheduled attainment of ambient standards; and
e. The owner(s) and/or resident(s) of immediately adjacent properties shall be notified by the owner(s) or operator(s) of the portable source in writing at least ten (10) business days prior to commencement of operations at the proposed location with copies mailed to SWCAA. Written notification to the adjacent landowners/residents shall be by certified mail with return receipt requested. Such written notification shall include a complete description of the proposed operation, the associated emissions control provisions and equipment, the total estimated project emissions, the name, address and phone number of the person in charge of the operation, and the address and phone number for SWCAA. Written notification shall indicate that all comments shall be directed to SWCAA.

G11. Misrepresentation and Tampering **SWCAA 400-105(6) and (7)**

a. The Permittee shall not make any false material statement, representation, or certification in any form, notice, or report.
b. The Permittee shall not render inaccurate any monitoring device or method required under RCW 70.94, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto.

G12. New Source Review **WAC 173-400-700**
WAC 173-460
SWCAA 400-110
SWCAA 400-141

The Permittee shall not construct or modify a source which is required to be reviewed under WAC 173-400-700, WAC 173-460, SWCAA 400-110, and SWCAA 400-141 without first receiving an approval or permit under such provisions. Portable sources may be exempt from this requirement if they fulfill the criteria described in G10**Error! Reference source not found.**.

G13. Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source **SWCAA 400-114**

Prior to replacing or substantially altering emission control technology or equipment installed at an existing stationary source or emission unit, the Permittee shall file an air discharge permit application with SWCAA. Construction shall not commence on a project subject to review until SWCAA issues a final air discharge permit or other regulatory order. However, any air discharge permit application filed under this section shall be deemed to be approved without conditions if the Agency takes no action within thirty (30) days of receipt of a complete application.

G14. Outdoor Burning **SWCAA 425**

The Permittee is prohibited from conducting outdoor burning except as allowed by SWCAA 425.

V. OPERATING TERMS AND CONDITIONS

The following table lists all federal, state, and/or locally enforceable requirements applicable to the Permittee. The legal authority for each requirement is enclosed in brackets below each requirement. Applicable requirements identified as having "Facilitywide" applicability apply to both emission units (EUs) and insignificant emission units (IEUs). Some of the requirements have been partially adopted into the Washington State Implementation Plan (SIP). Only those parts adopted into the Washington (SIP) are federally enforceable. Requirements which are not required under the FCAA are denoted as state or (Local Only). Monitoring requirements are used to provide a reasonable assurance of compliance with the applicable requirements, and may or may not involve the use of a reference test method. Short-term emissions shall be calculated from the average of three 1-hour test runs unless otherwise stated in the requirement or test method. Annual limits apply on a calendar year basis unless otherwise indicated.

Req. #	Requirements Applicable Facilitywide – General	Emission Point	Monitoring
Req-001	Permittee shall not cause or permit any visible emissions which exceed 20% opacity for more than three (3) minutes, in any 1-hour period except during soot blowing and grate cleaning as provided in SWCAA 400-040. Reference Methods: SWCAA 400 Appendix A Method 9 and 40 CFR 60 Appendix A Method 9 SWCAA 400-040(1)(a) and (b)	Facilitywide	M01
Req-002	Permittee shall not cause or permit fallout of particulate matter (PM) beyond the source's property boundary in sufficient quantity to interfere unreasonably with the use and enjoyment of the property on which the fallout occurs. SWCAA 400-040(2)	Facilitywide	M03 M04
Req-003	Reasonable precautions shall be taken at all times to prevent and minimize fugitive emissions from plant operations. SWCAA 400-040(3)(a) ADP 07-2720 Condition 3 ADP 09-2885 Condition 80	Facilitywide	M03 M04
Req-004	Operations that cause or contribute to odors that unreasonably interfere with any other property owner's use and enjoyment of their property shall use recognized good practice and procedures to reduce those odors to a reasonable minimum. SWCAA 400-040(4) OA 95-1799R1 Condition 19 OA 97-2078 Condition 15 OA 99-2233 Condition 15 OA 99-2202 Condition 22 ADP 07-2720 Condition 4 ADP 09-2885 Condition 81	Facilitywide	M03 M04

Req. #	Requirements Applicable Facilitywide – General	Emission Point	Monitoring
Req-005	Permittee shall not cause or permit emissions detrimental to persons or property. SWCAA 400-040(5)	Facilitywide	M03
Req-006	Permittee shall not cause or permit any emissions unit to emit a gas containing sulfur dioxide (SO_2) in excess of 1000 $ppm_v d$ of SO_2, corrected to 7% O_2 or 12% CO_2 as required by the applicable emission standard for combustion sources, and based on an average of sixty (60) consecutive minutes. Reference Method: 40 CFR 60 Appendix A Method 6 SWCAA 400-040(6)	Facilitywide	M19
Req-007	Permittee shall not cause or permit the installation or use of any means which conceals or masks an emission which would otherwise violate any provisions of SWCAA 400-040. SWCAA 400-040(7)	Facilitywide	N/A
Req-008	Permittee shall take reasonable precautions to prevent emissions of fugitive dust and operate the source to minimize emissions. SWCAA 400-040(8)(a)	Facilitywide	M03 M04
Req-009	Permittee shall not cause or permit emissions of PM from a combustion or incineration emissions unit in excess of 0.1 gr/dscf of exhaust gas corrected to the appropriate oxygen level. Reference Method: 40 CFR 60 Appendix A Method 5 SWCAA 400-050(1) and (3)	Facilitywide	M02 M05
Req-010	Permittee shall not cause or permit emissions of PM from a general process unit in excess of 0.1 gr/dscf of exhaust gas. Reference Method: 40 CFR 60 Appendix A Method 5 SWCAA 400-060	Facilitywide	M02 M05
Req-011	Each pollution control device shall be operated whenever the processing equipment served by that control device is in operation. Control devices shall be operated and maintained in accordance with the manufacturer's specifications. Furthermore, control devices shall be operated in a manner that minimizes emissions. ADP 09-2885 Condition 82	Facilitywide	N/A

Req. #	Requirements Applicable Facilitywide – General	Emission Point	Monitoring
Req-012	Emission units shall be maintained and operated in total and continuous conformity with the conditions specified in the appropriate Order of Approval or Air Discharge Permit. OA 95-1799R1 Condition 21 OA 99-2202 Condition 23 OA 99-2233 Condition 16 OA 01-2389 Condition 21 OA 01-2402 Condition 15 OA 00-2274R3 Condition 13 ADP 09-2885 Condition 83	Facilitywide	N/A
Req-013	The Permittee shall maintain a startup, shutdown, and malfunction plan available on site for review and copying. The startup, shutdown, and malfunction plan shall be consistent with the requirements of 40 CFR 63.6. Superseded copies of the startup, shutdown, and malfunction plan must be maintained on site for a period of five (5) years after the revision of the plan. The Permittee shall submit a copy of the startup, shutdown, and malfunction plan to SWCAA or EPA upon request. The Permittee shall submit a certification statement to SWCAA every six (6) months that certifies that the startup, shutdown, and malfunction plan has been followed at all times or that exceptions have been reported. Any revision to the startup, shutdown, and malfunction plan must be reported with the semiannual report. 40 CFR 63.6(e)(3) 40 CFR 63.105(d) and (e) 40 CFR 63.1206(c)(2) 40 CFR 63.2350(c) SWCAA 400-075 ADP 09-2885 Condition 155	EU-01 EU-02 EU-03 EU-06 EU-19 EU-20 EU-21 EU-22 EU-23	M08
Req-014	No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere or the use of gaseous diluents to achieve compliance with a relevant standard for visible emissions. 40 CFR 63.4(b) SWCAA 400-075	Facilitywide	N/A
Req-015	With the exception of column B-501 and column B-511, vent streams from the distillation columns in the Intermediates Plant shall be routed to the vent header system except during a startup, shutdown, and malfunction event. ADP 09-2885 Condition 100	Facilitywide	N/A

Req. #	Requirements Applicable Facilitywide – HAP Limit	Emission Point	Monitoring
Req-016	Facilitywide emissions of HAPs shall not exceed the following: a. 9.5 tpy of any single hazardous air pollutant as a 12-month rolling total summed monthly; and b. 24.0 tpy of all hazardous air pollutants combined as a 12-month rolling total summed monthly. SWCAA 400-091 ADP 09-2885 Condition 1	Facilitywide	M07
Req-017	Facilitywide emissions of VOC shall not exceed 2.0 tpy combined as a 12-month rolling total summed monthly from any tank not equipped with a control device or equipped only with conservation and emergency vents and storing volatile organic liquids with a true vapor pressure (TVP) greater than 3.5 kPa. ADP 09-2885 Condition 2 – 09-2885	EU-38 EU-74 EU-75 EU-76 EU-77	M07

Req. #	Requirements Applicable Facilitywide – National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry	Emission Point	Monitoring
Req-018	The HAP/VOC concentration increase in cooling water shall be less than 1 ppm from heat exchanger H-107B or heat exchanger H-107B must be operated with the minimum pressure on the cooling water side at least 35 kPa greater than the maximum pressure on the process side. Reference Methods: SW-846 8020, SW-846 8021, SW-846 8240, SW-846 8260, 40 CFR 136 Appendix A Method 602, or Method 624 40 CFR 63.104(a) and (b) SWCAA 400-075	Facilitywide	M14
Req-019	Each piece of equipment in a process unit to which the leak detection requirements apply shall be identified. 40 CFR 63.162(c) SWCAA 400-075	Facilitywide	M11
Req-020	A leaking pump shall be repaired as soon as practicable, but no later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 63.163(c)(3) and 63.171. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.163(c)(1) SWCAA 400-075	Facilitywide	M12
Req-021	A first attempt at repair of pumps shall be made no later than five (5) calendar days after the leak is detected. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.163(c)(2) SWCAA 400-075	Facilitywide	M12
Req-022	If, on a 6-month rolling average, greater than 10% or three of the pumps in a process unit leak, a quality improvement program for pumps shall be implemented. Information regarding pumps and pump seals as required by 40 CFR 63.176(d) shall be collected. Pump performance trials shall be conducted as in 40 CFR 63.176. 40 CFR 63.176 40 CFR 63.163(d)(2) SWCAA 400-075	Facilitywide	M13

Req. #	Requirements Applicable Facilitywide – National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry	Emission Point	Monitoring
Req-023	A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after follow up monitoring if no leaks were discovered during the follow-up monitoring. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.162(f)(1) SWCAA 400-075	Facilitywide	M12
Req-024	Each pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable but no later than five (5) calendar days after the pressure release has occurred. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.165(b)(1) SWCAA 400-075	Facilitywide	M12
Req-025	The sample connection systems shall collect or capture the sample purge for return to the process. 40 CFR 63.166 SWCAA 400-075	Facilitywide	N/A
Req-026	Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 63.162(b) or 40 CFR 63.167(d) and (e). 40 CFR 63.167 SWCAA 400-075	Facilitywide	M10 M12
Req-027	When a leak is detected it shall be repaired as soon as practicable, but no later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 63.171. A first attempt at repair of valves shall be made no later than five (5) calendar days after the leak is detected. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.168(f) SWCAA 400-075	Facilitywide	M12

Req. #	Requirements Applicable Facilitywide – National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry	Emission Point	Monitoring
Req-028	Equipment (40 CFR 63 Subpart H equipment: pumps, values, connectors and agitators in heavy liquid service, instrumentation systems and pressure relief devices in liquid service) shall be monitored within five (5) calendar days using the methodology specified in 40 CFR 63.180(b) or repaired, when visual, audible or olfactory methods identify a potential leak. When a leak is detected it shall be repaired as soon as practicable, but no later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 63.171. A first attempt at repair of pumps shall be made no later than five (5) calendar days after the leak is detected. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.169(a) and (c) SWCAA 400-075	Facilitywide	M12
Req-029	Vent gases from surge control vessels and bottoms receivers shall be routed back to the process or a closed-vent system at all times. 40 CFR 63.170 SWCAA 400-075	Facilitywide	M12
Req-030	If a leak repair is delayed, the Permittee shall document that the repair is technically infeasible without a process unit shutdown, emissions from immediate repair would be greater than the fugitive emissions, or the equipment has been taken out of HAP service. The repair shall occur by the end of the next process shutdown. 40 CFR 63.171 SWCAA 400-075	Facilitywide	M12
Req-031	An initial inspection and an annual inspection for visible, audible or olfactory indications of leaks shall be conducted for closed-vent systems and control devices. A leak over 500 ppm shall be repaired as soon as practicable except as provided in 40 CFR 63.172(i), with the first repair attempt within five (5) days and the repair completed no later than fifteen (15) days following discovery. Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process shutdown or if the owner or operator determines that emission resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.172 SWCAA 400-075	Facilitywide	M12

Req. #	Requirements Applicable Facilitywide – National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry	Emission Point	Monitoring
Req-032	Each agitator shall be inspected using visual methods weekly and instrumental methods monthly. When a leak is detected visually or by an instrument reading of over 10,000 ppm, it shall be repaired as soon as practicable but no later than fifteen (15) calendar days after it is detected, except as provided in 40 CFR 63.171. A first attempt at repair shall be made no later than five (5) calendar days after each leak is detected. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.173 SWCAA 400-075	Facilitywide	M12
Req-033	Connectors in gas/vapor or liquid service shall be inspected using instrument methods at a frequency outlined in 40 CFR 63.174(b)(3). A leak over 500 ppm be repaired as soon as practicable except as provided by 40 CFR 63.171. A first attempt at repair shall be made within five (5) days and the repair completed no later than fifteen (15) days after each leak is detected. Reference Method: 40 CFR 60 Appendix A Method 21 in accordance with 40 CFR 63.180 40 CFR 63.174 SWCAA 400-075	Facilitywide	M12
Req-034	The Permittee shall indicate if they will be using the quality improvement program for valves during the first year of a Phase III monitoring program and yearly thereafter. 40 CFR 63.175 SWCAA 400-075	Facilitywide	M13

Req. #	Requirements for Toluene Storage Tanks (EU-01 through EU-03)	Emission Point	Monitoring
Req-035	Emissions of benzene from storage tanks T-42, T-70, and T-71, combined, when routed through the vent header system, shall not exceed 250 lb/yr as a 12-month rolling total summed monthly. ADP 09-2885 Condition 3		M07 M15 M17
Req-036	Emissions of toluene from storage tanks T-42, T-70, and T-71, combined, when routed through the vent header system, shall not exceed 500 lb/yr as a 12-month rolling total summed monthly. ADP 09-2885 Condition 4		M07 M15 M17
Req-037	Toluene storage tanks T-42, T-70, and T-71 shall be vented to the vent header system at all times, except during a bypass of the vent header system. ADP 09-2885 Condition 84	EU-01	M07 M16 M17
Req-038	During a bypass of the vent header system, VOC emissions shall not exceed 1,000 lb/yr from the toluene storage tanks T-42, T-70, and T-71. Emissions during a vent header system bypass shall be calculated using engineering calculations with the best information available. ADP 09-2885 Condition 85	EU-02 EU-03	M07 M16 M17

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-039	Fuel oil combusted in hot oil heaters U-12, U-14, or boiler U-15 shall not contain greater than 0.5% w/w sulfur content. Reference Method: 40 CFR 60.17 40 CFR 60.42c(d) SWCAA 400-115	EU-11 EU-12 EU-13	M19
Req-040	Permittee shall not cause or permit the installation or use of any means which conceals or masks an emission which would otherwise violate any provisions of 40 CFR 60. 40 CFR 60.12	EU-11 EU-12 EU-13 EU-14	N/A
Req-041	The steam and fuel meters for boiler U-9 shall be calibrated annually. OA 94-1670R1 Appendix A Condition 3(e)	EU-08	M20
Req-042	Emissions of filterable PM (front-half of Method 5 only) to the atmosphere during the combustion of tars (non-fuel oil) in boilers U-2, U-3, or U-7, firing individually or separately, shall not exceed 0.01 gr/dscf, corrected to 7% O_2. Reference Methods: 40 CFR 60 Appendix A Method 5 Order of Approval (OA) 95-1799R1 Condition 17(a)	EU-05 EU-06 EU-07	M02 M25
Req-043	Emissions of filterable and condensable PM combined from each boiler U-2, U-3, and U-7 shall not exceed 7.0 tpy. PM emissions shall be based upon source test results (filterable and condensable PM combined), hours of operation, and type and quantity of fuel consumed. Emissions shall be calculated using emission rates from the most recent source test and the quantity of fuel consumed. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 OA 95-1799R1 Condition 17(b)	EU-05 EU-06 EU-07	M18 M22 M25
Req-044	Permittee shall not cause or permit any visible emissions which exceed 0% opacity for more than three (3) minutes, in any 1-hour period when firing on natural gas. This term applies to hot oil heaters U-1, U-12, U-14, and U-16 and boilers U-2, U-3, U-7, U-9, U-10, U-11, U-15 and U-17. Reference Method: SWCAA 400 Method 9 OA 95-1799R1 Condition 17(c) OA 00-2270R2 Condition 10	EU-04 EU-05 EU-06 EU-07 EU-09 EU-10 EU-11 EU-15	M01 M23 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-045	Visible emissions from boiler U-17, while firing on low-sulfur distillate fuel oil, octanal bottoms, or a combination of fuel oil and octanal bottoms, shall not exceed 10% opacity for more than three (3) minutes in any 1-hour period as determined by SWCAA 400 Appendix A Method 9. Reference Method: SWCAA 400 Appendix A Method 9 OA 00-2270R2 Condition 11	EU-15	M01 M25
Req-046	Permittee shall not cause or permit any visible emission which exceeds 10% opacity for more than three (3) minutes, in any 1-hour period when firing on fuel oil except during soot blowing and grate cleaning as provided in SWCAA 400-040. This term applies to hot oil heaters U-1, U-12, and U-14, and boilers U-2, U-3, U-7, U-10, U-11, U-15 and U-17. Reference Method: SWCAA 400 Appendix A Method 9 OA 95-1799R1 Condition 17(d)	EU-04 EU-05 EU-06 EU-07 EU-09 EU-10 EU-11	M01 M25
Req-047	Emissions of carbon monoxide (CO) from boiler U-10 shall not exceed 2.2 lb/hr as a 1-hour average when fueled on natural gas. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 13	EU-09	M21 M25
Req-048	Emissions of CO from boiler U-11 shall not exceed 2.7 lb/hr when firing on natural gas. Reference Method: 40 CFR 60 Appendix A Method 10 OA 99-2202 Condition 20(e)	EU-10	M21 M25
Req-049	Emissions of CO from hot oil heater U-12 shall not exceed 1.2 lb/hr as a 1-hour average when fueled on natural gas. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 14	EU-11	M21 M25
Req-050	Emissions of CO from hot oil heater U-12 shall not exceed 0.5 lb/hr based on a 1-hour average (average of three 1-hour runs). Reference Method: 40 CFR 60 Appendix A Method 10 ADP 99-2202 Condition 20(f)	EU-11	M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-051	Emissions of CO shall not exceed 3.0 tpy for U-10, 12.0 tpy for U-11, and 2.0 tpy for U-12 when firing on natural gas. Emissions shall be calculated using emission rates from the most recent source test and the quantity of fuel consumed. Reference Method: 40 CFR 60 Appendix A Method 10 OA 95-1799R1 Condition 17(f)	EU-09 EU-10 EU-11	M18 M21 M25
Req-052	Emissions of CO from boiler U-17 shall not exceed 1.2 lb/hr while firing any fuel (natural gas, ≤0.05% w/w sulfur fuel oil, or octanal bottoms). The short-term emission limits are not applicable during boiler tuning or maintenance when changes to boiler operation and emissions are necessary as part of the tuning or maintenance procedure to minimize long-term emissions. Reference Method: 40 CFR 60 Appendix A Method 10 OA 00-2270R2 Condition 4 and 5	EU-15	M06 M21 M25
Req-053	Emissions of CO from boiler U-17 shall not exceed 5.3 tpy, all fuels (natural gas, ≤0.05% w/w sulfur fuel oil, or octanal bottoms) combined and summed monthly as a 12-month rolling monthly total. Reference Method: 40 CFR 60 Appendix A Method 10 OA 00-2270R2 Condition 6	EU-15	M06 M18 M19 M21 M25
Req-054	Emissions of nitrogen oxides (NO_x) from boiler U-10 shall not exceed 2.3 lb/hr as a 1-hour average when fueled on natural gas. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 8	EU-09	M21 M25
Req-055	Emissions of NO_x from boiler U-11 shall not exceed 3.3 lb/hr as a 1-hour average when fueled on natural gas. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 9	EU-10	M21 M25
Req-056	Emissions of NO_x from hot oil heater U-12 shall not exceed 2.0 lb/hr as a 1-hour average when fueled on natural gas. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 10	EU-11	M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-057	Emissions of NO_x shall not exceed 45.0 tpy for hot oil heater U-1, 25.0 tpy for boilers U-2 and U-7 combined, 18.0 tpy for boiler U-3, 8.3 tpy for boiler U-10, 9.9 tpy for boiler U-11, and 6.1 tpy for hot oil heater U-12, summed monthly as a 12-month rolling total. Emissions shall be calculated using emission rates from the most recent source test and the quantity of fuel consumed. Reference Method: 40 CFR 60 Appendix A Method 7E OA 95-1799R1 Condition 17(h)	EU-04 EU-05 EU-06 EU-07 EU-09 EU-10 EU-11	M18 M19 M21 M25
Req-058	Emissions of NO_x from U-17 shall not exceed 1.0 lb/hr while firing on natural gas. The short-term emission limits are not applicable during boiler tuning or maintenance when changes to boiler operation and emissions are necessary as part of the tuning or maintenance procedure to minimize long-term emissions. Reference Method: 40 CFR 60 Appendix A Method 7E OA 00-2270R2 Condition 1 and 5	EU-15	M06 M21 M25
Req-059	Emissions of NO_x from U-17 shall not exceed 3.5 lb/hr while firing on low-sulfur ($\leq$0.05% w/w) distillate fuel oil, octanal bottoms, or a combination of these fuels. The short-term emission limits are not applicable during boiler tuning or maintenance when changes to boiler operation and emissions are necessary as part of the tuning or maintenance procedure to minimize long-term emissions. Reference Method: 40 CFR 60 Appendix A Method 7E OA 00-2270R2 Condition 2 and 5	EU-15	M06 M21 M25
Req-060	Emissions of NOx from U-17 shall not exceed 14.3 tpy, all fuels (natural gas, $\leq$0.05% w/w sulfur fuel oil, or octanal bottoms) combined and summed monthly as a 12-month rolling total. Reference Method: 40 CFR 60 Appendix A Method 7E OA 00-2270R2 Condition 3	EU-15	M06 M18 M19 M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-061	Facilitywide emissions of NO_x shall not exceed 139.0 tpy from all boilers, hot oil heaters, and permanent or temporary internal combustion engines, summed monthly as a 12-month rolling total. Emissions will be calculated based on emission rates from the last source test and fuel usage for boilers and heaters. Reference Method: 40 CFR 60 Appendix A Method 7E OA 95-1799R1 Condition 17(j) OA 97-2078 Condition 10(i)	EU-04 EU-05 EU-06 EU-07 EU-08 EU-09 EU-10 EU-11 EU-12 EU-13 EU-14 EU-15 EU-16 EU-17 EU-18	M06 M18 M19 M21 M25 M29
Req-062	The sulfur content of fuel oil burned in hot oil heater U-1, boiler U-2, boiler U-3, and boiler U-7 shall not exceed 1.75% w/w sulfur. Reference Methods: Methods identified in 40 CFR 60.17 ADP 09-2885 Condition 86	EU-04 EU-05 EU-06 EU-07	M19
Req-063	The sulfur content of fuel oil burned in boiler U-10 shall not exceed 1.5% w/w sulfur. Reference Methods: Methods identified in 40 CFR 60.17 ADP 09-2885 Condition 87	EU-09	M19
Req-064	The sulfur content of fuel oil burned in boiler U-11, hot oil heater U-12, hot oil heater U-14, and boiler U-15 shall not exceed 0.05% w/w sulfur. Reference Methods: Methods identified in 40 CFR 60.17 ADP 09-2885 Condition 88	EU-10 EU-11 EU-12 EU-13	M19
Req-065	Combined emissions of SO_2 from hot oil heater U-1, boilers U-2, U-3, U-7, and U-10 shall not exceed 71.0 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 16	EU-04 EU-05 EU-06 EU-07 EU-09	M18 M19
Req-066	Emissions of SO_2 from boiler U-10 shall not exceed 7.0 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 15	EU-09	M18 M19
Req-067	The total amount of 1.5% w/w sulfur fuel oil used by boiler U-10, 0.05% w/w sulfur fuel oil used by boiler U-11 and hot oil heater U-12, combined, shall not exceed 2,100,000 gal/yr. ADP 09-2885 Condition 90	EU-09 EU-10 EU-11	M18 M19

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-068	The Permittee shall notify SWCAA when #6 fuel oil is being used in hot oil heater U-1, and boilers U-2, U-3, and U-7. OA 95-1799R1 Condition 17(u)(2)	EU-04 EU-05 EU-06 EU-07	M18 M19
Req-069	Emissions of NO_x from hot oil heater U-14 shall not exceed 1.02 lb/hr while firing on natural gas. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(a)	EU-12	M06 M18
Req-070	Emissions of NO_x from hot oil heater U-14 shall not exceed 5.4 lb/hr while firing on low-sulfur ($\leq$0.05% w/w) distillate fuel oil. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(b)	EU-12	M06 M18
Req-071	Emissions of NO_x from hot oil heater U-14 shall not exceed 8.2 tpy as a 12-month rolling total summed monthly, both fuels (natural gas and $\leq$0.05% w/w sulfur fuel oil) combined. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(c)	EU-12	M06 M18 M19 M21 M25
Req-072	Emissions of NO_x from boiler U-15 shall not exceed 2.0 lb/hr while firing on natural gas. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(d)	EU-13	M06 M21 M25
Req-073	Emissions of NO_x from boiler U-15 shall not exceed 5.8 lb/hr while firing on low-sulfur ($\leq$0.05% w/w) distillate fuel oil. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(e)	EU-13	M06 M21 M25
Req-074	Emissions of NO_x from boiler U-15 shall not exceed 25.4 tpy as a 12-month rolling total summed monthly, both fuels (natural gas and $\leq$0.05% w/w sulfur fuel oil) combined. Reference Method: 40 CFR 60 Appendix A Method 7E OA 01-2389 Condition 19(f)	EU-13	M06 M18 M19 M21 M25
Req-075	Emissions of CO from hot oil heater U-14 shall not exceed 1.7 lb/hr while firing either natural gas or low-sulfur ($\leq$0.05% w/w) distillate fuel oil. Reference Method: 40 CFR 60 Appendix A Method 10 OA 01-2389 Condition 19(g)	EU-12	M06 M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-076	Emissions of CO from hot oil heater U-14 shall not exceed 7.3 tpy, both fuels (natural gas and ≤0.05% w/w sulfur fuel oil) combined. Reference Method: 40 CFR 60 Appendix A Method 10 OA 01-2389 Condition 19(h)	EU-12	M06 M18 M19 M21 M25
Req-077	Emissions of CO from boiler U-15 shall not exceed 3.2 lb/hr while firing either natural gas or low-sulfur (≤0.05% w/w) distillate fuel oil. Reference Method: 40 CFR 60 Appendix A Method 10 OA 01-2389 Condition 19(i)	EU-13	M06 M21 M25
Req-078	Emissions of CO from boiler U-15 shall not exceed 14.0 tpy, both fuels (natural gas and ≤0.05% w/w sulfur fuel oil) combined. Reference Method: 40 CFR 60 Appendix A Method 10 OA 01-2389 Condition 19(j)	EU-13	M06 M18 M19 M21 M25
Req-079	Emissions of filterable PM from boiler U-15 shall not exceed 3.0 tpy. Reference Method: 40 CFR 60 Appendix A Method 5 OA 01-2389 Condition 19(k)	EU-13	M06 M18 M19 M25
Req-080	Visible emissions from hot oil heater U-14 and boiler U-15 while fired on natural gas shall not exceed 0% opacity for more than three (3) minutes in any 1-hour period as determined by SWCAA 400 Appendix A Method 9. Reference Method: SWCAA 400 Appendix A Method 9 OA 01-2389 Condition 19(n)	EU-12 EU-13	M01 M06 M25
Req-081	Visible emissions from hot oil heater U-14 and boiler U-15 while fired on low-sulfur (≤0.05% w/w) distillate fuel oil shall not exceed 10% opacity for more than three (3) minutes in any 1-hour period as determined by SWCAA 400, Appendix A, Method 9 except during soot blowing and grate cleaning as provided by SWCAA 400-040. Reference Method: SWCAA 400 Appendix A Method 9 OA 01-2389 Condition 19(o) SWCAA 400-040(1)(a) and (b)	EU-12 EU-13	M01 M06 M19 M25
Req-082	The sulfur content of the fuel consumed by hot oil heater U-14 and boiler U-15 shall not exceed 0.05% w/w. Reference Methods: Methods identified in 40 CFR 60.17 OA 01-2389 Condition 19(t)	EU-12 EU-13	M18 M19

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-083	Natural gas and low-sulfur fuel oil with a maximum 0.05% w/w are the only fuels approved for use by hot oil heater U-14 and boiler U-15. OA 01-2389 Condition 19(r)	EU-12 EU-13	M18 M19
Req-084	Fuel oil consumption (≤0.05% w/w sulfur) by hot oil heater U-14 shall not exceed 340,000 gpy. OA 01-2389 Condition 19(s)	EU-12	M18 M19
Req-085	Visible emissions from baghouses F-13 and F-14 shall not exceed 5% opacity for more than three (3) minutes in any 1-hour period except during soot blowing and grate cleaning as provided by SWCAA 400-040. Reference Method: SWCAA 400 Appendix A Method 9 OA 99-2233 Condition 13(a) SWCAA 400-040(1)(a) and (b)	EU-05 EU-06 EU-07	M23 M25 M27 M28
Req-086	The pressure drop across either baghouse F-13 or baghouse F-14 shall not exceed +10.0 inches water column (iwc) during operation. ADP 09-2885 Condition 91	EU-05 EU-06 EU-07	M27 M28
Req-087	The exhaust from boiler U-2 shall be routed through baghouse F-13 or baghouse F-14 when the boiler fuel is waste tar. ADP 09-2885 Condition 92	EU-05	M27 M28
Req-088	The exhaust from boiler U-3 shall be routed through baghouse F-13 when the boiler fuel is waste tar or hazardous waste. ADP 09-2885 Condition 93	EU-06	M27 M28
Req-089	The exhaust from boiler U-7 shall be routed through baghouse F-14 when the boiler fuel is waste tar. ADP 09-2885 Condition 94	EU-07	M27 M28
Req-090	Natural gas shall be the only fuel approved for use in boiler U-9 and hot oil heater U-16. OA 97-2078 Condition 10(n) OA 97-2078 Condition 10(l) ADP 09-2885 Condition 89	EU-08 EU-14	M18 M19
Req-091	Emissions of NO_x from boiler U-9 shall not exceed 11.4 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 6	EU-08	M18 M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-092	Emissions of NO_x from boiler U-9 shall not exceed 3.1 lb/hr as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 7	EU-08	M21 M25
Req-093	Emissions of CO from boiler U-9 shall not exceed 14.0 tpy (12 month rolling total summed monthly). Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 11	EU-08	M18 M21 M25
Req-094	Emissions of CO from boiler U-9 shall not exceed 3.3 lb/hr as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 12	EU-08	M21 M25
Req-095	Emissions of SO_2 from boiler U-9 shall be less than 1.0 tpy. OA 94-1670R1 Condition 12(c)	EU-08	M18 M24
Req-096	Emissions of non-methane hydrocarbons and PM (filterable and condensable) from boiler U-9, combined, shall be less than 3.0 tpy. Reference Method: 40 CFR 60 Appendix A Method 25A OA 94-1670R1 Condition 12(d)	EU-08	M18 M24 M25
Req-097	Visible emissions from boiler U-9 shall not exceed 0% opacity for more than three (3) minutes in any 1-hour period when firing on natural gas. Reference Method: SWCAA 400 Appendix A Method 9 OA 94-1670R1 Condition 12(e)	EU-08	M01 M25
Req-098	Emissions of NO_x from hot oil heater U-16 shall not exceed 2.0 tpy, summed monthly as a 12-month rolling total, and 0.5 lb/hr. Reference Method: 40 CFR 60 Appendix A Method 7E OA 99-2202 Condition 20(p)	EU-14	M18 M21 M25
Req-099	Emissions of CO from hot oil heater U-16 shall not exceed 2.0 tpy and 0.5 lb/hr. Reference Method: 40 CFR 60 Appendix A Method 10 OA 99-2202 Condition 20(i)	EU-14	M18 M21 M25

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-100	Emissions of PM (filterable and condensable) from hot oil heater U-16 shall be less than 0.7 tpy. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 OA 97-2078 Condition 10(j)	EU-14	M18 M19 M26
Req-101	Emissions of total PM from boiler U-17 shall not exceed 3.1 tpy, summed monthly as a 12-month rolling total. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 OA 00-2270R2 Condition 7	EU-15	M06 M18 M19 M25
Req-102	Emissions of PM_{10} from boiler U-17 shall not exceed 2.2 tpy, summed monthly as a 12-month rolling total. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 OA 00-2270R2 Condition 8	EU-15	M06 M18 M19 M25
Req-103	Visible emissions from hot oil heater U-16 shall not exceed 0% opacity for more than three (3) minutes in any 1-hour period as determined by SWCAA 400 Appendix A Method 9. Reference Method: SWCAA 400 Appendix A Method 9 OA 97-2078 Condition 10(k)	EU-14	M01 M25
Req-104	The sulfur content of fuel oil consumed by boiler U-17 shall not exceed 0.05% w/w. Reference Methods: Methods identified in 40 CFR 60.17 OA 00-2270R2 Condition 13	EU-15	M18 M19
Req-105	Boiler U-17 is approved to fire low-sulfur ($\leq$0.05% w/w) distillate fuel oil, natural gas, octanal bottoms, and a combination of these fuels. OA 00-2270R2 Condition 12	EU-15	M18 M19
Req-106	Permittee shall maintain and operate equipment in a manner consistent with good air pollution control practices for minimizing emissions. 40 CFR 60.11(d)	EU-11 EU-12 EU-13 EU-14	M06
Req-107	Emissions of NO_x shall not exceed 6.5 tpy from all permanent or temporary internal combustion engines over 100 hp each providing power to the plant and summed monthly as a 12-month rolling total. OA 95-1799R1 Condition 17(i)	EU-16 EU-17 EU-18	M29

Req. #	Requirements for Combustion Units (EU-04 through EU-18)	Emission Point	Monitoring
Req-108	Annual combined operation of internal combustion engines providing power to the plant and over 100 hp each shall be limited to 625,000 hp-hr, rolled monthly. OA 95-1799R1 Condition 17(k)	EU-16 EU-17 EU-18	M29

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-109	The Permittee shall operate boiler U-3 to meet the emissions standards and operating requirements at all times except: a. During start-up, shutdown, malfunction; and b. When hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii) 40 CFR 63.1206(b)(1) SWCAA 400-075	EU-06	M08 M32 M33
Req-110	Prior to any change (per §63.1206(b)(5)(iii)) in design, operation, or maintenance of boiler U-3 that may adversely affect compliance, the Permittee shall: a. Notify SWCAA and the EPA Administrator at least sixty (60) days prior to the change per §63.1206(b)(5)(i)(A); b. Conduct a performance test per §63.1206(5)(i)(B); and c. Restrict burning of hazardous waste per §63.1206(5)(i)(C). 40 CFR 63.1206(b)(5)(i) SWCAA 400-075	EU-06	M32 M33
Req-111	Prior to any change (per §63.1206(b)(5)(iii)) in design, operation, or maintenance of boiler U-3 that will not adversely affect compliance, the Permittee shall document per §63.1206(b)(5)(ii). 40 CFR 63.1206(b)(5)(ii) SWCAA 400-075	EU-06	M32 M33
Req-112	The Permittee shall develop a PM CEMS correlation test plan per §63.1206(b)(8)(iii). Compliance with the requirement to install, calibrate, maintain and operate the PM CEMS shall not be required until such time that EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. 40 CFR 63.1206(b)(8) 40 CFR 63.1209(a)(1)(iii) SWCAA 400-075	EU-06	M34
Req-113	The Permittee shall calculate the hazardous waste residence time and include the calculation in the Comprehensive Performance Test (CPT) plan under §63.1207(f), the Documentation of Compliance under §63.1211(c), the Notification of Compliance under §§63.1207(j) and 63.1210(d) and the operating record. 40 CFR 63.1206(b)(11) SWCAA 400-075	EU-06	M32 M33
Req-114	The Permittee shall determine the as-fired heating value of each batch of hazardous waste burned in boiler U-3. 40 CFR 63.1206(b)(16) SWCAA 400-075	EU-06	M32 M33 M35

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-115	The Permittee shall operate only under the operating parameters and operating parameter limits specified in the Documentation of Compliance under §63.1211(c) or the Notification of Compliance under §§63.1207(j) and 63.1210(d), except: a. During performance tests under approved test plans according to §§63.1207(e), (f), and (g), and b. Under the conditions of §§63.4(b)(1)(i) or (ii). 40 CFR 63.1206(c)(1) SWCAA 400-075	EU-06	M08 M30 M31 M32 M33 M35 M37 M38
Req-116	The Permittee shall install an Automatic Waste Feed Cutoff (AWFCO) system to boiler U-3 that immediately and automatically cuts off the hazardous waste feed during periods: a. When any of the following are exceeded: (1) Any operating parameter limit specified under §63.1209; (2) Any emission standard monitored by a CEMS; or (3) The allowable combustion chamber pressure is exceeded; b. When the span value of any continuous monitoring system (CMS) detector, except a CEMS, is met or exceeded; c. Upon malfunction of a CMS monitoring an operating parameter limit specified under §63.1209 or an emission level; or d. When any component of the AWFCO system fails. 40 CFR 63.1206(c)(3)(i) SWCAA 400-075	EU-06	M30 M31 M32 M33
Req-117	During an AFWCO event, the Permittee shall follow the SSMP and continue to duct combustion gases from boiler U-3 to baghouse F-13 while hazardous waste remains in the combustion chamber. 40 CFR 63.1206(c)(3)(ii) SWCAA 400-075	EU-06	M08 M37
Req-118	During an AWFCO event, the Permittee shall continue to monitor the operating parameters established under §63.1209 and continue to monitor CO and O_2 with the CEMS. No hazardous waste shall be fed into the combustion chamber until operating parameters are within the specified limits. 40 CFR 63.1206(c)(3)(iii) SWCAA 400-075	EU-06	M30 M31 M32 M33 M35 M37
Req-119	If an equipment or other failure prevents immediate and automatic cutoff of the hazardous waste feed, the Permittee shall cease feeding hazardous waste as quickly as possible. 40 CFR 63.1206(c)(3)(iv) SWCAA 400-075	EU-06	M08 M37 M38 M39

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-120	Following any AWFCO event where there is an exceedance of an emission standard or operating requirement, the Permittee shall investigate the cause of the AWFCO event, take appropriate corrective measures to minimize future AWFCO events, and record the findings and corrective measures in the operating record. 40 CFR 63.1206(c)(3)(v) SWCAA 400-075	EU-06	M08 M37 M38
Req-121	For each set of ten (10) exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittee shall submit to SWCAA and the EPA Administrator a written report within five (5) calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken. 40 CFR 63.1206(c)(3)(vi) SWCAA 400-075	EU-06	M08 M36 M37
Req-122	The AWFCO system and associated alarms shall be tested at least monthly to verify operability and shall document and record the AWFCO operability test procedures and results in the operating record. 40 CFR 63.1206(c)(3)(vii) SWCAA 400-075	EU-06	M37
Req-123	During an AWFCO event, the Permittee may ramp down the hazardous waste federate over a period not to exceed one (1) minute, unless the AWFCO event was triggered by an exceedance of any of the following: a. Minimum combustion chamber temperature; b. Maximum hazardous waste feedrate; or c. Any hazardous waste firing system operating limits established for boiler U-3. 40 CFR 63.1206(c)(3)(viii) SWCAA 400-075	EU-06	M31 M32 M33 M37 M38
Req-124	For each event that is not defined as a malfunction under the SSMP during which an emergency safety vent (ESV) opens when hazardous waste is in the combustion chamber and combustion gases are not being controlled by baghouse F-13, the Permittee shall document in the operating record whether boiler U-3 is in compliance with the emission standards. 40 CFR 63.1206(c)(4)(i) SWCAA 400-075	EU-06	M08 M36 M37 M38
Req-125	The Permittee shall develop an ESV operating plan, comply with the operating plan, and keep the plan in the operating record. 40 CFR 63.1206(c)(4)(ii) SWCAA 400-075	EU-06	M36 M37 M38

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-126	After any ESV opening that results in a failure to meet the emission standards as defined in paragraph §63.1206(c)(4)(i), the Permittee shall investigate the cause of the ESV opening, take appropriate corrective measures to minimize such future ESV openings, and record the findings and corrective measures in the operating record. 40 CFR 63.1206(c)(4)(iii) SWCAA 400-075	EU-06	M36 M37 M38
Req-127	Combustion leaks of HAP shall be controlled by keeping the combustion zone sealed. 40 CFR 63.1206(c)(5)(i)(A) SWCAA 400-075	EU-06	M32 M33 M37 M38
Req-128	The Permittee shall establish training programs in accordance with §63.1206(c)(6) for all categories of personnel whose activities may reasonably be expected to directly affect HAP emissions from boiler U-3. Boiler U-3 shall be operated at all times by persons who are trained and certified to perform any duty that may affect HAP emissions from the boiler. 40 CFR 63.1206(c)(6) SWCAA 400-075	EU-06	M37
Req-129	The Permittee shall prepare an Operating and Maintenance Plan. The plan shall be followed at all times while operating boiler U-3. 40 CFR 63.1206(c)(7) SWCAA 400-075	EU-06	M32 M33 M38
Req-130	Baghouse F-13 shall be equipped with a bag leak detection system that meets the specifications and requirements of §63.1206(c)(8)(ii). 40 CFR 63.1206(c)(8)(i) and (ii) SWCAA 400-075	EU-06	M37 M38 M39
Req-131	In the case of a bag leak detection system alarm, the Permittee shall follow the procedures in the Operating and Maintenance Plan. 40 CFR 63.1206(c)(8)(iii) SWCAA 400-075	EU-06	M37 M38 M39
Req-132	The Permittee shall conduct a Comprehensive Performance Test no later than sixty-one (61) months after the previous Comprehensive Performance Test and subsequently every sixty-one (61) months thereafter. 40 CFR 63.7(b) and (c) 40 CFR 63.8 40 CFR 63.1207(d)(1) SWCAA 400-075	EU-06	M32

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-133	The Permittee shall conduct a Confirmatory Performance Test: a. No later than thirty-seven (37) months after the compliance date; or b. No earlier than eighteen (18) months and no later than thirty-one (31) months after the previous Comprehensive Performance Test. 40 CFR 63.7 40 CFR 63.8 40 CFR 63.1207(d)(2) SWCAA 400-075	EU-06	M32
Req-134	Upon postmark of the Notification of Compliance, the Permittee shall comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c). 40 CFR 63.1207(j)(1)(ii) SWCAA 400-075	EU-06	M32 M33
Req-135	If the Permittee fails to postmark a Notification of Compliance by a specified date, the Permittee shall: a. Immediately cease burning hazardous waste; b. Prior to submitting a revised Notification of Compliance, the Permittee shall burn hazardous waste only for the purpose of pretesting or for a CPT and only for a maximum of 720 hours; and c. The Permittee shall submit to SWCAA and the EPA Administrator a Notification of Compliance subsequent to a new CPT before resuming hazardous waste burning. 40 CFR 63.1207(k) SWCAA 400-075	EU-06	M32 M33 M37 M38
Req-136	Within ninety (90) days of performing a CPT, if the Permittee determines that any emission standard under 40 CFR 63 Subpart EEE has been exceeded during a CPT for a mode of operation, the Permittee shall immediately cease burning hazardous waste under that mode of operation. 40 CFR 63.1207(l)(1)(i) SWCAA 400-075	EU-06	M32 M33 M37 M38
Req-137	If the Permittee has failed to demonstrate compliance with any emission standard under 40 CFR 63 Subpart EEE for any mode of operation, the Permittee shall: a. Prior to submitting a revised Notification of Compliance, the Permittee shall burn hazardous waste only for the purpose of pretesting or a CPT under revised operating conditions, and only for a maximum of 720 hr (renewable at the discretion of SWCAA or the EPA Administrator); b. The Permittee shall conduct a CPT under revised operating conditions; and c. The Permittee shall submit to SWCAA and the EPA Administrator a Notification of Compliance subsequent to the new CPT. 40 CFR 63.1207(l)(1)(ii) SWCAA 400-075	EU-06	M32 M33 M35 M37 M38

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-138	Within ninety (90) days of performing a Confirmatory Performance Test, if the Permittee determines that dioxin/furan standard under 40 CFR 63 Subpart EEE has been exceeded during a Confirmatory Performance Test, the Permittee shall immediately cease burning hazardous waste. 40 CFR 63.1207(l)(2) SWCAA 400-075	EU-06	M33 M35 M37 M38
Req-139	In order to burn hazardous waste after an immediate cessation following the determination of an exceedance of the dioxin/furan standard, the Permittee shall: a. Submit to SWCAA and the EPA Administrator for review and approval a test plan to conduct a CPT to identify revised limits on the applicable dioxin/furan operating parameters specified in §63.1209(k); b. Submit to SWCAA and the EPA Administrator a Notification of Compliance with the dioxin/furan emission standard under the provisions of §§63.1207(j), (k), and (l). The Notification of Compliance shall include the revised limits on the applicable dioxin/furan operating parameters specified in §63.1209(k); and c. Until the Notification of Compliance is submitted, the Permittee shall be prohibited from burning hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hr (renewable at the discretion of SWCAA and the EPA Administrator), except as provided by §63.1207(l)(3). 40 CFR 63.1207(l)(2) SWCAA 400-075	EU-06	M32 M33 M35
Req-140	The Permittee shall certify, operate, and maintain continuous emissions monitoring systems (CEMS) for CO and O_2 to demonstrate and monitor compliance with the CO standard. Reference Methods: 40 CFR 60 Appendix B Performance Specification 4B 40 CFR 63.1209(a)(1)(i) SWCAA 400-075	EU-06	M30 M32 M33 M37 M38
Req-141	The Permittee shall install, calibrate, maintain, and operate a PM CEMS. Compliance with the requirement to install, calibrate, maintain and operate the PM CEMS shall not be required until such time that EPA promulgates all performance specifications and operational requirements applicable to PM CEMS. 40 CFR 63.1206(b)(8) 40 CFR 63.1209(a)(1)(iii) SWCAA 400-075	EU-06	M34
Req-142	Prior to feeding the material, the Permittee shall obtain an analysis of each feedstream. 40 CFR 63.1209(c)(1) SWCAA 400-075	EU-06	M32 M33 M35 M37 M38

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-143	The Permittee shall develop, implement, and follow a Feedstream Analysis Plan (FAP). 40 CFR 63.1209(c)(2) SWCAA 400-075	EU-06	M35 M37 M38
Req-144	The Permittee shall comply with the following parameters related to Destruction Resource Effectiveness (DRE): a. Minimum combustion chamber temperature as specified in the most current CPT [§63.1209(j)(1)]; b. Maximum steam production rate as specified in The most current CPT [§63.1209(j)(2)]; c. Maximum hazardous waste feedrate as specified in The most current CPT [§63.1209(j)(3)]; and d. CO emissions as specified in the most current CPT [§63.1209(j)(4)]. Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(j)(1) through (j)(4) SWCAA 400-075	EU-06	M30 M32 M33 M37 M38
Req-145	The Permittee shall comply with the following parameters related to dioxins/furans: a. Maximum temperature at baghouse inlet as specified in the most current CPT [§63.1209(k)(1)]; b. Minimum combustion chamber temperature as specified in the most current CPT [§63.1209(k)(2)]; c. Maximum steam production rate as specified in the most current CPT [§63.1209(k)(3)]; and d. Maximum hazardous waste feedrate as specified in the most current CPT [§63.1209(k)(4)]. Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(k)(1) through (k)(4) SWCAA 400-075	EU-06	M31 M32 M33 M37 M38
Req-146	The Permittee shall comply with the maximum thermal feedrate of mercury as specified in the most current CPT. Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(l)(1)(ii) SWCAA 400-075	EU-06	M31 M32 M33 M37 M38

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-147	The Permittee shall comply with the following parameters related to PM: a. Minimum baghouse pressure drop as specified in the most current CPT [§63.1209(m)(1)(iv)]; b. Maximum steam production rate as specified in the most current CPT [§63.1209(m)(2)]; and c. Maximum ash feedrate as specified in the most current CPT [§63.1209(m)(3)]. Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(m)(1) through (m)(3) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38
Req-148	The Permittee shall comply with the following parameters related to semi-volatile metals (SVM) and low-volatility metals (LVM), which shall be determined in the most recent Notification of Compliance: a. Maximum temperature at baghouse inlet as specified in the most current CPT [§63.1209(n)(1)]; b. Maximum thermal feedrate of total SVM as specified in the most current CPT [§63.1209(n)(2)(v)(a)(2)]; c. Maximum thermal feedrate of total LVM as specified in the most current CPT [§63.1209(n)(2)(v)(b)(2)]; d. Extrapolation of feedrate levels [§63.1209(n)(2)(vii)]; e. Minimum baghouse pressure drop as specified in the most current CPT average [§63.1209(n)(3)]; f. Maximum total chlorine and chloride feedrate as specified in the most current CPT [§63.1209(n)(4)]; and g. Maximum steam production rate as specified in the most current CPT [§63.1209(n)(4). Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(n)(1) through (n)(4) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38
Req-149	The Permittee shall comply with the maximum thermal feedrate of HCl and Cl_2 as specified in the most current CPT. Operating limits shall be determined per the most recent CPT and Notification of Compliance. 40 CFR 63.1206(c)(1)(v) 40 CFR 63.1209(o)(1)(ii)(A) SWCAA 400-075	EU-06	M32 M33 M35
Req-150	For each mode of operation that the boiler operates, the Permittee shall establish operating parameter limits per §63.1209(q). 40 CFR 63.1209(q) SWCAA 400-075	EU-06	M30 M31 M32 M33 M35

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-151	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain dioxins and furans in excess of 0.40 ng TEQ/dscm, corrected to 7% O_2. This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Method 0023A or 23 40 CFR 63.1217(a)(1)(i) SWCAA 400-075	EU-06	M30 M32 M33 M37 M38
Req-152	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain emissions in excess of 4.2×10^{-5} lb mercury attributable to the hazardous waste per MMBtu heat input from the hazardous waste on an (not-to-exceed) annual averaging period. This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Method 29 40 CFR 63.1217(a)(2)(ii) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38
Req-153	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain emissions in excess of 8.2×10^{-5} lb combined cadmium and lead emissions attributable to the hazardous waste per MMBtu heat input from the hazardous waste on an (not-to-exceed) annual averaging period. This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Method 29 40 CFR 63.1217(a)(3)(ii) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38
Req-154	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain emissions in excess of 1.3×10^{-4} lb chromium emissions attributable to the hazardous waste per MMBtu heat input from the hazardous waste. This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Method 29 40 CFR 63.1217(a)(4)(ii) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38

Req. #	Requirements for Combustion Unit Boiler U-3 (EU-06)	Emission Point	Monitoring
Req-155	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain CO in excess of 100 ppmv, over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7% O_2. These emission standards shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). 40 CFR 63.1217(a)(5)(i) and (ii) SWCAA 400-075	EU-06	M30 M31 M32 M33 M35 M37 M38
Req-156	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain emissions in excess of 5.1×10^{-2} lb combined emissions of HCl and chlorine gas attributable to the hazardous waste per MMBtu heat input from the hazardous waste. This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Methods 26 or 26A, 40 CFR 63 Appendix A Methods 320 or 321 or ASTM Method D6735-01 per §63.1208(b)(5) 40 CFR 63.1217(a)(6)(ii) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38
Req-157	The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere that contain PM emissions in excess of 34 mg/dscm corrected to 7% O_2.This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). Reference Method: 40 CFR 60 Appendix A Method 5 or 5I 40 CFR 63.1217(a)(7) SWCAA 400-075 ADP 09-2885 Condition 5	EU-06	M30 M31 M32 M33 M35 M37 M38
Req-158	The Permittee shall achieve a DRE of 99.99% for each principle organic hazardous constituent (POHC) designated under §63.1217(c)(3). This emission standard shall apply at all times except during start-up, shutdown, malfunction, and when hazardous waste is not in the combustion chamber per §63.1206(b)(1)(ii). 40 CFR 63.1217(c)(1) SWCAA 400-075	EU-06	M31 M32 M33 M35 M37 M38

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-159	Visible emissions from any emissions unit within the Benzoic Acid and Benzaldehyde Plant shall not exceed 0% opacity for greater than three (3) minutes in any 1-hour period as determined by SWCAA Method 9. Reference Method: SWCAA 400 Appendix A Method 9 ADP 09-2885 Condition 17	EU-19 EU-20 EU-21 EU-22 EU-23 EU-25 EU-27 EU-28	M01 M06
Req-160	Vent streams from R-101 and R-151 and emissions from tank T-313A shall be routed to the vent header system at all times, unless the RTOs or the carbon beds and RTOs are being bypassed. ADP 09-2885 Condition 95	EU-19 EU-20 EU-21 EU-22 EU-23 EU-28	M06 M47 M48
Req-161	When carbon beds T-120A/T-130B are the final control devices for the vent header system, the combined emissions of CO shall not exceed the following: a. 35.0 tpy as a 12-month rolling total summed monthly; and b. 7,500 ppmvd as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 26	EU-20	M06 M40 M41 M48
Req-162	When carbon beds T-120A/T-130B are the final control devices for the vent header system, combined emissions of VOC shall not exceed 1.5 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 28	EU-20	M06 M40 M48
Req-163	When carbon beds T-120A/T-130B are the final control devices for the vent header system, combined emissions of VOC shall not exceed 13.9 lb/hr as averaged over each carbon bed regeneration cycle. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 29	EU-20	M06 M40 M48

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-164	When carbon beds T-120A/T-130B are the final control devices for the vent header system, the combined emissions of filterable PM and condensable PM shall not exceed the following: a. 2.0 tpy as a 12-month rolling total summed monthly; and b. 0.005 gr/dscf. Compliance shall be assumed if the visible emission standard (0% opacity) is met unless new data to the contrary is developed during a source test. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 or 40 CFR 60 Appendix A Method 9 ADP 09-2885 Condition 27	EU-20	M02 M06 M40 M48
Req-165	When carbon beds T-120A/T-130B are the final control devices for the vent header system, a Total Resource Effectiveness (TRE) index value of 1.0 or greater shall be maintained for the carbon beds, combined. Reference Method: 40 CFR 60 Appendix A Method 18 40 CFR 63.113(a)(3) and (d) SWCAA 400-075 ADP 09-2885 Condition 25	EU-20	M06 M40 M41 M48
Req-166	When carbon beds T-120A/T-120B or T-180/T-181 are being used as a final control device, at least 0.3 pounds of steam per pound of carbon shall be used to regenerate each carbon bed during each regeneration cycle unless compliance with all applicable emission limits can be maintained while utilizing less steam during the regeneration cycle. If compliance with all applicable emission limitations is demonstrated during a source test while utilizing a reduced steam rate, the new reduced steam rate shall become the minimum steam rate. 40 CFR 63.114(b)(3) and (d) 40 CFR 63.117(f) 40 CFR 63.152(b)(2) SWCAA 400-075 ADP 09-2885 Condition 101	EU-20	M06 M40 M48
Req-167	When the carbon beds T-120A/T-130B are used as a final control device, the temperature of the carbon beds shall not exceed 35°C after the dry/cool cycle when system air flow rates are greater than 500,000 scfm. 40 CFR 63.114(b)(3) and (e) 40 CFR 63.117(f) 40 CFR 63.152(b)(2) SWCAA 400-075 ADP 09-2885 Condition 102	EU-20	M06 M40 M48

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-168	When carbon beds T-180/T-181 are the final control devices for the vent header system, the combined emissions of CO shall not exceed the following: a. 35.0 tpy as a 12-month rolling total summed monthly; and b. 7,500 ppmvd as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 30	EU-20	M06 M40 M41 M48
Req-169	When carbon beds T-180/T-181 are the final control devices for the vent header system, the combined emissions of VOC shall not exceed 1.5 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 32	EU-20	M06 M40 M48
Req-170	When carbon beds T-180/T-181 are the final control devices for the vent header system, the combined emissions of VOC shall not exceed 10.9 lb/hr as averaged over each carbon bed regeneration cycle. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 33	EU-20	M06 M40 M48
Req-171	When carbon beds T-180/T-181 are the final control devices for the vent header system, the combined emissions of filterable PM and condensable PM shall not exceed the following: a. 2.0 tpy as a 12-month rolling total summed monthly; and b. 0.005 gr/dscf. Compliance shall be assumed if the visible emission standard (0% opacity) is met unless new data to the contrary is developed during a source test. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 or 40 CFR 60 Appendix A Method 9 ADP 09-2885 Condition 31	EU-20	M02 M06 M40 M48
Req-172	When carbon beds T-180/T-181 are the final control devices for the vent header system, a TRE index value of 1.0 or greater shall be maintained for the carbon beds, combined. Reference Method: 40 CFR 60 Appendix A Method 18 40 CFR 63.113(a)(3) and (d) SWCAA 400-075 ADP 09-2885 Condition 24	EU-20	M06 M40 M41 M48

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-173	When carbon beds T-120A/T-130B or T-180/T-181 are the final control devices for the vent header system and the TRE index value is greater than 1.0 and less than or equal to 4.0, then a source test shall be conducted to determine: a. the pounds of steam per cycle necessary to regenerate each regenerative carbon bed; b. the regenerative carbon bed temperatures; and c. the exhaust rate from the 150-side toluene oxidizer. Reference Method: Methods in 40 CFR 63.116 40 CFR 63.114(b)(3), (d)(1), and (e) 40 CFR 63.117(f) 40 CFR 63.152(b)(2) SWCAA 400-075	EU-20	M06 M40 M41 M48
Req-174	When carbon beds T-120A/T-130B or T-180/T-181 are the final control devices for the vent header system and the TRE index value is greater than 4.0, the exhaust rate from the 150-Side toluene oxidizer shall not exceed 200,000 cfh. 40 CFR 63.114(d)(1) 40 CFR 63.117(f) 40 CFR 63.152(b)(2) SWCAA 400-075 ADP 09-2885 Condition 23	EU-23	M40 M41 M48
Req-175	Bypasses of RTO X-100 or RTO X-150, individually, shall not exceed 240 hr/yr. During a bypass of RTO X-100 or RTO X-150, the vent header system shall be controlled by the carbon beds. ADP 09-2885 Condition 96	EU-20 EU-21	M47 M48
Req-176	Process gas or natural gas shall be the only fuels approved for use in RTO X-100 and RTO X-150. ADP 09-2885 Condition 98	EU-19	M18
Req-177	Emissions of CO from RTO X-100 and RTO X-150, individually, shall not exceed the following: a. 30.0 tpy as a 12-month rolling total summed monthly; and b. 140 ppm_vd corrected to 3% O_2 as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 18	EU-19	M06 M18 M43 M45 M46

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-178	Emissions of NO_x from RTO X-100 and RTO X-150, individually, shall not exceed the following: a. 3.0 tpy as a 12-month rolling total summed monthly; and b. 10.0 ppm_vd corrected to 3% O_2 as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 19	EU-19	M06 M18 M43 M45 M46
Req-179	Emissions of VOC from RTO X-100 and RTO X-150, individually, shall not exceed the following: a. 5.0 tpy as a 12-month rolling total summed monthly; and b. 10.0 ppm_vd as benzene, corrected to 3% O_2, averaged over each carbon bed regeneration cycle. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 21	EU-19	M06 M18 M43 M45 M46
Req-180	Emissions of SO_2 from RTO X-100 and RTO X-150, individually, shall not exceed 1.0 tpy as a 12-month rolling total summed monthly. . Reference Method: 40 CFR 60 Appendix A Method 6 ADP 09-2885 Condition 20	EU-19	M06 M18 M43 M44 M45
Req-181	When RTO X-100 and X-150 are the final control devices, total organic HAP emissions from process vents shall be reduced by 98% by weight, or to a concentration not to exceed 20 ppmvd, corrected to 3% O_2, whichever is less stringent. Reference Method: 40 CFR 60 Appendix A Method 18 40 CFR 63.113(a)(2) SWCAA 400-075 ADP 09-2885 Condition 22	EU-19	M42 M43 M45 M46
Req-182	RTO X-100 and RTO X-150 center bed temperatures, individually, shall be maintained greater than 1,500°F as a 1-hour average. 40 CFR 63.114(a)(1) and (e) 40 CFR 63.117(f) 40 CFR 63.152(b)(2) SWCAA 400-075 ADP 09-2885 Condition 97	EU-19	M06 M42
Req-183	The vent header system pressure shall be maintained at less than +2.5 iwc at all times, except during a startup, shutdown, and malfunction event. ADP 09-2885 Condition 99	EU-19 EU-20 EU-21	M08 M47

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-184	Emissions of VOC from tank T-54 shall not exceed 39,000 lb/yr as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 34	EU-25	M50
Req-185	Emissions of benzene from tank T-54 shall not exceed 1,670 lb/yr as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 35	EU-25	M50
Req-186	Emissions of benzene from tar tank T-313 shall not exceed 1,173 lb/yr as a 12-month rolling total summed monthly. An emission factor of 1.61 lb/hr shall be used for calculating emissions unless a new emission factor is developed from a mass balance or source testing. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 36	EU-27	M49
Req-187	Emissions of toluene from tar tank T-313 shall not exceed 1,860 lb/yr as a 12-month rolling total summed monthly. An emission factor of 2.55 lb/hr shall be used unless a new emission factor is developed from a mass balance or source testing. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 37	EU-27	M49
Req-188	Emissions of filterable PM from the benzoic acid chipper baghouse shall not exceed 0.006 gr/dscf. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(d)(1)	EU-24	M02 M06 M52 M53
Req-189	Emissions of filterable PM from the benzoic acid chipper baghouse shall not exceed 0.2 tpy. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(d)(2)	EU-24	M06 M52 M53
Req-190	Emissions of PM from scrubber V-61 shall not exceed 0.1 tpy a 12-month rolling total summed monthly. ADP 07-2720 Condition 1	EU-26	M07

Req. #	Requirements for Benzoic Acid and Benzaldehyde Production (EU-19 through EU-28)	Emission Point	Monitoring
Req-191	Visible emissions from scrubber V-61 shall not exceed 0% opacity for more than three (3) minutes in any 1-hour period as determined by a Certified Observer certified in accordance with SWCAA Method 9. ADP 07-2720 Condition 2	EU-26	M01
Req-192	The water makeup flow rate to scrubber V-61 shall not be less than 2 gpm. ADP 07-2720 Condition 5	EU-26	M51
Req-193	Tank temperature of tanks T-61, T-62, T-64, and T-65 shall not exceed 170°C. ADP 07-2720 Condition 6	EU-26	M51
Req-194	Only benzoic acid shall be stored in tanks T-61, T-62, T-64, and T-65. ADP 07-2720 Condition 7	EU-26	M51
Req-195	The discharge point for scrubber V-61 shall exhaust vertically at a minimum of 18 ft above ground level. ADP 07-2720 Condition 8	EU-26	N/A
Req-196	Any device which inhibits the vertical flow of exhaust from scrubber V-61 shall be prohibited. ADP 07-2720 Condition 9	EU-26	N/A

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-197	Emissions of HAP from all columns, controlled and uncontrolled, within the Fragrance and Specialty Plants (excluding the HCA Plant) shall not exceed 2.5 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 38	EU-29 EU-30 EU-31 EU-32 EU-33 EU-41	M09 M54 M55 M56 M57 M93
Req-198	Emissions of VOC from distillation column C-1101 shall be less than 65,000 ppmvd (as toluene) as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 39	EU-29	M54 M55
Req-199	Emissions of VOC from distillation columns C-1101, C-1151, C-1181, and C-1191 shall not exceed 1.7 tpy each. Annual emissions shall be calculated using an emission factor from the most recent source test and the amount of product generated. If source test data is not available, emissions shall be determined from engineering calculations using component vapor pressure and exhaust flow. VOC emissions shall be reported as the individual species emitted if such data is available, or as the most volatile compound in the column if speciation data is not available. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 40	EU-29 EU-30 EU-31 EU-32	M54 M55 M57
Req-200	Only products with a vapor pressure less than toluene (46.8 mm Hg at 35°C) may be distilled in distillation column C-1101, except when distilling products with impurities totaling less than 10% w/w. Acetone, benzene, isopropanol, and methanol shall not be processed in distillation column C-1101. ADP 09-2885 Condition 104	EU-29	M54
Req-201	When distilling cinnamic alcohol in any of the distillation columns C-1101, C-1151, C-1181, and C-1191, emissions of acetone shall not exceed 200,000 ppmvd (as acetone) as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 42	EU-29 EU-30 EU-31 EU-32	M54 M55
Req-202	Emissions of acetone from distillation columns C-1101, C-1151, C-1181, and C-1191, combined, shall not exceed 3.2 tpy. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 43	EU-29 EU-30 EU-31 EU-32	M54 M55 M57

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-203	A temperature monitoring device shall be installed on the exhaust of distillation columns C-1101, C-1151, C-1181, C-1191, C-1211, and C-8502. When distilling acetic acid the exhaust temperature shall be monitored and recorded at least once per shift, unless data recording is automated then the limit shall be based on a 1-hour average. ADP 09-2885 Condition 180	EU-29 EU-30 EU-31 EU-32 EU-33 EU-41	M54 M81
Req-204	The exhaust temperature from distillation column C-1101 shall be less than 35°C except when the distillation column is operating at less than 45 mm Hg (absolute). ADP 09-2885 Condition 103	EU-29	M54
Req-205	The knockout pots for columns C-1101, C-1151, C-1181, C-1191, and C-1211 shall be emptied after lights cut prior to increasing the vacuum. ADP 09-2885 Condition 110	EU-29 EU-30 EU-31 EU-32 EU-33	M54
Req-206	Exhaust from knockout pot V-1156 shall be routed through scrubber C-1265 prior to discharge to the ambient air when distilling a chemical that contains greater than 10% w/w methanol in still pot V-1151 (column C-1151). ADP 09-2885 Condition 117	EU-30	M54
Req-207	Emissions of VOC from distillation columns C-1151, C-1181, C-1191, and C-1211 shall not exceed 100,000 ppmvd (as methanol) as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 41	EU-30 EU-31 EU-32 EU-33	M54 M55 M57
Req-208	The exhaust temperature of distillation columns C-1151, C-1181, C-1191, and C-1211 shall not exceed 42°C (1-hour average) when distilling acetic acid. ADP 09-2885 Condition 109	EU-30 EU-31 EU-32 EU-33	M54
Req-209	The vent condenser cooling water inlet temperature for chilled water vent condensers E-1156 (column C-1151), E-1184 (column C-1181), E-1196 (column C-1191), E-1214 (column C-1211), and E-1273 (column V-1270) shall not exceed 53.6°F (12°C) as a 1-hour average. ADP 09-2885 Condition 105	EU-30 EU-31 EU-32 EU-33 EU-47	M54
Req-210	The vent condenser cooling water outlet temperature for chilled water vent condensers E-1156 (column C-1151), E-1184 (column C-1181), E-1196 (column C-1191), E-1214 (column C-1211), E-1273 (column V-1270) shall not exceed 68°F (20°C) as a 1-hour average, except when distilling acetic acid. ADP 09-2885 Condition 106	EU-30 EU-31 EU-32 EU-33 EU-47	M54

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-211	When distilling acetic acid, the vent temperature for vent condensers E-1156 (column C-1151), E-1184 (column C-1181), E-1196 (column C-1191), E-1214 (Column C-1211), and E-1273 (column V-1270) shall not exceed 107.6°F (42°C) as a 1-hour average. ADP 09-2885 Condition 107	EU-30 EU-31 EU-32 EU-33 EU-47	M54
Req-212	The vent condenser cooling water flow for chilled water vent condensers E-1156 (column C-1151), E-1184 (column C-1181), E-1196 (column C-1191), E-1214 (column C-1211), E-1273 (column V-1270) shall be 2.0 gal/min, at minimum, except when distilling acetic acid. ADP 09-2885 Condition 108	EU-30 EU-31 EU-32 EU-33 EU-47	M54
Req-213	When distilling crude liliol in distillation columns C-1151, C-1181, C-1191, or C-1211, the accumulator and the knockout pot associated with the column shall be emptied after the completion of the first cut. ADP 09-2885 Condition 111	EU-30 EU-31 EU-32 EU-33	M54
Req-214	Emissions of VOC from distillation column C-1211 shall not exceed 1.5 tpy. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 44	EU-33	M54 M55 M57
Req-215	Emissions of VOC from reactors R-1101, R-1141, and R-1171 shall not exceed 5.0 lb/hr, each reactor, as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 46	EU-34 EU-35 EU-36	M54 M55 M56
Req-216	Emissions of VOC from reactors R-1101, R-1141, and R-1171 shall not exceed any of the following: a. 2.0 tpy for reactors R-1101 and R-1141 combined; and b. 2.0 tpy for reactor R-1171. ADP 09-2885 Condition 47	EU-34 EU-35 EU-36	M54 M55 M56 M57
Req-217	Emissions of acetaldehyde from reactors R-1101, R-1141, and R-1171, combined, shall not exceed 228.0 lb/yr. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 48	EU-34 EU-35 EU-36	M54 M55 M56 M57
Req-218	During methyl cinnamic aldehyde production in reactors R-1101, R-1141, and R-1171, emissions of propionaldehyde, combined, shall not exceed 42.0 lb/yr. ADP 09-2885 Condition 49	EU-34 EU-35 EU-36	M56 M57

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-219	Exhaust from reactor R-1101 and R-1141 shall be routed through FIF scrubber C-1180 prior to discharge to the ambient air when producing a chemical that requires the use of acetaldehyde or propionaldehyde in the process. ADP 09-2885 Condition 113	EU-34 EU-35	M54 M58
Req-220	When producing methyl cinnamic aldehyde in batch reactors R-1101 or R-1141 the vent flow shall be routed to FIF Scrubber C-1180. ADP 09-2885 Condition 112	EU-34 EU-35	M54 M58
Req-221	The discharge point for FIF scrubber C-1180 shall be at least 25 ft above ground level. ADP 09-2885 Condition 114	EU-34 EU-35	N/A
Req-222	The FIF scrubber C-1180 recycle water flow rate shall not be less than 2.0 gal/min and the scrubber water makeup rate shall not be less than 2.0 gal/hour, respectively ADP 09-2885 Condition 115	EU-34 EU-35	M54 M58
Req-223	Exhaust from reactor R-1141 (through T-1115) shall be routed through scrubber C-1265 prior to discharge to the ambient air when producing a chemical that contains greater than 10% w/w methanol. ADP 09-2885 Condition 116	EU-35	M54
Req-224	Reflux column C-1171 shall be used as a water scrubber when processing acetaldehyde or propionaldehyde in Reactor R-1171. The water level in V-1171 shall be a minimum of 40% and the recirculation rate shall be a minimum of 10 gal/min. ADP 09-2885 Condition 119	EU-36	M54 M59
Req-225	The discharge point for batch reactor R-1171 shall be at least 25 feet above ground level. ADP 09-2885 Condition 118	EU-36	N/A
Req-226	The exhaust temperature for reactor R-1171 shall be less than 52°F, as a 1-hour average, when venting at greater than 20 acfm. ADP 09-2885 Condition 120	EU-36	M54 M59
Req-227	Emissions of VOC from continuous tube reactor R-2150 shall not exceed the following: a. 0.75 lb/hr as a 1-hour average; and b. 3.1 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 50	EU-37	M71 M72

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-228	Emissions of CO from continuous tube reactor R-2150 from catalyst deactivation shall not exceed the following: a. 5.0 lb/hr as a 1-hour average; and b. 0.5 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 51	EU-37	M71 M73
Req-229	Emissions of CO from continuous tube reactor R-2150 during normal operation shall not exceed 10.0 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 52	EU-37	M71 M72
Req-230	Condenser E-2154 (continuous tube reactor R-2150) cooling water inlet temperature shall not exceed 95°F (35°C) as a 1-hour rolling average. ADP 09-2885 Condition 121	EU-37	M54
Req-231	Tanks T-1213 and T-1216 shall not be used to store volatile organic liquids with a vapor pressure or combined partial pressures of greater than 27.6 kPa (207.7 mm Hg) at 20°C. ADP 09-2885 Condition 122	EU-38	M93
Req-232	When offloading propionaldehyde in tank T-1144: a. The headspace of tank T-1144 shall be vented to tank T-1146; b. Tank T-1146 shall contain cold, approximately 59°F (15°C), benzaldehyde; and c. The headspace of tank T-1146 shall be routed to FIF scrubber C-1180. ADP 09-2885 Condition 123	EU-39	M60
Req-233	During offloading of propionaldehyde into tank T-1144, emissions of propionaldehyde from FIF Scrubber C-1180 shall not exceed 34 lb/yr. ADP 09-2885 Condition 45	EU-40	M07 M60
Req-234	Emissions of VOC from batch distillation column C-8502 shall not exceed 1.7 tpy. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 53	EU-41	M54 M55 M81
Req-235	Emissions of VOC from distillation column C-8502 and reactors R-8501, R-8502, and R-8521, combined, shall not exceed 3.0 tpy. Reference Method: 40 CFR 60 Appendix A Method 25A ADP 09-2885 Condition 54	EU-41 EU-42 EU-43 EU-44	M56 M57

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-236	During the hydrogenation of methyl cinnamic aldehyde in reactor R-8501, the reactor shall not vent to ambient air until the reactor temperature is 60°C (140°F) or less. ADP 09-2885 Condition 125	EU-41	M54
Req-237	Emissions of VOC from reactor R-801 shall not exceed 1.6 tpy as a 12-month rolling total summed monthly. ADP 09-2885 Condition 57	EU-46	M66
Req-238	Reactor R-801 vent condensers E-812A and E-812B cooling water inlet temperature shall not exceed 53.6°F (12°C) as a 1-hour average. ADP 09-2885 Condition 126	EU-46	M65
Req-239	Reactor R-801 vent condensers E-812A and E-812B cooling water outlet temperature for shall not exceed 68°F (20°C) as a 1-hour average. ADP 09-2885 Condition 127	EU-46	M65
Req-240	During the alkylation of hydrogenated methyl cinnamic aldehyde to liliol in reactor R-801, vent condensers E-812A and E-812B (reactor R-801) water flow rate shall be, at minimum, 2.0 gal/min. ADP 09-2885 Condition 128	EU-46	M65
Req-241	Emissions of VOC from continuous distillation column C-801 shall not exceed 2.3 lb/hr as a 1-hour average. ADP 09-2885 Condition 58	EU-45	M63
Req-242	Emissions of VOC from continuous distillation column C-801 shall not exceed 1,540 lb/yr as a 12-month rolling total summed monthly. ADP 09-2885 Condition 59	EU-45	M63 M64
Req-243	Continuous distillation column C-801 shall be routed through a [cooling tower] water condenser when processing crude benzyl alcohol to maintain a total resource effectiveness index greater than 1.0 or reduce total organic HAP by 98% w/w or to a concentration of 20 ppmvd, corrected to 3% O_2 when distilling under vacuum. ADP 09-2885 Condition 60	EU-45	M63
Req-244	The 24-hour average temperature of the exhaust from the exhaust condenser for continuous distillation column C-801 shall be maintained at a temperature established during a source test that demonstrates that a HAP emission rate of less than 2.3 lb/hr can be achieved when the distillation column is run under vacuum conditions when distilling crude benzyl alcohol. A source test shall be conducted based on the same configuration (per 40 CFR 63.114) and a source test shall be conducted if the Permittee chooses to change distillation methods. ADP 09-2885 Condition 61	EU-45	M61 M63

Req. #	Requirements for Fragrance and Specialty Plants (EU-29 through EU-46)	Emission Point	Monitoring
Req-245	Crude benzyl alcohol shall not be distilled in continuous distillation column C-801 under vacuum. ADP 09-2885 Condition 124	EU-45	M54
Req-246	During the alkylation of hydrogenated methyl cinnamic aldehyde to liliol in reactor R-801: a. When reactor R-801 is being heated, the vent valve shall be closed when the reactor temperature reaches 221°F (105°C); b. After the reaction to liliol is complete, the vent to reactor R-801 shall not be opened until the reactor pressure becomes negative. Nitrogen gas shall be used to break the vacuum. c. When reactor R-801 is not being filled or displacing nitrogen the vent valve shall be closed. ADP 09-2885 Condition 129	EU-46	M65

Req. #	Requirements for Hexyl Cinnamic Aldehyde Plant (EU-47 through EU-53)	Emission Point	Monitoring
Req-247	Emissions of VOC from batch distillation column V-1270 shall not exceed the following: a. 100,000 $ppm_v d$ as methanol as a 1-hour average; and b. 1.5 tpy as a 12-month rolling sum calculated monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 67	EU-47	M69 M68 M70
Req-248	Emissions from batch distillation column V-1270 shall be routed through condenser E-1273 and knock-out pot V-1272, except when distilling products containing greater than 10% methanol. ADP 09-2885 Condition 138	EU-47	M54
Req-249	Emissions from batch distillation column V-1270 shall be routed through condenser E-1273, knock-out pot V-1272, and scrubber C-1265 except when distilling products containing less than 10% w/w methanol. ADP 09-2885 Condition 139	EU-47	M54
Req-250	Emissions of VOC from continuous tube reactor R-1250A shall not exceed the following: a. 4.5 lb/hr as a 1-hour average; and b. 12.0 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 62	EU-48	M67 M69 M70
Req-251	Emissions of benzene from continuous tube reactor R-1250A shall not exceed 250 lb/yr as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 63	EU-48	M67 M69 M70
Req-252	Emissions of acetaldehyde from continuous tube reactor R-1250A shall not exceed 200 lb/yr as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 64	EU-48	M67 M69 M70
Req-253	Emissions of CO from continuous tube reactor R-1250A from catalyst deactivation shall not exceed the following: a. 5.0 lb/hr as a 1-hour average; and b. 0.5 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 65	EU-48	M67 M69 M70

Req. #	Requirements for Hexyl Cinnamic Aldehyde Plant (EU-47 through EU-53)	Emission Point	Monitoring
Req-254	Emissions of CO from continuous tube reactor R-1250A during normal operation shall not exceed 75.0 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 66	EU-48	M67 M69 M70
Req-255	Continuous tube reactor R-1250A exhaust temperature shall not exceed 15°C as a 1-hour average, except during catalyst deactivation and production of decanal. ADP 09-2885 Condition 134	EU-48	M69
Req-256	Continuous tube reactor R-1250A exhaust temperature shall not exceed 40°C as a 1-hour average during the production of decanal. ADP 09-2885 Condition 135	EU-48	M69
Req-257	Emissions of VOC, excluding methanol, from scrubber C-1265 shall not exceed 4.0 tpy as a 12-month rolling sum calculated monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 55	EU-49 EU-50 EU-52 EU-53	M69 M70
Req-258	Emissions of methanol from scrubber C-1265 shall not exceed 5.0 tpy as a 12-month rolling sum calculated monthly. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 56	EU-49 EU-50 EU-52 EU-53	M69 M70
Req-259	Scrubber C-1265 water temperature shall not exceed 25°C as a 1-hour average. ADP 09-2885 Condition 130	EU-49 EU-50 EU-52 EU-53	M69
Req-260	Scrubber C-1265 water recirculation rate shall be at least 2.0 gal/min unless compliance with permitted emission limits can be demonstrated at a lower water recirculation rate during a source test. If data recording is automated, this limit shall be based on a 1-hour average. ADP 09-2885 Condition 131	EU-49 EU-50 EU-52 EU-53	M69
Req-261	Scrubber C-1265 water makeup rate shall be at least 7.5 gph unless compliance with permitted emission limits can be demonstrated at a lower water makeup rate during a source test. If data is recorded hourly, this limit shall be based on a 1-hour average. ADP 09-2885 Condition 132	EU-49 EU-50 EU-52 EU-53	M69

Req. #	Requirements for Hexyl Cinnamic Aldehyde Plant (EU-47 through EU-53)	Emission Point	Monitoring
Req-262	Scrubber C-1265 scrubber water methanol concentration shall not exceed 10% molar concentration as a 3-hour average. ADP 09-2885 Condition 133	EU-49 EU-50 EU-52 EU-53	M69
Req-263	Emissions of VOC from column C-1290 decant tank chiller vent shall not exceed 1.5 lb/hr as a 1-hour average. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A ADP 09-2885 Condition 68	EU-51	M69 M70
Req-264	Aldehyde distillation column C-1290 chilled water condenser inlet water temperature shall not exceed: a. 15°C as a 3-hour average; or b. 40°C as a 3-hour average, when distilling decanal. If data recording is automated, this limit shall be based on a 1-hour average. ADP 09-2885 Condition 136	EU-51	M69
Req-265	The headspaces of methanol tank T-1121 and crude HCA tank T-1263 shall be routed to scrubber C-1265. ADP 09-2885 Condition 137	EU-52	N/A

Req. #	Requirements for Benzoate Plant (EU-54 through EU-65)	Emission Point	Monitoring
Req-266	Emissions of filterable PM from scrubbers C-901, C-902A, C-904, C-905, C-906, C-907, C-909, and C-920 shall not exceed 0.006 gr/dscf (individually). Emissions shall be calculated using emissions data from the most recent source test. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(a)(1)	EU-54 EU-55 EU-56 EU-57 EU-58 EU-59 EU-60 EU-61 EU-62 EU-65	M02 M06 M77
Req-267	Emissions of filterable PM from scrubbers C-901, C-902A, C-904, C-905, C-906, C-907, C-909, and C-920 shall not exceed 24.0 tpy (all scrubbers combined). Emissions shall be calculated using emissions data from the most recent source test and the amount of product produced. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(a)(2)	EU-54 EU-55 EU-56 EU-57 EU-58 EU-59 EU-60 EU-61 EU-62 EU-65	M06 M74 M77
Req-268	Emissions of filterable PM from the fluidized bed extruder baghouse shall not exceed 0.008 gr/dscf. Emissions shall be calculated using emissions data from the most recent source test. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(b)(1)	EU-63	M02 M06 M77
Req-269	Emissions of filterable PM from the fluidized bed extruder baghouse shall not exceed 2.1 tpy. Emissions shall be calculated using emissions data from the most recent source test and the amount of product produced Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(b)(2)	EU-63	M06 M74 M77
Req-270	Emissions of filterable PM from the six pneumatic material handling systems shall not exceed a total of 0.5 tpy combined. Reference Method: 40 CFR 60 Appendix A Method 5 OA 00-2274R3 Condition 11(c)	EU-64	M06 M74 M78

Req. #	Requirements for Benzoate Plant (EU-54 through EU-65)	Emission Point	Monitoring
Req-271	Emissions of VOCs (total diphenyl compounds) from all of the scrubbers shall not exceed 13.0 tpy, summed monthly as a 12-month rolling total. Emissions shall be calculated with a mass balance approach using the weekly diphenyl concentration data and the total liquid feed to the dryers. Reference Method: KCI 600-19-BF-TDS OA 00-2274R3 Condition 11(e)	EU-54 EU-55 EU-56 EU-57 EU-58 EU-59 EU-60 EU-61 EU-62 EU-65	M06 M74 M75 M77
Req-272	Pressure drop across the fluidized bed extruder baghouse shall not exceed +6 iwc. OA 00-2274R3 Condition 11(h)	EU-63	M06 M76
Req-273	Visible emissions from scrubbers C-901, C-902A, C-904, C-905, C-906, C-907, C-909, C-920, the fluidized bed extruder baghouse, the benzoic acid chipper baghouse, and the pneumatic conveying equipment exhausts shall not exceed 0% opacity for greater than three (3) minutes in any 1-hour period as determined in accordance with SWCAA 400, Appendix A, Method 9. Reference Method: SWCAA 400 Appendix A Method 9 OA 00-2274R3 Condition 11(f)	EU-54 EU-55 EU-56 EU-57 EU-58 EU-59 EU-60 EU-61 EU-62 EU-63 EU-64 EU-65	M01 M06
Req-274	The scrubber water flow rate for scrubbers C-902A and C-920 shall be at least 28 gpm unless compliance with the PM emission limit can be demonstrated at a lower scrubber water flow rate. The scrubber water flow rate for scrubbers C-901, C-904, C-905, C-906, C-907, and C-909 shall be at least 15 gpm unless compliance with the PM emission limit can be demonstrated at a lower scrubber water flow rate. Scrubber water flow rate may be determined using a pressure gage and pump curves or other method approved in writing by SWCAA. OA 00-2274R3 Condition 11(g)	EU-54 EU-55 EU-56 EU-57 EU-58 EU-59 EU-60 EU-62 EU-65	M06 M76 M77

Req. #	Requirements for Plasticizer Plant (EU-66 and EU-67)	Emission Point	Monitoring
Req-275	Emissions of VOC from the two plasticizer reactors (R-8601A and R-8621) shall not exceed any of the following: a. 21,000 $ppm_v d$ as isooctane per reactor; and b. 9.0 lb/hr per reactor. Hourly emissions shall be calculated from the nitrogen flow rate and the most recently measured concentration. Reference Method: 40 CFR 60 Appendix A Method 18 OA 96-1864R1 Condition 1	EU-66 EU-67	M06 M79 M80
Req-276	Emissions of VOC from the two plasticizer reactors R-8601A and R-8621, combined, shall not exceed 5.5 tpy. Annual emissions shall be calculated using a production based emission factor from the most recent source test, and the total quantity of plasticizer produced. OA 96-1864R1 Condition 2	EU-66 EU-67	M79 M80
Req-277	If gases are vented from refrigerated condensers X-8601 [or] X-8621 at greater than 20 cfm, the vent gas temperature [from refrigerated chillers E-8603 or E-8623, respectively,] shall not exceed 52°F as a 10-minute average. OA 96-1864R1 Condition 3	EU-66 EU-67	M79

Req. #	Requirements for Wastewater Treatment (EU-68 through EU-72)	Emission Point	Monitoring
Req-278	Emissions of benzene from the aerobic treatment system shall not exceed 6,000 lb/yr as a 12-month rolling total summed monthly, based on wastewater analysis and material balance. Emissions shall be calculated using the results of water sample testing and the amount of wastewater generated. Reference Methods: 40 CFR 61.355(c)(3)(iv) ADP 09-2885 Condition 69	EU-68	M07 M86 M87
Req-279	Emissions of toluene from the aerobic treatment system shall not exceed 16,000 lb/yr as a 12-month rolling total summed monthly, based on wastewater analysis and material balance. Emissions shall be calculated using the results of water sample testing and the amount of wastewater generated. Reference Methods: 40 CFR 61.355(c)(3)(iv) ADP 09-2885 Condition 70	EU-68	M07 M85 M86 M87
Req-280	The Permittee shall develop written procedures for the management of wastewater generated during maintenance activities in accordance with 40 CFR 63.105. These procedures shall be included in the SSMP required under 40 CFR 63.6(e)(3). 40 CFR 63.105(b) SWCAA 400-075 ADP 09-2885 Condition 142	EU-69 EU-70 EU-71 EU-72	M08
Req-281	The anaerobic digester shall be designed to operate [in accordance with 40 CFR 61.349(a)(1)(i)] with no detectable emissions as indicated by an instrument reading of less than 500 ppm_v above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h). Reference Method: 40 CFR 60 Appendix A Method 21 40 CFR 61.349(a)(1)(i) SWCAA 400-075 ADP 09-2885 Condition 140	EU-69 EU-70	M12 M85
Req-282	The emissions from tanks T-104, T-164, T-141, and T-182 shall be routed to the vent header system at all times and shall comply with the applicable requirements of 40 CFR 61.343(a)(1)(i). 40 CFR 61.343(a)(1)(i)	EU-71	M12

Req. #	Requirements for Wastewater Treatment (EU-68 through EU-72)	Emission Point	Monitoring
Req-283	Leak repairs shall be completed no later than fifteen (15) calendar days after discovery. A first repair attempt shall be made in five (5) calendar days after discovery. Delay of repair is allowed if the repair is technically impossible without a complete or partial facility or unit shutdown. Tank leaks shall be repaired within forty-five (45) days after discovery. ADP 09-2885 Condition 141	EU-69 EU-71 EU-72	M12
Req-284	Except as provided in 40 CFR 61.350, if visible defects are observed during an inspection, or if other problems are identified, or if detectible emissions are measured, a first effort to repair shall be made as soon as practicable but no later than five (5) calendar days after detection. Repair shall be completed no later than fifteen (15) days after the emissions are detected or the visible defect is observed. Delay of repair is allowed if the repair is technically impossible without a complete or partial facility or unit shutdown. 40 CFR 61.349(g) 40 CFR 61.350 SWCAA 400-075	EU-69 EU-70	M12
Req-285	Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than forty-five (45) calendar days after identification. Delay of repair is allowed if the repair is technically impossible without a complete or partial facility or unit shutdown. 40 CFR 61.343(d) 40 CFR 61.350 SWCAA 400-075	EU-71 EU-72	M12
Req-286	The amount of natural gas and digester gas consumed by flare X-86B shall be recorded monthly. ADP 09-2885 Condition 204	EU-69	M85
Req-287	The amount of digester gas bypassing flare X-86B shall be recorded monthly. Monitoring data shall be recorded at least once every fifteen (15) minutes. 40 CFR 61.349(a)(1)(ii) ADP 09-2885 Condition 205	EU-69	M85
Req-288	Emissions of NO_x from enclosed flare X-86B shall not exceed any of the following: a. 0.60 lb/hr as a 1-hour average; and b. 2.6 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 7E ADP 09-2885 Condition 72	EU-69	M83 M85

Req. #	Requirements for Wastewater Treatment (EU-68 through EU-72)	Emission Point	Monitoring
Req-289	Emissions of CO from enclosed flare X-86B shall not exceed any of the following: a. 3.0 lb/hr as a 1-hour average; and b. 13.1 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 10 ADP 09-2885 Condition 73	EU-69	M83 M85
Req-290	Emissions of SO_2 from enclosed flare X-86B shall not exceed any of the following: a. 1,000 ppmvd corrected to 3% O_2 as a 1-hour average; and b. 37.1 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 6 ADP 09-2885 Condition 76	EU-69	M84 M85
Req-291	The SO_2 emission rate from flare X-86B shall be determined at least annually. The determination may be made using the results of a sulfur balance across the anaerobic wastewater treatment system, through direct measurements of the hydrogen sulfide content of the digester gas, or by direct measurement of the SO_2 emissions from flare X-86B. Reference Method: 40 CFR 60 Appendix A Method 6 or 6C ADP 09-2885 Condition 144	EU-69	M84
Req-292	Emissions of VOC from enclosed flare X-86B shall not exceed any of the following: a. 20 ppmvd (as benzene) corrected to 3% O_2 as a 1-hour average; and b. 2.1 tpy as a 12-month rolling total summed monthly. Reference Method: 40 CFR 60 Appendix A Method 18 40 CFR 61.349(a)(2) ADP 09-2885 Condition 74	EU-69	M83 M85

Req. #	Requirements for Wastewater Treatment (EU-68 through EU-72)	Emission Point	Monitoring
Req-293	Flare X-86B shall reduce emissions of benzene from wastewater treatment consistent with 40 CFR 61.349(a)(2)(i) as determined by a source test. Permittee shall provide compliance by using one of the following options: a. Organic emissions vented to the digester flare shall be reduced by 95% or greater; b. Emissions of VOC from the flare shall not exceed 20 $ppm_v d$, corrected to 3% O_2; or c. The flare shall provide for a minimum residence time of 0.5 s at a minimum 3-hour average temperature of 1,400°C. Reference Method: 40 CFR 60 Appendix A Method 18 40 CFR 61.349(a)(2)(i) 40 CFR 61.349(c)(2) 40 CFR 61.349(d) SWCAA 400-075 ADP 09-2885 Condition 143	EU-69	M82 M83
Req-294	Emissions of PM_{10} from enclosed flare X-86B shall not exceed any of the following: a. 0.3 lb/hr as a 1-hour average; and b. 1.31 tpy as a 12-month rolling total summed monthly. Reference Methods: 40 CFR 60 Appendix A Method 5 and 40 CFR 51 Appendix M Method 202 ADP 09-2885 Condition 75	EU-69	M83 M85
Req-295	Visible emissions from enclosed flare X-86B shall not exceed 0% opacity for more than three (3) minutes in any 1-hour period as determined in accordance with EPA Method 9 and SWCAA Method 9. Reference Methods: 40 CFR 60 Appendix A Method 9 and SWCAA 400 Appendix A Method 9 ADP 09-2885 Condition 77	EU-69	M01
Req-296	The operating temperature of flare X-86B shall be maintained at a minimum of 1,400°F as a 3-hour average unless compliance with all applicable emission limitations can be maintained at a lower temperature as demonstrated by a source test. ADP 09-2885 Condition 145	EU-69	M82
Req-297	The amount of digester gas allowed to bypass flare X-86B shall not exceed 10,000 scf/month. ADP 09-2885 Condition 146	EU-70	M85

Req. #	Requirements for Wastewater Treatment (EU-68 through EU-72)	Emission Point	Monitoring
Req-298	Wastewater from T-104, T-141, T-164, and T-182 shall be treated by the anaerobic treatment system (ANTS) as necessary to meet the requirements of 40 CFR 61 Subpart FF. Facility waste and waste mixtures with a flow-weighted annual average water content of 10% or greater shall contain less than or equal to 6.0 Mg/yr (6.6 tpy) benzene in compliance with 40 CFR 61.342(e)(2)(i). Reference Methods: 40 CFR 61.355(c)(3)(iv) 40 CFR 61.342(e)(2)(i) SWCAA 400-075 ADP 09-2885 Condition 71	EU-71	M86
Req-299	If the total annual benzene quantity from facility waste is less than 10 Mg/yr (11 ton/yr), the Permittee shall: a. Maintain records per §61.356; b. Report per §61.357; and c. Repeat the determination of total annual benzene quantity from facility waste at least once annually. 40 CFR 61.355(a)(4) and (a)(5)	EU-71	M86
Req-300	Emissions of VOC, including benzene, from the exhaust of the non-regenerative activated carbon system associated with tanks T-21B and T-21D shall not exceed 500 ppmv. ADP 09-2885 Condition 78	EU-72	M87
Req-301	When carbon breakthrough is indicated, the activated carbon in the activated carbon system associated with tanks T-21B and T-21D shall be replaced with fresh carbon immediately. ADP 09-2885 Condition 147	EU-72	M87

Req. #	Requirements for Benzene Transfer Operations (EU-73)	Emission Point	Monitoring
Req-302	Total organic HAP emissions shall be reduced by ≥98% or to an exit concentration of 20 $ppm_v d$ corrected to 3% O_2 or less, whichever is less stringent, when loading benzene into rail cars or tank trucks. Reference Method: 40 CFR 60 Appendix A Method 18 or Method 25A 40 CFR 63.126(b)(1) SWCAA 400-075	EU-73	M88 M89 M90
Req-303	Only railcars that have current certifications and have been determined to be vapor-tight within the preceding twelve (12) months shall be loaded. Reference Method: 40 CFR 60 Appendix A Method 27 40 CFR 63.126(e) SWCAA 400-075 ADP 09-2885 Condition 149	EU-73	M92 M89 M91
Req-304	Emissions of VOC from the non-regenerative carbon canisters resulting from loading benzene into railcars shall not exceed the following: a. 1,000 $ppm_v d$ of benzene as a 1-hour average; and b. 20 lb/yr as a 12-month rolling total summed monthly. Emissions shall be calculated based on the average benzene concentration from the CEMS and the amount of benzene transferred. Reference Method: 40 CFR 60 Appendix A Method 18 ADP 09-2885 Condition 79	EU-73	M92 M88 M89 M90
Req-305	During the transfer of benzene to railcars, the vapor space displaced from the railcar shall be routed to the non-regenerative carbon canisters to control emissions. ADP 09-2885 Condition 148	EU-73	M88 M89 M90 M91
Req-306	During transfer of benzene to railcars, the pressure in the collection system at the railcar vent line shall be less than the certified railcar pressure. ADP 09-2885 Condition 150	EU-73	M89

Req. #	Requirements for Miscellaneous Storage Tanks (EU-74 through EU-77)	Emission Point	Monitoring
Req-307	For each Group 2 storage vessel, the Permittee shall maintain a record of the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Reference Method: Incorporated methods listed under 40 CFR 63.111 "Maximum True Vapor Pressure" 40 CFR 63.119(a)(3) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93
Req-308	For each storage tank subject to 40 CFR 63 Subpart EEEE containing organic liquids (non-gasoline) having a capacity less than 18.9 m^3 (5,000 gal), that are not required to be controlled under Subpart EEEE, the Permittee shall keep documentation as per §63.2343(a). 40 CFR 63.2343(a) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93 M94
Req-309	For each storage tank subject to 40 CFR 63 Subpart EEEE containing organic liquids (non-gasoline) having a capacity greater than 18.9 m^3 (5,000 gal) that are not required to be controlled under Subpart EEEE, the Permittee shall keep documentation as per §§63.2343(b)(1) through (b)(3). 40 CFR 63.2343(b)(1) through (b)(3) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93 M94 M95 M92
Req-310	If one or more of the following events occur since the filing of the Notification of Compliance Status or the last Compliance report, the Permittee shall submit a subsequent Compliance report as specified in paragraphs §63.2343(b)(2) and (c)(2). a. Any storage tank or transfer rack became subject to control under 40 CFR 63 Subpart EEEE; or b. Any storage tank equal to or greater than 18.9 m^3 (5,000 gal) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of 40 CFR 63 Subpart EEEE; or c. Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or d. Any of the information required in §63.2386(c)(1), §63.2386(c)(2), or §63.2386(c)(3) has changed. 40 CFR 63.2343(d) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M94 M95 M92 M96

Req. #	Requirements for Miscellaneous Storage Tanks (EU-74 through EU-77)	Emission Point	Monitoring
Req-311	Any existing tank subject to 40 CFR 63 Subpart EEEE and meeting either of the following: a. A volume greater than or equal to 18.9 m^3 (5,000 gal) and less than 189.3 m^3 (50,000 gal) containing a volatile organic liquid with an annual average TVP greater than or equal to 27.6 kPa and less than 76.6 kPa; or b. A volume greater than 189.3 m^3 (50,000 gal) containing a volatile organic liquid with an annual average TVP less than 76.6 kPa; shall comply with the requirements in §§63.2346(a)(1), (a)(2), (a)(3), or (a)(4). 40 CFR 63.2346(a) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M95 M41 M46
Req-312	Any existing tank subject to 40 CFR 63 Subpart EEEE and meeting either of the following: a. A volume greater than or equal to 18.9 m^3 (5,000 gal) and less than 189.3 m^3 (50,000 gal) containing a volatile organic liquid with an annual average TVP greater than or equal to 76.6 kPa; or b. A volume greater than 189.3 m^3 (50,000 gal) containing a volatile organic liquid with an annual average TVP greater than or equal to 76.6 kPa; shall comply with the requirements in §§63.2346(a)(1), (a)(2), or (a)(4). 40 CFR 63.2346(a) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M95 M41 M46
Req-313	Any tank with a volume greater than 5,000 gal containing a volatile organic liquid with a vapor pressure greater than 76.6 kPa shall: a. Reduce emissions of total organic HAP by at least 95% w/w or, as an option, to an exhaust concentration less than or equal to 20 ppmvd at 3% O_2 for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of 40 CFR 63, Subpart SS; or b. Comply with the requirements of §63.984 for routing emissions to a fuel gas system or back to a process. 40 CFR 63.2346 SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M95 M41 M46
Req-314	All storage tanks subject to 40 CFR 63 Subpart EEEE shall be operated in compliance with the emission limitations, operating limits, and work practice standards as applicable in 30 CFR 63 Subpart EEEE at all times when the equipment identified in §63.2338(b)(1) through (4) is in organic liquid distribution operation. 40 CFR 63.2350(a) 40 CFR 63.2378 SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M94 M95

Req. #	Requirements for Miscellaneous Storage Tanks (EU-74 through EU-77)	Emission Point	Monitoring
Req-315	All tanks containing a volatile organic liquid and subject to 40 CFR 63 Subpart EEEE shall be operated and maintained according to the provisions of 40 CFR 63.6(e)(1)(i). 40 CFR 63.6(e)(1) 40 CFR 63.2350(b) SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93
Req-316	For those tanks subject to 40 CFR 63 Subpart EEEE for which performance testing is required, the Permittee shall conduct performance testing per §63.2354. 40 CFR 63.7(e) 40 CFR 63.2354 SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93
Req-317	For those tanks required to have a control system installed under 40 CFR 63 Subpart EEEE, the Permittee shall install, operate and maintain a continuous parameter monitoring systems per §63.2366. 40 CFR 63.2366 SWCAA 400-075	EU-74 EU-75 EU-76 EU-77	M93

VI. NON-APPLICABLE REQUIREMENTS

This section lists all federal, state, and/or local requirements which might reasonably apply to the Permittee, but are deemed non-applicable after review by SWCAA as per WAC 173-401-640(2).

1. Continuous Monitoring Systems – NSPS

40 CFR 60 Subpart A (§60.13 et seq)

This standard applies to continuous monitoring systems (examples: temperature and emission monitoring systems) used to comply with NSPS requirements. The only NSPS requirement is for reporting sulfur content in fuel oil. No continuous monitoring systems are required by the regulation; therefore, this section of Subpart A does not apply.

2. Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for which Construction Is Commenced after June 20, 1996

40 CFR 60 Subpart E (§60.50 et seq)

This standard was promulgated to regulate the incineration of solid waste at greater than 50 ton/day. Solid waste is defined as refuse, more than 50% of which is municipal type waste consisting of a mixture of paper, wood, yard wastes, food wastes, plastics, leather, rubber, and other combustibles, and noncombustible materials such as glass and rock. Boilers U-2, U-3, and U-7 burn natural gas, fuel oil, and waste tars; boiler U-3 also burns hazardous waste, which is classified as such because of the possibility that it may contain benzene. The waste tar and hazardous waste burned in these boilers do not meet the definition of "solid waste" under Subpart E, nor do the boilers meet the definition of "incinerator"; therefore Subpart E does not apply.

3. 40 CFR 63 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984

40 CFR 63 Subpart Kb (§60.110b et seq)

This standard was promulgated to regulate VOC emissions from storage vessels. This regulation is no longer applicable to the facility because the Permittee is implementing compliance under 40 CFR 63 Subpart F per §63.110(b); therefore, Subpart Kb does not apply.

4. Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced after January 5, 1981, and on or before November 7, 2006

40 CFR 60 Subpart VV (§60.480 et seq)

This standard was promulgated to regulate VOC emissions from equipment leaks. This regulation is no longer applicable to the whole facility because the Permittee is implementing compliance under 40 CFR 63 Subpart H per §63.160(c); therefore, Subpart VV does not apply.

5. Standards Of Performance for VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes
40 CFR 60 Subpart III (§60.610 et seq)

This standard was promulgated to regulate VOC emissions from Air Oxidation Unit Processes. This regulation is no longer applicable to the whole facility because the Permittee is implementing compliance under 40 CFR 63 Subpart F per §§63.110(d)(1)–(3); therefore Subpart III does not apply.

6. Standard of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations
40 CFR 60 Subpart NNN (§60.660 et seq)

This standard was promulgated to regulate VOC emissions from Distillation Operations. This regulation is no longer applicable to the facility because the Permittee is implementing compliance under 40 CFR 63 Subpart F per §§63.110(d)(4)–(6); therefore, Subpart NNN does not apply.

7. Standard of Performance for VOC Emission from Synthetic Organic Chemicals Manufacturing Industry Reactor Processes
40 CFR Subpart RRR (§60.700 et seq)

This standard was promulgated to regulate VOC emissions from Reactor Processes. This regulation is no longer applicable to the facility because the Permittee is implementing compliance under 40 CFR 63 Subpart F per §§63.110(d)(7)–(9); therefore, Subpart RRR does not apply.

8. National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene **40 CFR 61 Subpart J (§61.110 et seq)**

This standard was promulgated to regulate benzene emissions from equipment leaks. This regulation is no longer applicable to the facility because the Permittee is implementing compliance under 40 CFR 63 Subpart H per §63.160(b)(2); therefore Subpart J does not apply.

9. National Emissions Standard for Equipment Leaks (Fugitive Emission Sources)
40 CFR 61 Subpart V (§61.240 et seq)

This standard was promulgated to regulate VOC emissions from equipment leaks. This regulation is no longer applicable to the facility because the Permittee is implementing compliance under 40 CFR 63 Subpart H per §63.160(b)(2); therefore Subpart V does not apply.

10. National Emissions Standard for Benzene Emissions from Benzene Storage Vessels
40 CFR 61 Subpart Y (§61.270 et seq)

This standard was promulgated to regulate the storage of liquid benzene in tanks with a storage capacity greater than 10,000 gallons (37.8 m^3). The Permittee operates one benzene storage tank, tank T-714 (5,000 gallons). The storage capacity of the benzene storage tank at this facility is less than 10,000 gallons; therefore Subpart Y does not apply.

11. National Emissions Standard for Benzene Emissions from Benzene Transfer Operations 40 CFR 61 Subpart BB (§61.300 et seq)

This standard was promulgated to regulate benzene emissions during the loading of benzene into rail cars and tank trucks. This regulation is no longer applicable to the facility because the Permittee has chosen to comply with the requirements in 40 CFR 63 instead of this regulation as provided in 40 CFR 63.110; therefore Subpart BB does not apply.

12. National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing 40 CFR 63 Subpart FFFF (§63.2430 et seq)

The Permittee requested a federally-enforceable limit on HAP emissions for the facility under ADP 07-2759, which was subsequently superseded by ADP 09-2885. As of the compliance date for this regulation of May 10, 2008, the facility was no longer classified as a major source of HAP; therefore Subpart FFFF does not apply.

13. National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines 40 CFR 63 Subpart ZZZZ (§63.6580 et seq)

Subpart ZZZZ applies to existing and new reciprocating internal combustion engines (RICE) at major and area sources of HAP. EKC accepted a federally-enforceable limit on HAP in ADP 09-2885; therefore, EKC is considered to be an area source of HAP. The fire water pump and the emergency generator engines are considered existing RICEs under §63.6590(a)(1)(iii). The existing emergency fire water pump (EU-64) and the existing emergency generator (EU-63) are subject to Subpart ZZZZ, but do not have any requirements per §63.6590(b)(3).

14. Hazardous Waste Burned in Boilers and Industrial Furnaces 40 CFR 266 Subpart H (§266.100 et seq)

This standard was promulgated to regulate the combustion of hazardous waste under the RCRA and has resulted in and EPA-issued BIF permit, which includes additional requirements for the U-3 boiler. The requirements under Subpart H are not part of the air program; therefore requirements under Subpart H are not applicable in the Title V permit. Many of the requirements of the BIF permit have been removed in order to implement the requirements under 40 CFR 63 Subpart EEE.

15. Solid Waste Incinerator Facilities WAC 173-434

This standard applies to solid waste or solid waste derived fuel incinerator facilities that were constructed after January 1, 1985. Boilers U-2, U-3, U-7, and U-17 burn materials (waste tar and octanal bottoms) that are considered "solid waste" and would therefore be considered an "incinerator facility" under WAC 173-434-030. The primary purpose of these boilers is to produce steam, not to thermally destruct waste; therefore, the boilers do not meet the definition of "incinerator" under WAC 173-400-030(41), which is incorporated by reference under WAC 173-434-030 and SWCAA 400-030(54). These regulations do not apply to the facility.

16. WA State Department of Health – Radiation **WAC 246-220**

The Permittee operates level measuring devices that are subject to the requirements for radioactive sources contained in WAC 246-220 through 246-256. These requirements are not part of the air program; therefore these requirements do not apply.

17. Incinerator Regulation **SWCAA 400-050(2) and (3)**
SWCAA 400-050(2) and (3)

Boilers U-2, U-3, U-7, and U-17 are permitted to burn fuels other than natural gas or fuel oil. U-2, U-3, and U-7 can burn process tar, U-3 can burn RCRA hazardous waste, and U-17 can burn octanal bottoms. The question is whether these fuels are considered "waste" and therefore the boiler could be considered "incinerators." Under SWCAA 400-030(54), an incinerator is a furnace used primarily for the thermal destruction of waste. The boilers could operate solely upon any fuel that the boilers are currently permitted to burn. However, the boilers are primarily used for the production of process steam and not for the destruction of waste. In addition, none of the boilers meet the definition of "incinerator" under 40 CFR 60.51 – Standards of Performance for Incinerators. In the case of boiler U-3, the boiler is permitted to burn RCRA hazardous waste under an EPA RCRA permit and under SWCAA permits. The RCRA permit was issued under the Boiler and Industrial Furnace (BIF) regulation, 40 CFR 266 Subpart H – Hazardous Waste Burned in Boilers and Industrial Furnaces – not under 40 CFR 264/265 Subpart O – Incinerators. The boiler is also regulated under 40 CFR 63 Subpart EEE – NESHAP for Hazardous Waste Combustors – in Phase II of the promulgation of the regulation which specifically addressed combustion in boilers; phase I was aimed at combustion in incinerators. Based upon all of the above, the boilers would not be considered "incinerators" and these regulations do not apply to the facility.

18. Registration program **SWCAA 400-100(2)**

The Permittee is an AOP source and is subject to the Title V permit program. Pursuant to SWCAA 400-100(3)(a)(iv), facilities subject to the Title V permit program are exempt from the registration requirements of SWCAA 400-100(2); therefore, this regulation does not apply.

19. Requirements for Sources in a Maintenance Plan Area **SWCAA 400-111**

The Permittee is not located in a maintenance plan area for any criteria pollutant; therefore, this regulation is not applicable.

20. Requirements for New Sources in Nonattainment Areas **SWCAA 400-112**

The Permittee is not located in a nonattainment area for any criteria pollutant; therefore, this regulation is not applicable.

21. Bubble Rules **SWCAA 400-120**

The Permittee has not requested an emission bubble for any regulated pollutant; therefore, this regulation is not applicable.

22. Acquisition and Use of Emission Reduction Credits SWCAA 400-130

All emission credits that were issued to the Permittee have been expired. There are no currently active emission credits; therefore, this regulation is not applicable.

VII.MONITORING TERMS AND CONDITIONS

The Permittee shall conduct each of the monitoring activities listed below. Each monitoring requirement is indexed according to the underlying requirement(s). Pursuant to WAC 173-401-530(2)(c), none of the following monitoring requirements apply to IEUs.

Monitoring: Facilitywide – General and HAP Limit

M01. Visible Emissions Monitoring

WAC 173-401-615(1)(b)
OA 94-1670R1 Condition 12(e)
OA 95-1799R1 Condition 17(c) and 17(d)
OA 97-2078 Condition 10(k)
OA 00-2274R3 Condition 11(f)
OA 01-2389 Condition 19(n) and 19(o)
OA 00-2270R2 Condition 10 and 11
ADP 07-2720 Condition 2
ADP 09-2885 Condition 17, 27, 31, and 77

A brief qualitative observation for the purpose of identifying potential visible emissions from an affected emission unit or process shall be performed during daylight hours while the unit or process is operating or active. Based upon the qualitative observation the Permittee shall take one or more of the following actions:

a. If no visible emissions are observed, the Permittee shall make a record as per K1(a) or K7 of this Permit, as applicable, and no further action is necessary.
b. Observed visible emissions.
   (1) All applicable sources, except benzoate dryers, fluidized bed extruder, and benzoic acid chipper baghouse. If visible emissions are observed, the Permittee shall verify that the visible emissions observed are within the applicable opacity limit established in this Permit. If the visible emissions are within the applicable opacity limit, the Permittee shall make a record as per K1(a) and no further action is necessary.
   (2) Benzoate dryers, fluidized bed extruder, and benzoic acid chipper baghouse. If any visible emissions are observed, at least six (6) minutes of opacity observations shall be conducted in accordance with SWCAA Method 9 for each reading in excess of the opacity standard to a maximum total of sixty (60) minutes or thirteen (13) readings in excess of the opacity standard. If the visible emissions are within the applicable opacity limit, the Permittee shall make a record as per K7 and no further action is necessary.
c. If visible emissions are observed and the emissions are above the applicable opacity limit established in this Permit, the Permittee shall report the exceedance of the applicable opacity limit as a deviation as per R1 and make a record as per K1(a) or K7, as applicable, and K1(c). The Permittee shall verify that the emission unit or process and any associated air pollution control equipment emitting the visible emissions are operating properly. Adjustments, repairs, or maintenance shall be performed on the unit, process, or control equipment to reduce the visible emissions to a level at or below the applicable opacity limit as soon as practicable but no later than seventy-two (72) hours after initial discovery of the visible emissions. The Permittee shall demonstrate that the unit or process is in compliance with the

applicable opacity limit by using SWCAA Method 9 or EPA Method 9 as applicable. If visible emissions are within the applicable opacity limit identified in this Permit after adjustments, repairs, or maintenance were performed, the Permittee shall make a record as per K1(a) or K7, as applicable, K1(c), and K1(g) and no further action is necessary.

If visible emissions cannot be reduced to a level at or below the applicable opacity limit within seventy-two (72) hours, the Permittee shall report the exceedance of the applicable opacity limit as a deviation as per R1 and make a record as per K1(a) or K7, as applicable, K1(c), and K1(g). The Permittee shall continue to make adjustments, repairs, or maintenance on the unit or process, until such time as the unit or process is demonstrated to be in compliance by using SWCAA Method 9 or EPA Method 9 as applicable.

Implementation of corrective actions does not shield the Permittee from enforcement action by SWCAA or from the obligation of reporting permit deviations as specified in WAC 173-401-615(3). Records of monitoring activities shall be maintained in accordance with K1(a) or K7, as applicable, K1(c), and K1(g) of this Permit.

M02. Grain Loading Limit Monitoring

WAC 173-401-615(1)(b)
ADP 09-2885 Conditions 27 and 31

A brief qualitative observation for the purpose of identifying emissions from an affected emission unit or process shall be performed during daylight hours while the unit or process is operating or active. It is assumed that for the purposes of compliance that the presence of visible emissions is an indicator that the grain loading limit (in gr/dscf) may have been exceeded.

Based upon the qualitative observation the Permittee shall take one or more of the following actions:

a. If no visible emissions are observed, the Permittee shall make a record as per K1(a) of this Permit and no further action is necessary.
b. If visible emissions are observed, the Permittee shall report the exceedance of the applicable grain loading limit as a deviation as per R1 and make a record as per K1(a) and K1(c). The Permittee shall verify that the emission unit or process and any associated air pollution control equipment emitting the visible emissions are operating properly. Adjustments, repairs, or maintenance shall be performed on the unit, process, or control equipment to reduce the visible emissions to a level at or below the applicable opacity limit as soon as practicable but no later than seventy-two (72) hours after initial discovery of the visible emissions. The Permittee shall demonstrate that the unit or process is in compliance with the applicable grain loading limit by using SWCAA Method 9 or EPA Method 9 as applicable. If visible emissions are eliminated after adjustments, repairs, or maintenance were performed, the Permittee shall make a record as per K1(a) and K1(c) of this Permit and no further action is necessary.

   If visible emissions cannot be eliminated within seventy-two (72) hours, the Permittee shall report the exceedance of the applicable grain loading limit as a deviation as per R1 and make a record as per K1(a), K1(c), and K1(g). The Permittee shall continue to make adjustments, repairs, or maintenance on the unit or process, until such time as the unit or process is

demonstrated to be in compliance by using SWCAA Method 9, EPA Method 9, a source test, or other method of compliance demonstration, as applicable.

Implementation of corrective actions does not shield the Permittee from enforcement action by SWCAA or from the obligation of reporting permit deviations as specified in WAC 173-401-615(3). Records of monitoring activities shall be maintained in accordance with K1(a), K1(c), and K1(g) of this Permit.

M03. Complaint Log

WAC 173-401-615(1)(b)
ADP 09-2885 Condition 154

The Permittee shall record any air quality related complaint received by either the Permittee or SWCAA. All air quality related complaints shall be investigated no later than one (1) business day after the Permittee has been notified. Investigation shall determine the validity of each complaint, the cause of any emissions that may have prompted the complaint, and what, if any, corrective action was taken in response to the complaint. Permittee shall take appropriate corrective action for all valid complaints. Records of monitoring activities shall be maintained in accordance with K1(a) and K1(b) of this Permit.

M04. Fugitive Emission and Fallout General Inspection

WAC 173-401-615(1)(b)

At least once per month or in response to a complaint, the Permittee shall perform monthly inspections of affected operations during daylight hours for the purpose of identifying excess fugitive emissions or fallout. Whenever fugitive emissions or fallout are observed during the monthly inspection or a result of a complaint, the Permittee shall identify the source of the emissions. Within two (2) hours of discovery, the Permittee shall confirm whether the equipment involved is experiencing a malfunction, and whether reasonable precautions and good work practices are being employed to minimize emissions. Reasonable precautions and good work practices include, but are not limited to, worker training programs, closed doors and windows, vertical exhaust of ventilation equipment, and proper operation of ventilation systems. Records of monitoring activities shall be maintained in accordance with K1(a), K1(b), and K1(c) of this Permit.

M05. Particulate Matter Emissions Monitoring

WAC 173-401-615(1)(b)

The Permittee shall perform monthly inspections of affected operations during daylight hours for the purpose of identifying potential PM emissions violations. Whenever fallout of PM beyond the Permittee's property boundary or visible emissions are observed during the monthly inspection, or whenever PM fallout or visible emissions are indicated by a complaint, the Permittee shall investigate and determine the source of the emissions. Within sixty (60) minutes of determining the source of PM fallout or excess visible emissions, the Permittee shall determine if the equipment involved is experiencing a malfunction and whether all air pollution control equipment is operating properly. Implementation of corrective action does not relieve the Permittee from the obligation of reporting permit deviations as specified in WAC 401-615(3).

Records of monitoring activities shall be maintained in accordance with K1(a), K1(b), and K1(c) of this Permit.

M06. Maintenance Activities Monitoring

OA 01-2389 Condition 19(u)(3)
OA 00-2274R3 Condition 11(j)(1)
OA 00-2270R2 Condition 15
ADP 09-2885 Condition 173, 185(d), and 212

Maintenance activities, including activities performed on control equipment, shall be recorded for each occurrence that may affect emissions from:

a. Hot oil heater U 1 (EU-04) [ADP 09-2885 Condition 212];
b. Steam boiler U 2 (EU-05) [ADP 09-2885 Condition 212];
c. Steam boiler U 3 (EU-06) [ADP 09-2885 Condition 212];
d. Steam boiler U 7 (EU-07) [ADP 09-2885 Condition 212];
e. Steam boiler U 9 (EU-08) [ADP 09-2885 Condition 212];
f. Steam boiler U 10 (EU-09) [ADP 09-2885 Condition 212];
g. Steam boiler U 11 (EU-10) [ADP 09-2885 Condition 212];
h. Hot oil heater U 12 (EU-11) [ADP 09-2885 Condition 212];
i. Hot oil heater U 14 (EU-12) [OA 01-2389 Condition 19(u)(3) and ADP 09-2885 Condition 212];
j. Steam boiler U 15 (EU-13) [OA 01-2389 Condition 19(u)(3) and ADP 09-2885 Condition 212];
k. Hot oil heater U 16 (EU-14) [ADP 09-2885 Condition 212];
l. Steam boiler U 17 (EU-15) [OA 00-2270R2 Condition 11(j)(1), and ADP 09-2885 Condition 212];
m. Benzoic acid and benzaldehyde production (EU-19, EU-20, EU-22 through EU-28) [ADP 09-2885 Condition 173];
n. Benzoate plant (EU-54 through EU-65) [OA00-2274R3 Condition 11(j)(1)];
o. Fragrance plant (EU-29 through EU-37) [ADP 09-2885 Condition 185(d)]; and
p. Benzyl alcohol/benzyl amine plant (EU-41 throughEU-46) [ADP 09-2885 Condition 185(d)].

The records shall be readily available on-site for inspection. Records of monitoring activities shall be maintained in accordance with K1(g) and K1(h) of this Permit.

M07. Emission Inventory Monitoring

WAC 173-401-615(1)(b)
SWCAA 400-105(1)(b)(i)
ADP 01-2402 Condition 13(b)
OA 00-2274R3 Condition 11(k)(2)
ADP 07-2720 Condition 1
ADP 09-2885 Conditions 1–4, 85, 175, and 229

For purposes of determining compliance with the applicable emission limits, the Permittee shall maintain information consistent with SWCAA 400-105 for determining emissions from the affected units. The Permittee shall provide the following:

a. Rolling 12-month sum of HAP emissions from any source, including fugitive sources, emitting HAPs on a facilitywide basis [ADP 09-2885 Condition 1];

b. Rolling 12-month sum of VOC emissions from any tank not equipped with a control device or equipped only with conservation and emergency vents and storing volatile organic liquids with a TVP greater than 3.5 kPa [ADP 09-2885 Condition 2];
c. Emissions during a vent header system bypass shall be calculated using engineering calculations with the best information available [ADP 09-2885 Condition 175];
d. Emissions of benzene and toluene during period when tanks T-42, T-70, or T-71 are not connected to the vent header system [ADP 09-2885 Conditions 3 and 4];
e. Emissions of VOC from tanks T-42, T-70, and T-71 during a bypass of the vent header system [ADP 09-2885 Condition 85];
f. The quarterly quantity of wastewater from each inflowing waste stream [ADP 09-2885 Condition 229]; and
g. The quarterly quantity of benzene and toluene concentration in each of the following [ADP 09-2885 Condition 229]:
    1. Anaerobic Treatment System (ANTS) plant influent and effluent;
    2. API effluent;
    3. Biological Oxidation (BIOX) influent; and
    4. Outflow of tanks T-104, T-164, T-141, and T-182;
h. The total quantity of benzene and toluene emitted annually from the aerobic wastewater treatment system;
i. Rolling 12-month throughput of technical-grade benzoic acid (TBA) for tanks T-61, T-62, T-64, and T-65 [ADP 07-2720 Condition 1];
j. Emissions of PM (as technical grade benzoic acid) from scrubber V-61, which controls emissions from tanks T-61, T-62, T-64 and T-65 [ADP 07-2720 Condition 1]; and
k. The results of the periodic testing of the benzoate scrubbers, the sodium and potassium benzoate dryer feeds, and the fluidized bed extruder baghouse [OA 00-2274R3 Condition 11(k)(2)].

Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h).

M08. Startup, Shutdown, and Malfunction Plan

40 CFR 63.6(e)(3)
40 CFR 63.105(e)
40 CFR 63.1206(c)(2)
40 CFR 63.2350(c)
SWCAA 400-075
ADP 09-2885 Condition 155

Prior to the compliance date for an applicable standard, the permittee shall develop a written startup, shutdown and malfunction plan (SSMP) [§63.6(b)(3)(i)]. The Permittee may make such revisions to the SSMP without prior approval by the EPA Administrator or SWCAA [§63.6(e)(3)(viii)]. Superseded copies of the SSMP must be maintained on site for a period of five (5) years after the revision of the SSMP. If the SSMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the current SSMP, the Permittee shall revise the SSMP within forty-five (45) days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment.

The SSMP shall describe, in detail:

a. Procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction to ensure that, at all times, the Permittee operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions; and
b. A program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard and ensures that the Permittee is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of HAP;
c. A description of the records that will be kept which demonstrate that the procedures specified in the SSMP were followed. These records may take the form of a "checklist" or other effective form of recordkeeping that confirms conformance with the SSMP and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment.

The SSMP does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard.

Records of monitoring activities shall be maintained in accordance with K1(a), K1(c), K1(e), K1(f), K1(g), K1(h), K1(i), and K5 of this Permit.

Monitoring: Facilitywide – National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry

M09. Emission Units Subject to 40 CFR 63 Subpart F, Subpart G, or Subpart H

40 CFR 63 Subpart F(§63.100 et seq), Subpart G (§63.110 et seq), and Subpart H (§63.160 et seq)

For those emission units subject to applicable requirements under 40 CFR 63 Subpart F, Subpart G, or Subpart H, the Permittee shall keep appropriate records as specified in the appropriate Subpart. Records of monitoring activities shall be maintained in accordance with K1(c), K1(d), K1(g), and K1(h) of this Permit.

M10. Leak Detection and Inspection of Sample Connect, Open Valves, and Bottoms Receivers

40 CFR 63.167(2)(e)
40 CFR 63.172(f)
SWCAA 400-075

A facilitywide inspection shall be conducted annually to identify any open valves or leaking bottoms receivers or sample connections. The inspection shall record any open-ended valve that is not equipped with a cap, blind flange, plug, or a second valve, except:

a. Any open-ended valve or line excepted as provided in §63.162(b), §63.168(2)(d), or §63.168(2)(e); and
b. Any open-ended valves or lines containing materials which, if capped or equipped with a double block and bleed system (as specified in §63.168(2)(a) through (c)), would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard.

Each closed-vent system, except those closed-vent systems listed under §§63.172(k) and (l), shall be inspected annually according to the following:
a. If the closed-vent system is constructed of hard-piping, the Permittee shall conduct annual visual inspections for visible, audible, or olfactory indications of leaks; or
b. If the vapor collection system or closed-vent system is constructed of duct work, the Permittee shall conduct annual inspections according to the procedures in §63.180(b).

Records of monitoring activities shall be maintained in accordance with K1(a), K1(d), and K6 of this Permit.

M11. Leak Detection Program Applicability Monitoring Log

40 CFR 63.123(a)
SWCAA 400-075

Records showing which equipment is subject to the leak detection program shall be maintained by the Permittee on site and shall be readily accessible. The Permittee shall identify all lines that contain over 5% HAP concentration. Records of monitoring activities shall be maintained in accordance with K1(h) and K6 of this Permit.

M12. Leak Detection Monitoring

40 CFR 61.349(a)(1) and (2)
40 CFR 61.354(d)
40 CFR 61.355(h)
40 CFR 63.180
40 CFR 63.181
40 CFR 63.182
WAC 173-401-615(1)(b)
SWCAA 400-075
ADP 09-2885 Condition 156

The monitoring of leaks shall be conducted as defined in §63.180 except as approved in the alternative monitoring request contained in a letter from Anita J. Frankel, EPA Region 10 on April 23, 1996, found in Appendix A of this Permit. The alternative monitoring request to use a photoionization detector (PID) calibrated with isobutylene instead of methane to satisfy the leak monitoring requirements of §63.180 was granted.

The Permittee shall review the records required by §63.181 and the reports required by §63.182 (contained in M11) annually to determine compliance with the applicable requirements.

Monitoring of non-regenerative carbon canisters on tank T-21 shall be conducted monthly as required in §61.349(a). Records of monitoring activities shall be maintained in accordance with K1(a), K1(d), and K6 of this Permit.

M13. Leak Detection Quality Improvement Plan

40 CFR 63.175
40 CFR 63.176
SWCAA 400-075

Every six (6) months the Permittee shall summarize the progress at reducing leaks and include this information in the semiannual report and indicate whether a quality improvement plan will be implemented. Records of monitoring activities shall be maintained in accordance with K1(a) and K1(h) and K6 of this Permit.

M14. Heat Exchanger Testing

40 CFR 63.104(b)
SWCAA 400-075

Heat exchangers H-101A, H-101B, H-107B, H-151B, H-151C, H-162, H-164, H-205A, H-205B, and H-211 are required to be tested per §63.104(b). An alternative to the testing requirements of §63.104(b)(4) was approved by SWCAA on April 26, 1999 and is included in Appendix B of this Permit. The alternative requires that:

a. Testing shall be performed every three (3) months;
b. Testing shall be performed using an EPA method listed in 40 CFR 136 sensitive to concentrations as low as 10 ppm;
c. Only the exit of each heat exchanger needs to be tested;
d. A minimum of three (3) sets of samples shall be taken at each heat exchanger exit. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable; and
e. A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 ppm or 10% of the entrance mean, whichever is greater.

Testing is required unless the minimum pressure on the cooling water side is at least 35 kPa greater than the maximum pressure on the process side or unless one or more of the conditions under §63.104(a)(1)–(6) are met. Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h) of this Permit.

Monitoring: Toluene Storage Tanks

M15. Toluene Tank Temperature Monitoring

ADP 09-2885 Condition 159

The inlet and outlet glycol and water side temperatures of the chillers on toluene storage tanks T-70 and T-71 shall be recorded daily for each day during bypass of the vapor collection system.

Records of monitoring activities shall be maintained in accordance with K1(e), K1(h), and K4 of this Permit.

M16. Toluene Tank Monitoring During Bypass

ADP 09-2885 Condition 160

As a surrogate indicator during an air pollution control system bypass, the vapor space pressure of toluene storage tanks T-42, T-70, and T-71 shall be monitored and recorded continuously. A vapor space pressure greater than +1.8 iwc shall be presumed to cause a bypass of the vapor collection system. The bypass shall be presumed to have occurred beginning with the last recorded vapor space pressure less than or equal to +1.8 iwc.

Emissions during bypass shall be calculated using engineering calculations with the best information available. Toluene emissions may be calculated through the use of vent valve pressure versus flow correlations and the assumption that all escaping air is saturated with toluene.

Records of monitoring activities shall be maintained in accordance with K1(c), K1(e), K1(g), K1(i), and K4 of this Permit.

M17. Toluene Tanks Throughput Log

ADP 09-2885 Condition 158

Toluene throughput for toluene storage tanks T-42, T-70, and T-71 shall be recorded annually for each calendar year. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

Monitoring: Combustion Units

M18. Combustion and Process Unit Fuel Consumption Logging

40 CFR 60.11(d)
40 CFR 60.48c(g)
WAC 173-401-615(1)(b)
SWCAA 400-115
OA 94-1670R1 Appendix A Condition 3(e)
OA 97-2078 Condition 10(m)
OA 01-2389 Condition 19(u)(1) and (2)
OA 00-2270R2 Condition 14
ADP 09-2885 Condition 161 and 231(a)

The fuel consumption of each fuel that a combustion unit has burned shall be logged monthly for each combustion unit. The following is a list of the units and fuels:

Unit	Fuels
Hot Oil heater U-1	Natural Gas and Fuel Oil (max 1.75% S)
Steam Boiler U-2	Natural Gas, Waste Tar, and Fuel Oil (max 1.75% S)
Steam Boiler U-3	Natural Gas, Fuel Oil (max 1.75% S), Waste Tar, and Hazardous Waste
Steam Boiler U-7	Natural Gas, Waste Tar, and Fuel Oil (max 1.75% S)
Steam Boiler U-9	Natural Gas
Steam Boiler U-10	Natural Gas, Natural Gas, and Fuel Oil (max 1.5% S)
Steam Boiler U-11	Natural Gas and Fuel Oil (max 0.05% S)

Unit	Fuels
Hot Oil heater U-12	Natural Gas and Fuel Oil (max 0.05% S)
Hot Oil heater U-14	Natural Gas and Fuel Oil (max 0.05% S)
Steam Boiler U-15	Natural Gas and Fuel Oil (max 0.05% S)
Hot Oil heater U-16	Natural Gas
Steam Boiler U-17	Natural Gas, Fuel Oil (max 0.05% S), and Octanal Bottoms
Flare X-86B	Natural Gas and Digester Gas
RTO X-100	Natural Gas and Process gas
RTO X-150	Natural Gas and Process gas

The Permittee shall quantify and report the amount of each fuel burned in each unit for each calendar month with the semiannual (R05) and annual reports (R06).

Hot oil heaters U-12, U-14, and U-16 and steam boiler U-15 are subject to 40 CFR 60 Subpart Dc and monthly recordkeeping is allowed by an EPA variance letter dated May 6, 1998 listed in Appendix C of this Permit.

Records of monitoring activities shall be maintained in accordance with K1(h), K2, and K4 of this Permit.

M19. Combustion and Process Unit Fuel Certification and Sulfur Content Monitoring

40 CFR 60.48c(f)
40 CFR 60.11(d)
WAC 173-401-615
SWCAA 400-115
ADP 09-2885 Condition 164

The Permittee shall maintain records of fuel oil purchases and the sulfur content of the fuel oil used by each boiler, hot oil heater, or RTO. If fuel oil is burned in any boiler or hot oil heater during any 6-month period, a fuel oil certification for each type of fuel oil burned shall be submitted to SWCAA as part of the semiannual monitoring report.

For hot oil heaters U-12 and U-14 and boiler U-15, the fuel certification shall contain the following [40 CFR 60.48c(f)]:

a. The name of the oil supplier;
b. For #1 and #2 distillate fuel oil: A certification from the oil supplier that the fuel oil complies with the specifications for distillate oil in 40 CFR 60.41c;
c. For #4, #5, and #6 residual fuel oils: The location of the oil when the sample was drawn for analysis (refinery versus oil supplier's location) and the method used to determine the sulfur content of the oil.

For hot oil heater U-1 and boilers U-2, U-3, U-7, U-10, U-11, and U-17, a certification from the fuel supplier satisfies the requirement to collect and maintain a sulfur analysis of each shipment of fuel oil for the boilers/heaters in order to demonstrate compliance with the fuel sulfur content requirements.

If no fuel oil was burned in the 6-month period, a record shall be made to that effect and submitted as part of the semiannual monitoring report.

The responsible official shall certify that the records of fuel supplier certifications submitted represent all of the fuel burned during the semiannual period [ADP 09-2885 Condition 164].

In each semiannual report the Permittee shall certify that natural gas, waste tar, hazardous waste (as per the BIF permit), digester gas, process gas, octanal bottoms, and/or fuel oil are the only fuels used in combustion units. Fuel oil certifications for each type of fuel oil available onsite shall be submitted to SWCAA in each semiannual report (R05).

Records of monitoring activities shall be maintained in accordance with K1(a) and K1(h) of this Permit.

M20. Boiler U-9 Steam and Fuel Meter Calibrations

OA 94-1670R1 App. A
WAC 173-401-615(1)(b)

The steam and fuel meters for boiler U-9 shall be calibrated at least annually in accordance with manufacturer's specifications. Records of monitoring activities shall be maintained in accordance with K1(g) of this Permit.

M21. Combustion Unit Periodic Emissions Monitoring

WAC 173-401-615
SWCAA 400-106(2)
OA 95-1799R1 Condition 17(t)(3)
ADP 09-2885 Condition 211, 212, and Appendix D

Tuning of hot oil heaters U-1, U-12, U-14, and U-16 and boilers U-2, U-3, U-7, U-9, U-10, U-11, U-15, and U-17 for CO and NO_x shall be conducted at least once each calendar year no later than the end of December in accordance with Appendix D of this Permit (ADP 09-2885 Appendix D) and the requirements of SWCAA 400-106. This monitoring is not required on a particular unit in any year in which source testing was conducted on the unit. As a minimum level of quality assurance, at least five (5) minutes of data shall be collected using a calibrated combustion analyzer while the boiler is operating at representative of current intended operating conditions. Upon commencing monitoring, the Permittee shall:

a. If monitoring results indicate that emission concentrations are within an applicable emission limit, the test results shall be reported to SWCAA within fifteen (15) days of test completion.
b. If the monitoring results indicate that emission concentrations exceed the permitted emission limits, the Permittee shall either:
    1. Perform sixty (60) minutes of additional monitoring to more accurately quantify CO and NO_x emissions. If, after performing additional monitoring, the monitoring results indicate emission concentrations above an applicable emission limit, the Permittee shall initiate corrective action; or
    2. Initiate corrective action including, but not limited to tuning, maintenance by service personnel, limitation of combustion unit load, or other action taken to maintain compliance with permitted limits. Monitoring of combustion unit emissions must be

conducted as soon as practical but no later than three (3) days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

If after performing additional monitoring, the monitoring results indicate that emission concentrations are within the applicable emission limit, the results shall be reported to SWCAA within fifteen (15) days of monitoring completion.

Records of monitoring activities shall be maintained in accordance with K1(d) and K1(g) of this Permit.

M22. Combustion Unit Fuel Heat Content

ADP 09-2885 Condition 231(b)

The heat content of waste tar, hazardous waste, and octanal bottoms shall be determined a minimum of once per year.

Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h) of this Permit.

M23. Baghouses F-13 and F-14 Visible Emissions Monitoring

OA 99-2233 Condition 13(b)

Visible emissions monitoring of baghouse F-13 and baghouse F-14 shall be performed weekly during daylight hours while the baghouses are operating using EPA Method 22 or EPA Method 9 for a minimum of six (6) minutes. The Permittee shall perform the following:

a. During the initial opacity observation period:
   (1) For each visible emission observation in excess of 5% opacity, an additional six (6) minutes of opacity readings shall be performed;
   (2) If two (2) visible emission observations are in excess of 10% opacity, then an additional twelve (12) minutes of opacity readings shall be performed;
   (3) If no visible emissions observations are above 5% opacity, no additional readings are required, otherwise, observations shall continue per (1) and (2) until sixty (60) minutes of observations or thirteen (13) readings in excess of 5% opacity have been recorded.
b. If visible emissions are observed and the emissions are above the applicable opacity limit established in this Permit, the Permittee shall report the exceedance of the applicable opacity limit as a deviation as per R1 and make a record as per K1(a). The Permittee shall verify that the emission unit or process and any associated air pollution control equipment emitting the visible emissions are operating properly. Adjustments, repairs, or maintenance shall be performed on the unit, process, or control equipment to reduce the visible emissions to a level at or below the applicable opacity limit as soon as practicable but no later than seventy-two (72) hours after initial discovery of the visible emissions. The Permittee shall demonstrate that the unit or process is in compliance with the applicable opacity limit by using SWCAA Method 9 or EPA Method 9 as applicable. If visible emissions are within the applicable opacity limit identified in this Permit after adjustments, repairs, or maintenance were performed, the Permittee shall make a record as per K1(a) and K1(c) and no further action is necessary.

If visible emissions cannot be reduced to a level at or below the applicable opacity limit within seventy-two (72) hours, the Permittee shall report the exceedance of the applicable opacity limit as a deviation as per R1 and make a record as per K1(a) and K1(c). The Permittee shall continue to make adjustments, repairs, or maintenance on the unit or process, until such time as the unit or process is demonstrated to be in compliance by using SWCAA Method 9 or EPA Method 9 as applicable.

Implementation of corrective actions does not shield the Permittee from enforcement action by SWCAA or from the obligation of reporting permit deviations as specified in WAC 173-401-615(3). Records of monitoring activities shall be maintained in accordance with K1(a), K1(d), and K1(g) of this Permit.

M24. Boiler U-9 PM, SO_2, and VOC Emission Factors

WAC 173-401-615(1)
OA 94-1670R1 Conditions 12(c) and 12(d)

EPA AP-42 Section 1.2 (January 1995) emission factors for PM, SO_2, and VOC and total fuel usage shall be used to determine total emissions for boiler U-9, unless a source test has been performed. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M25. Combustion Unit Emission Testing

SWCAA 400-052
OA 01-2389 Condition 19(l), (m), and (p)
ADP 09-2885 Condition 210 and Appendix C

Emission testing for hot oil heaters U-1, U-12, U-14, and U-16 and boilers U-2, U-3, U-7, U-9, U-10, U-11, U-15, and U-17 shall be conducted every sixty (60) months for each fuel in accordance with Appendix E of this Permit (ADP 09-2885 Appendix C). The pollutants to be tested are based on the type of fuel being combusted according to the following:

a. Natural Gas: CO and NO_x;
b. Fuel Oil: CO, NO_x, PM, and opacity;
c. Waste Tar: CO, NO_x, PM, opacity, and cobalt;
d. Hazardous Waste: CO, NO_x, PM, and opacity; and
e. Octanal Bottoms: CO, NO_x, PM, and opacity.

A testing schedule has been established in Appendix E of this Permit, which will meet the requirements under both the (Local Only) and (SIP) only versions of SWCAA 400-052.

Compliance with the short-term emission limits for U-14 and U-15 shall be determined using the average results of the most recent source test.

Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h) of this Permit.

M26. Hot Oil Heater U-16 PM Emission Factor and Emissions Determination
WAC 173-401-615(1)(b)

Emissions of PM from hot oil heater U-16 shall be calculated using an emission factor of 7.8 lb PM/MMcf of natural gas and the quantity of fuel consumed. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M27. Baghouses F-13 and F-14 Pressure Drop Monitoring
WAC 173-401-615(1)(b)
ADP 09-2885 Condition 163

The Permittee shall:
a. Continuously monitor the differential pressure across the baghouses F-13 and F-14;
b. Record which boilers are routed to which baghouse; and
c. Record the differential pressure for baghouses F-13 and F-14 at least once daily.

If a baghouse is not is operation during a particular day, a record shall be made to that effect. Records of monitoring activities shall be maintained in accordance with K1(a) and K1(e) of this Permit.

M28. Baghouses F-13 and F-14 Bag Check
ADP 09-2885 Condition 162

The Permittee shall visually inspect baghouses F-13 and F-14 a minimum of once per year for wear and torn bags. Records of monitoring activities shall be maintained in accordance with K1(a) of this Permit.

M29. Internal Combustion Engine Monitoring and Emissions
OA 95-1799R1 Condition 17(p)
WAC 173-401-615(1)(b)

The Permittee shall notify SWCAA no later than the next business day of use of any temporary internal combustion engines over 100 hp connected to the process. The Permittee shall log the number of hours each internal combustion engine is operated for each calendar month. Only engines connected to the process with over 100 hp shall be quantified (e.g. Reactor R-101, BIOX, power generation).

Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

Monitoring: Combustion Unit Boiler U-3

M30. Boiler U-3 Continuous Emission Monitoring System (CEMS) Requirements
40 CFR 63.8(b), (c), (d), (e), and (g)
40 CFR 63.1209(a), (d), (e), (f), (g), and (h)
SWCAA 400-075

A CEMS shall be installed and maintained to monitor CO and O_2 emissions from the exhaust stack of boiler U-3 as follows:

a. The permittee shall install and maintain a system for monitoring the concentration and emission rate of CO in accordance with the requirements and specifications found in the following regulations:
   1. 40 CFR 60 Appendix B – Performance Specification 4B "Specifications and Test Procedures for Carbon Monoxide and Oxygen Continuous Monitoring Systems in Stationary Sources"
   2. 40 CFR 60 Appendix F – "Quality Assurance Procedures: Procedure 1. Quality Assurance Requirements for Gas Continuous Emission Monitoring Systems Used for Compliance Determination"

   Notwithstanding the requirements in the above regulations, Relative Accuracy Test Audits (RATAs) shall be conducted annually. Each subsequent RATA test shall be performed by the end of the month in which the first RATA test was performed (e.g. if the initial test was performed on June 15, each subsequent test is due by June 30).
b. CO readings exceeding the span:
   1. CO CEMS not using a span of 10,000 ppm: Except as provided under §63.1209(a)(3)(ii), if the CO CEMS detects a response that results in a 1-minute average at or above 3,000 ppmv span level, the 1-minute average shall be recorded as 10,000 ppmv. The 10,000 ppmv value shall be used for calculating the hourly rolling average.
   2. CO CEMS using a span of 10,000 ppm: If the CO CEMS records a 1-minute average of 10,000 ppmv for any 1-minute average at or above 3,000 ppmv, the CEMS is subject to the same Performance Specification 4B performance and equipment specifications as a CEMS operating in the range of 3,000 ppmv to 10,000 ppm, except:
      i. Calibration drift shall be less than 200 ppmv; and
      ii. Calibration error shall be less than 200 ppmv.
c. Rolling averages shall be calculated per §63.1209(a)(6).
d. CEMS shall be operated and maintained in accordance with:
   1. §63.8(c)(4)(ii), except the CEMS detectors shall measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds instead of the requirement under §63.88(c)(4)(ii); and
   2. §63.1209(b).
e. The Permittee shall conduct monitoring of CEMS as per the provisions of §63.8(b).
f. The Permittee shall comply with the CEMS performance evaluation requirements of §§63.8(d), (e), and the Appendix to 40 CFR 63 Subpart EEE.
g. Data reduction shall be performed per §63.8(g).
h. A request for alternative monitoring requirements may be made by the Permittee to SWCAA and the EPA Administrator per §63.1209(g).

Records of monitoring activities shall be maintained in accordance with K1(f), K1(g), and K1(h) of this Permit.

M31. Boiler U-3 Continuous Monitoring Systems

40 CFR 63.8(b), (c), (d), (e), and (g)
40 CFR 63.1207 and §§63.1209(b), (d), (e), (f), (g), and (h)
SWCAA 400-075

Continuous Monitoring Systems (CMS), such as thermocouples, pressure transducers, and flow meters, shall be installed in conformance with §63.8(c)(3) that requires, at a minimum, to comply

with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the CMS, except:

a. The calibration of thermocouples shall be verified at a frequency and in a manner consistent with manufacturer specifications, but no less frequent than once per year. Optical pyrometers shall be operated and maintained in accordance with manufacturer specifications unless otherwise approved by the SWCAA. The Permittee shall calibrate optical pyrometers in accordance with the frequency and procedures recommended by the manufacturer, but no less frequent than once per year, unless otherwise approved by the SWCAA; and
b. The accuracy of the weight measurement device for any carbon injection system shall be ±1% of the weight being measured. The calibration of the device shall be verified at least once each calendar quarter at a frequency not to exceed one hundred twenty (120) days.

CMS shall be operated and maintained in accordance with:

a. §63.8(c), except the Permittee shall comply with §63.1211(c) instead of §63.8(c)(3); and
b. §63.1209(b).

The Permittee shall conduct monitoring of CMS as per the provisions of §63.8(b).

The Permittee shall comply with the requirements of §63.8(d) and (e), except that the Permittee shall conduct performance evaluations of components of the CMS under the frequency and procedures under §63.1207.

Data reduction shall be performed per §63.8(g).

Records of monitoring activities shall be maintained in accordance with K1(e), K4, and K5 of this Permit.

M32. Boiler U-3 Comprehensive Performance Plan and Testing

40 CFR 63.7(b) and (c)
40 CFR 63.8(e)
40 CFR 63.1207(b)(1), (d)(1), (e)(1)(i), (e)(2), (e)(3), (f)(1), (g)(1), (h), (i), and (j)(2)
SWCAA 400-075

The Permittee shall conduct Comprehensive Performance Tests to demonstrate compliance with the emission standards under 40 CFR 63 Subpart EEE, establish limits for the operating parameters provided by §63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems.

A CPT shall be conducted no later than sixty-one (61) months after the previous CPT and subsequently every sixty-one (61) months thereafter. Time extensions for subsequent CPTs may be requested according to the procedure under §63.1207(i).

SWCAA or the EPA Administrator may be petitioned under §63.7(h) to obtain a waiver of any performance test. Waiver qualifications, procedures, content and public noticing requirements are under §63.1207(e)(2).

The CPT plan shall include:
a. The provisions of §63.7(c)(2)(i), (ii), (iii), and (v); and
b. The provisions of §63.1207(f)(1).

During testing, the Permittee shall comply with the provisions of §63.7(e). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirement of §63.7(e)(1) to conduct performance testing under representative operating conditions.

a. Operations during testing. For the following parameters, the Permittee shall operate the combustor during the performance test under normal conditions (or conditions that will result in higher than normal emissions):
   (1) Chlorine feedrate. The Permittee shall feed normal (or higher) levels of chlorine during the dioxin/furan performance test;
   (2) Cleaning cycle of the particulate matter control device. The Permittee shall conduct the following tests when the PM control device undergoes its normal (or more frequent) cleaning cycle: The PM, semivolatile metal, and low volatile metal performance tests; and the dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used.
b. Modes of operation. The Permittee may conduct testing under two or more operating modes to provide operating flexibility to establish limits for the applicable operating parameters specified in §63.1209 based on operations during the comprehensive performance test.
c. Steady-state conditions. Prior to obtaining performance test data, the Permittee shall operate under performance test conditions until steady-state operations is reached with respect to emissions of pollutants the Permittee will measure during the performance test and operating parameters under §63.1209 for which limits shall be established. During system conditioning, the Permittee shall ensure that each operating parameter for which limits shall be established is held at the level planned for the performance test. The Permittee shall include documentation in the performance test plan under paragraph 63.1207(f) justifying the duration of system conditioning.

Current operating parameter limits established under §63.1209 are waived during subsequent comprehensive performance testing. Current operating parameter limits are also waived during pretesting prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of SWCAA and the EPA Administrator) under an approved test plan or if the Permittee records the results of the pretesting. Pretesting means:

a. Operations when stack emissions testing for dioxin/furan, mercury, semivolatile metals, low volatile metals, particulate matter, or hydrogen chloride/chlorine gas is being performed; and
b. Operations to reach steady-state operating conditions prior to stack emissions testing under §63.1207(g)(1)(iii).

The Permittee shall send, via U.S. mail, to SWCAA and the EPA Administrator, a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under §63.1209 within ninety (90) days of completion of a CPT. Upon postmark of the Notification of Compliance, the Permittee shall comply with all operating requirements specified in the Notification of

Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c). The Notification of Compliance shall be submitted in accordance with K1 and K11

Records of monitoring activities shall be maintained in accordance with K1(d), K1(e), K1(f), K1(h), K4, and K5 of this Permit.

M33. Boiler U-3 Confirmatory Performance Plan and Testing

40 CFR 63.7(b) and (c)
40 CFR 63.8(e)
40 CFR 63.1207(b)(2), (d)(2), (e)(1)(ii), (e)(2), (f)(2), (g)(2), (i), and (j)(2)
SWCAA 400-075

The Permittee shall conduct Confirmatory Performance Testing to:
a. Demonstrate compliance with the dioxin/furan emission standard when the source operates under normal operating conditions; and
b. Conduct a performance evaluation of continuous monitoring systems required for compliance assurance with the dioxin/furan emission standard under §63.1209(k).

The Permittee shall conduct a Confirmatory Performance Test:
a. No later than thirty-seven (37) months after the compliance date; or
b. No earlier than eighteen (18) months and no later than thirty-one (31) months after the pervious Comprehensive Performance Test.

SWCAA or the EPA Administrator may be petitioned under §63.7(h) to obtain a waiver of any performance test. Waiver qualifications, procedures, content and public noticing requirements are under §63.1207(e)(2).

The Confirmatory Performance Test plan shall include:
a. The provisions of §63.7(c)(2)(i), (ii), (iii), and (v); and
b. The provisions of §63.1207(f)(2).

The Permittee shall conduct Confirmatory Performance Testing for dioxin/furan under normal operating conditions for the following parameters:
a. Carbon monoxide (or hydrocarbon) CEMS emissions levels must be within the range of the average value to the maximum value allowed, except as provided by §63.1207(g)(2)(iv). The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous twelve (12) months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;
b. Each operating limit (specified in §63.1209) established to maintain compliance with the dioxin/furan emission standard must be held within the range of the average value over the previous twelve (12) months and the maximum or minimum, as appropriate, that is allowed, except as provided by §63.1207(g)(2)(iv). The average value is defined as the sum of the rolling average values recorded over the previous twelve (12) months, divided by the number of rolling averages recorded during that time. The average value must not include calibration data, startup data, shutdown data, malfunction data, and data obtained when not burning hazardous waste;

c. The Permittee shall feed chlorine at normal feedrates or greater; and
d. If the combustor is equipped with carbon injection or carbon bed, normal cleaning cycle of the particulate matter control device.
e. SWCAA or the EPA Administrator may approve an alternative range to that required by §§63.1207(g)(2)(i) and (ii) if the Permittee documents in the Confirmatory Performance Test plan that it may be problematic to maintain the required range during the test. In addition, when making the finding of compliance, SWCAA or the Administrator may consider test conditions outside of the range specified in the test plan based on a finding that the Permittee could not reasonably maintain the range specified in the test plan and considering factors including whether the time duration and level of the parameter when operations were out of the specified range were such that operations during the confirmatory test are determined to be reasonably representative of normal operations. In addition, SWCAA or the Administrator will consider the proximity of the emission test results to the standard.

The Permittee shall send, via U.S. mail, to SWCAA and the EPA Administrator, a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard within ninety (90) days of completion of a Confirmatory Performance Test.

The Notification of Compliance shall be submitted in accordance with R19 and R20.

Records of monitoring activities shall be maintained in accordance with K1(d), K1(e), K1(f), K1(h), K4, and K5 of this Permit.

M34. Boiler U-3 PM CEMS Correlation Plan

40 CFR 63.1206(b)(8)
SWCAA 400-075

Compliance with the requirement to install, calibrate, maintain, and operate the PM CEMS shall not be required until such time that EPA promulgates all performance specifications and operational requirements applicable to PM CEMS.

The Permittee shall develop a PM CEMS correlation test plan that includes the following information. This test plan may be included as part of the comprehensive performance test plan required under §§63.1207(e) and (f):
a. Number of test conditions and number of runs for each test condition;
b. Target particulate matter emission level for each test condition;
c. How the Permittee plans to modify operations to attain the desired particulate matter emission levels; and
d. Anticipated normal particulate matter emission levels; and

The plan shall be submitted to SWCAA and the EPA Administrator for approval at least ninety (90) calendar days before the correlation test is scheduled to be conducted.

Records of monitoring activities shall be maintained in accordance with K1(f) and K5 of this Permit.

M35. Boiler U-3 Feedstream Analysis Plan

40 CFR 63.1209(c)(2)
SWCAA 400-075

The Permittee shall develop and implement a feedstream analysis plan and record it in the operating record. The plan must specify at a minimum:

a. The parameters for which the Permittee will analyze each feedstream to ensure compliance with the operating parameter limits of this section;
b. Whether the Permittee will obtain the analysis by performing sampling and analysis or by other methods, such as using analytical information obtained from others or using other published or documented data or information;
c. How the Permittee will use the analysis to document compliance with applicable feedrate limits (e.g., if hazardous wastes are blended and the analyses of the wastes is obtained prior to blending but not of the blended, as-fired, waste, the plan must describe how the Permittee will determine the pertinent parameters of the blended waste);
d. The test methods which the Permittee will use to obtain the analyses;
e. The sampling method which the Permittee will use to obtain a representative sample of each feedstream to be analyzed using sampling methods described in 40 CFR 266 Appendix IX or an equivalent method; and
f. The frequency with which the Permittee will review or repeat the initial analysis of the feedstream to ensure that the analysis is accurate and up to date.

The Permittee shall submit the feedstream analysis plan to SWCAA and the EPA Administrator for review and approval.

The Permittee shall monitor and record feedrates as follows:

a. Determine and record the value of the parameter for each feedstream by sampling and analysis or other method;
b. Determine and record the mass or volume flow rate of each feedstream by a CMS. If the flow rate of a feedstream is determined by volume, the Permittee shall determine and record the density of the feedstream by sampling and analysis, unless the constituent concentration is reported in units of weight per unit volume (e.g., mg/l); and
c. Calculate and record the mass feedrate of the parameter per unit time.

The Permittee is not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the feedrate limits under this section provided that the Permittee documents in the CPT plan the expected levels of the constituent in the feedstream and account for those assumed feedrate levels in documenting compliance with feedrate limits: natural gas, process air, and feedstreams from vapor recovery systems.

Records of monitoring activities shall be maintained in accordance with K1(e), K1(h), K4, and K5 of this Permit.

M36. Boiler U-3 ESV Operating Plan

40 CFR 63.1206(c)(4)(ii)
SWCAA 400-075

The Permittee shall develop an ESV operating plan, comply with the operating plan, and keep the plan in the operating record.

The ESV operating plan must provide detailed procedures for rapidly stopping the waste feed, shutting down the combustor, and maintaining temperature and negative pressure in the combustion chamber during the hazardous waste residence time, if feasible. The plan must include calculations and information and data documenting the effectiveness of the plan's procedures for ensuring that combustion chamber temperature and negative pressure are maintained as is reasonably feasible.

Records of monitoring activities shall be maintained in accordance with K1(e), K1(h), K4, and K5 of this Permit.

M37. Boiler U-3 Operator Training and Certification Program

40 CFR 63.1206(c)(6)
SWCAA 400-075

The Permittee shall establish training programs for all categories of personnel whose activities may reasonably be expected to directly affect emissions of hazardous air pollutants from the source. Such persons include, but are not limited to, chief facility operators, boiler operators, continuous monitoring system operators, persons that sample and analyze feedstreams, persons that manage and charge feedstreams to the combustor, persons that operate emission control devices, and ash and waste handlers. Each training program shall be of a technical level commensurate with the person's job duties specified in the training manual. Each commensurate training program shall require an examination to be administered by the instructor at the end of the training course. Passing of this test shall be deemed the "certification" for personnel, except that, for hazardous waste boiler operators, the training and certification program shall be as specified in §63.1206(c)(6)(iii) through (c)(6)(vi).

The Permittee shall ensure that the source is operated and maintained at all times by persons who are trained and certified to perform these and any other duties that may affect emissions of hazardous air pollutants. A certified boiler operator must be on duty at the site at all times the source is in operation.

Hazardous waste boiler operators shall:

a. Be trained and certified under a site-specific, source-developed and implemented program that meets the requirements of §63.1206(c)(6)(v); or
b. Be trained under the requirements of, and certified under, one of the following American Society of Mechanical Engineers (ASME) standards: QHO–1–1994, QHO–1a–1996, or QHO–1–2004 (Standard for the Qualification and Certification of Hazardous Waste Incinerator Operators). If the Permittee elects to use the ASME program:
    1. Boiler operators must, prior to the compliance date, achieve provisional certification, and must submit an application to ASME and be scheduled for the full certification exam. Within one year of the compliance date, boiler operators must achieve full certification;

2. New operators and operators of new sources must, before assuming their duties, achieve provisional certification, and must submit an application to ASME, and be scheduled for the full certification exam. Within one year of assuming their duties, these operators must achieve full certification; or

c. Be trained and certified under a State program.

Hazardous water boiler operators shall be trained and certified under:

a. A site-specific, source-developed and implemented program that meets the requirements of §63.1206(c)(6)(v); or
b. A State program.

Site-specific, source developed and implemented training programs for hazardous waste boiler operators must include the following elements:

a. Training on the following subjects:
   1. Environmental concerns, including types of emissions;
   2. Basic combustion principles, including products of combustion;
   3. Operation of the specific type of combustor used by the operator, including proper startup, waste firing, and shutdown procedures;
   4. Combustion controls and continuous monitoring systems;
   5. Operation of air pollution control equipment and factors affecting performance;
   6. Inspection and maintenance of the combustor, continuous monitoring systems, and air pollution control devices;
   7. Actions to correct malfunctions or conditions that may lead to malfunction;
   8. Residue characteristics and handling procedures; and
   9. Applicable Federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards; and
b. An examination designed and administered by the instructor; and
c. Written material covering the training course topics that may serve as reference material following completion of the course.

To maintain boiler operator qualification under a site-specific, source developed and implemented training program as provided by §63.1206(c)(6)(v), boiler operators must complete an annual review or refresher course covering, at a minimum, the following topics:

a. Update of regulations;
b. Combustor operation, including startup and shutdown procedures, waste firing, and residue handling;
c. Inspection and maintenance;
d. Responses to malfunctions or conditions that may lead to malfunction; and
e. Operating problems encountered by the operator.

Records of monitoring activities shall be maintained in accordance with K5 of this Permit.

M38. Boiler U-3 Operation and Maintenance Plan

40 CFR 63.1206(c)(7) and (8)(iii)
SWCAA 400-075

The Permittee shall prepare and at all times operate according to an operation and maintenance plan that describes in detail procedures for operation, inspection, maintenance, and corrective measures for all components of the combustor, including associated pollution control equipment, that could affect emissions of regulated hazardous air pollutants.

The plan shall prescribe how the Permittee will operate and maintain boiler U-3 in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels achieved during the CPT.

This plan ensures compliance with the operation and maintenance requirements of §63.6(e) and minimizes emissions of pollutants, AWFCO events, and malfunctions.

Records of monitoring activities shall be maintained in accordance with K5 of this Permit.

M39. Baghouse F-13 Bag Leak Detection System Corrective Measures Plan

40 CFR 63.1206(c)(8)(iii)
SWCAA 400-075

The corrective measures plan must include, at a minimum, the procedures used to determine and record the time and cause of the alarm as well as the corrective measures taken to correct the control device malfunction or minimize emissions as specified below. Failure to initiate the corrective measures required by this paragraph is failure to ensure compliance with the emission standards in 40 CFR 63 Subpart EEE.

a. The Permittee shall initiate the procedures used to determine the cause of the alarm within thirty (30) minutes of the time the alarm first sounds; and
b. The Permittee shall alleviate the cause of the alarm by taking the necessary corrective measure(s) which may include, but are not to be limited to, the following:
   (1) Inspecting the baghouse for air leaks, torn or broken filter elements, or any other malfunction that may cause an increase in emissions;
   (2) Sealing off defective bags or filter media;
   (3) Replacing defective bags or filter media, or otherwise repairing the control device;
   (4) Sealing off a defective baghouse compartment;
   (5) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system; or
   (6) Shutting down the combustor.

If boiler U-3 is operated when the detector response exceeds the alarm set point more than 5% of the time during any 6-month block time period (excessive exceedances), the Permittee shall submit a notification to SWCAA and the EPA Administrator within thirty (30) days of the end of the 6-month block time period that describes the causes of the exceedances and the revisions to the design, operation, or maintenance of the combustor or baghouse the Permittee is taking to minimize exceedances. Notification shall be submitted in accordance with R11.

Records of monitoring activities shall be maintained in accordance with K1(a), K1(c), K1(f), K1(g), K1(i), K4, and K5 of this Permit.

Monitoring: Benzoic Acid and Benzaldehyde Production

M40. Carbon Bed Operation Parameter Logging

40 CFR 63.114(b)(3)
WAC 173-401-615(1)(b)
SWCAA 400-075
ADP 09-2885 Conditions 167–170, and 172

The following parameters for carbon beds T-120A, T-130B, T-180, and T-181 shall be continuously monitored and recorded:

a. The steam rate for each carbon bed, monitored and recorded with an accuracy of ±10% [ADP 09-2885 Condition 167];
b. The temperature of each carbon bed monitored and recorded with an accuracy of ±1% (as °C) of the temperature being monitored or 0.5°C, whichever is greater [ADP 09-2885 Condition 168]; and
c. The exhaust flow through carbon beds monitored and recorded [ADP 09-2885 Condition 169].

The following information for carbon beds T-120A, T-130B, T-180, and T-181 shall be recorded [ADP 09-2885 Condition 172]:

a. The number of hours of operation of the carbon beds;
b. The number of hours of operation of the carbon beds as a final control device.

Process gas feed and exhaust streams from 100-side and 150-side carbon beds shall be sampled and analyzed for benzene and toluene concentrations weekly if used as the final control device for twelve (12) or more hours in any seven (7) days, otherwise sampling must be conducted monthly [ADP 09-2885 Condition 170].

Records of monitoring activities shall be maintained in accordance with K1(e), K1(h), and K2 of this Permit.

M41. Carbon Bed Testing

40 CFR 63.2346
ADP 09-2885 Condition 214

When the RTOs are being bypassed at a TRE less than 4.0, the pounds of steam per cycle necessary to regenerate each regenerative carbon bed shall be determined by a source test using EPA testing methods as contained in 40 CFR 63.116.

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M42. RTO Temperature Logging

40 CFR 63.114(a)(1)
SWCAA 400-075
ADP 09-2885 Condition 165

The combustion zone temperature of RTO X-100 and RTO X-150 shall be continuously monitored and recorded when in operation.

Records of monitoring activities shall be maintained in accordance with K1(e) of this Permit.

M43. RTO Operation Logging

ADP 09-2885 Condition 171

The amount of time that RTO X-100 and RTO X-150 are in operation as a control device shall be recorded continuously.

Records of monitoring activities shall be maintained in accordance with K1(e) of this Permit.

M44. RTO SO_2 Emission Factors

WAC 173-401-615(1)(b)

EPA AP-42 Section 1.2 (January 1995) emission factors for SO_2 and total fuel usage shall be used to determine total emissions. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M45. RTO Exhaust Flow Rate Logging

ADP 09-2885 Condition 166

The total exhaust flow of RTO X-100 and RTO X-150 shall be logged monthly. The exhaust flow may be determined based on inlet air rates to the reactors, direct measurement, or other method approved in writing by SWCAA.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M46. RTO Testing

40 CFR 63.2346
ADP 09-2885 Condition 213 and Appendix E

Emission testing of RTO X-100 and RTO X-150 shall be conducted every sixty (60) months in accordance with Appendix F of this Permit (ADP 09-2885 Appendix E).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M47. Vent Header System Pressure Monitoring and Bypass Log

ADP 09-2885 Condition 174

During normal operation, the vent header system pressure shall be recorded continuously.

If the vent header system is bypassed due to a startup, shutdown, or malfunction, the Permittee shall follow the SSMP and perform all actions, recordkeeping, and reporting requirements in accordance with §63.6(e)(3). Emissions during a vent header system bypass shall be calculated using engineering calculations with the best information available.

Records of monitoring activities shall be maintained in accordance with K1(c) and K1(i) of this Permit.

M48. RTO and Carbon Bed Bypass Log

ADP 09-2885 Condition 176

The following shall be recorded:
a. The number of hours during which the RTOs are being bypassed; and
b. The number of hours during which both the carbon beds and RTOs are being bypassed.

Records of monitoring activities shall be maintained in accordance with K1(e), K1(h), and K1(i) of this Permit.

M49. Tar Tank T-313 Operation Log

ADP 09-2885 Condition 179

The hours of operation of tar tank T-313 shall be recorded every six (6) months. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M50. Tank T-54 Parameter Log

WAC 173-401-615(1)(b)
ADP 09-2885 Conditions 177 and 178

The vent flow rate to tank T-54 shall be determined and recorded weekly.

The temperature of tank T-54 shall be recorded weekly.

Benzene and toluene concentrations in the exhaust of tank T-54 shall be measured annually using a gas chromatograph or equivalent measuring device.

Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M51. Benzoic Acid Tank Parameter Log

ADP 07-2720 Condition 10

During period when tanks T-61, T-62, T-64, and T-65 contain benzoic acid, the following parameters shall be recorded once per shift on daily log sheets or the data acquisition system:
a. Makeup water flow rate to scrubber V-61; and
b. Tank temperature of tanks T-61, T-62, T-64, and T-65 when they contain liquid benzoic acid.

For each period during which tanks T-61, T-62, T-64, and T-65 do not contain benzoic acid, a record shall be entered into the log indicating that the records do not contain benzoic acid. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M52. Benzoic Acid Chipper Baghouse Testing

OA 00-2274R3 Condition 11(d) and Appendix B

Unless a source test has been performed, the Permittee shall calculate PM emissions from the benzoic acid chipper baghouse using an emission factor of 0.0231 lb PM/hr.

If the Permittee conducts emission testing to quantify emissions from the benzoic acid chipper baghouse, the Permittee shall conduct emission testing in accordance with Appendix G of this Permit (OA 00-2274R3 Appendix B).

Records of monitoring activities shall be maintained in accordance with K1(d), as applicable, and K1(h) of this Permit.

M53. Benzoic Acid Chipper Baghouse Pressure Drop Log

WAC 173-401-615(1)(b)
OA 00-2274R3 Condition 11(j)(5)

The pressure drop across the benzoic acid chipper baghouse shall be recorded at least once per month.

Records of monitoring activities shall be maintained in accordance with K1(a) and K1(h) of this Permit.

Monitoring: Fragrance and Specialty Plants

M54. Specialty and Fragrance Process Parameter Log

WAC 173-401-615(1)(b)
ADP 09-2885 Conditions 185(a), 185(b), 185(c), 187, 188, and 189

The following process parameters shall be monitored and recorded as follows:

a. After each lights cut, the operating log shall state whether the knockout pots for columns C-1101, C-1151, C-1181, C-1191, C-1211, and C-8501 were emptied after the lights cut.
b. For each calendar month, monitor and record the amount of product produced or number of batches of each chemical processed shall be recorded for columns C-1101, C-1151, C-1181, C-1191, C-1211, C-8502. [ADP 09-2885 Condition 185(b)]
c. When distilling products with greater than 10% w/w methanol in still pot V-1151, record whether the emissions are routed to scrubber C-1265. [WAC 173-401-615(1)];
d. When distilling products with greater than 10% w/w methanol in reactor R-1141, record whether the emissions are routed to scrubber C-1265. [WAC 173-401-615(1)];
e. For each calendar year, monitor and record the amount of product produced or number of batches of each chemical processed in reactors R-1101, R-1141, R-1171, R-8501, R-8502, and R-8521 as applicable to demonstrate compliance with the applicable permit limits. [ADP 09-2885 Condition 185(c)];
f. For each calendar month, monitor and record the amount of product produced or number of batches of each chemical processed shall be recorded for column C-801 [WAC 173-401-615(1)];
g. If reactor R-1171 is venting at greater than 20 acfm, monitor and record the vent temperature [WAC 173-401-615(1)(b)]

h. Vent condenser E-2154 (continuous tube reactor R-2150) cooling water inlet temperature shall be continuously monitored and recorded [ADP 09-2885 Condition 187];
i. Continuous tube reactor R-2150 air flow rate during catalyst deactivation shall be recorded at least once per event [ADP 09-2885 Condition 188];
j. The number of hours of continuous tube reactor R-2150 catalyst deactivation event shall be recorded for each occurrence [ADP 09-2885 Condition 189];
k. For chilled water vent condensers E-1156 (column C-1151), E-1184 (column C-1181), E-1196 (column C-1191), E-1214 (column C-1211), and E-1273 (column V-1270), record the following [ADP 09-2885 Condition 185(a)]:
    1. Whether the column is distilling acetic acid;
    2. If the column is not distilling acetic acid, then:
        i. The cooling water inlet temperature;
        ii. The cooling water outlet temperature; and
        iii. The cooling water flow; or
    3. If the column is distilling acetic acid, then:
        i. The cooling water inlet temperature; and
        ii. The vent temperature at the exhaust.
l. When processing acetaldehyde or propionaldehyde in reactor R-1171, record the following:
    1. The water level in V-1171; and
    2. The water recirculation rate;
m. When distilling products using batch distillation column V-1270, the Permittee shall record [WAC 173-401-615(1)(b)]:
    1. Whether the product contains more than or less than 10% w/w methanol; and
    2. Whether scrubber C-1265 is being used as a control device in conjunction with condenser E-1273 and knock-out pot V-1272.

Records of monitoring activities shall be maintained in accordance with K1(a), K1(e), and K1(h) of this Permit.

M55. Fragrance Plant and Benzyl Alcohol Plant Source Testing ADP 09-2885 Conditions 215, 216, 223, and Appendices F and G

Emission testing of columns C-1101, C-1151, C-1181, C-1191, and C-1211 shall be conducted at least once every sixty (60) calendar months in accordance with Appendix H of this Permit (ADP 09-2885 Appendix F) [ADP 09-2885 Condition 215].

Emission testing of scrubber C-1265 shall be conducted at least once every sixty (60) calendar months in accordance with Appendix I of this Permit (ADP 09-2885 Appendix G) [ADP 09-2885 Condition 216].

The Permittee shall determine the exhaust flow rate from distillation column C-8502 through direct measurement or engineering calculation at least once every sixty (60) calendar months. [ADP 09-2885 Condition 223].

Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h) of this Permit.

M56. Reactors R-1101, R-1141, R-1171, R-8501, R-8502, R-8521, and Scrubber C-1180 Source Testing

OA 97-2078 Appendix C
ADP 09-2885 Conditions 217, 218, and Appendices H and I

Emissions testing of Reactor R-1101 shall be conducted every sixty (60) months at the outlet of scrubber C-1180 in accordance with Appendix J of this Permit (OA 97-2078 Appendix C).

Emission testing of batch reactors R-1141, R-1171, R-8501, R-8502, and R-8521 shall be conducted at least once every sixty (60) calendar months in accordance with Appendix K of this Permit (ADP 09-2885 Appendix H).

Emission testing of scrubber C-1180 shall be conducted at least once every sixty (60) calendar months in accordance with Appendix L of this Permit (ADP 09-2885 Appendix I).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M57. Emissions from Columns C-1101, C-1151, C-1181, C-1191, C-1211 and C-8502 and Reactors R-1101, R-1141, and R-1171

WAC 173-401-615(1)(b)
ADP 09-2885 Condition 181

Annual emissions of VOC, TAPs, and HAPs from distillation columns C-1101, C 1151, C-1181, C-1191, C-1211, and C-8502, and reactors R-1101, R-1141, and R-1171, shall be calculated using an emission factor from the most recent source test and the amount of product produced. If source test data is not available, emissions shall be determined from engineering calculations using component vapor pressure and exhaust flow. VOC emissions shall be reported as the individual species emitted if such data is available, or as the most volatile compound in the column or reactor if speciation data is not available.

Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h) of this Permit.

M58. FIF Scrubber C-1180 Make-up Water Flow Rate and Recycle Water Flow Rate Monitoring

ADP 09-2885 Condition 182

When FIF scrubber C-1180 is being operated to control emissions from batch reactors R-1101 and R 1141, the FIF scrubber C-1180 make-up water flowrate and recycle water flowrate shall be monitored and recorded at least once per shift, unless data recording is automated then the limit shall be based on a 1-hour average. If batch reactors R-1101 or R-1141 are not in operation, a record shall be made to that effect.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M59. Column C-1171 Monitoring when being used as a Scrubber by Reactor R-1171

ADP 09-2885 Condition 183

When reactor R-1171 is processing chemicals containing or using acetaldehyde or propionaldehyde and reflux column C-1171 is being used as a scrubber, the total quantity of water added to accumulator tank V-1171 shall be recorded for each batch and the reflux water flowrate shall be continuously monitored and recorded.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M60. Tank T-1146 Temperature Monitoring

ADP 09-2885 Condition 184

When the headspace of tank T-1144 is routed to tank T-1146, the temperature of tank T-1146 shall be recorded at least once per day.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M61. Column C-801 Exhaust Temperature Log

ADP 09-2885 Condition 192

When distilling crude benzyl alcohol under vacuum conditions, the temperature of the exhaust from continuous distillation column C-801 shall be continuously monitored and recorded.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M62. Column C-801 Pressure Monitoring Log

ADP 09-2885 Condition 221

When distilling HAP-containing products in distillation column C-801, the Permittee shall continuously monitor and record the distillation column pressure.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M63. Column C-801 Source Testing

ADP 09-2885 Condition 61

When distilling crude benzyl alcohol under vacuum conditions, the Permittee shall assume that the emissions rate is 2.3 lb/hr of HAP, unless a source test is performed. A source test shall be conducted based on the same configuration (per 40 CFR 63.114) and a source test shall be conducted if the Permittee chooses to change distillation methods.

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M64. Emissions from Column C-801

ADP 09-2885 Condition 191

Annual emissions of VOC, TAPs, and HAPs from distillation column C-801 shall be calculated using an emission factor from the most recent source test and the amount of product generated. If source test data is not available, emissions shall be determined from engineering calculations using component vapor pressure and exhaust flow. VOC emissions shall be reported as the individual species emitted if such data is available, or as the most volatile compound in the column if speciation data is not available.

Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h) of this Permit.

M65. Reactor R-801 Parameter Monitoring

ADP 09-2885 Condition 193

When reactor R-801 is in operation, vent condensers E-812A/E-812B cooling water inlet temperatures, cooling water outlet temperatures, and cooling water flow rates shall be continuously monitored and recorded. If reactor R-801 is not in operation, a record shall be made to that effect.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h).

M66. Reactor R-801 Source Testing

ADP 09-2885 Condition 222

Emission testing of reactor R-801 shall be conducted within sixty (60) days of production of Lilience™ and every sixty (60) months thereafter in accordance with Appendix M of this Permit (ADP 09-2885 Appendix L).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M67. Emissions from Reactor R-1250A

ADP 09-2885 Condition 194

Annual emissions of VOC and TAPs from continuous tube reactor R-1250A during the production of a specific aldehyde shall be calculated from the amount of that aldehyde produced during the year and the emission rate per quantity of aldehyde produced from the most recent source test conducted while producing that aldehyde. If source test data is not available for the production of a specific aldehyde, emissions shall be calculated using the assumption that the vapor stream is saturated with that aldehyde at 15°C, using the theoretical vent flow calculated from a material balance across the reactor. Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h) of this Permit.

Monitoring: Hexyl Cinnamic Aldehyde Plant

M68. Emissions from Batch Distillation Column V-1270

ADP 09-2885 Condition 196

Annual emissions of VOC and TAPs from batch distillation column V-1270 shall be calculated using an emission factor for the processing of each chemical (expressed in pounds per batch) from the most recent source test, and the total number of batches processed. If no source test is available then the Permittee shall calculate emissions using engineering calculations with the best information available. Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h) of this Permit.

M69. HCA Plant Parameter Log

ADP 09-2885 Conditions 195 and 197–202

The following parameters shall be monitored:

a. Vent Condenser E-1254 (continuous tube reactor R-1250A) exhaust temperature shall be continuously monitored and recorded. If continuous tube reactor R-1250A is not operated during any calendar day, a record shall be made to that effect [ADP 09-2885 Condition 198];
b. Continuous tube reactor R-1250A air flow rate during catalyst deactivation shall be recorded at least once per event [ADP 09-2885 Condition 199];
c. The number of hours of continuous tube reactor R-1250A catalyst deactivation event shall be recorded for each occurrence [ADP 09-2885 Condition 200];
d. When distilling acetic acid in batch distillation column V-1270, the exhaust temperature and the distillation column pressure shall be recorded at least once per day during operation. If the distillation column is not operated during any calendar day, a record shall be made to that effect [ADP 09-2885 Condition 197];
e. For each chemical processed in batch distillation column V-1270, the number of batches shall be recorded for each calendar month [ADP 09-2885 Condition 201];
f. Scrubber C-1265 scrubber water temperature, water makeup rate, and water flow rate shall be continuously monitored and recorded at least once per day. If reactor R-1260 or column C-1280 is not operated during any calendar day, a record shall be made to that effect [ADP 09-2885 Condition 195];
g. Column C-1290 condenser water temperature shall be recorded at least once per calendar day. If column C-1290 is not operated during any calendar day, a record shall be made to that effect [ADP 09-2885 Condition 202].

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h).

M70. HCA Plant Source Testing

ADP 09-2885 Conditions 224, 225, and 226 and Appendices M, N, and O

Emission testing of continuous tube reactor R-1250A shall be conducted within sixty (60) days of production of each aldehyde produced in excess of 1,080 hours in any 12-month rolling period after the modification and every sixty (60) months thereafter in accordance with Appendix N of this Permit (ADP 09-2885 Appendix M).

Emission testing of continuous tube reactor R-1250A during catalyst deactivation shall be conducted within ninety (90) days of initial production after the modification and every sixty (60) months thereafter in accordance with Appendix O of this Permit (ADP 09-2885 Appendix N).

Emission testing of column C-1290 decant tank chiller vent shall be conducted within sixty (60) days of initial operation and every sixty (60) months thereafter in accordance with Appendix P of this Permit (ADP 09-2885 Appendix O).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M71. Emissions from Continuous Tube Reactor R-2150

ADP 09-2885 Condition 186

Annual emissions of VOC and TAPs from continuous tube reactor R-2150 shall be calculated from the amount of product produced during the year and the emission rate per quantity of product produced from the most recent source test conducted.

Records of monitoring activities shall be maintained in accordance with K1(d)(8), K1(e), and K1(h).

M72. Continuous Tube Reactor R-2150 Source Testing

ADP 09-2885 Condition 219

Emission testing of continuous tube reactor R-2150 shall be conducted within sixty (60) days of achieving maximum production but no later than one hundred eighty (180) days after startup of Lilience™ production and every sixty (60) months thereafter in accordance with Appendix Q of this Permit (ADP 09–2885 Appendix J).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M73. Continuous Tube Reactor R-2150 Catalyst Deactivation Source Testing

ADP 09-2885 Condition 220

Emission testing of continuous tube reactor R-2150 during catalyst deactivation shall be conducted within ninety (90) days of initial production after the modification and every sixty (60) months thereafter in accordance with Appendix R of this Permit (ADP 09-2885 Appendix K).

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

Monitoring: Benzoate Plant

M74. Benzoate Plant Production Monitoring

WAC 173-401-615(1)(b)
OA 00-2274R3 Condition 11(j)(2)

Facilitywide production of sodium and potassium benzoate shall be recorded monthly. Plant hours of operation shall be recorded monthly. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M75. Benzoate Plant Diphenyl Concentration Determination

OA 00-2274R3 Appendix B

The concentration of VOC as total diphenyl compounds in the sodium and potassium benzoate liquid feed to the dryers shall be determined weekly using KCI Method 600-19-BF-TDS or equivalent. Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M76. Benzoate Plant Scrubber Flow Rate and Fluidized Bed Extruder Baghouse Pressure Drop Log

OA 00-2274R3 Condition 11(j)(3) and (6)

The minimum scrubber water flow shall be verified weekly for each benzoate plant scrubber and the verification recorded. Pressure drop across the fluidized bed extruder baghouse shall be recorded weekly. Records of monitoring activities shall be maintained in accordance with K1(h) and K9 of this Permit.

M77. Benzoate Plant Scrubbers and Fluidized Bed Extruder Baghouse Emission Testing

OA 00-2274R3 Condition 11(i) and Appendix B

The Permittee shall conduct emission testing of the benzoate plant scrubbers in accordance with Appendix G of this Permit (OA 00-2274R3 Appendix B).

Unless otherwise approved by SWCAA, the benzoate scrubbers shall be tested using EPA Methods 1–4, 5, and 202 at least once every sixty (60) months on a rotating schedule so that each scrubber is tested at the same frequency (no scrubber is tested twice until all scrubbers have been tested).

The sodium and potassium benzoate feed to the dryers shall be tested using KCI Method 600-19-BF-TDS for total diphenyl a minimum of once every calendar week.

The outlet of the fluidized bed extruder baghouse shall be tested using EPA Methods 1–4, 5, and 202 at least once every sixty (60) months.

Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M78. Benzoate Pneumatic Material Handling Systems Emissions Testing
WAC 173-401-615(1)(b)
OA 00-2274R3 Condition 11(c)

Unless a source test has been performed, the Permittee shall calculate emissions from the benzoate pneumatic material handling systems using an emission factor of 0.0487 lb/hr.

If the Permittee conducts emission testing to quantify emissions from the benzoate pneumatic material handling systems, the Permittee shall conduct the source test as follows:

a. Test Constituents and Methods.
   1. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
   2. PM using EPA Method 5, front-half only

   The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

b. Test Requirements
   1. Notification.
      i. A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
      ii. SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing. The Permittee shall submit a comprehensive test plan to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   2. Test Location and Source Operation
      i. Testing shall be performed at the outlet of the benzoate pneumatic material handling system.
      ii. A complete record of production related parameters shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.
      iii. Source operations during the emissions test must be representative of the maximum level of normal operation.

c. Test Results Final Report
   A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:
   1. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
   2. Time and date of the test and identification and qualifications of the personnel involved;
   3. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
   4. Summary of control system or equipment operating conditions,
   5. Summary of production related parameters;
   6. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;

7. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
8. Copies of field data and example calculations;
9. Chain of custody information;
10. Calibration documentation;
11. Discussion of any abnormalities associated with the results; and
12. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

Records of monitoring activities shall be maintained in accordance with K1(d), K1(e), and K1(h) of this Permit.

Monitoring: Plasticizer Plant

M79. Plasticizer Plant Monitoring **WAC 173-401-615(1)(b)**
OA 96-1864R1 Conditions 4 and 5

The plasticizer vent temperature shall be recorded once per batch if gases are vented at greater than 20 cfm. The length of time during which nitrogen is added to each reactor during a single batch, and the rate of addition shall be recorded at least once every six (6) months.

The total production of plasticizers (lb/yr) shall be reported annually by March 15 for the previous calendar year. Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M80. Condenser X-8601 Sampling Log
OA 96-1864R1 Condition 9

The Permittee shall conduct emission testing of the exhaust of condenser X-8601 in accordance with Appendix S of this Permit (OA 96-1864R1 Appendix A).

Grab sampling shall be conducted every sixty (60) months following the initial source test of R-8601A to measure the concentration of isooctane in each reactor vent during filling and nitrogen addition. The temperature of the vent shall be recorded and reported along with the results of sampling.

Records of monitoring activities shall be maintained in accordance with K1(d), as applicable, and K1(e) and K1(h) of this Permit.

M81. Emissions from Column C-8502 and Reactors R-8501, R-8502, and R-8521
ADP 09-2885 Condition 190

Annual emissions of VOC, TAPs, and HAPs from reactors R-8501, R-8502, and R-8521 shall be calculated using an emission factor from the most recent source test and the amount of product produced. If source test data is not available, emissions shall be determined from engineering calculations using component vapor pressure and exhaust flow. VOC emissions shall be reported as the individual species emitted if such data is available, or as the most volatile compound in the column or reactor if speciation data is not available.

Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h).

Monitoring: Wastewater Treatment

M82. Flare X-86B Temperature Log **40 CFR 61.354(c)(1)**
40 CFR 63.114(a)(1)
SWCAA 400-075
ADP 09-2885 Condition 203

The combustion zone temperature of flare X-86B shall be continuously monitored and recorded. The temperature measurement shall have an accuracy of the following, whichever is greater:
a. ±1% of the monitored temperature (in °C); or
b. ±0.5°C.

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M83. Flare X-86B Testing **40 CFR 61.349(c)(2)**
40 CFR 63.116(c)
ADP 09-2885 Condition 227 and Appendix P

Emission testing of flare X-86B shall be conducted every sixty (60) months in accordance with Appendix T of this Permit (ADP 09-2885 Appendix P). Records of monitoring activities shall be maintained in accordance with K1(d) of this Permit.

M84. Flare X-86B SO_2 Emission Factor and Emissions Determination
ADP 09-2885 Condition 228

The SO_2 emission rate from flare X-86B shall be determined at least annually. The determination may be made using the results of a sulfur balance across the anaerobic wastewater treatment system, through direct measurement of the hydrogen sulfide content of the digester gas, or by direct measurement through testing of the SO_2 emissions from enclosed flare X-86B. Records of monitoring activities shall be maintained in accordance with K1(d)(8), as applicable, and K1(e) and K1(h) of this Permit.

M85. Flare X-86B Fuel Usage and Digester Gas Bypassed Log
40 CFR 61.349(a)(2)
ADP 09-2885 Condition 204 and 205

The following information concerning flare X-86B shall be recorded monthly:
a. The amount of natural gas consumed;
b. The amount of digester gas consumed; and
c. The amount of digester gas allowed to bypass flare X-86B (i.e. remain untreated).

Records of monitoring activities shall be maintained in accordance with K1(e) and K1(h) of this Permit.

M86. Benzene content of facilitywide waste

40 CFR 61.355(a)
40 CFR 61.355(c)(3)
SWCAA 400-075
ADP 09-2885 Condition 229

The Permittee shall determine the total annual benzene quantity from facility waste by the following procedure:

a. The following waste streams have been determined to be subject to 40 CFR 61 Subpart FF: Anaerobic Treatment System (ANTS) plant influent and effluent, API sump effluent, BIOX influent, and outflow of tanks T 104, T I64, T 141, and T 182. For each waste stream subject to this Subpart having a flow-weighted annual average water content greater than 10% water, on a volume basis as total water, or is mixed with water or other wastes at any time and the resulting mixture has an annual average water content greater than 10% as specified in §61.342(a), the Permittee shall:
   (1) Determine the quarterly waste quantity for each waste stream using the procedures specified in §61.355(b);
   (2) Determine the flow-weighted quarterly average benzene concentration for each waste stream using the procedures specified in §61.355(c); and
   (3) Calculate the annual benzene quantity for each waste stream by multiplying the annual waste quantity of the waste stream times the flow-weighted annual average benzene concentration.
b. Total annual benzene quantity from facility waste is calculated by adding together the annual benzene quantity for each waste stream generated during the year and the annual benzene quantity for each process unit turnaround waste annualized according to §61.355(b)(4).

Waste streams subject to 40 CFR 61 Subpart FF containing benzene and toluene shall be tested using one of the following methods:

- SW-846 8020, February 2007 [FR03Ja08-36, 1/3/2008];
- SW-846 8021, February 2007 [FR03Ja08-36, 1/3/2008];
- SW-846 8240, February 2007 [FR03Ja08-36, 1/3/2008];
- SW-846 8260, February 2007 [FR03Ja08-36, 1/3/2008]; or
- 40 CFR 136 Appendix A Method 602 or 624.

Records of monitoring activities shall be maintained in accordance with K1(d), K1(e), and K1(h) of this Permit.

M87 Wastewater Treatment Non-regenerative Carbon Canisters

40 CFR 63.349(a)
40 CFR 61.354(d)
ADP 09-2885 Condition 206

The non-regenerative carbon canisters used to control the exhaust from tanks T-21B and T-21D shall be monitored at least once per calendar month. Alternatively, the carbon in the carbon beds may be replaced with fresh carbon on a predetermined schedule such that the carbon could not become overloaded.

Monitoring of non-regenerative carbon canisters on tanks T-21B and T-21D shall be conducted annually as required in §61.349(a).

Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

Monitoring: Benzene Transfer Operations

M88. Benzene Transfer Operations Monitoring **40 CFR 63.127(b)**
SWCAA 400-075
ADP 09-2885 Condition 208

Benzene exhaust concentration from the non-regenerative carbon canisters (for control of emissions from benzene loading operations) shall be continuously monitored and recorded daily when loading benzene. Daily records shall include monitor calibration data for days during which benzene is loaded. Data availability shall be better than 90% over each 3-month period. Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M89. Benzene Transfer Operations Line Pressure Log
ADP 09-2885 Condition 207

All bypass lines shall be checked for proper alignment and closure prior to loading benzene into railcars. Pressure in the collection system at the railcar vent line during benzene railcar loading shall be monitored. The results of this monitoring shall be recorded once per tank loading event. Records of monitoring activities shall be maintained in accordance with K1(a) and K1(h) of this Permit.

M90. Benzene Railcar Non-regenerative Carbon Canister Monitoring
ADP 09-2885 Condition 209

The non-regenerative carbon canister CEMS shall be calibrated a minimum of once per calendar quarter in accordance with the manufactures recommendations. Records of monitoring activities shall be maintained in accordance with K1(f) and K1(h) of this Permit.

M91. Rail Car and Tank Truck Testing **40 CFR 63.128(e) and (f)**
SWCAA 400-075

Every rail car or tank truck used to transport benzene shall be pressure tested for leaks a minimum of every twelve (12) months using methods identified in 40 CFR 63.128(f). Records of monitoring activities shall be maintained in accordance with K1(d) and K1(h) of this Permit.

M92. Transfer Rack not Subject to Control Requirements under 40 CFR 63 Subpart EEEE **40 CFR 63.2343(c) and (d)**
40 CFR 63.2390(d)
SWCAA 400-075

For each transfer rack that loads a volatile organic liquid and is not subject to control based on the criteria specified in 40 CFR 63 Subpart EEEE Table 2, the Permittee shall:

a. Submit semiannually a Compliance report containing the information in 40 CFR 63.2386(c)(1), (2), (3), and as applicable §63.2386(d)(3) and (4).

b. Keep documentation, including a record of total annual facility-level volatile organic liquid loading volume as defined in §63.2406 through the transfer rack, that verifies the rack is not required to be controlled under 40 CFR 63 Subpart EEEE. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location.

Records of monitoring activities shall be maintained in accordance with K1(h) and K9 of this Permit.

Monitoring: Miscellaneous Storage Tank

M93. Storage Tank Parameter Log

40 CFR 63.123(a)
SWCAA 400-075
ADP 09-2885 Condition 157

For tanks that are subject to 40 CFR 63 Subpart G, the Permittee shall maintain the following records:

a. The maximum design capacity (volume) and dimensions of the tank;
b. The tank contents;
c. The maximum true vapor pressure (as defined in 40 CFR 63.111 "Maximum True Vapor Pressure") of total organic compounds contained in tanks; and
d. The periods during which a volatile organic liquid is being stored in the tank.
e. The annual throughput;
f. The control device, if applicable.

Records of monitoring activities shall be maintained in accordance with K1(h) of this Permit.

M94. Storage Tanks (<5,000 gal) not Subject to Control Requirements under 40 CFR 63 Subpart EEEE

40 CFR 63.2343(a)
SWCAA 400-075

For each storage tank containing a volatile organic liquid with a capacity of less than 18.9 m^3 (5,000 gal) and for each transfer rack subject to this Subpart that only unloads organic liquids, the Permittee shall keep documentation that verifies that each storage tank and transfer rack is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in paragraph (a) of this section on a plant site plan or process and instrumentation diagram (P&ID). Records of monitoring activities shall be maintained in accordance with K1(h) and K9 of this Permit.

M95. Storage Tank (≥5,000 gal) not Subject to Control Requirements under 40 CFR 63 Subpart EEEE

40 CFR 63.2343(b)
SWCAA 400-075

For each storage tank containing a volatile organic liquid having a capacity of 18.9 m^3 (5,000 gal) or more that is not subject to control based on the criteria specified in 40 CFR 63 Subpart EEEE Table 2, items 1 through 6, the Permittee shall:

a. Submit semiannually a Compliance report containing the information in 40 CFR 63.2386(c)(1), (2), (3), and as applicable §63.2386(d)(3) and (4).
b. Keep documentation, including a record of the annual average TVP of the total organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under 40 CFR 63 Subpart EEEE. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to §63.10(b)(1), including records stored in electronic form in a separate location.

Records of monitoring activities shall be maintained in accordance with K1(h) and K9 of this Permit.

M96. Storage Tanks Requiring Controls under 40 CFR 63 Subpart EEEE – Testing

40 CFR 63.2354

For those tanks that meet the applicability requirements of 40 CFR 63 Subpart EEEE and where the tank is required to be installed with emissions controls, the Permittee shall perform performance testing in accordance with §§63.2354(a) and (b). Records of monitoring activities shall be maintained in accordance with K1(d) and K9 of this Permit.

M97. Storage Tanks Requiring Controls under 40 CFR 63 Subpart EEEE – CMS

40 CFR 63.2366

For those storage tanks that are subject to 40 CFR 63 Subpart EEEE and require controls, the Permittee shall install, operate, and maintain a CMS as required under 40 CFR 63.2366. Records of monitoring activities shall be maintained in accordance with K1(e) and K9 of this Permit.

VIII. RECORDKEEPING TERMS AND CONDITIONS WAC 173-401-615(2)

The Permittee shall maintain files of all information, including all reports and notifications, recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be retained on site. The remaining three (3) years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

Pursuant to WAC 173-401-530(2)(c), none of the recordkeeping requirements apply to IEUs.

The Permittee shall maintain records of required monitoring activities as identified in M01–M97 as follows:

K1. General Recordkeeping **40 CFR 63.6(b)**
40 CFR 63.10(b)
WAC 173-401-615(2)
OA 96-1864R1 Conditions 6 and 12
OA 00-2274R3 Condition 11(k)(1)
OA 00-2270R2 Conditions 16 and 17
OA 01-2389 Condition 19(u)(4) and (v)(1)
ADP 07-2720 Condition 11 and 12
ADP 09-2885 Condition 151 and 153

a. Inspections and Certifications.
   1. The date and time of the inspection or certification
   2. An identification of the unit or activity being inspected or certified;
   3. The name and title of the person who conducted the inspection or certification;
   4. The operating conditions of the unit or the type of activity occurring at the time of the inspection or certification;
   5. Compliance status of each monitored requirement as described in Sections V and VII of this Permit; and
   6. A description of any corrective action taken in response to a discovered permit deviation, excess emission, upset condition, or malfunction, as applicable.

b. Complaints.
   1. The date and time of complaint;
   2. The name of the complainant;
   3. The nature of the complaint and an identification of the unit or activity being complained about;
   4. The date the inspection was conducted, if any;
   5. The name and title of the person who conducted the inspection or certification; and
   6. A description of any corrective action taken in response to the complaint, as applicable.

c. Excess Emissions and Upset Conditions.
   1. The date and time of excess emission or upset condition occurred;
   2. The nature of the excess emission or upset condition and an identification of the affected unit, process, or activity; and

3. A description of any corrective action taken in response to a discovered permit deviation, excess emission, upset condition, or malfunction, as applicable.

d. Sampling and Testing.
   1. An identification of the unit or activity being sampled or tested;
   2. The date sampling or testing was performed;
   3. The operating conditions of the unit or the type of activity occurring at the time of the sampling or testing;
   4. The name and title of the person or the entity that performed the sampling or testing;
   5. The analytical technique used to take the sample or method used to perform the test;
   6. The date sample analysis was performed;
   7. If a sample is taken and analyzed:
      i. The name and title of the person or the entity that performed the sample analysis;
      ii. The analytical techniques or methods used; and
   8. The results of the test or sample analyses;
   9. The compliance status of each monitored requirement as described in Section VI and VIII of this Permit; and
   10. Any corrective action taken in response to a tested or sampled deviation from permit conditions.

e. CMS
   1. The date each variable was monitored;
   2. Periods that data was unavailable or each period during which a CMS is malfunctioning or inoperative (including calibration and out-of-control periods);
   3. Date of calibration or replacement;
   4. Compliance status of each monitored requirement as described in Section VI and VIII of this Permit;
   5. Corrective action taken in response to permit deviations;
   6. The date and time of any CMS calibrations or calibration checks, a description of calibration corrections performed, and the date the corrections were made;
   7. As applicable, any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the Permittee has been granted a waiver [63.10(b)(2)(xii)];
   8. As applicable, all emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the Permittee has been granted such permission under §63.8(f)(6) [63.10(b)(2)(xiii)]; and
   9. As applicable, all documentation supporting initial notifications and notifications of compliance status under §63.9 [63.10(b)(2)(xiv)].

f. CEMS
   1. The date and averaging time for each variable monitored;
   2. Data reduced to the appropriate averaging time;
   3. Periods that data was unavailable or each period during which a CEMS is malfunctioning or inoperative (including calibration and out-of-control periods);
   4. The date and time of any calibrations or calibration checks (including zero drift and span), a description of calibration corrections performed, and the date the corrections were made;
   5. Calibration gas certifications and expiration date;
   6. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the

source is required to report). In lieu of maintaining a file of all CEMS sub-hourly measurements, the Permittee shall retain the most recent consecutive three averaging periods of sub-hourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard;

7. Compliance status of each monitored requirement as described in Section VI and VIII of this Permit;
8. Corrective action taken in response to permit deviations;
9. Data availability shall be greater than 95% based on a rolling six month average unless stated otherwise in the monitoring section or applicable requirement (i.e. 40 CFR 63.152(c)(2)(ii)(A) monitoring requirements);
10. Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under this part, if the Permittee has been granted a waiver [63.10(b)(2)(xii)];
11. All emission levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the Permittee has been granted such permission under §63.8(f)(6) [63.10(b)(2)(xiii)]; and
12. All documentation supporting initial notifications and notifications of compliance status under §63.9 [63.10(b)(2)(xiv)].

g. Maintenance Activities.
   1. An identification of the unit or activity being maintained;
   2. The date and time of the maintenance activity;
   3. The name and title of the person who performed the maintenance;
   4. A description of the maintenance being conducted. If the maintenance occurs during periods of startup, shutdown, or malfunction, then the description should include:
      i. Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard and when the actions taken are different from the procedures specified in the SSMP [see §63.6(e)(3)]; or
      ii. Actions taken during periods of malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when the actions taken are different from the procedures specified in the SSMP [see §63.6(e)(3)].

h. General Parameter or Data Recordkeeping.
   1. An identification of the unit or activity whose data is being recorded;
   2. Identification of the parameter or data being recorded; and
   3. The date and time the data was collected.

i. Startup, Shutdown, and Malfunction.
   1. The Permittee shall maintain at the affected source [§63.6(b)(3)(v)]:
      i. A current SSMP and must make the plan available upon request for inspection and copying by SWCAA and the EPA Administrator;
      ii. If the SSMP is subsequently revised as provided in §63.6(e)(3)(viii), the Permittee shall maintain each previous (i.e., superseded) version of the SSMP and must make each such previous version available for inspection and copying by SWCAA and the EPA Administrator for a period of five (5) years after revision of the SSMP; and
      iii. If an affected source specified in the SSMP ceases operation or is otherwise no longer subject to the provisions of 40 CFR 63, the Permittee shall maintain a copy of the most recent SSMP containing the affected source and must make the plan available

upon request for inspection and copying by the Administrator for five (5) years from the date the source ceases operation or is no longer subject to this part;

2. The occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards [§63.10(b)(2)(i)];
3. The occurrence and duration of each malfunction of operation (i.e., process equipment) or the required air pollution control and monitoring equipment [§63.10(b)(2)(ii)];
4. All required maintenance performed on the air pollution control and monitoring equipment [§63.10(b)(2)(iii)];
5. Actions taken during periods of startup or shutdown when the source exceeded applicable emission limitations in a relevant standard and when the actions taken are different from the procedures specified in the Permittee's SSMP [§63.10(b)(2)(iv)(A)];
6. Actions taken during periods of malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when the actions taken are different from the procedures specified in the Permittee's SSMP [§63.10(b)(2)(iv)(B)];
7. All information necessary, including actions taken, to demonstrate conformance with the SSMP when all actions taken during periods of startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist", or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events [§§63.6(b)(3)(iii) and 63.10(b)(2)(v)].

K2. Fuel consumption records **OA 97-2078 Condition 12**

Appropriate fuel consumption records, such as purchase receipts, shall be maintained for natural gas consumed by boiler U-17.

K3. Operation and Maintenance Log – Boilers and Hot Oil Heaters
OA 95-1799R1 Condition 17(t)(1) and (t)(2)

The Permittee shall document the following on a monthly basis:

a. The amount of steam produced in U-2, U-3, U-7, U-10, U-11, and U-12; and
b. 12-month rolling sum of NO_x emissions from U-2, U-3, U-7, U-10, U-11, and U-12.

K4. CMS Recordkeeping **40 CFR 63.10(c)**
WAC 173-401-615(2)

In addition to complying with the requirements specified in K1, the Permittee shall maintain the following:

a. All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);
b. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;
c. The date and time identifying each period during which the CMS was out of control, as defined in §63.8(c)(7);

d. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;
e. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;
f. The nature and cause of any malfunction (if known);
g. The corrective action taken or preventive measures adopted;
h. The nature of the repairs or adjustments to the CMS that was inoperative or out of control;
i. The total process operating time during the reporting period; and
j. All procedures that are part of a quality control program developed and implemented for CMS under §63.8(d).
k. In order to satisfy the requirements of §§63.6(c)(10)–(c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in §63.6(e), provided that such plan and records adequately address the requirements of §§63.6(c)(10)–(c)(12).

K5. Subpart EEE Recordkeeping **40 CFR 63.10(b) and (c)**
40 CFR 63.1206(b)(1)(ii) , (b)(5)(ii), (b)(11), (c)(2), (c)(2)(v)(A), (c)(3)(v), (c)(3)(vii), (c)(4)(ii), (c)(4)(iii), (c)(5)(ii), (c)(6), and (c)(7)(i)(D)
40 CFR 63.1209(c)(2) and (q)
40 CFR 63.1211(c)
SWCAA 400-075

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a. Information required to document and maintain compliance with the regulations of 40 CFR 63 Subpart EEE, including data recorded by CMS, and copies of all notifications, reports, plans, and other documents submitted to SWCAA and the EPA Administrator [§63.1200, §63.10(b), and §63.10(c)];
b. If the Permittee elects to comply with all applicable requirements and standards promulgated under authority of the FCAA, including §§112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, the Permittee shall document in the operating record that the facility is in compliance with those requirements [§63.1206(b)(1)(ii)];
c. Documentation that a change will not adversely affect compliance with the emission standards or operating requirements [§63.1206(b)(5)(ii)];
d. Calculation of hazardous waste residence time [§63.1206(b)(11)];
e. SSMP [§63.1206(c)(2)];
f. Documentation of the investigation and evaluation of excessive exceedances during malfunctions [§63.1206(c)(2)(v)(A)];
g. Corrective measures for any AWFCO event that results in an exceedance of an emission standard or operating parameter limit [§63.1206(c)(3)(v)];
h. Documentation and results of the AWFCO system operability testing [§63.1206(c)(3)(vii)];
i. ESV operating plan [§63.1206(c)(4)(ii)];
j. Corrective measures for any ESV opening [§63.1206(c)(4)(iii)];
k. Method used for control of combustion system leaks [§63.1206(c)(5)(ii)];
l. Operator training and certification program [§63.1206(c)(6)];

m. Operation and Maintenance Plan [§63.1206(c)(7)(i)(D)];
n. Feedstream Analysis Plan [§63.1209(c)(2)];
o. Documentation of changes in modes of operation [§63.1209(q)]; and
p. Documentation of Compliance [§63.1211(c)];

K6. Leak Detection Recordkeeping **40 CFR 63.181**

The Permittee shall keep records as per 40 CFR 63.181.

K7. Benzoate Plant and Benzoic Acid Chipper Opacity

WAC 173-401-615(2)
OA 00-2274R3 Condition 11(j)(4)

The opacity of emissions from scrubbers C-901, C-902A, C-904, C-906, C-907, C-909, C-920, the fluidized bed extruder baghouse, and the benzoic acid chipper baghouse shall be recorded monthly. The record shall include:
a. The date and time of the inspection or certification;
b. An identification of the unit or activity being inspected or certified;
c. The name and title of the person who conducted the inspection or certification;
d. The operating conditions of the unit or the type of activity occurring at the time of the inspection or certification;
e. Compliance status of each monitored requirement as described in Sections V and VII of this Permit; and
f. A description of any corrective action taken in response to a discovered permit deviation, excess emission, upset condition, or malfunction, as applicable.

K8. Fluidized Bed Extruder Baghouse Pressure Drop

OA 00-2274R3 Condition 11(j)(6)

Pressure drop across the fluidized bed extruder baghouse shall be recorded weekly.

K9. Tanks and Loading Racks Subject to 40 CFR 63 Subpart EEEE

40 CFR 63.2390(a) and (b)

The Permittee shall:
a. Keep all records identified in §63.2343 for each emission source identified in §63.2338 that does not require control under Subpart EEEE; and
b. For each emission source identified in §63.2338 that does require control under Subpart EEEE:
   1. Keep all records identified in 40 CFR 63 Subpart SS and 40 CFR 63 Subpart EEEE Table 12 that are applicable, including records related to notifications and reports, SSMP, performance tests, CMS, and performance evaluation plans; and
   2. Keep the records required to show continuous compliance, as required in 40 CFR 63 Subpart SS and 40 CFR 63 Subpart EEEE Tables 8 through 10, with each emission limitation, operating limit, and work practice standard that applies.

IX. REPORTING TERMS AND CONDITIONS

All required reports must be certified by a responsible official consistent with WAC 173-401-520. Where an applicable requirement requires reporting more frequently than once every six (6) months, the responsible official's certification need only be submitted once every six (6) months, covering all required reporting since the date of the last certification. In the case where there are two reporting frequencies for the same record, submittal of the record according to the most frequent schedule is deemed to have met the requirement for the less frequent reporting schedule.

Addresses of regulatory agencies are the following, unless otherwise instructed:

Southwest Clean Air Agency
11815 NE 99th Street, Suite 1294
Vancouver, WA 98682-2322

U.S. EPA Region 10
Federal & Delegated Air Programs Unit
1200 Sixth Avenue, MS AWT-107
Seattle, WA 98101

R01. Deviations or Excursions from Permit Conditions

40 CFR 63.10(c)
40 CFR 63.152(c)(2)(ii)(A)
40 CFR 63.2386(e)
WAC 173-401-615(3)(b)
SWCAA 400-107
OA 00-2274R3 Condition 11(k)(1)
OA 01-2389 Condition 19(v)(1)
ADP 01-2402 Condition 13(c)
ADP 03-2456R1 Condition 34(b)
ADP 07-2720 Condition 11 and 12
ADP 09-2885 Condition 233 and 234

A deviation or excursion from permit condition means an instance when any rule, regulation, or approval condition is not met, including, but not limited to, conditions that establish emission limitations, emission standards, control equipment requirements, work practices, parameter ranges, and those designed to assure compliance with such requirements, such as monitoring, recordkeeping, and reporting. A deviation or excursion does not necessarily constitute a violation and may or may not result in excess emissions.

Deviations and excursions from permit requirements shall be reported no later than thirty (30) days after the end of the month during which the deviation is discovered. Deviations and excursions that represent a potential threat to human health or safety shall be reported as soon as possible but no later than twelve (12) hours after the deviation or excursion is discovered. Reports of deviations and excursions shall include:

a. Identification of the emission unit(s) involved;
b. The duration of the event including the beginning and end times; and
c. A brief description of the event, including:
    1. Whether or not the deviation or excursion was due to an upset condition;

2. The probable cause of the deviation or excursion; and
3. The corrective action taken and when the corrective action was initiated.

R02. Excess Emissions

40 CFR 63.10(c), (d)(5)(i), and (d)(5)(ii)
40 CFR 63.152(c)(2)(ii)(A)
WAC 173-401-615(3)(b)
SWCAA 400-107
OA 00-2274R3 Condition 11(k)(1)
OA 01-2389 Condition 19(v)(1)
OA 00-2270R2 Condition 19
ADP 01-2402 Condition 13(c)
ADP 03-2456R1 Condition 34(b)
ADP 07-2720 Condition 11 and 12
ADP 09-2885 Condition 233 and 234

Excess emissions may result from a deviation or excursion from permit conditions, startups, shutdowns, malfunctions, and upsets.

Excess emissions shall be reported to SWCAA as follows [WAC 173-401-615(3)(b) and SWCAA 400-107]:

a. As soon as possible, but no later than twelve (12) hours after discovery for emissions that represent a potential threat to human health or safety;
b. As soon as possible, but no later than forty-eight (48) hours after discovery for emissions which the permittee wishes to claim as unavoidable; and
c. No later than thirty (30) days after the end of the month of discovery for all other excess emissions.

Excess emission reports shall contain the following information [SWCAA 400-107]:

a. Identification of the emission unit(s) involved;
b. A brief description of the event;
c. Duration of the event; and
d. Anticipated corrective action to prevent or minimize excess emissions, if any.

Upon request by SWCAA, the Permittee shall submit a full written report describing the known causes, the corrective actions taken, and the preventive measures implemented to minimize or eliminate the chance of recurrence.

If actions taken by the Permittee are consistent with the procedures specified in the SSMP, during:

a. A startup or shutdown and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards; or
b. A malfunction of an affected source, including actions taken to correct a malfunction; then

the Permittee shall submit a startup, shutdown, and malfunction report [40 CFR 63.10(5)(i)].

For startups, shutdowns, and malfunctions of 40 CFR 63 applicable equipment that result in exceedances of emission limits established in 40 CFR 63 where the Permittee takes actions that are not consistent with the SSMP, the Permittee shall report the following [40 CFR 63.10(d)(5)(ii)]:

a. Within two (2) working days of commencing actions inconsistent with the SSMP, the Permittee shall report to SWCAA the actions taken. The report may be submitted by telephone, fax, or electronic mail.
b. No later than seven (7) working days after an event where actions taken by the Permittee were inconsistent with the SSMP, the Permittee shall submit (or have postmarked) a letter to SWCAA containing:
   1. Name, title, and signature of the owner, operator or other responsible official who is certifying the accuracy of the letter;
   2. An explanation of the circumstances of the event and the reasons for not following the SSMP; and
   3. A description of all excess emissions and/or parameter monitoring exceedances which are believed to have occurred.

In accordance with SWCAA 400-107(1), excess emissions that the Permittee wishes to be considered unavoidable must be reported as soon as possible, but no later than forty-eight (48) hours after discovery. The Permittee shall report the upset condition by telephone, e-mail or facsimile as initial notification to SWCAA; a message may be left on the answering machine for conditions outside of normal business hours.

R03. Complaint Reports **WAC 173-401-615(3)**
ADP 03-2465 Condition 19(c)
ADP 03-2456R1 Condition 34(c)
ADP 09-2885 Condition 154

The Permittee shall report all air quality related complaints made by the public to SWCAA within three (3) days of receipt. Complaint reports shall include the date and time of the complaint, the nature of the complaint, and the corrective action taken in response to each complaint.

R04. Benzene Wastewater Reports **40 CFR 61.357**
ADP 09-2885 Condition 239

At least annually or whenever there is a change in the process generating a waste stream that could cause the total annual benzene to 1) increase above 1.0 Mg/yr, if previously the total annual benzene was less than 1.0 Mg/yr or 2) increase above 10 Mg/yr, if previously the total annual benzene was less than 10 Mg/yr, the Permittee shall submit to SWCAA the information required under §61.357(a)(1) through (a)(3).

If the total annual benzene is greater than or equal to 10 Mg/yr the Permittee shall submit to SWCAA:

a. at least annually, the information required under §61.357(a)(1) through (a)(3) and any applicable reports under §61.357(d); and
b. at least quarterly, no later than thirty (30) days following the end of each calendar quarter:

1. A certification that all required inspections of the benzene wastewater systems have been carried out as required by 40 CFR 61 Subpart FF (§61.340 et seq.);
2. Each 3-hour period of time during which the temperature of the combustion zone of the anaerobic digester enclosed combustion device is below 1,343°F;
3. Each 3-hour period when the concentration of organics in the vent stream from the non-regenerative carbon canister on tank T-21B and T-21D is greater than 20% above the design concentration level in the exhaust; and
4. The results of sampling required every three (3) months of benzene and toluene content in the wastewater from the oil water separator, anaerobic digester feed and discharge, and feed to the aerobic treatment system.

R05. Semiannual Reports

40 CFR 60.48c
40 CFR 63.6(e)(3)(viii)
40 CFR 63.10(d)(5)(i) and (ii)
40 CFR 63.104(f)(2)
40 CFR 63.152(d)
40 CFR 63.182(d)
40 CFR 63.1211(a)
40 CFR 63.2343(b)(2), (c)(2), and (d)
40 CFR 63.2386(b)
WAC 173-401-615(1)
WAC 173-401-615(3)
OA 94-1670R1 Condition 16
OA 00-2270R2 Condition 22
OA 95-1799R1 Condition 17(r)
ADP 09-2885 Condition 232 and 240

Consistent with WAC 173-401-615(3) the Permittee shall submit to SWCAA semiannual reports on the status of all monitoring requirements for the periods defined from January 1 through June 30 from July 1 through December 31. Unless otherwise specified, the first semiannual report is due by October 15 and the second semiannual report is due by April 15 of the following year. All instances of deviations from permit requirements shall be clearly identified. The semiannual report shall contain a certification by a responsible official of any reports submitted during the semiannual period that have not already been certified. The certification shall be consistent with WAC 173-401-520.

The following shall be included with the semiannual report:

a. A copy of the most recent opacity certification card containing the name, certificate number, and expiration date for all personnel conducting EPA Method 9 or SWCAA Method 9 monitoring during the semiannual period [WAC 173-401-615(2)];
b. Reports of any required monitoring that have not been submitted during the semiannual period or that have not been certified by the responsible official. All instances of deviations from permit requirements must be clearly identified in such reports [WAC 173-401-615(3)(a)];
c. Identification of all instances of deviations from permit conditions that occurred during the semiannual period [WAC 173-401-615(3)(b)];

d. If a start-up, shutdown, or malfunction occurred during the reporting period, a letter must be submitted with the semiannual report, signed by the responsible official, stating whether actions taken were consistent with the SSMP and including the number, duration, and a brief description of each event [ADP 09-2885 Condition 232(c)]
e. Any revision to a SSMP [40 CFR 63.6(e)(3)(viii) and ADP 09-2885 Condition 232(e)];
f. Periodic startup, shutdown, and malfunction reports (see R09) [40 CFR 63.10(d)(5)(i)];
g. Immediate startup, shutdown, and malfunction reports (see R10) [40 CFR 63.10(d)(5)(ii)];
h. Excessive emissions and CMS performance report and summary report (see R13) [40 CFR 63.10(e)(3)]
i. Records of fuel oil purchases and certification of the sulfur content of each fuel oil burned in any boiler or hot oil heater within the 6-month period. If no fuel oil was burned in the 6-month period, the report should include a statement to that effect. The certification shall include, at minimum [40 CFR 60.48c(e)(11), OA 95-1799R1 Condition 17(r), and ADP 09-2885 Condition 232(a)]:
    1. The name of the oil supplier;
    2. For #1 and #2 distillate fuel oil: A certification from the oil supplier that the fuel oil complies with the specifications for distillate oil in 40 CFR 60.41c;
    3. For #4, #5, and #6 residual fuel oils: The location of the oil when the sample was drawn for analysis (refinery versus oil supplier's location) and the method used to determine the sulfur content of the oil; and
    4. A certification by the responsible official that the records of fuel supplier certifications submitted represent all of the fuel oil burned during the semiannual period. [40 CFR 60.48c]
j. A certification that natural gas, waste tar, hazardous waste, digester gas, process gas, octanal bottoms, and fuel oil are the only fuels used in combustion units [ADP 09-2885 Condition 232(b)].
k. For the RTOs, carbon beds, benzene transfer operations, and wastewater operations, the following information shall be included [ADP 09-2885 Condition 232(d)]:
    1. The daily average values of any monitored parameters when the daily average values were outside established ranges;
    2. Identification of any carbon bed regeneration cycles during which the monitored parameters were outside established ranges (when the carbon bed was being used as a final control device);
    3. Identification of any time periods when insufficient monitoring data was collected;
    4. Identification of any time periods when vent streams were diverted from a control device (bypass);
    5. Identification of any time periods when a bypass line seal mechanism was broken, the bypass line valve position was changed or the key to unlock the bypass line valve was checked out;
    6. Demonstration that planned routine maintenance of control devices (periods when a portion of the process is operating uncontrolled) does not exceed 240 hr/yr per RTO during facility operations;
    7. The results of any performance tests conducted during the semiannual period;
    8. Changes in process group determinations;
    9. Records of any inspection during which a leak in a closed-vent system was detected; and

10. Records of any inspection of a process wastewater system during which a control device failure was identified.

l. Reporting and recordkeeping of leak detection monitoring shall be conducted as required by 40 CFR 63.181 and 40 CFR 63.182. Every semiannual report shall contain the annual or semiannual leak detection report due during that period or a certification of the date they were submitted. The number of valves, pumps, compressors, agitators, and connectors monitored and leaks identified shall be included in the report [ADP 09-2885 Condition 240].

The following information shall be submitted to SWCAA no later than thirty (30) days following the end of each semiannual period:

m. The amount of each type of fuel burned in hot oil heater U-1 (EU-04), hot oil heater U-12 (EU-11) and boilers U-2 (EU-05), U-3 (EU-06), U-7 (EU-07), U-9 (EU-08) [OA 94-1670R1 Condition 16], U-10 (EU-09), U-11 (EU-10), and U-17 [OA 00-2270R2 Condition 22] shall be reported for each calendar month during the semiannual period [OA 01-2389].

The following information shall be submitted to SWCAA no later than thirty-one (31) days following the end of each semiannual period:

n. Natural gas consumption and total hours of operation of boiler U-9 (EU-08) [OA 94-1670R1 Condition 16];

The following information shall be submitted to SWCAA no later than sixty (60) days following the end of each semiannual period:

o. For process vents, reports of process changes as required under §63.118(g), (h), (i), and (j) [§63.152(c)(4)(i)];

p. Notification if any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in §63.100 [§63.152(c)(4)(iii)];

q. A report of leak-detection monitoring conducted pursuant to 40 CFR 63 Subpart H including [40 CFR 63.182(d)]:

1. The number of valves for which leaks were detected as described in 40 CFR 63.168(b), the percent leakers, and the total number of valves monitored;
2. The number of valves for which leaks were not repaired as required in 63.168(f), identifying the number of those that are determined non-repairable;
3. The number of pumps for which leaks were detected as described in 40 CFR 63.163(b), the percent leakers, and the total number of pumps monitored;
4. The number of pumps for which leaks were not repaired as required in 40 CFR 63.163(b);
5. The number of compressors for which leaks were detected as described in 40 CFR 63.164(f);
6. The number of compressors for which leaks were not repaired as required in 40 CFR 63.164(g);
7. The number of connectors for which leaks were detected as described in 63.174(a), the percent of connectors leaking, and the total number of connectors monitored;
8. The number of connectors for which leaks were not repaired as required in 40 CFR 63.174(d), identifying the number of those that are determined non-repairable;
9. The facts that explain any delay of repairs, and where appropriate, why a process shutdown was technically unfeasible;

10. The results of the annual visual, audible and olfactory inspection of the closed-vent systems and control devices conducted in accordance with 40 CFR 63.172(f) if the inspection was conducted during the semiannual period;
11. The results of any monitoring of pressure relief devices conducted during the semiannual period. Each pressure relief device that has been subject to a pressure release must be monitored no later than five (5) days following the release [40 CFR 63.165); and
12. Each report shall state whether or not a quality improvement plant has been or will be implemented.

r. If a heat exchanger leak is detected and repair is delayed, the Permittee shall report the following [40 CFR 63.104(f)(2)]:
   1. The date the leak was detected;
   2. The reasons(s) for the delay in repair;
   3. An estimate of emissions due to the delay if the delay was due to the reasons cited in 40 CFR 63.104(e)(2);
   4. If the leak remains unrepaired, the expected date of repair shall be reported; and
   5. If the leak was repaired, the date of the repair shall be reported.

s. If any of the following occurs, the Permittee shall submit a subsequent compliance report that containing the information specified in §63.2386(c)(1), (2), and 3), and, as applicable §63.2386(d)(3) and (d)(4) no later than October 15 for the first half semiannual report and April 15 for the second half semiannual report [§63.2343(d)]:
   1. Any storage tank or transfer rack became subject to control under 40 CFR 63 Subpart EEEE; or
   2. Any storage tank equal to or greater than 18.9 m^3 (5,000 gal) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or
   3. Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or
   4. Any of the information required in §63.2386(c)(1), §63.2386(c)(2), or §63.2386(c)(3) has changed.

t. For each storage tank subject to 40 CFR 63 Subpart EEEE having a capacity of less than 18.9 m^3 (5,000 gallons) and for each transfer rack subject to 40 CFR 63 Subpart EEEE that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), the Permittee shall submit subsequent compliance reports that contain the information specified in §63.2386(c)(1), (2), and 3), and, as applicable §63.2386(d)(3) and (d)(4) no later than October 15 for the first half semiannual report and April 15 for the second half semiannual report [§63.2343(b)(2) and (c)(2)].

u. For tanks and leading racks subject to 40 CFR 63 Subpart EEEE, the Permittee shall submit subsequent compliance reports that contain the information specified in §63.2386(a) and (d) no later than October 15 for the first half semiannual report and April 15 for the second half semiannual report [40 CFR 63.2386(a)].

R06. Annual Reports and Compliance Certification

40 CFR 60.7
40 CFR 61.357
WAC 173-401-615(1)(b)
WAC 173-401-630(5)
OA 95-1799R1 Condition 17(u)(1)
OA 96-1955 Condition 17(aa)
OA 97-2078 Condition 10(p)(1) through (3)
OA 00-2274R3 Condition 11(k)(2)
OA 00-2270R2 Condition 22
OA 01-2389 Condition 19(v)(2)
ADP 03-2465 Conditions 19(d), (e), and (f)
ADP 03-2456R1 Conditions 34(d), (e), (f), (g), and (h)
ADP 09-2885 Condition 231

a. Compliance Certification: The Permittee shall submit to SWCAA and EPA a certification of compliance with all terms and conditions of this Permit in accordance with WAC 173-401-630(5)(d). The Permittee shall submit by March 15 of the following year the following information for the period of January through December:
   1. Identification of each term or condition of the Title 5 permit that is the basis of the certification;
   2. Statement of compliance status;
   3. Whether compliance was continuous or intermittent;
   4. Method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with WAC 173-401-615;
   5. Whether the monitoring method(s) used to determine the compliance status of the source provides continuous or intermittent data;
   6. Such other facts as SWCAA may require to determine the compliance status of the source; and
   7. Such additional requirements as may be specified pursuant to FCAA §§114(a)(3) and 504(b).

b. Annual Reports: The Permittee shall report the following to SWCAA annually by March 15 for the previous calendar year unless otherwise noted:

   Toluene Storage Tanks

   8. Total amount of throughput of tanks T-70, T-71, and T-42 [ADP 09-2885 Condition 231(d)];

   Combustion Units

   9. Total amount of each fuel burned in each boiler and hot oil heater [OA 95-1799R1 Condition 17(u)(1); OA 01-2389 19(v)(2); ADP 09-2885 Condition 231(a)];
   10. Steam production in U-2, U-3, U-7, U-10, U-11, and U-12 [OA 95-1799R1 Condition 17(u)(1)]; and
   11. The average heat content for waste tar, hazardous waste, and octanal bottoms burned [ADP 09-2885 Condition 231(b);

Benzoic Acid and Benzaldehyde Production

12. The hours of operation of tank T-313 and the associated benzene and toluene emissions [ADP 09-2885 Condition 231(e)];

HCA Plant

13. The results of all CO emissions sampling events shall be reported annually by March 15 for the previous calendar year;
14. The total vent flow from R-1260 shall be reported annually by March 15 for the previous calendar year.
15. The total amount of each aldehyde product produced in reactor R-1250A [ADP 09-2885 Condition 231(m)];
16. The total quantity of air fed to reactor R-1250A during catalyst deactivation [ADP 09-2885 Condition 231(n)]; and
17. For each chemical processed in distillation column V-1270, the total number of batches produced [ADP 09-2885 Condition 231(o)];

Benzoate Plant

18. The results of weekly testing for total diphenyls of the sodium and potassium benzoate feed to the dryers in the benzoate plant (EU-54 through EU-65);

Plasticizer Plant

19. The total production of plasticizers (lb/yr) shall be reported annually for the previous calendar year; and
20. The results of the isooctane concentration and vent temperature during the most recent grab sample of condenser X-8601;

Wastewater Treatment

21. The results of quarterly sampling of benzene and toluene content from the oil water separator, anaerobic digester feed and discharge, and feed to the aerobic treatment system [ADP 09-2885 Condition 231(f)];
22. The total annual benzene quantity from facility waste determined in accordance with 40 CFR 61.355(a) [ADP 09-2885 Condition 231(g)];
23. A table identifying each waste stream and whether or not the waste stream will be controlled for benzene emissions. For each waste stream identified as not controlled for benzene the following information shall be included:
    i. Whether or not the water content of the waste stream is greater than 10%;
    ii. Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;
    iii. Annual waste quantity for the waste stream;
    iv. Range of benzene concentrations for the waste stream;
    v. Annual average flow-weighted benzene concentration for the waste stream; and
    vi. Annual benzene quantity for the waste stream;
24. For each waste stream identified as controlled for benzene emissions the following information shall be included [ADP 09-2885 Condition 231(h)];
    i. Annual waste quantity for the waste stream;
    ii. Range of benzene concentrations for the waste stream;

iii. Annual average flow-weighted benzene concentration for the waste stream; and
iv. Annual benzene quantity for the waste stream;

25. For each waste stream identified as not controlled for benzene the following information shall be included [ADP 09-2885 Condition 231(i)]:
    i. Whether or not the water content of the waste stream is greater than 10%;
    ii. Whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate;
    iii. Annual waste quantity for the waste stream;
    iv. Range of benzene concentrations for the waste stream;
    v. Annual average flow-weighted benzene concentration for the waste stream; and
    vi. Annual benzene quantity for the waste stream;
26. A summary of all benzene wastewater inspections during which detectable emissions were measured or a problem identified, including information about the repairs or corrective action taken [ADP 09-2885 Condition 231(j)];
27. Identification of any periods when flare X-86B was bypassed, the amount of gas bypassed, and the reason for the bypass [ADP 09-2885 Condition 231(k)]; and
28. The total amount of natural gas and digester gas burned in enclosed flare X-86B [ADP 09-2885 Condition 231(l)];

Miscellaneous Storage Tanks and Other Specified Storage Tanks

29. For each storage tank that contains VOC, HAP, or TAP, the Permittee shall submit the following [WAC 173-401-615(1)(b) and ADP 09-2885 Condition 231(c)]:
    i. Tank capacity, contents, and annual throughput during the annual period and whether the contents are a volatile organic liquid or a HAP;
    ii. Control device(s) in place while the tank was in use during the annual period;
    iii. Maximum TVP (definition under §63.111) for the volatile organic liquid;
    iv. Whether the tank is subject to 40 CFR 63 Subpart F, 40 CFR 63 Subpart G, or 40 CFR 63 Subpart EEEE; and
    v. If requirements under 40 CFR 63 Subpart F, 40 CFR 63 Subpart G, or 40 CFR 63 Subpart EEEE are triggered, a compliance schedule to bring the storage tank into compliance with the applicable regulation.

R07. Emission Inventory Reports

SWCAA 400-105
OA 94-1670R1 Condition 17(u)(1)
OA 96-1864R1 Conditions 11 and 14
OA 00-2274R3 Condition 11(k)(3)
OA 00-2270R2 Condition 23
OA 01-2389 Condition 19(v)(3)
ADP 01-2402 Condition 13(b)
ADP 09-2885 Condition 230

A written annual, January through December, emissions inventory report shall be submitted to SWCAA by March 15 of each year for the previous calendar year in accordance with SWCAA 400-105(1), unless an alternate date has been approved in advance by SWCAA. The inventory shall include stack and fugitive emissions of PM, PM_{10}, $PM_{2.5}$, CO, NO_x, SO_2, VOC, TAP, HAP, total reduced sulfur compounds, fluorides, and lead. The Permittee shall maintain records of

information necessary to substantiate any reported emissions, consistent with the averaging times for the applicable standards.

For the Fragrance and Benzyl Alcohol/Benzyl Amine Plants the inventory shall include the data necessary to calculate annual emissions including product throughput or number of batches and source test results or engineering estimates used to calculate annual emissions.

The periodic source test results from the plasticizer plant (EU-66 and EU-67) shall be included with the annual emissions inventory [96-1864R1 Condition 14].

R08. Leak Detection Periodic Report **40 CFR 63.182(d)**

For each process unit complying with the provisions of §63.163 through §63.174, the Permittee shall submit semiannually the summary information listed below for each monitoring period during the 6-month period:

a. The number of valves for which leaks were detected as described in §63.168(b), the percent leakers, and the total number of valves monitored;
b. The number of valves for which leaks were not repaired as required in §63.168(f), identifying the number of those that are determined non-repairable;
c. The number of pumps for which leaks were detected as described in §63.163(b), the percent leakers, and the total number of pumps monitored;
d. The number of pumps for which leaks were not repaired as required in §63.163(c);
e. The number of compressors for which leaks were detected as described in §63.164(f);
f. The number of compressors for which leaks were not repaired as required in §63.164(g);
g. The number of agitators for which leaks were detected as described in §63.173(a) and (b);
h. The number of agitators for which leaks were not repaired as required in §63.173(c);
i. The number of connectors for which leaks were detected as described in §63.174(a), the percent of connectors leaking, and the total number of connectors monitored;
j. The number of connectors for which leaks were not repaired as required in §63.174(d), identifying the number of those that are determined non-repairable;
k. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible;
l. The results of all monitoring to show compliance with §§63.164(i), 63.165(a), and 63.172(f) conducted within the semiannual reporting period;
m. If applicable, the initiation of a monthly monitoring program under §63.168(d)(1)(i), or a quality improvement program under either §§63.175 or 63.176;
n. If applicable, notification of a change in connector monitoring alternatives as described in §63.174(c)(1);
o. If applicable, the compliance option that has been selected under §63.172(n).

For owners or operators electing to meet the requirements of §63.178(b), the report shall include the following information for each process unit:

a. Batch product process equipment train identification;
b. The number of pressure tests conducted;
c. The number of pressure tests where the equipment train failed the pressure test;
d. The facts that explain any delay of repairs; and
e. The results of all monitoring to determine compliance with §63.172(f).

For each process unit subject to the requirements of §63.163 through §63.174, the report shall include the following information for each process unit:
a. Process unit identification.
b. Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service.
c. Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").
d. Planned schedule for each phase of the requirements in §63.163 and §63.168 of this subpart.

For each process unit subject to the requirements of §63.178(b), the report shall include the following information for each process unit:
a. Batch products or product codes subject to the provisions of this subpart, and
b. Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this subpart.

For each process unit subject to the requirements in §63.179, the report shall include the following information for each process unit:
a. Process unit identification.
b. A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of §63.172 of this subpart.

R09. Periodic Startup, Shutdown, and Malfunction Report

40 CFR 63.10(d)(5)(i)
SWCAA 400-075

If actions taken by the Permittee during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSMP, the Permittee shall state such information in a startup, shutdown, or malfunction report. The report shall include:
a. The number of startup, shutdown, or malfunction events;
b. The duration of each startup, shutdown, or malfunction event;
c. A brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded; and
d. A brief description of actions taken to minimize emissions during each startup, shutdown, or malfunction.

Reports shall only be required if a startup or shutdown caused the source to exceed any applicable emission limitation in the relevant emission standards, or if a malfunction occurred during the reporting period. The startup, shutdown, or malfunction report shall consist of a letter, containing the name, title, and signature of the responsible official who is certifying its accuracy that shall be submitted to SWCAA and the EPA Administrator with the semiannual report due April 15 and October 15.

R10. Immediate Startup, Shutdown, and Malfunction Report

40 CFR 63.10(d)(5)(ii)
40 CFR 63.2386(a)
SWCAA 400-075

Any time an action taken by the Permittee during a startup or shutdown that caused the source to exceed any applicable emission limitation in the relevant emission standards, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the SSMP, the Permittee shall report the actions taken for that event within two (2) working days after commencing actions inconsistent with the plan followed by a letter within seven (7) working days after the end of the event.

The immediate report required shall consist of a telephone call or FAX transmission to SWCAA and the EPA Administrator within two (2) working days after commencing actions inconsistent with the SSMP, and it shall be followed by a letter, delivered or postmarked within seven (7) working days after the end of the event, that contains the following:

a. The name, title, and signature of the responsible official who is certifying its accuracy;
b. An explanation of the circumstances of the event;
c. The reasons for not following the SSMP, describing all excess emissions and/or parameter monitoring exceedances which are believed to have occurred (or could have occurred in the case of malfunctions); and
d. The actions taken to minimize emissions in conformance with §63.6(e)(1)(i).

The Permittee may make alternative reporting arrangements, in advance, with SWCAA and the EPA Administrator per the procedures governing the arrangement of alternative reporting requirements under §63.9(i).

R11. Excessive Exceedances Report **40 CFR 63.1206(c)(3)(vi)**
SWCAA 400-075

For each set of ten (10) exceedances of an emission standard or operating requirement while hazardous waste remains in the combustion chamber (i.e., when the hazardous waste residence time has not transpired since the hazardous waste feed was cutoff) during a 60-day block period, the Permittee shall submit to SWCAA and the EPA Administrator a written report within five (5) calendar days of the 10th exceedance documenting the exceedances and results of the investigation and corrective measures taken.

R12. Emergency Safety Vent Opening Report **40 CFR 63.1206(c)(4)(iv)**
SWCAA 400-075

The Permittee shall submit to SWCAA and the EPA Administrator a written report within five (5) days of an ESV opening that results in failure to meet the emission standards of 40 CFR 63 Subpart EEE, as determined in §63.1206(c)(4)(i) of this section, documenting the result of the investigation and corrective measures taken.

R13. Excess Emissions and Continuous Monitoring System Performance Report and Summary Report **40 CFR 63.10(e)(3)**
SWCAA 400-075

The Permittee shall submit an excess emissions and CMS performance report and/or a summary report to SWCAA and the EPA Administrator semiannually, unless more frequent reporting is specifically required by a relevant standard. All excess emissions and CMS performance reports shall be due by the 30th day following the end of the semiannual period.

If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is:
a. Less than 1% of the total operating time for the reporting period, and
b. The total CMS downtime for the reporting period is less than 5% of the total operating time for the reporting period;

then, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted.

If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is:
a. 1% or greater of the total operating time for the reporting period, or;
b. The total CMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period;

then, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

The excess emissions and CMS performance report shall include the following:
a. The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;
b. The date and time identifying each period during which the CMS was out of control, as defined in §63.8(c)(7);
c. The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;
d. The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;
e. The nature and cause of any malfunction (if known);
f. The corrective action taken or preventive measures adopted;
g. The nature of the repairs or adjustments to the CMS that was inoperative or out of control;
h. The total process operating time during the reporting period; and
i. All information concerning out-of-control periods defined per §63.8(c)(7), including start and end dates and hours and descriptions of corrective actions taken.

Each excess emissions and CMS performance report shall include the name, title and signature of the responsible official.

The summary report shall be entitled "Summary Report – Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

a. The company name and address of the affected source;
b. An identification of each hazardous air pollutant monitored at the affected source;
c. The beginning and ending dates of the reporting period;
d. A brief description of the process units;
e. The emission and operating parameter limitations specified in the relevant standard(s);
f. The monitoring equipment manufacturer(s) and model number(s);
g. The date of the latest CMS certification or audit;
h. The total operating time of the affected source during the reporting period;
i. An emission data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
j. A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;
k. A description of any changes in CMS, processes, or controls since the last reporting period;
l. The name, title, and signature of the responsible official who is certifying the accuracy of the report; and
m. The date of the report.

R14. Emission Test Reports

40 CFR 63.152(b)(1)(ii)
SWCAA 400-106(1)(g)
OA 94-1670R1 Appendix A Condition 2(e)
OA 96-1864R1 Condition 13, Appendix A Condition 4(a)
OA 96-1955 Appendix A Condition 2(n), Appendix B Condition 4(a)
OA 97-2078 Appendix A Condition 2(i)
OA 00-2274R3 Appendix B, Condition 3
ADP 03-2465 Appendix A, Condition 4
ADP 03-2456R1 Appendix A, Condition 4
ADP 09-2885 Condition 237

If emission testing is required, the Permittee shall submit test results to SWCAA no later than forty-five (45) days following completion of the required testing.

R15. Performance Monitoring (Tuning) Reports

SWCAA 400-106(2)(f)
ADP 09-2885 Condition 236

Performance monitoring or tuning results shall be submitted to SWCAA no later than fifteen (15) days following completion of the required testing.

R16. Plasticizer Plant Operation or Material Change Reporting

OA 96-1864R1 Condition 10

SWCAA shall be notified at least ten (10) days in advance of the processing of any new material or a change in the method of operation in the Plasticizer Plant. The written notice shall include the following:

a. A description of the proposed change with a Material Safety Data Sheet (MSDS) or equivalent information for each new toxic or hazardous air pollutant emitted;
b. The date the change is to be made;
c. The change in emissions of VOCs, HAPs and TAPs occurring as a result of the change; and
d. A summary of any applicable requirement that would apply as a result of the change.

If the proposed emission rate of a new TAP exceeds its SQER, causes or contributes to an exceedance of the applicable VOC limits, or otherwise circumvents an applicable requirement, New Source Review shall be required prior to making the proposed change.

R17. Fragrance and Specialty Plants – New Chemicals Reporting

OA 97-2078 Condition 13
ADP 09-2885 Condition 238

SWCAA shall be notified at least seven (7) days in advance of the use or production of any new chemical, which will result in emissions of toxic or hazardous air pollutants not previously approved or emitted. The written notice shall include the following:

a. A description of the proposed change in materials with an MSDS for each new material;
b. The date the change is to be made;
c. The change in emissions of VOC, HAP and TAP compounds occurring as a result of the change; and
d. A summary of any applicable requirement that would apply as a result of the change.

If the proposed emission rate of a new TAP exceeds one or more SQERs and/or the applicable VOC limits, or otherwise circumvents an applicable requirement, New Source Review shall be required prior to making the proposed change.

SWCAA shall be notified, in writing, of production of a new chemical that is listed in Table 1 of 40 CFR 63 Subpart F other than benzyl benzoate at least ten (10) business days prior to the anticipated production. The notification shall identify any increases or decreases in emissions as the result of the product changes and shall demonstrate that the emissions will not exceed any applicable limit.

R18. Notification of CPT and Confirmatory Performance Test

40 CFR 63.9(e), (g)(1), and (g)(3)
40 CFR 63.1207(e)
SWCAA 400-075

CPT

The Permittee shall submit to SWCAA and the EPA Administrator a notification of the intention to conduct a CPT and CMS performance evaluation and a site-specific CPT plan and CMS performance evaluation test plan at least one (1) year before the performance test and performance evaluation are scheduled to begin. Time extensions for subsequent Confirmatory Performance Tests may be requested according to the procedure under §63.1207(i).

a. SWCAA and the EPA Administrator will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within nine (9) months after receipt of the original plan.
b. The Permittee shall submit to SWCAA and the EPA Administrator a notification of the intention to conduct the comprehensive performance test at least sixty (60) calendar days before the test is scheduled to begin.

Confirmatory Performance Test

The Permittee shall submit to SWCAA and the EPA Administrator a notification of the intention to conduct a confirmatory performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least sixty (60) calendar days before the performance test is scheduled to begin. SWCAA and the EPA Administrator will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within thirty (30) calendar days after receipt of the original test plans.

The Permittee shall make the site-specific test plan and CMS performance evaluation test plan available to the public for review no later than sixty (60) calendar days before initiation of the test. The Permittee shall issue a public notice to all persons on the Permittee's facility/public mailing list (developed pursuant to 40 CFR 70.7(h), 71.11(d)(3)(i)(E) and 124.10(c)(1)(ix)) announcing the availability of the test plans and the location where the test plans are available for review. The test plans must be accessible to the public for sixty (60) calendar days, beginning on the date that the public notice is issued. The location must be unrestricted and provide access to the public during reasonable hours and provide a means for the public to obtain copies. The notification must include the following information at a minimum:

a. The name and telephone number of the source's contact person;
b. The name and telephone number of the regulatory agency's contact person;
c. The location where the test plans and any necessary supporting documentation can be reviewed and copied;
d. The time period for which the test plans will be available for public review; and
e. An expected time period for commencement and completion of the CPT.

R19. Notification of Compliance **40 CFR 63.1207(j), (k), and (l)**
40 CFR 63.1210(d)
40 CFR 63.9(g) and (h)
40 CFR 63.10(d)(2) and (e)(2)
SWCAA 400-075

Notification of Compliance – CPT.
Except as provided by §63.1207(j)(4) and (j)(5), within ninety (90) days of completion of a CPT, the Permittee shall submit to SWCAA and the EPA Administrator, via U.S. mail, a Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under §63.1209. The Notification of Compliance (NOC) shall contain:

a. The methods that were used to determine compliance [§63.9(h)(2)(i)(A)];
b. The results of any performance tests, opacity or visible emission observations, CMS performance evaluations, and/or other monitoring procedures or methods that were conducted [§63.9(h)(2)(i)(B)];
c. The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods [§63.9(h)(2)(i)(C)];
d. The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard [§63.9(h)(2)(i)(D)];
e. An analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification) [§63.9(h)(2)(i)(E)];
f. A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method) [§63.9(h)(2)(i)(F)];
g. A statement by the owner or operator of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements [§63.9(h)(2)(i)(G)];
h. Hazardous waste residence time [§63.1206(b)(11)]
i. Operating requirements including, but not limited to, the operating requirements in §63.1206 and §63.1209 [§63.1206(c)(1)(ii)];
j. The method that will be used to control combustion system leaks or if the Permittee controls combustion system leaks by maintaining the combustion zone pressure lower than ambient pressure using an instantaneous monitor, the monitoring and recording frequency of the pressure monitor, and how the monitoring approach will be integrated into the AWFCO system [§63.1206(c)(5)(ii)];
k. The results of the one-time dioxin/furan emissions test [§63.1207(b)(3)(iv)]; and
l. Document compliance with the emission standards and CMS requirements, and identifying operating parameter limits under §63.1209 [§63.1207(j)(1)(i)].

Upon postmark of the Notification of Compliance, the Permittee shall comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under §63.1211(c).

Notification of Compliance – Confirmatory Performance Test.
Except as provided by §63.1207(j)(4), within ninety (90) days of completion of a CPT, the Permittee shall submit to SWCAA and the EPA Administrator, via U.S. Mail, a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard.

a. A notification of the date the CMS performance evaluation under §63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under §63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under §63.7(h), the Permittee shall notify SWCAA and the EPA Administrator in writing of the date of the performance evaluation at least sixty (60) calendar days before the evaluation is scheduled to begin [§63.7(g)(1)];
b. A notification that the criterion necessary to continue use of an alternative to RATA testing, as provided by §63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked no later than ten (10) days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions [§63.7(g)(3)]; and
c. All items required under a Notification of compliance for a CPT.

The Permittee may submit a written request to SWCAA and the EPA Administrator for a time extension documenting that, for reasons beyond control, the Permittee may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. SWCAA and the EPA Administrator will determine whether a time extension is warranted.

R20. Notification of Change **40 CFR 63.1206(b)(5)**
SWCAA 400-075

If the Permittee plans to change (as defined in paragraph (b)(5)(iii) of this section) the design, operation, or maintenance practices of the source in a manner that may adversely affect compliance with any emission standard that is not monitored with a CEMS:

a. Notification. The Permittee shall notify SWCAA and the EPA Administrator at least sixty (60) days prior to the change, unless the Permittee documents circumstances that dictate that such prior notice is not reasonably feasible. The notification must include:
   1. A description of the changes and which emission standards may be affected; and
   2. A comprehensive performance test schedule and test plan under the requirements of §63.1207(f) that will document compliance with the affected emission standard(s);
b. Performance test. The Permittee shall conduct a comprehensive performance test under the requirements of §§63.1207(f)(1) and (g)(1) to document compliance with the affected emission standard(s) and establish operating parameter limits as required under §63.1209, and submit to the Administrator a Notification of Compliance under §§63.1207(j) and 63.1210(d); and
c. Restriction on waste burning.
   1. Except as provided by §63.1206(b)(5)(i)(C)(2), after the change and prior to submitting the notification of compliance, the Permittee shall not burn hazardous waste for more than a total of 720 hours (renewable at the discretion of SWCAA and the EPA Administrator) and only for the purposes of pretesting or comprehensive performance testing. Pretesting is defined at §63.1207(h)(2)(i) and (ii).

2. The Permittee may petition SWCAA and the EPA Administrator to obtain written approval to burn hazardous waste in the interim prior to submitting a Notification of Compliance for purposes other than testing or pretesting. The Permittee shall specify operating requirements, including limits on operating parameters that the Permittee determine will ensure compliance with the emission standards of Subpart EEE based on available information. SWCAA or the EPA Administrator will review, modify as necessary, and approve if warranted the interim operating requirements.

If the Permittee determines that a change will not adversely affect compliance with the emission standards or operating requirements, the Permittee shall document the change in the operating record upon making such change. The Permittee must revise as necessary the CPT Plan, Notification of Compliance, and SSMP to reflect these changes.

Per §63.1206(b)(5)(iii), "change" means any change in design, operation, or maintenance practices that were documented in the comprehensive performance test plan, Notification of Compliance, or startup, shutdown, and malfunction plan.

R21. Notification of Excessive Bag Leak Detection System Exceedances

40 CFR 63.1206(c)(8)(iv)
SWCAA 400-075

If the Permittee operates boiler U-3 when the detector response exceeds the alarm set-point more than 5% of the time during any 6-month block time period, the Permittee shall submit a notification to SWCAA and the EPA Administrator within thirty (30) days of the end of the 6-month block time period that describes the causes of the exceedances and the revisions to the design, operation, or maintenance of the combustor or baghouse the Permittee is taking to minimize exceedances. To document compliance with this requirement:

a. The Permittee shall keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken;
b. The Permittee shall record the percent of the operating time during each 6-month period that the alarm sounds;
c. In calculating the operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; and
d. If corrective action is required, each alarm shall be counted as a minimum of one (1) hour.

R22. Notifications and Reports Required under 40 CFR 63 Subpart EEEE

40 CFR 63.2386
SWCAA 400-075

The Permittee shall submit notifications and reports, as applicable, as required under the following sections:

a. Notifications under 40 CFR 63.2382(b) through (d);
b. Notifications and reports under 40 CFR 63 Subpart SS;
b. Notifications and reports under 40 CFR 63 Subpart EEEE Table 12;
c. Reports under 40 CFR 63 Subpart EEEE Table 11; and
c. Reports under 40 CFR 63.2386(c) through (e).

APPENDIX A
40 CFR 60 Subpart H Leak Detection Alternative Monitoring

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

April 23, 1996

Bob
Tom
Paul
Wess
Scott
Tim
Jennifer
Jackie
Mark
Jer S.
Jer B.
David
Virginia
Mary
File KCT - NSPS Subpt. H

Reply To
Attn of: OAQ-107

Lawrence Benedict
Environmental Engineer
Kalama Chemical
1296 Third Street Northwest
Kalama, Washington 98625-9799

Dear Mr. Benedict:

In a letter dated February 16, 1996, you submitted an alternative monitoring request pursuant to 40 CFR 63.8(f). On February 28, 1996, in a telephone conversation discussing your request, Patrick Foley of the Region 10 Office of Environmental Assessment, explained that additional information would be necessary to evaluate the request. In a letter dated March 26, 1996, you submitted that information.

Specifically the request was to allow the use of a photoionization detector (PID) calibrated with isobutylene for leak monitoring requirements under 40 CFR 63.180 in place of methane which is the specified calibration gas at 40 CFR 63.180(b)(4). Your request is approved and an alternative monitoring plan for use of the PID calibrated with isobutylene is enclosed. Also enclosed is a narrative explaining the rationale used to develop the specific requirements of the alternative monitoring plan.

The alternative monitoring plan should be implemented immediately. Failure to follow the requirements of this plan may be considered a violation of 40 CFR 63.8(f)(5)(iii) and/or the original monitoring requirements that it replaced.

I appreciate your cooperation in providing the information necessary to approve your request. If you have any questions please contact Patrick Foley at (206) 553-1904.

Sincerely,

Anita Frankel

Anita Frankel, Director
Office of Air Quality

RECEIVED
MAY 06 1996
SOUTHWEST AIR POLLUTION CONTROL AUTHORITY

Enclosures (2)

cc: Scott Inloes, SWAPCA

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Alternative Monitoring Plan
for Kalama Chemical
Under 40 CFR 63.8(f)
to Use a PID Calibrated with Isobutylene
to Comply with 40 CFR 63.180

Kalama Chemical shall comply with all of the requirements of 40 CFR Part 63 Subparts A F, G and H (the Hazardous Organic NESHAP or "HON") except as explicitly listed below. This alternative monitoring plan shall only apply to use of the PHOTOVAC photoionization detector used to establish the attached benzene and toluene calibration curves for measurement of leaks from equipment subject to the HON because they contain benzene and toluene. This alternative monitoring plan shall only apply to such equipment at the Kalama Chemical facility in Kalama, Washington. This alternative monitoring plan replaces only the calibration requirements found at 40 CFR 63.180(b)(4) and the acceptable span requirement at section 3.1.1.b. of Method 21 of Appendix A of 40 CFR Part 60. If Kalama Chemical fails to comply with its provisions, it may be considered to be in violation of 40 CFR 63.8(f)(5)(iii) and/or the requirements it replaced.

1.0 Definitions

(a) Terms not defined herein shall be given the meaning listed in 40 CFR §§ 63.2 63.101 and 63.161 and in Method 21 of Appendix A of 40 CFR Part 60.

(b) *PID* is defined as the PHOTOVAC photoionization detector calibrated with isobutylene which was used to establish the attached benzene and toluene calibration curves and conversion factor.

(c) *FID* is defined as any flame ionization detector that meets the requirements of 40 CFR 63.180.

(d) *Conversion Factor* is defined as the multiplicative factor used to convert the PID readings as isobutylene to what an FID would have read as methane. For the purposes of this alternative monitoring plan the conversion factor shall have a constant value of 1.4.

2.0 Monitoring of Operation, Test Methods and Procedures

(a) Kalama Chemical shall monitor using test methods and procedures specified at 40 CFR 63.180 with the exception of procedures described in this section.

(b) When monitoring using the PID, the PID reading shall be converted to an equivalent FID reading using the conversion factor, by means of the following equation:

PID Reading x 1.4 = Equivalent FID Reading

Enclosure (1)

(c) The equivalent FID reading shall be the instrument reading used to compare to the standards and shall be the value recorded in any recordkeeping or reporting requirements for 40 CFR Part 63 subparts A, F, G, and H.

(d) In place of the requirement to use methane as the calibration gas found at 40 CFR 63.180(b)(4), Kalama Chemical shall use the following gases for calibration of the PID:

(1) Zero air (less than 10 ppm hydrocarbon in air).

(2) (i) For Phase I, a mixture of isobutylene in air at a concentration of approximately, but less than 7000 ppm.
(ii) For Phase II, a mixture of isobutylene in air at a concentration of approximately, but less than, 7000 ppm for agitators, 3500 ppm for pumps, and 350 ppm for all other equipment, except as provided at paragraph (3) of this section.
(iii) For Phase III, a mixture of isobutylene and air at a concentration of approximately, but less than, 7000 ppm for agitators, 1400 ppm for pumps in food/medical service, 3500 ppm for pumps in polymerizing monomer service, 700 ppm for all other pumps, and 350 ppm for all other equipment, except as provided at paragraph (3) of this section.

(3) The PID may be calibrated at a higher isobutylene concentration up to 1400 ppm higher than described above for a specific piece of equipment when monitoring that piece of equipment. If the PID's design allows for multiple calibration gas concentrations, then the lower concentration calibration gas shall be no higher than 1400 ppm isobutylene and the higher concentration calibration gas shall be no higher than 7000 ppm isobutylene.

(e) If Kalama Chemical demonstrates to the Administrator's satisfaction that use of a dilution probe to bring the measured volatile hazardous organic concentration down by at least a factor of 10 is not feasible, the PID is not required to meet the Monitoring Instrument Specification at section 3.1.1.b. of Method 21 for linear response range and the measurable range.

(f) If Kalama Chemical makes the demonstration described in paragraph (e), then, when monitoring equipment with a leak standard of 2000 ppm (as methane) or greater, and when the PID reading is greater than 1400 ppm:

(i) an FID shall be used to measure and record the leak rate at some time within the same 8 or 12 hour work shift that it is detected with the PID; and
(ii) an FID shall be used to verify that a leak has been repaired as required by the standards in 40 CFR Part 63 subparts A, F, G, and H.

2

CALIBRATION CURVE RAW DATA

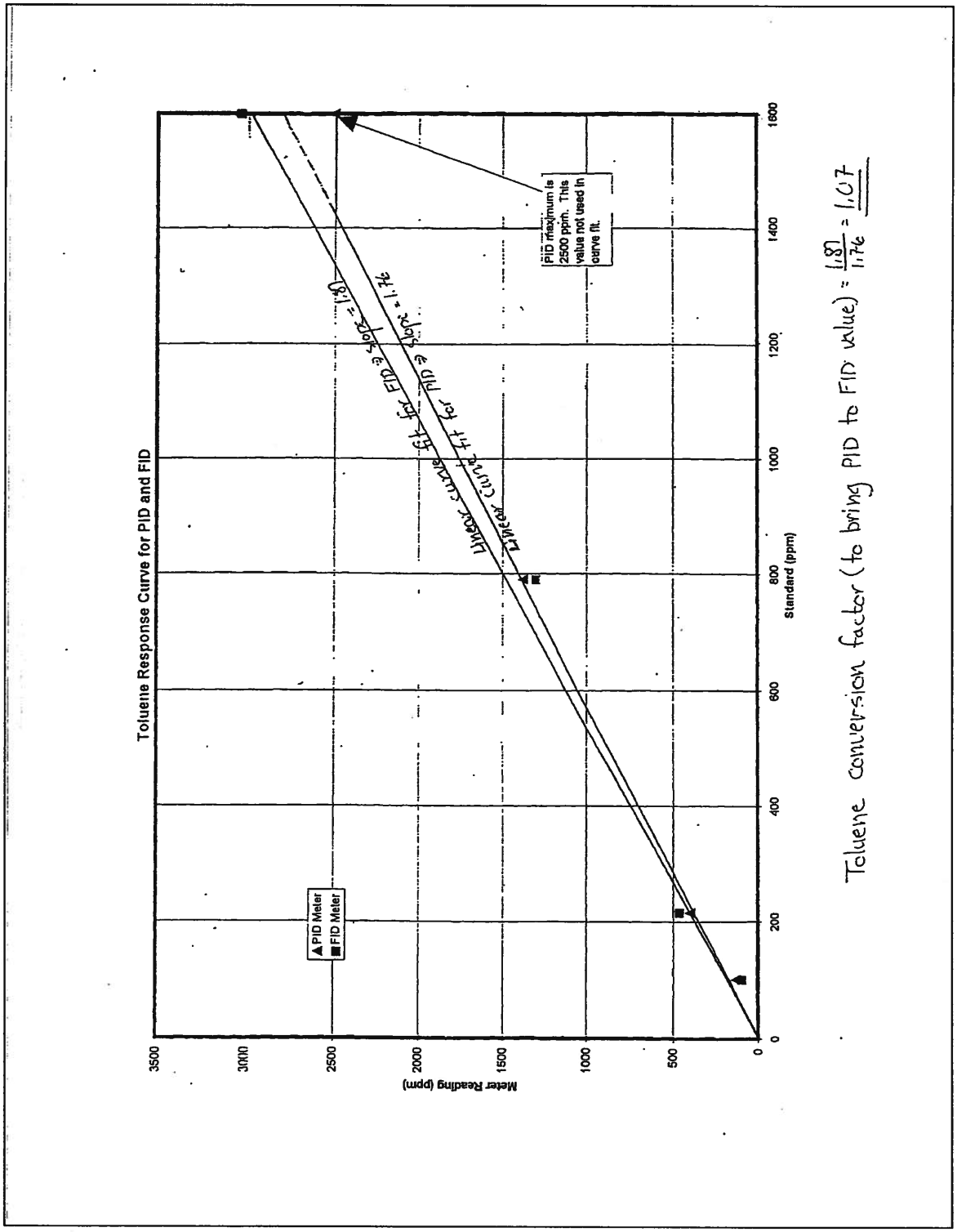
PID CALIBRATED WITH 100 PPM ISOBUTYLENE
FID CALIBRATED WITH 100 PPM METHANE AND 10,000 PPM METHANE
LEAK DEF. = Valves. PSV's, & Conn. = 500 ppm; Pumps = 2000

Benzene Standards

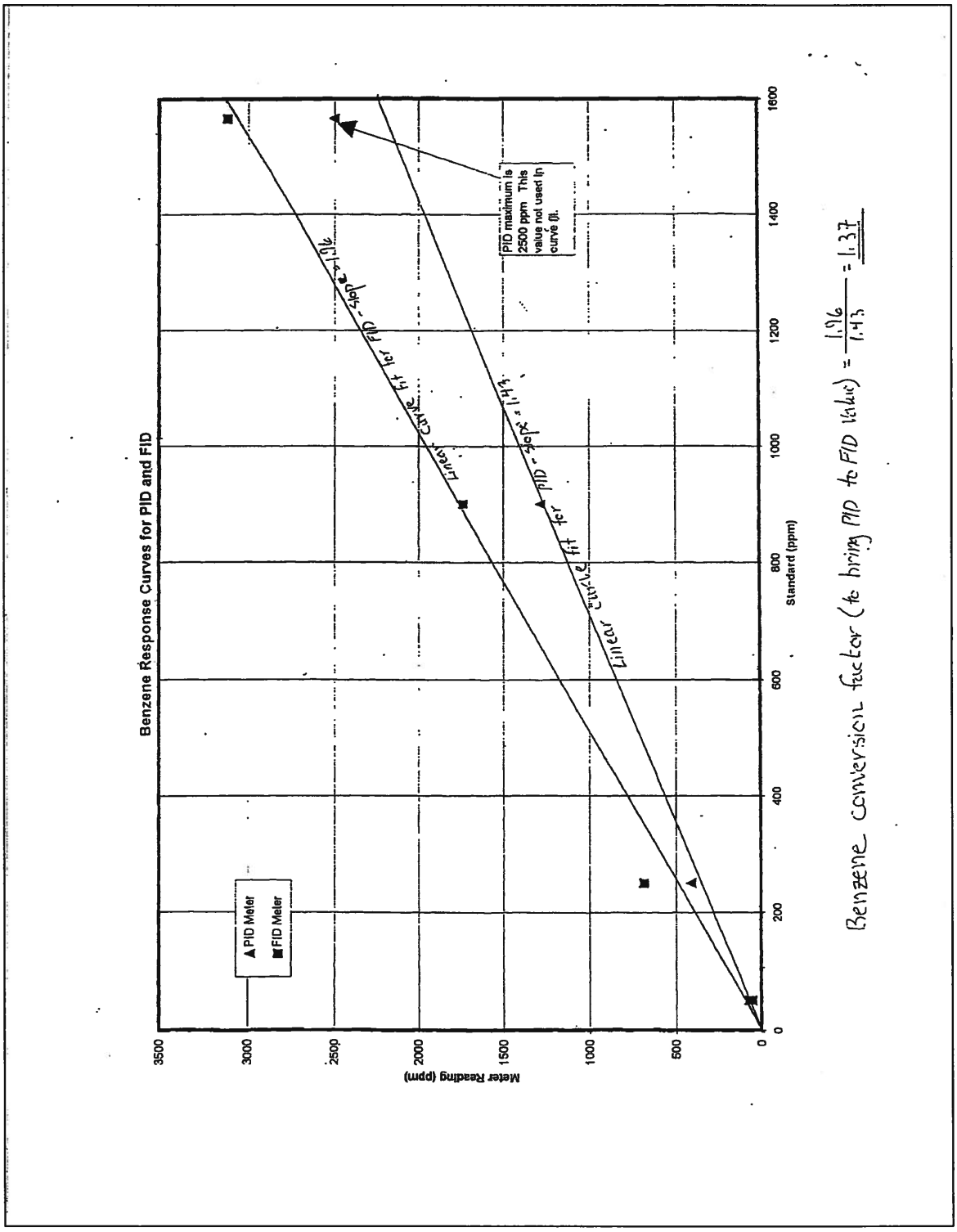
Standard (ppm)	PID #1 (ppm)	PID #2 (ppm)	Av - BCK (ppm)	FID #1 (ppm)	FID #2 (ppm)	Av-bck (ppm)
50	38	70	54	65	100	72.5
250	415	430	408	700	700	685
900	1280	1280	1280	1750	1750	1735
1565	2500	2500	2500	3500	2750	3115
6200	2500 maxd			10K maxd		

Toluene Standards

Standard (ppm)	PID#1 (ppm)	PID #2 (ppm)	Av - BCK (ppm)	FID #1 (ppm)	FID #2 (ppm)	Av-bck (ppm)
100	142	116	129	110	100	95
215	395	395	395	500	450	460
790	1450	1300	1375	1300	1300	1300
1600	2500	2500	2500	3000	3100	3040



Toluene conversion factor (to bring PID to FID value) = $\frac{1.80}{1.74} = 1.07$


Benzene Response Curves for PID and FID
Meter Reading (ppm)
Standard (ppm)
PID Meter
FID Meter
PID maximum is 2500 ppm. This value not used in curve fit.
Linear curve fit for FID - slope = 1.96
Linear curve fit for PID - slope = 1.43
Linear
Benzene conversion factor (to bring PID to FID value) = 1.96 / 1.43 = 1.37

Background Information in Support of the Alternative Monitoring Plan for Kalama Chemical Under 40 CFR 63.8(f) to Use a PID Calibrated with Isobutylene to Comply with 40 CFR 60.180

In a letter dated February 16, 1996, Lawrence Benedict of Kalama Chemical, submitted an alternative monitoring request pursuant to 40 CFR 63.8(f). On February 28, 1996, in a telephone conversation discussing the request, Patrick Foley of the Region 10 Office of Environmental Assessment, explained to Mr. Benedict that additional information would be necessary to evaluate the request. In a letter dated March 26, 1996, Mr. Benedict submitted that information.

Specifically the request was to allow the use of a photoionization detector (PID) calibrated with isobutylene for leak monitoring requirements under 40 CFR 63.180 in place of methane which is the specified calibration gas at 40 CFR 63.180(b)(4). This substitution of calibration gases is not a straightforward and explicitly acceptable monitoring method for two reasons. First, since the PID cannot detect methane a conversion factor that compares the monitor responses for methane and isobutylene can not be calculated directly. Second, the regulations are not entirely clear as to whether methane is simply the calibration gas or whether it is both the calibration gas and the reference compound as defined in 40 CFR 60, Appendix A, Method 21.

To address the first concern, Mr. Foley asked that Mr. Benedict prepare multipoint calibration curves using benzene and toluene for both the PID and a flame ionization detector (FID) which is calibrated with methane. In the letter dated March 26, 1996, Mr. Benedict submitted those calibration curves with calculations of conversion factors for benzene and toluene as suggested at 40 CFR 60, Appendix A, Method 21, Section 3.2. The calibration curves are included as part of the Alternative Monitoring Plan. Although the conversion factor is calculated indirectly by dividing benzene and toluene responses with the FID by the benzene and toluene responses with the PID to correct the PID to what the FID would have read, it appears to be technically correct. Using a multiplicative factor of 1.4 to convert the PID readings to what the FID would have read is acceptable and should be environmentally conservative for any combination of concentrations of benzene and toluene. The converted reading should then be compared to the leak standard to determine whether a leak has occurred. This is more explicitly and concisely described in the attached Alternative Monitoring Plan.

To address the second concern and to ensure that the above correction factor method is correct in assuming that methane is

1

also the reference compound in addition to the specified calibration compound, Mr. Foley contacted several experts at EPA-HQ. Even though the regulations are not explicit on this point, the HQ opinion is that the intent was to establish methane as the reference compound.

In reviewing the information submitted, another issue arose. Although Kalama has apparently defined a leak more stringently (2000 ppm for pumps and 500 ppm for valves, PRVs and connectors) than the currently applicable leak definition in HON subpart H (Phase II for a Group I process unit - 5000 ppm for pumps and 500 ppm for valves, PRVs, connectors), approval to use a monitoring device with an effective span of only 2500 ppm is still problematic. Essentially, the PID does not meet the apparatus specification for linear response range and measurable range at section 3.1.1.b. of Method 21. It does not appear that Region 10 has clear authority to simply accept and enforce a voluntarily imposed emission limit such as the proposed 2000 ppm leak definition rather than the regulation defined leak of 5000 ppm for pumps in light liquid service[1], nor is it clear that Kalama Chemical has made such a request.

To resolve this problem the PID could be fitted with an acceptable dilution probe, as allowed by Method 21, to bring the volatile hazardous air pollutant (VHAP) concentration within the specification for linear response range and measurable range.

If this cannot be achieved, the Alternative Monitoring Plan requires that when a PID reading is greater than 1400 ppm when monitoring equipment with a leak definition of 2000 ppm (as methane) or greater, an FID (with an appropriate span) must be used to remonitor the equipment. This requirement is necessary to ensure enforceability of the standard.

Another issue that appeared to be a concern in Mr. Benedict's discussions with Mr. Foley, was that the phenol equipment *in heavy liquid service* cannot be monitored directly with the FID due to condensation of phenol within the monitoring instrument and/or in the sampling line and on the sample filter. Mr. Benedict also explained that preparing standards of sufficient concentration to create phenol response curves for the FID and

[1] It is important to note that for implementation of Phase III (beginning on April 24, 1997 for Group I chemical manufacturing process units), the leak definition tightens to 1000 ppm for most pumps in light liquid service. It is not obvious that all or any of the pumps at the Kalama Cemical facility would qualify as being *In food/medical service* under Phase III and hence qualify for a less stringent leak definition of 2000 ppm.

2

PID was difficult due to the low vapor pressure of phenol.

Because the phenol lines are *in heavy liquid service*, there is no periodic instrumental monitoring requirement. A leak is determined upon observation through visible, audible, or olfactory detection methods. Once a leak is detected, verification of repair is through instrumental monitoring, visible, audible, or olfactory detection methods, soap solution, or pressure testing. If instrumental monitoring is difficult one of the other accepted verification methods should suffice.

Finally, all requirements of 40 CFR 63.180 and Method 21 remain in force and are applicable to the Alternative Monitoring Plan with the exception of the requirement to calibrate using methane at 63.180(b)(4) and the span requirement of section 3.1.1.b. of Method 21.

The alternative monitoring plan should be implemented immediately. Failure to follow the requirements of this plan may be considered a violation of 40 CFR 63.8(f)(5)(iii) and/or the original monitoring requirements that it replaced.

3

APPENDIX B
40 CFR 63 Subpart G Alternative Monitoring

Southwest Air Pollution Control Authority
1308 NE 134th Street • Vancouver, WA 98685-2747
(360) 574-3058 • Fax: (360) 576-0925
TDD Accessible

Bob _____
Randy _____
Paul _____
Vannessa _____
Natalia _____
Scott _____

Jennifer _____
Jackie _____
Carole _____
Jer S. _____

David _____
Virginia _____
Mary _____
File _____

April 26, 1999

Mr. Larry Benedict
BFGoodrich Kalama, Inc.
1296 NW Third Street
Kalama, Washington 98625

Subject: Compliance Determination and Request to Use an Alternative Monitoring Method for 40 CFR 63.104

Dear Mr. Benedict:

This letter responds to your letter dated April 14, 1999, in which you made three requests: (1) a determination on whether April 22, 1999 is a deadline for having the monitoring completed or instead to have a monitoring plan in place; (2) approval for alternative monitoring of the inlet exchanger side; and (3) approval for alternative monitoring of the marginal heat exchangers. The requests for an alternative monitoring plan are made pursuant to 40 CFR §§ 63.104(a)(1-6), 63.100(k)(2)(ii), 63.104(b)(1), and 63.104(b)(4).

SWAPCA was delegated by EPA the authority to approve minor and intermediate alternative monitoring plans in Volume 63, Number 230, page 6654 of the Federal Register (December 1, 1998). SWAPCA approves your proposed alternative monitoring plans subject to the attached requirements. The attached alternative monitoring plan for Inlet Columbia River Once-Through Water Sampling does not alter any of the other requirements of 40 CFR Part 63, Subparts A, G and H, which may apply to the facility. All reports for these monitoring plans should be addressed to this office.

We understand from your communications with us on April 21, 1999 that you would like to withdraw Item No. 3 which involves the issues of an alternative monitoring plan for the marginal heat exchangers. If any heat exchanger looses its pressure exemption in the future then you will need to conduct sampling and testing within 30 days of discovery.

In addition, SWAPCA has determined that water sampling shall be completed by May 22, 1999 consistent with your interpretation of 40 CFR 63.104(b)(4) that the intent of this regulation is to have the monitoring plan in place by April 22, 1999 and the first set of samples taken by May 22, 1999. This will require that three individual samples are tested and the numerical average reported.

If you have any comments, or desire additional information, please call me or Scott Inloes at (360) 574-3058 extension 26.

Sincerely,

Robert D. Elliott
Executive Director
RDE/smi

Enclosure
Man Meyer, EPA Region X

Alternative Monitoring Plan for BFGoodrich Kalama, Inc. (Kalama, Washington) Under 40 CFR 63.104 – Inlet Columbia River Once-Through Water Sampling

Background

BFGoodrich Kalama, Inc. utilizes a group of parallel river water pumps to pump Columbia River once-through water to the majority of the non-contact cooling water heat exchangers that are applicable to 40 CFR 63.104. A number of these heat exchangers utilize cooling water booster pumps to boost the supplied river water pressure to the exchanger.

BFGoodrich Kalama, Inc. requested in a letter dated April 14, 1999 an alternative monitoring method to that of 40 CFR 63.104(b)(4) which requires separate entrance samples for the individual exchangers. BFGoodrich Kalama, Inc. believes that the presence of any HAPs in the Columbia River once-through water used on the site is non-existent.

Alternative Monitoring Plan

BFGoodrich Kalama, Inc. shall comply with all of the requirements of 40 CFR Part 63 Subpart F (National Emission Standards for Hazardous Organic Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry) except as explicitly listed below. This alternative monitoring plan shall only apply to the heat exchangers that use Columbia River once-through cooling water (H-101A, H-101B, H-107B, H-151B, H-151C, H-162, H-164, H-205A, H-205B, and H-211). This alternative monitoring plan replaces only the monitoring requirements of 40 CFR §§ 63.104(b)(4, 5, and 6) to monitor three sets of inlet and outlet samples for each applicable once-through heat exchanger, with compliance determined based on an exit mean concentration which is greater than 1 part per million or 10% of the entrance mean, whichever is greater.

1.0 Definition

Terms not defined herein shall be given the meaning listed in 40 CFR §§ 63.2 and 63.104.

2.0 Monitoring of Operation

A) BFGoodrich Kalama Inc. shall take and analyze using methods contained in 40 CFR §§ 63.104(b)(3) a minimum of three sets of samples of the Columbia River once-through water before it goes to any exchangers during the first month only of required sampling. BFGoodrich Kalama, Inc. will not be required to sample the individual entrance cooling water for those exchangers utilizing Columbia River once-through cooling water.

B) A minimum of three sets of samples shall be taken and separate analysis conducted from each exit from those heat exchangers utilizing Columbia River once-through cooling water at a frequency as specified in 40 CFR 63.104(b)(1).

C) A leak shall be defined to have occurred when the exit concentration of HAP in the cooling water for the applicable exchangers using once–through cooling water is greater than 1 ppm. SWAPCA will assume that the cooling water HAP concentration is zero at the inlet to the heat exchangers using Columbia River once-through cooling water.

3.0 Record Keeping and Reporting Requirements

All records of sampling and analysis conducted pursuant to section 2.0 and all records maintained pursuant to this section shall be kept by BFGoodrich Kalama, Inc. for at least five years in a readily accessible location and shall be made available to EPA, WDOE, and SWAPCA inspectors upon request. These records shall include the one time sampling of the inlet for the heat exchangers using Columbia River once-through cooling water.

Approved 26th of April, 1999

Robert D. Elliott
Executive Director
Southwest Air Pollution Control Authority

Clarification of 40 CFR 63.104 for BFGoodrich Performance Materials (Kalama, Washington) – Sampling Date

Background

BFGoodrich Kalama, Inc. utilizes a group of parallel river water pumps to pump Columbia River water to the majority of the non-contact cooling water heat exchangers that are applicable to 40 CFR 63.104. A number of these utilize cooling water booster pumps to boost the supplied river water pressure to the exchanger. Several exchangers used in the Specialty Chemical processes utilize recirculating cooling tower water.

Request for Determination of Compliance Date

Per 40 CFR 63.100(k)(2)(ii), heat exchange systems applicable to 40 CFR 63.104 shall be in compliance with the applicable sections no later than April 22, 1999. BFGoodrich Kalama, Inc. requests a determination as to what is required in terms of sampling prior to this compliance date. BFGoodrich Kalama, Inc. interprets 40 CFR 63.104 as an ongoing monitoring and repair program for applicable cooling water heat exchangers. BFGoodrich Kalama, Inc. therefore believes that the "compliance" date is not a deadline to have monitoring completed, but rather to have a monitoring plan identified with actual monitoring to begin some time in the month following the "compliance" date. In other words, BFGoodrich Kalama, Inc. interprets 40 CFR 63.104(b)(1) to mean that the first set of samples shall be taken sometime between April 22 and May 22, 1999.

SWAPCA's Determination:

SWAPCA has reviewed the Federal Register Notice (62 FR 2733, January 17, 1997) and HON Inspection Tool document dated September 1997(EPA-B-97-006). Neither of these documents indicates what is required by April 22, 1999 as required in 40 CFR 63.104. SWAPCA requested additional information from EPA Region X, in the week of April 12, 1999 and during a conference call with EPA headquarters and Region X on April 20, 1999. Based on the above, SWAPCA determines that water samples and all required actions of 40 CFR 63.104 shall be completed by no later than May 22, 1999 as required in 40 CFR 63.104.

Determination made 26th of April, 1999

Robert D. Elliott
Executive Director
Southwest Air Pollution Control Authority

APPENDIX C
40 CFR 60 Subpart Dc Alternative Monitoring

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

MAY - 6 1998

Reply To
Attn Of: OAQ-107

RECEIVED
MAY - 8 1998
SOUTHWEST AIR POLLUTION
CONTROL AUTHORITY

Mr. Joseph Williams
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Dear Mr. Williams:

The U.S. Environmental Protection Agency (EPA) has received several inquiries from your agency, other permitting authorities in the Washington and facilities in various jurisdictions seeking authorization to reduce the recordkeeping frequency for small natural gas fired boilers subject to New Source Performance Standards (NSPS) Subpart Dc. The standard currently requires affected facilities to keep records of the amount and type of fuels combusted *each day*.

Under the applicable NSPS, approval of alternate recordkeeping requirements may only be done by EPA. While EPA expressly retains this approval authority, this letter outlines an approach which may be used to implement reduced recordkeeping for certain equipment affected by NSPS Subpart Dc, pursuant to the conditions listed below.

Over the past several years, EPA has made several determinations that reduce the recordkeeping requirements for facilities subject to Subpart Dc. The bulk of these determinations can be found on EPA's web site under the Applicability Determination Index (ADI). In general, these determinations conclude that since Subpart Dc does not have any substantive emissions limitations for units that fire only natural gas, there is little value in requiring daily recordkeeping of the amount of fuel combusted. Specifically, in cases where an affected unit fires only natural gas, or natural gas with clean, low-sulfur fuel oil as a backup, the unit may maintain monthly fuel usage records. However, EPA's determinations have continued to require quarterly reporting of excess emissions consistent with 40 C.F.R. § 60.7(d), for those units firing fuel oil. Region 10 concurs with these determinations.

EPA has approved the reduced recordkeeping frequencies pursuant to the authority found in 40 C.F.R. § 60.13(i). This authority was delegated from EPA Headquarters to the Regions in August 1995, but has not been delegated to states under Section 111(c) of the Clean Air Act. In any case, because of the routine nature of the determinations described above, Region 10 sees little added benefit in approving these minor changes on a case-by-case basis. In fact, these alternate frequencies are best memorialized in a state's preconstruction permit or other preconstruction review process that occurs long before a source's NSPS obligations begin. Therefore, we offer your agency and the local air pollution control authorities in Washington the following procedures to approve reduced recordkeeping frequencies. Although these procedures

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are not a formal NSPS delegation, we view it as a common-sense approach to implementing EPA's authority under 40 C.F.R. § 60.13(i) in connection with Subpart Dc.

Recordkeeping [60.48c(g)]

1. The requirement of 40 C.F.R. § 60.48c(g) to record and maintain the amount of fuel combusted each day may be reduced to monthly, where: (a) the only fuel used is natural gas, or (b) the only fuels used are natural gas and distillate oil with a sulfur content less than 0.5%, and compliance is demonstrated using supplier certifications. Documentation may be in the form of fuel bills or meter readings, or other records that adequately document fuel usage.

2. The permitting authority should require sources to certify that they will burn only natural gas or distillate oil using fuel certification, and that they will promptly notify the agency of any anticipated and actual switches in fuel use.

3. To the extent possible, the permitting authority should clearly document any revised recordkeeping frequency in the source's preconstruction permit or other approval document.

4. If a source's fuel oil sulfur content ever exceeds 0.5%, the recordkeeping frequency will immediately revert to daily in order to determine whether the 30-day rolling average sulfur content of the fuel exceeds 0.5%. For additional information regarding this requirement, please see 40 C.F.R. § 60.46c(d)(2).

5. For those affected sources using low-sulfur distillate fuel oil, a reduced recordkeeping frequency shall not exempt the unit from compliance with any of the fuel certification requirements, including those of 40 C.F.R. §§ 60.42c(h), 60.44c(g), or any of the reporting requirements, including those of 60.48c(e)(11) and 60.48c(f).

6. Multiple units that utilize a common fuel supply or fuel header or that duct to a common stack must document the fuel quantity and quality supplied to each unit, or must have the ability to apportion fuel use between each affected unit. As long as the conditions of Item 1 above are met, the affected unit may record this information on a monthly basis.

Reporting [60.48c(d)]

1. Should an affected source fire any fuel oil during the quarter, whether as an emergency or backup fuel, it will be considered subject to the sulfur dioxide emission limitations and will be required to provide a quarterly compliance report.

Documentation

1. Each permitting authority will provide notification to EPA prior to granting any authorization of reduced recordkeeping under Subpart Dc. The notification will include a brief description of the basis for proposing the alternative requirements. Authorization will not be given prior to 10 working days after receipt of the notification by EPA. This 10-day period will be extended if EPA requests additional information in order to review the preliminary determination. If EPA notifies the permitting authority of any objection to the reduced requirements, the permitting authority will not authorize the alternative requirements and will refer the matter to EPA for a formal determination under Subpart Dc.

2. The permitting authority will maintain a registry showing who has received approval for reduced recordkeeping under Subpart Dc. The registry may be maintained in either AFS or in a separate state-only database. If tracked outside of AFS, the permitting authority will provide a copy of the registry to EPA Region 10 at least once each federal fiscal year, or upon written request. Otherwise, if the permitting authority elects to use AFS, the Region will access the information directly when needed. The registry should include the company name, boiler identification number, boiler size, types of fuel burned, the date the reduced recordkeeping was approved, and the mechanism used for the approval.

These procedures may be used only for reduced recordkeeping under Subpart Dc and do not authorize the permitting authority to make any other adjustments, pursuant to 40 C.F.R. § 60.13(i), other than those explicitly stated above. EPA reserves its authority to enforce all recordkeeping requirements of the NSPS, and will not recognize reduced requirements where the procedures outlined above are not followed.

If you have any questions, please contact John Keenan, Air Enforcement & Program Support Unit, at (206) 553-1817.

Sincerely,

Douglas E. Hardesty, Manager
Federal & Delegated Air Programs Unit

cc: Benton County Clean Air Authority
Northwest Air Pollution Authority
Olympic Air Pollution Control Authority
Puget Sound Air Pollution Control Agency
Southwest Air Pollution Control Authority
Spokane County Air Pollution Control Authority

APPENDIX D
Tuning Requirements for Combustion Units [ADP 09-2885 Appendix D]

Appendix D
Air Quality Testing Requirements
Combustion Units – Tuning

1. Purpose

The purpose of this evaluation is to determine emission concentrations from the combustion units (boilers and hot oil heaters) at current operating conditions and assure compliance with the requirements of ADP 09-2885.

2. Test Constituents and Test Methods

a. Oxygen (O_2) using a calibrated combustion analyzer;
b. Nitrogen oxides (NO_x) using a calibrated combustion analyzer; and
c. Carbon monoxide (CO) using a calibrated combustion analyzer

Calibrated combustion analyzers include electrochemical cell combustion analyzers, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA. Sampling and analysis shall be performed via calibrated combustion analyzer unless an alternative test method or testing schedule is requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Testing Requirements:

a. Tuning shall be conducted each calendar year no later than the end of December on the primary fuel as determined in Appendix C, unless the unit is not in use during that year, or reference method source testing was conducted during that year.
b. The analyzer(s) response to span gas of a known concentration shall be determined before and after testing. No more than twelve (12) hours may elapse between span gas response checks. The results of the analyzer response shall not be valid if the pre and post response check results vary by more than 10% of the known span gas value.
c. The span gas concentration must not be less than 50% of the target/permitted pollutant concentration nor more than 200% of the target/permitted pollutant concentration. A lower concentration span gas may be used if it is more representative of measured concentrations.
d. Sampling shall consist of at least one (1) test consisting of at least five (5) minutes of data collection following a "ramp-up phase." The "ramp-up phase" ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations shall be recorded at least once every thirty (30) seconds during the data collection phase. All test data collected following the ramp-up phase(s) shall be reported to SWCAA. A sample data sheet is attached for reference.
e. Tuning shall consist of a minimum of one (1) tuning run consisting of at least five (5) minutes of data collection following a "ramp-up phase" for the analyzer. The "ramp-up phase" ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration value). Emission concentrations shall be recorded at least once every thirty (30) seconds during tuning run data collection. All test data collected following the ramp-up phase(s) shall be reported to SWCAA.
f. If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits, the Permittee shall either perform 60 minutes of additional monitoring to more accurately quantify CO and NO_x emissions, or initiate corrective action. Additional monitoring or corrective action shall be initiated as soon as

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Appendix D
Air Quality Testing Requirements
Combustion Units – Tuning (cont.)

practical but no later than three days after the exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of boiler load, or other action taken to maintain compliance with permitted limits. Monitoring of boiler emissions must be conducted within three days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

g. Test Location and Source Operation.
   (1) The outlet of the exhaust stack after control equipment shall be tested for all constituents listed in 2 above.
   (2) Unit operation during the emissions test must be representative of current intended operating conditions.

4. **Reporting Requirements.**
   a. Compliance shall be determined by comparing the average of the results of each evaluation run with the requirements of ADP 09-2885.
   b. All tuning results shall be recorded and shall include the following:
      (1) Time and date of the emissions evaluation;
      (2) Identification of the personnel involved;
      (3) A summary of actual results, reported in units consistent with the applicable emission standard or limit;
      (4) A summary of control system or equipment operating conditions;
      (5) A description of the evaluation methods or procedures used including all field data, quality assurance/quality control procedures and documentation; and
      (6) Calibration documentation.
   c. Reported test results shall be corrected to 3% O_2 in the exhaust gas.
   d. Tuning results shall be reported to SWCAA within fifteen (15) calendar days of tuning completion.

APPENDIX E
Testing Requirements for Combustion Units [ADP 09-2885 Appendix C]

Appendix C
Emission Testing Requirement
Combustion Units

1. Purpose

The purpose of this emission testing is to quantify emissions from combustion units (boilers and hot oil heaters) and to assure compliance with the requirements of ADP 09-2885. For the purposes of testing, a primary fuel is defined as either the only fuel burned in a unit or a fuel that comprises the greater portion of the heat input to the unit.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. Moisture content of stack gas using EPA Method 4;
c. O_2 and CO_2 using EPA Methods 3 or 3A;
d. Carbon monoxide (CO) using EPA Method 10;
e. Nitrogen oxides (NO_x) using EPA Method 7E;
f. Particulate matter (PM) using EPA Method 5 (front-half) and EPA Method 202 (back half);
g. Visible emissions using EPA Method 9 and SWCAA Method 9;
h. Cobalt using EPA Method 5 using Inductively Coupled Plasma Mass Spectrometry; and
i. Fuel heat content using ASTM D240 or equivalent.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or test schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

Each unit shall be tested for the constituents using the method listed in 2.a through 2.c, above. In addition, each unit shall be tested for the following, depending upon the fuel being burned:

a. Natural Gas: CO and NO_x;
b. Fuel Oil: CO, NO_x, PM, and visible emissions;
c. Waste Tar: CO, NO_x, PM, visible emissions, cobalt, and heat content;
d. Hazardous Waste: CO, NO_x, PM, visible emissions, and heat content; and
e. Octanal Bottoms: CO, NO_x, PM, visible emissions, and heat content.

3. Testing Dates

a. Initial testing. The following units have been tested. Any unit not listed has not had an initial test:
   (1) Heater U-1, Natural Gas: March 18, 2009;
   (2) Boiler U-2, Natural Gas: November 27, 2007;
   (3) Boiler U-2, Waste Tar: January 28, 2009;
   (4) Boiler U-3, Natural Gas: November 4, 2005;
   (5) Boiler U-3, Hazardous Waste: November 11, 2008;
   (6) Boiler U-7, Natural Gas: November 11, 2008;
   (7) Boiler U-7, Waste Tar: May 5, 2009;
   (8) Boiler U-9, Natural Gas: November 2, 2005;
   (9) Boiler U-10, Natural Gas: April 5, 2007;

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Appendix C
Emission Testing Requirement
Combustion Units (cont.)

(10) Boiler U-11, Natural Gas: May 18, 2007;
(11) Heater U-12, Natural Gas: October 21, 1997;
(12) Heater U-14, Natural Gas: November 22, 2002;
(13) Boiler U-15, Natural Gas: June 28, 2001;
(14) Heater U-16, Natural Gas: November 24, 2008;
(15) Boiler U-17, Natural Gas: December 12, 2006; and
(16) Boiler U-17, Octanal (C8) Bottoms: November 25, 2003.

b. Periodic testing. Each unit shall be tested on the specified fuel, no later than the date listed in Table 1 and shall be subsequently tested every sixty (60) months thereafter no later than the end of the month of the initial test.

c. The Permittee may request a postponement of a scheduled test for a specified unit burning a specific fuel until the next scheduled test date if there was no rolling 12-month period in the previous sixty (60) months where the fuel threshold was equaled or exceeded. A separate written request shall be made for each scheduled test for which a postponement is requested. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

4. Testing Requirements

a. Notification
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test location. Testing shall be performed for each exhaust of the unit or of the control device for the unit for all constituents.
c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.
d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Reported test results shall be corrected to 3% O_2 in the exhaust gas;
e. Summary of control system or equipment operating conditions;
f. Summary of production related parameters;

Appendix C
Emission Testing Requirement
Combustion Units (cont.)

g. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
h. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
i. Copies of field data and example calculations;
j. Chain of custody information;
k. Calibration documentation;
l. Discussion of any abnormalities associated with the results; and
m A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

Appendix C
Emission Testing Requirement
Combustion Units (cont.)

Table 1: Unit Testing Schedule

Unit	Fuel	Test Date (test no later than)	Periodic Test Frequency
Heater U-1	Natural Gas	March 31, 2014	Every sixty (60) months
	Fuel Oil	July 31, 2010	Every sixty (60) months
Boiler U-2	Natural Gas	August 31, 2012	Every sixty (60) months
	Waste Tar	September 30, 2013	Every sixty (60) months
	Fuel Oil	September 30, 2014	Every sixty (60) months
Boiler U-3	Natural Gas	November 30, 2010	Every sixty (60) months
	Fuel Oil	June 30, 2013	Every sixty (60) months
	Waste Tar	July 31, 2014	Every sixty (60) months
	Hazardous Waste	November 30, 2013	Every sixty (60) months
Boiler U-7	Natural Gas	November 30, 2011	Every sixty (60) months
	Waste Tar	May 31, 2010	Every sixty (60) months
	Fuel Oil	July 31, 2014	Every sixty (60) months
Boiler U-9	Natural Gas	November 30, 2010	Every sixty (60) months
Boiler U-10	Natural Gas	April 30, 2012	Every sixty (60) months
	Fuel Oil	June 30, 2011	Every sixty (60) months
Boiler U-11	Natural Gas	May 30, 2012	Every sixty (60) months
	Fuel Oil	August 30, 2014	Every sixty (60) months
Heater U-12	Natural Gas	October 30, 2010	Every sixty (60) months
	Fuel Oil	June 30, 2012	Every sixty (60) months
Heater U-14	Natural Gas	November 30, 2014	Every sixty (60) months
	Fuel Oil	June 30, 2012	Every sixty (60) months
Boiler U-15	Natural Gas	June 30, 2011	Every sixty (60) months
	Fuel Oil	July 31, 2013	Every sixty (60) months
Heater U-16	Natural Gas	September 30, 2013	Every sixty (60) months
Boiler U-17	Natural Gas	October 31, 2011	Every sixty (60) months
	Fuel Oil	August 30, 2010	Every sixty (60) months
	Octanal (C_8) Bottoms	November 30, 2013	Every sixty (60) months

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Appendix C
Emission Testing Requirement
Combustion Units (cont.)

Table 2: Fuel Thresholds

Unit	Unit Rating (MMBtu/hr)	Fuel	Fuel Usage Threshold[1]	
Heater U-1	50.5	Natural Gas	53.5 MMcf	545,400 therm
		Fuel Oil[2]	363,600 gal	545,400 therm
Boiler U-2	57.8	Natural Gas	61.2 MMcf	624,240 therm
		Waste Tar	2,811.9 ton	624,240 therm
		Fuel Oil[2]	416,200 gal	624,240 therm
Boiler U-3	41.8	Natural Gas	44.3 MMcf	451,440 therm
		Fuel Oil[2]	301,000 gal	451,440 therm
		Waste Tar	2,033.5 ton	451,440 therm
		Hazardous Waste	2,033.5 ton	451,440 therm
Boiler U-7	57.8	Natural Gas	61.2 MMcf	624,240 therm
		Waste Tar	2,811.9 ton	624,240 therm
		Fuel Oil[2]	416,200 gal	624,240 therm
Boiler U-9	44.1	Natural Gas	46.7 MMcf	476,280 therm
Boiler U-10	29.4	Natural Gas	31.1 MMcf	317,520 therm
		Fuel Oil[3]	211,700 gal	317,520 therm
Boiler U-11	35.2	Natural Gas	37.3 MMcf	380,160 therm
		Fuel Oil[4]	253,400 gal	380,160 therm
Heater U-12	15.3	Natural Gas	16.2 MMcf	165,240 therm
		Fuel Oil[4]	110,200 gal	165,240 therm
Heater U-14	28.0	Natural Gas	29.6 MMcf	302,400 therm
		Fuel Oil[4]	201,600 gal	302,400 therm
Boiler U-15	50.9	Natural Gas	53.9 MMcf	549,720 therm
		Fuel Oil[4]	366,500 gal	549,720 therm
Heater U-16	10.2	Natural Gas	10.8 MMcf	110,160 therm
Boiler U-17	30.9	Natural Gas	32.7 MMcf	333,720 therm
		Fuel Oil[4]	222,500 gal	333,720 therm
		Octanal (C_8) Bottoms	1,076.5 ton	333,720 therm

[1] Fuels are assumed to have the following heat contents: natural gas is 1,020 Btu/ft³, #2 fuel oil is 140,000 Btu/gal, #6 fuel oil is 150,000 Btu/lb, tar is 13,500 Btu/lb, and octanal bottoms is 11,100 Btu/lb.
[2] Permitted to burn fuel oil with up to 1.75% sulfur content.
[3] Permitted to burn fuel oil with up to 1.5% sulfur content.
[4] Permitted to burn fuel oil with up to 0.05% sulfur content.

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APPENDIX F
Testing Requirements for RTOs [ADP 09-2885 Appendix E]

Appendix E
Air Quality Testing Requirements
Benzoic Acid and Benzaldehyde Production – RTOs

1. Background:
The purpose of this sampling is to quantify emissions, monitor control device operation, and demonstrate compliance of RTO X-100 and RTO X-150 with the requirements of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4;
d. Carbon monoxide (CO) using EPA Method 10;
e. Nitrogen oxides (NO_x) using EPA Method 7E;
f. Visible emissions (opacity) using EPA Method 9 and SWCAA Method 9;
g. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane);
h. Toluene using EPA Method 18; and
i. Benzene using EPA Method 18

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. The initial tests for RTO X-100 and RTO X-150 were performed on May 19, 1997. The last source tests as of the issuance of this ADP were May 9, 2007 for RTO X-100 and February 1, 2007 for RTO X-150.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the outlet of each RTO.
c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.
d. Source Operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix E
Air Quality Testing Requirements
Benzoic Acid and Benzaldehyde Production – RTOs (cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Reported test results shall be corrected to 3% O_2 in the exhaust gas;
e. Summary of control system or equipment operating conditions;
f. Summary of production related parameters;
g. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
h. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
i. Copies of field data and example calculations;
j. Chain of custody information;
k. Calibration documentation;
l. Discussion of any abnormalities associated with the results; and
m A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX G
Testing Requirements for Benzoate Scrubbers and Fluidized Bed Baghouse [OA 00-2274R3 Appendix B]

Appen. B Page . of 2

Air Quality Testing Requirements
Noveon Kalama, Inc. Order of Approval 00-2274R3
Scrubber Monitoring Modification and Consolidation of Permit Requirements

1. **Introduction:**

   a. The purpose of this testing is to quantify emissions of PM and VOCs and to demonstrate compliance with the requirements of this Order of Approval.

   b. A comprehensive source test plan shall be submitted to SWCAA for review and approval at least 10 business days prior to each test except for those tests conducted more than once per year.

   c. SWCAA personnel shall be notified of the proposed test date at least 5 days prior to testing so that they may be present during testing unless testing is scheduled more than once per year.

   d. Source testing shall be conducted along the following schedule:

Source	Constituent	Test Method or Equivalent[1]	Minimum Test Duration	Minimum Test Frequency[2]
One benzoate scrubber	Stack flow[3]	EPA methods 1-4	N/A	Every 5 years
	Filterable PM[3]	EPA method 5	1 hour	Every 5 years
	Condensable PM	EPA method 202	1 hour	Every 5 years
Sodium and potassium benzoate feed to dryers	Total diphenyls	KCl Method 600-19-BF-TDS	N/A	Weekly
Fluidized bed extruder baghouse	Stack flow	EPA methods 1-4	N/A	Every 5 years
	Filterable PM	EPA method 5	1 hour	Every 5 years
	Condensable PM	EPA method 202	1 hours	Every 5 years

With the exception of testing for total diphenyls, testing for each constituent shall consist of a minimum of three sampling runs of the duration specified above. Unless otherwise approved by SWCAA, the benzoate scrubbers shall be tested on a rotating schedule so than each scrubber is tested at the same frequency (no scrubber is tested twice until all scrubbers have been tested).

[1] The use of an alternate or equivalent test method must be pre-approved by SWCAA in writing.

[2] Where the test frequency is listed as "weekly" source testing shall be conducted per calendar week. Where the test frequency is listed as "every 5 years," no two tests shall be separated by more than 60 calendar months.

[3] Cyclonic flow is likely from these scrubbers. The absence of cyclonic flow (average angle $\leq 20°$) must be confirmed prior to testing.

Appendix B

Air Quality Testing Requirements

Noveon Kalama, Inc. Order of Approval 00-2274R3

Scrubber Monitoring Modification and Consolidation of Permit Requirements

1. **Introduction (continued):**

   f. The source test dates listed below shall serve as the most recent emissions test for that source for the purposes of determining when subsequent source testing is required.

Source	Most Recent Test Date
Benzoate scrubber C-905	August 10, 1999
Fluidized bed extruder baghouse	August 11, 1999

2. **Source Operation:**

   a. A complete record of production related parameters including unit load or processing rate, startups, and shutdowns shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the final report of the test results.

   b. Source operations during the emissions test must be representative of maximum intended operating conditions.

3. **Reporting:**

The results of all testing required less frequently than once per year shall be submitted to SWCAA within 45 days of test completion. The report shall include:

a. A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
b. Time and date of the test and identification and qualifications of the personnel involved.
c. A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit.
d. A summary of control system or equipment operating conditions.
e. A summary of production related parameters.
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
h. Copies of field data and example calculations.
i. Chain of custody information.
j. Calibration documentation.
k. Discussion of any abnormalities associated with the results.
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX H
Testing Requirements for Columns C-1101, C-1151, C-1181, C-1191, and C-1211
[ADP 09-2885 Appendix F]

Appendix F
Emission Testing Requirement
Fragrance and Specialty Plants – Columns C-1101, C-1151, C-1181, C-1191, and C-1211

1. Purpose

The purpose of this testing is to quantify emissions from batch distillation columns C-1101, C-1151, C-1181, C-1191, and C-1211 and to provide an adequate assurance of compliance with the terms and conditions of this ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2, 2C, or 2D;
c. O_2 and CO_2 using EPA Methods 3 or 3A;
d. Moisture content of stack gas using EPA Method 4; and
e. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing.
   (1) Initial testing of C-1211 was performed on October 28, 2008;
   (2) Initial testing of C-1181 was performed on November 7, 2008;
   (3) Initial testing of C-1101 is required prior to December 2010;
   (4) Initial testing of C-1151 is required prior to December 2011; and
   (5) Initial testing of C-1191 is required prior to December 2012.
b. Periodic testing. Periodic testing of each unit shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. The column being tested shall be tested at the following exhaust point:
   (1) Batch Distillation Column C-1101 (SDU Column): Vent Condenser E-1112;
   (2) Batch Distillation Column C-1151 (FIF Column): Vent Condenser E-1156;
   (3) Batch Distillation Column C-1181 (KFC Column): Vent Condenser E-1184;
   (4) Batch Distillation Column C-1191 (MPS Column): Vent Condenser E-1196; and
   (5) Batch Distillation Column C-1211 (PMC Column): Vent Condenser E-1214.
c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.

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Appendix F
Emission Testing Requirement
Fragrance and Specialty Plants – Columns C-1101, C-1151, C-1181, C-1191, and C-1211 (cont.)

d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records.
   (1) A complete record of production related parameters (including time for each phase), process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.
   (2) If engineering calculations are submitted for the filling and emptying phases, the final report should include all assumptions, calculations, and references used in determining emissions.

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures, calculations, and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX I
Testing Requirements for Scrubber C-1265 [ADP 09-2885 Appendix G]

Appendix G
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Scrubber C-1265

1. **Background:**
The purpose of this testing is to quantify emissions from scrubber C-1265 and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. **Test Constituents and Test Methods**
   a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1, 2C, or 2D;
   b. O_2 and CO_2 using EPA Methods 3 or 3A;
   c. Moisture content of stack gas using EPA Method 4;
   d. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing. For scrubber C-1265 the most volatile compound is expected to be methanol; and
   e. Methanol (aqueous) molar concentration in the scrubber make-up water using engineering calculations.

   The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. **Test Dates**
   a. Initial testing. Scrubber C-1265 was initially tested on March 6, 2008.
   b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. **Test Requirements**
   a. Notification
      (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
      (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
   b. Test Location. Testing shall be performed at the exhaust outlet of scrubber C-1265 for all constituents.
   c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.
   d. Source Operation. During the emissions test, the following sources shall be operated in such a manner as to represent the maximum level of normal operation:
      (1) Crude HCA distillation column C-1280;
      (2) Batch reactor R-1260 (operating in the phase – filling, reaction, or emptying – that represents the maximum level of emissions);
      (3) Tank T-1263; and
      (4) Tank T-1121.

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Appendix G
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Scrubber C-1265 (cont.)

These four sources represent approximately 89% of the maximum (PTE) methanol load to scrubber C-1265. The other sources – batch distillation column V-1270, batch reactor R-1141, and batch reactor V-1151 – operate on a highly variable schedule.

e. Test Records.
   (1) The operating parameters of all units controlled by scrubber C-1265 during the test shall be submitted; and
   (2) Any other records of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures, calculations, and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX J
Testing Requirements for Reactor R-1101, R-1141, and R-1171 [ADP 97-2078 Appendix C]

Air Quality Testing Requirements
Kalama Chemical, Inc. Order of Approval No. 97-2078
Specialty Reactors (R-1101, R-1141, and R-1171)

1. Introduction:

a. The purpose of this testing is to quantify the emissions from the specialty reactors (R-1101, R-1141 and R-1171) to demonstrate compliance with the requirements of this Order of Approval.

b. The tests shall be performed at the facility at existing facility at 1296 NW Third Street, Kalama Cowlitz County, Washington.

c. The compliance tests using the methods specified below shall be performed within 180 days of initial startup of reactor (R-1171). A minimum of three runs shall be tested per emission point (two test locations). One of the three emission testing runs for the FIF scrubber shall be during loading mixing tank from the acetaldehyde storage tank. This testing shall be repeated every 5 years after the first compliance test.

SWAPCA may waive a specific performance test upon prior written request of the Respondent. Such a request would need to be justified on the grounds that prior tests had shown compliance by a wide margin, and that adequate alternative means exist to show continuing compliance.

d. The Respondent shall submit the test plan to SWAPCA for review and approval ten days prior to testing.

e. Results shall be submitted to SWAPCA within 45 days of testing and kept on site for review for a minimum of 5 years.

f. Testing shall include, but not necessarily be limited to the constituents identified in Section 2.a below.

2. Testing Requirements:

a. Compounds or substances to be tested for:		Suggested Methods or Equivalent:
1.	Velocity and flow rate from reactor	EPA Method 2A, 2C or 2D,
2.	Moisture	EPA Method 4
3.	Gaseous organic compounds - GC	EPA Method 18 (GC)
4.	Total gaseous non-methane hydrocarbons	EPA Method 25A (FID)
5.	Acetaldehyde	EPA Method T-05 (HPLC, impingers)

Air Quality Testing Requirements

Kalama Chemical Inc. Order of Approval No. 97-2078

Specialty Reactors (R-1101, R-1141, and R-1171)

2. Testing Requirements: (cont.)

b. Process points and tests methods to be used:

1. Gaseous outlet from the chilled water condenser (E-1171) exhaust when processing methanol containing material, three one hour runs and test identified 2.a.1. through 2.a.4. of Appendix C.

2. Gaseous outlet of from FIF scrubber exhaust when processing acetaldehyde, three one hour runs and test identified 2.a.1, 2.a.2, 2.a.3, and 2.a.5 of Appendix C.

3. Source Operation:

a. A complete record of production related parameters including process startups, shutdowns and upsets shall be kept during the emissions tests to correlate operations with emissions and shall be recorded in the test results final report.

b. Source operation during the emissions tests must be representative of intended operating conditions.

4. Reporting:

a. A final emission test report shall be prepared and submitted to SWAPCA within 45 calendar days of test completion.

b. The test report shall include a summary of emissions, test conditions, operational status, ambient conditions, test equipment calibration information, copies of actual data sheets, discussion of any operations or testing problems or conditions that would influence test data or result in the data not being representative of intended operating conditions.

c. Emission data as reported shall be reported uncorrected as compound measured (Method 25 reported as methanol).

APPENDIX K
Testing Requirements for Reactors R-1141, R-1171, R-8501, R-8502, and R-8521
[ADP 09-2885 Appendix H]

Appendix H
Emission Testing Requirement
Fragrance and Specialty Plants – Batch Reactors R-1141, R-1171, R-8501, R-8502, and R-8521

1. Background

The purpose of this testing is to quantify emissions from batch reactors R-1141, R-1171, R-8501, R-8502, and R-8521 to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing.
   (1) Batch reactor R-1141 was tested on March 25, 2009;
   (2) Batch reactor R-1171 was tested on June 16, 2009;
   (3) An initial test of continuous batch reactor R-8501 is required within sixty (60) days after reaching maximum production rate of Lilience™ but no later than one hundred eighty (180) days after the initial startup date;
   (4) An initial test of batch reactor R-8502 is required prior to December 31, 2010; and
   (5) An initial test of batch reactor R-8521 is required prior to December 31, 2011.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust of the batch reactor.
c. Test Duration.
   (1) Filling Phase. At least one (1) grab sample for VOC testing shall be obtained. In lieu of a grab sample, engineering calculations, representing the worst case emission rate based upon the vapor pressure, temperature, and other physical characteristics of the reactants may be submitted.

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Appendix H
Emission Testing Requirement
Fragrance and Specialty Plants – Batch Reactors R-1141, R-1171, R-8501, R-8502, and R-8521 (cont.)

(2) Reaction Phase. Testing during the reaction phase shall include a minimum of three test runs, each at least one (1) hour in duration, unless an alternate testing duration is requested, in writing, by the Permittee and approved by SWCAA.
(3) Emptying Phase. At least one (1) grab sample for VOC testing shall be obtained. In lieu of a grab sample, engineering calculations, representing the worst case emission rate based upon the vapor pressure, temperature, and other physical characteristics of the reactants may be submitted.

d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded and submitted in the test final report.

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX L
Testing Requirements for Scrubber C-1180 [ADP 09-2885 Appendix I]

Appendix I
Emission Testing Requirement
Fragrance and Specialty Plants – Scrubber C-1180

1. Background:
The purpose of this testing is to quantify emissions from scrubber C-1180 and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1, 2C, or 2D;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4; and
d. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. Scrubber C-1180 was initially tested on March 25, 2009.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust outlet of scrubber C-1180 for all constituents.
c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.
d. Source Operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records.
   (1) The operating parameters of all units controlled by scrubber C-1180 during the test shall be submitted; and
   (2) Any other records of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix I
Emission Testing Requirement
Fragrance and Specialty Plants – Scrubber C-1180 (cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures, calculations, and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX M
Testing Requirements for Reactor R-801 [ADP 09-2885 Appendix L]

Appendix L
Air Quality Testing Requirements
Continuous Distillation Reactor R-801

1. Background:
The purpose of this testing is to quantify the emissions from reactor R-801 to demonstrate compliance with the requirements of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1, 2A, 2C, or 2D;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4; and
d. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane).

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. An initial test of reactor R-801 is required within sixty (60) days after reaching maximum production rate but no later than one hundred eighty (180) days after the initial startup date.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the reactor exhaust.
c. Test Duration.
   (1) Filling Phase. At least one (1) grab sample for VOC testing shall be obtained. In lieu of a grab sample, engineering calculations, representing the worst case emission rate based upon the vapor pressure, temperature, and other physical characteristics of the reactants may be submitted.
   (2) Reactor Heat-up Phase. The maximum quantity of emission is expected during this phase. The Permittee shall propose a representative testing duration and number of samples to SWCAA as part of the test plan.
   (3) Reaction Phase. No testing required since reactor is closed to atmosphere.
   (4) Emptying Phase. At least one (1) grab sample for VOC testing shall be obtained. In lieu of a grab sample, engineering calculations, representing the worst case emission rate based upon the vapor pressure, temperature, and other physical characteristics of the reactants may be submitted.

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Appendix L
Air Quality Testing Requirements
Continuous Distillation Reactor R-801 (cont.)

d. Source Operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

4. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX N
Testing Requirements for Reactor R-1250A [ADP 09-2885 Appendix M]

Appendix M
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Reactor R-1250A

1. Background

The purpose of this testing is to quantify emissions from continuous tube reactor R-1250A and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885. Continuous tube reactor R-1250A is used to produce several different aldehydes, including hexanal, octanal, and decanal.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Carbon monoxide (CO) using integrated sampling and EPA Method 10; and
d. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing. For continuous tube reactor R-1250A the most volatile compound is expected to be the aldehyde being produced.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing.
   (1) Reactor R-1250A was initially tested while producing octanal on March 18, 2008;
   (2) Reactor R-1250A was initially tested while producing decanal on March 24, 2008
   (3) For each aldehyde produced in continuous tube reactor R-1250A that has not been initially tested, an initial test shall be performed within sixty (60) days after producing any aldehyde in continuous tube reactor R-1250A in excess of 1,080 hours in any 12-month rolling period.
b. Periodic testing. Each aldehyde produced in continuous tube reactor R-1250A shall be required subsequently each time the aldehyde is produced in excess of 1,080 hours in any 12-month rolling period, but no more frequently than once every sixty (60) months.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust of chilled water condenser E-1254.
c. Test Duration. Tests shall include a minimum of three test runs, each at least one (1) hour in duration.
d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.

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Appendix M
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Reactor R-1250A (cont.)

e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded and submitted in the test final report.

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX O
Testing Requirements for Reactor R-1250A Catalyst Deactivation [ADP 09-2885 Appendix N]

Appendix N
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Reactor R-1250A Catalyst Deactivation

1. Background:
The purpose of this testing is to quantify emissions from continuous tube reactor R-1250A during catalyst deactivation and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4;
d. Carbon monoxide (CO) using integrated sampling and EPA Method 10;
e. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane); and
f. Visible Emissions (opacity) using EPA Method 9 and SWCAA Method 9.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. Continuous tube reactor R-1250A was initially tested during catalyst deactivation on March 25, 2008.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust of chilled water vent condenser E-1254.
c. Test Duration. Samples shall be taken at one (1) hour intervals during the entire catalyst deactivation process.
d. Source Operation. Continuous tube reactor shall be operated in a manner consistent with catalyst deactivation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix N
Emission Testing Requirement
Hexyl Cinnamic Aldehyde Plant – Reactor R-1250A Catalyst Deactivation
(cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX P
Testing Requirements for Column C-1290 [ADP 09-2885 Appendix O]

Appendix O
Air Quality Testing Requirements
Hexyl Cinnamic Aldehyde Plant – Column C-1290

1. Background:
The purpose of this testing is to quantify emissions from aldehyde distillation column C-1290 and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1, 2C, or 2D; and

b. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane). When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing.

(1) Column C-1290 was tested while distilling octanal on March 5, 2008.

(2) For each aldehyde produced in reactor C-1290 that has not been initially tested, an initial test shall be performed within sixty (60) days after producing any aldehyde in reactor C-1290 in excess of 1,080 hours in any 12-month rolling period.

b. Periodic testing. Each aldehyde produced in reactor C-1290 shall be required subsequently each time the aldehyde is produced in excess of 1,080 hours in any 12-month rolling period, but no more frequent than once every sixty (60) months.

4. Test Requirements

a. Notification.

(1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.

(2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.

b. Test Location. Testing shall be performed at the exhaust outlet of decant tank condenser E-1299.

c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.

d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.

e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix O
Air Quality Testing Requirements
Hexyl Cinnamic Aldehyde Plant – Column C-1290 (cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX Q
Testing Requirements for ReactorR-2150 [ADP 09-2885 Appendix J]

Appendix J
Emission Testing Requirement
Fragrance and Specialty Plants – Reactor R-2150

1. Background

The purpose of this testing is to quantify emissions from continuous tube reactor R-2150 and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Carbon monoxide (CO) using integrated sampling and EPA Method 10; and
d. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A. When using EPA Method 25A, VOC concentrations shall be reported as equivalents of the most volatile compound during testing.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. An initial test of continuous tube reactor R-2150 is required within sixty (60) days after reaching maximum production rate but no later than one hundred eighty (180) days after the initial startup date.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust of water vent condenser E-2154.
c. Test Duration. Tests shall include a minimum of three test runs, each at least one (1) hour in duration.
d. Source operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded and submitted in the test final report.

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Appendix J
Emission Testing Requirement
Fragrance and Specialty Plants – Reactor R-2150 (cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX R
Testing Requirements for Reactor R-2150 Catalyst Deactivation [ADP 09-2885 Appendix K]

Appendix K
Emission Testing Requirement
Fragrance and Specialty Plants – Reactor R-2150 Catalyst Deactivation

1. Background:
The purpose of this testing is to quantify emissions from continuous tube reactor R-2150 during catalyst deactivation and to provide an adequate assurance of compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4;
d. Carbon monoxide (CO) using integrated sampling and EPA Method 10;
e. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane); and
f. Visible Emissions (opacity) using EPA Method 9 and SWCAA Method 9.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method or testing schedule may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. An initial test of continuous tube reactor R-2150 during catalyst deactivation is required within one hundred eighty (180) days after the initial startup date or within sixty (60) days after reaching maximum production rate.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification.
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location. Testing shall be performed at the exhaust of chilled water condenser E-1254.
c. Test Duration. Samples shall be taken at one (1) hour intervals during the entire catalyst deactivation process.
d. Source Operation. Continuous tube reactor shall be operated in a manner consistent with catalyst deactivation.
e. Test Records. A complete record of production related parameters, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix K
Emission Testing Requirement
Fragrance and Specialty Plants – Reactor R-2150 Catalyst Deactivation
(cont.)

5. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Summary of control system or equipment operating conditions;
e. Summary of production related parameters;
f. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
g. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
h. Copies of field data and example calculations;
i. Chain of custody information;
j. Calibration documentation;
k. Discussion of any abnormalities associated with the results; and
l. A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

APPENDIX S
Testing Requirements for Reactor R-8601A/Vent Condenser X-8601
[OA 96-1864R1 Appendix A]

Appendix A **Page 1 of 1**
Emission Testing Requirements
Reactor R-8601A Vent Condenser X-8601

1. Introduction:

a. The purpose of this testing is to quantify emissions from X-8601 during reactor filling and nitrogen addition, and to demonstrate compliance with the requirements of this Order of Approval.

2. Testing Requirements:

a. An initial source test to quantify emissions of isooctane from X-8601 shall be conducted no later than 90 days after initial startup of reactor R-8601A. Unless otherwise directed by SWCAA, testing shall consist of two hours of data collection during reactor filling, and two hours of data collection during nitrogen addition using the methods specified below.

Constituent	Test Method or Equivalent
Stack gas velocity	EPA Methods 1 and 2
Stack gas moisture content	EPA Method 4
Isooctane	EPA Method 18 or 25A

3. Source Operation:

a. A complete record of production related parameters including process startups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions, and shall be included with the final test report.

b. Source operations during the emissions test must be representative of the maximum level of normal operation.

4. Reporting Requirements:

a. A final emission test report shall be prepared and submitted to SWCAA within 45 calendar days of test completion and, at a minimum, shall contain the following information:
(1) Description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
(2) Time and date of the test and identification and qualifications of the personnel involved.
(3) Summary of results, reported in units and averaging periods consistent with the applicable emissions standard or unit.
(4) Summary of control system or equipment operating conditions.
(5) Summary of production related parameters.
(6) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
(7) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
(8) Copies of field data and example calculations.
(9) Chain of custody information.
(10) Calibration documentation.
(11) Discussion of any abnormalities associated with the results.
(12) A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

SWCAA 96-1864R1

APPENDIX T
Testing Requirements for Flare X-86B [ADP 09-2885 Appendix P]

Appendix P
Air Quality Testing Requirements
Flare X-86B

1. Background:
The purpose of this testing is to quantify emissions from enclosed flare X-86B and to assure compliance with the terms and conditions of ADP 09-2885.

2. Test Constituents and Test Methods

a. Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
b. O_2 and CO_2 using EPA Methods 3 or 3A;
c. Moisture content of stack gas using EPA Method 4;
d. Carbon monoxide (CO) using EPA Method 10;
e. Nitrogen oxides (NO_x) using EPA Method 7E;
f. Visible emissions (opacity) using EPA Method 9 and SWCAA Method 9;
g. Volatile Organic Compounds (VOC) using EPA Method 18 or 25A (measured as propane). Methane and ethane measured using EPA Method 18 may be subtracted from a total VOC value determined using EPA Method 25A;
h. Toluene using EPA Method 18; and
i. Benzene using EPA Method 18.

The above constituents and test methods shall be used provided that the test methods are determined by SWCAA to be appropriate test methods for this source. An alternative test method may be requested by the Permittee, in writing, to SWCAA. Upon review of the request, SWCAA shall inform the Permittee, in writing, of the determination.

3. Test Dates

a. Initial testing. The initial test for flare X-86B was January 20, 2004.
b. Periodic testing. Periodic testing shall be performed a minimum of every sixty (60) months after the initial source test no later than the end of the month in which the initial source test was performed.

4. Test Requirements

a. Notification
   (1) A comprehensive test plan shall be submitted to SWCAA for review and approval a minimum of ten (10) days prior to the proposed test date.
   (2) SWCAA shall be notified a minimum of five (5) days prior to the proposed test date so that a SWCAA representative may be present during testing.
b. Test Location Testing shall be performed at the exhaust outlet of the flare.
c. Test Duration. Tests shall include a minimum of three (3) test runs, each at least one (1) hour in duration.
d. Source Operation. Source operations during the emissions test must be representative of the maximum level of normal operation.
e. Test Records. A complete record of production related parameters, including digester gas flow rate, startups, shutdowns, and flare temperature, process start ups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.

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Appendix P
Air Quality Testing Requirements
Flare X-86B (cont.)

4. Reporting Requirements

A final test report shall be prepared and submitted to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, shall contain the following information:

a. Description of the source including manufacturer, model number, serial number, and design capacity of the equipment, and the location of the sample ports or test locations;
b. Time and date of the test and identification and qualifications of the personnel involved;
c. Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
d. Reported test results shall be corrected to 3% O_2 in the exhaust gas;
e. Summary of control system or equipment operating conditions,
f. Summary of production related parameters;
g. A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation;
h. A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation;
i. Copies of field data and example calculations;
j. Chain of custody information;
k. Calibration documentation;
l. Discussion of any abnormalities associated with the results; and
m A statement signed by the senior management official of the testing firm certifying the validity of the source test report.