

PROPOSED DRAFT CAAPP PERMIT
Onyx Environmental Services
I.D. No.: 163121AAP
Application No.: 95090072
November 6, 2003

217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT¹

PERMITTEE

Onyx Environmental Services
Attn: Doug Harris
7 Mobile Avenue
Sauget, Illinois 62201

Application No.: 95090072

I.D. No.: 163121AAP

Applicant's Designation:

Date Received: September 7, 1995

Operation of: Hazardous Waste Combustors

Date Issued: TO BE DETERMINED

Expiration Date²: DATE

Source Location: 7 Mobile Avenue, Sauget, St. Clair County

Responsible Official: Doug Harris, General Manager

This permit is hereby granted to the above-designated Permittee to OPERATE hazardous waste combustors, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Anatoly Belogorsky at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:AB:psj

cc: Illinois EPA, FOS, Region 3

¹ This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 - federal PSD and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

² Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

Onyx Environmental Services
7 Mobile Avenue
Sauget, Illinois 62201
618/271-2804

I.D. No.: 95090072
Standard Industrial Classification: 4953, Refuse Systems

1.2 Owner/Parent Company

Onyx Environmental Services
7 Mobile Avenue
Sauget, Illinois 62201

1.3 Operator

Onyx Environmental Services
7 Mobile Avenue
Sauget, Illinois 62201

Dennis Warchol
618/271-2804

1.4 General Source Description

Onyx Environmental Services is located in Sauget and is a treatment, storage and disposal facility, which accepts offsite waste for their further dispose through incineration. Containers and bulk shipments of hazardous and solid wastes are received, analyzed and transferred to temporary storage facilities, processed and ultimately destroyed in one of three incineration units.

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

ACMA	Alternative Compliance Market Account
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment Trading Unit
BAT	Best Available Technology
Btu	British thermal unit
°C	Degrees Celsius
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
cfm	Cubic foot per minute
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System
CO	Carbon Monoxide
DRE	Destruction and Removal Efficiency
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
ft	Feet
G	Grams
gal	Gallon
gr	Grains
HAP	Hazardous Air Pollutant
HCl	Hydrogen Chloride
Hg	Mercury
HWC	Hazardous Waste Combustor
hr	hour
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
kW	kilowatts
L	Liter
LAER	Lowest Achievable Emission Rate
lb	pound
MACT	Maximum Achievable Control Technology
Mg	Milligrams
mmBtu	Million British thermal units
mmscf	Million standard cubic feet
MW	Megawatts

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NESHAP	National Emission Standards for Hazardous Air Pollutants
NIC	Notification of Intent to Comply
NOC	Notification of Compliance
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
POHC	Principal Organic Hazardous Constituent
ppm	parts per million
ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
scf	Standard cubic feet
scm	Standard cubic meters
SO ₂	Sulfur Dioxide
TEQ	Toxic Equivalency Quotient
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
µg	Micrograms
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material
yr	Year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

- 3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Ash Handling
Handling of Spent Dry Scrubber Solids
Lime Unloading and Proportioning

- 3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

None

- 3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

- a. Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].
- b. Storage tanks of virgin or rerefined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oils [35 IAC 201.210(a)(11)].
- c. Gas turbines and stationary reciprocating internal combustion engines of less than 112 kW (150 horsepower) power output [35 IAC 201.210(a)(15)].

- 3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

- 3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.
- 3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit's process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.
- 3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

- 3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).
- 3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210(a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.
- 3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
Unit 1	Hazardous Waste Combustors: Incineration Unit #2 (Incinerator)	1987	Spray Dryer Absorber, Baghouse
	Incineration Unit #3 (Incinerator)	1988	Spray Dryer Absorber, Baghouse
	Incineration Unit #4 (Rotary Kiln)	1989	Spray Dryer Absorber, Baghouse
Unit 2	<u>Material Processing Areas</u> Waste Processing Units (MP-1 and MP-2)	1988	Carbon Adsorption Unit
	Lab Pack Repack Unit		None
Unit 3	Drum Crusher	N/A	None
Unit 4	Storage Tanks for Liquid Wastes		Carbon Canisters
Unit 5	Bulk Solid Waste Storage Facility		Cyclone, Baghouse, Carbon Adsorption Unit
Unit 6	Fugitive Emissions (Pipelines, Valves, etc.)		None
Unit 7	Boiler	1995	None

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of HAP emissions.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to the following particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit:

- a. 40 CFR Part 61, Subpart FF "National Emission Standard for Benzene Waste Operation".
- b. 40 CFR Part 63, Subpart DD "National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations".
- c. 40 CFR Part 61, Subpart V "National Emission Standard for Equipment Leaks".
- d. 40 CFR Part 63, Subpart EEE "National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors".

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

- a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

Compliance with this requirement is considered to be assured by the inherent nature of operations at this source, as demonstrated by historical operation.

- b. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 IAC 212.122, pursuant to 35

IAC 212.123(a), except as allowed by 35 IAC
212.123(b) and 212.124.

5.2.3 Ozone Depleting Substances

The Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

- a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or
- b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

- 5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable

requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

- b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.
- c. This source is subject to the emission standards and requirements established in 40 CFR Part 63, Subpart EEE "National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors" with a compliance date September 30, 2003, as established by these rules, and extended by the Illinois EPA to June 30, 2004.

5.2.6 Episode Action Plan

- a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.
- b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.
- c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.
- d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:

- i. Illinois EPA, Compliance Section; and
- ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or
- iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.3 Non-Applicability of Regulations of Concern

This permit is issued based on the source not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the source either does not have a pollutant-specific emissions unit that uses an add-on control device to achieve compliance with an emission limitation or standard or is subject to a NESHAP proposed after November 15, 1990, pursuant to 40 CFR 64.2(b)(1)(i).

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	47.23
Sulfur Dioxide (SO ₂)	66.19
Particulate Matter (PM)	47.57
Nitrogen Oxides (NO _x)	97.62
HAP, not included in VOM or PM	52.56
Total	311.17

5.5.2 Emissions of Hazardous Air Pollutants

Source-wide emission limitations for HAPs as listed in Section 112(b) of the CAA are not set. This source is considered to be a major source of HAPs.

5.5.3 Other Source-Wide Emission Limitations

None

5.6 General Recordkeeping Requirements

5.6.1 Emission Records

The Permittee shall maintain records of the following items for the source to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7) (b) of the Act:

Total annual emissions on a calendar year basis for the emission units covered by Section 7 (Unit Specific Conditions) of this permit.

5.6.2 Retention and Availability of Records

- a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular recordkeeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.
- b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the source with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emissions Report

The annual emissions report required pursuant to Condition 9.7 shall contain emissions information for the previous calendar year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating VARIABLE Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping and reporting requirements of Conditions 5.6 and 5.7, and compliance procedures in Section 7 (Unit Specific Conditions) of this permit.

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6.0 NOT APPLICABLE TO THIS PERMIT

7.0 UNIT SPECIFIC CONDITIONS

7.1 Unit 1: Hazardous Waste Combustors

7.1.1 Description

Hazardous waste combustors #2 and #3 are the fixed hearth incinerators used for incineration of both bulk liquid and liquids from drums and hazardous solid wastes. Bulk liquid wastes are fed to the units continuously, while liquids from drums and solid wastes are fed in batches. Hazardous waste combustor #4 is a rotary kiln used for incineration of both bulk liquid and hazardous solid wastes. Bulk liquid wastes are fed to the unit continuously, while bulk and containerized solids are fed in batches.

7.1.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 1:	Hazardous Waste Combustors (Incinerators) #2 and #3	Spray Dryer Absorber, Baghouse
	Hazardous Waste Combustor (Rotary Kiln) #4	Spray Dryer Absorber, Baghouse

7.1.3 Applicability Provisions and Applicable Regulations

- a. The "affected hazardous waste combustor (HWC)" for the purpose of these unit-specific conditions, is an emission unit (either incinerator or rotary kiln) used for incineration of the hazardous solid/liquid wastes.
- b. On July 24, 2001, the United States Court of Appeals for the District of Columbia granted the Sierra Club's petition for review and vacated the challenged portions of the rule under 40 CFR Part 63, Subpart EEE "National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors". The "Interim Standards for Hazardous Air Pollutants from Hazardous Waste Combustors" published on February 13, 2002, amends certain portions of Subpart EEE. Also, court decision obligates USEPA to issue revised final standards for HWC by June 14, 2005.
- c. Each affected HWC is subject to the emission standards and requirements established in 40 CFR Part

63, Subpart EEE "National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors" and "Interim Standards for Hazardous Air Pollutants from Hazardous Waste Combustors" published on February 13, 2002. On January 16, 2003 the Illinois EPA had received request from the Permittee for an extension from compliance with Subpart EEE. A 9-month extension was granted on January 30, 2003 in accordance with 40 CFR 62.1213. The Permittee must comply with those standards no later than June 30, 2004. Condition 7.1.14 contains certain milestones and unambiguous deadlines for the full compliance with 40 CFR Part 63 Subpart EEE. All emission standards and requirements applicable to this source after June 30, 2004 are discussed further in this Section.

- d. Until June 30, 2004, each affected HWC is subject to the emission standards and requirements established in the Resource Conservation and Recovery Act (RCRA) and specified in the solid waste permit issued by the Illinois EPA's Bureau of Land.
- e. After June 30, 2004, the emission standards and requirements established in 40 CFR Part 63, Subpart EEE for HWC will supercede all appropriate RCRA requirements in respect to emission standards of released air pollutants, testing, and monitoring requirements of affected HWC.
- f. Each affected HWC is subject to the following emission limits until June 30, 2004:
 - i. No person shall cause or allow the emission of particulate matter into the atmosphere from any incinerator burning more than 0.907 Mg/hr (2000 lb/hr) but less than 27.2 Mg/hr (60,000 lb/hr) of refuse to exceed 183 mg/scm (0.08 gr/scf) of effluent gases corrected to 12 percent carbon monoxide [35 IAC 212.181(b)].
 - ii. No person shall cause or allow the emission of carbon monoxide into the atmosphere from any incinerator to exceed 500 ppm, corrected to 50 percent excess air [35 IAC 216.141].

7.1.4 Non-Applicability of Regulations of Concern

- a. Prior to June 30, 2004, each affected HWC is exempted from compliance with the standards of 40 CFR Part 63, subpart EEE, pursuant to 40 CFR 63.1206(a)(1).
- b. This permit is issued based on the affected HWC not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM), pursuant to 40 CFR 64.2(b)(1)(i), unless the Permittee applies for a significant modification to the CAAPP permit prior to June 30, 2004.

7.1.5 Operating Requirements and Work Practices

- a. The following physical forms and feed rates of the waste feed shall not exceed the following limits, as established by the RCRA permit B-29R:

Table 1 - Waste Feed Rates

Waste Type	##2/3 Permit Limit (lb/hr)	##2/3 Practical* Limit (lb/hr)	#4 Permit Limit (lb/hr)	#4 Practical* Limit (lb/hr)
Containers	1053	204	3000	672
Bulk Solids	---	---	12,000	2920
Hi Btu	2012	128	1100	306
Low Btu	1993	460	1700	424
Specialty Feed	724	75	---	---
SCC	364	2	1000	306

* Based on last six months of operation

Table 2 - Metal Feed Limits

(by using the practical federates from Table 1 in conjunction with the following metals federate limits)

Metals (lb/hr)	##2/3	#4
LVM	186	762
SVM	2035	4822
Hg	0.005	0.03

Table 3 - Metals Trigger Levels

(results in the metals trigger percentages for each category of waste)

Waste Type	LVM % Level Trigger		SVM % Level Trigger		Hg % Level Trigger	
	##2/3	#4	##2/3	#4	##2/3	#4
Containers	91	100	100	100	0.000024	0.000045
Bulk Solids	---	26	---	100	---	0.000010
Hi Btu	100	100	100	100	0.000039	0.000098
Low Btu	40	100	100	100	0.000011	0.000071
Specialty Feed	100	---	100	---	0.000067	----
SCC	100	100	100	100	0.00010	0.000098

Table 4- Practical Metals Feed Triggers

Applying practical feeding scenarios (i.e., bulk solids are generally blended in the pits and fed in a manner that a 3:1 "blending" occurs, containers are alternated when fed so a 2:1 "blending" occurs, bulk liquids and specialty feed could be fed "straight", so a 1:1 ratio is used) gives new trigger limits for containers and bulk solids.

Waste Type	LVM % Level Trigger		SVM % Level Trigger		Hg % Level Trigger	
	##2/3	#4	##2/3	#4	##2/3	#4
Containers	100	100	100	100	0.000048	0.000090
Bulk Solids	---	78	---	100	---	0.000030
Hi Btu	100	100	100	100	0.000039	0.000098
Low Btu	40	100	100	100	0.000011	0.000071
Specialty Feed	100	---	100	---	0.000067	----
SCC	100	100	100	100	0.00010	0.000098

Table 5 - Metals Trigger Percentages and Volumes

Using the most conservative triggers from Table 4 above (those highlighted) for LVM's and SVM's, the units ##2/3 Hg trigger for Special Feed, and the unit #4 Hg triggers (any wastes received containing the mercury code, except Specialty Feeders, would be processed by unit #4 exclusively), gives the following trigger percentages and trigger volumes shown below

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Waste Type	LVM % Level Trigger	LVM Volume Trigger	SVM % Level Trigger	SVM Volume Trigger	Hg % Level Trigger	Hg Volume Trigger
Containers	100	---	100	---	0.000090	336 lb
Bulk Solids	78	973 lb	100	---	0.000030	973 lb
Hi Btu	100	---	100	---	0.000098	306 lb
Low Btu	40	460 lb	100	---	0.000071	424 lb
Specialty Feed	100	---	100	---	0.000067	75 lb
SCC	100	---	100	---	0.000098	306 lb

- b. The heat input of containerized solids or lab packs fed shall not exceed the following limits:
 - i. HWC #2 and #3 (Each): 750,000 Btu/charge of material.
 - ii. HWC #4: 2,000,000 Btu/charge of material.
- c. The total thermal load to the HWC system from all wastes shall not exceed the following limits:
 - i. HWC #2 and #3 (Each): 16 million Btu/hr.
 - ii. HWC #4: 50 million Btu/hr.
- d. Waste derived fuels fed to the secondary combustion chamber of HWC #4 and upper chamber waste burners of HWC #2 and #3 must have a heating value greater than 13,000 Btu/lb and a viscosity within the burner manufacturer's specifications.
- e. High Btu liquid wastes fed to the upper chamber injector of HWC #2 and #3 must have a heating value greater than 8,000 Btu/lb and a viscosity within the burner manufacturer's specifications.
- f. High Btu liquid wastes fed to the secondary combustion chamber of HWC #4 must have a heating value greater than 5,000 Btu/lb and a viscosity within the burner manufacturer's specifications.
- g. The Permittee must comply with the following operating limits whenever waste is in the system (waste is in the system when any waste remains in the belly of the incinerator and has not been rammed out,

or it has been less than fifteen (15) seconds since the last liquid waste was shutoff):

- i. HWC #2 and #3
 - A. The lower chamber temperature must not be less than 1,590°F for any one (1) minute average, except when the upper chamber temperature is greater than 1,845°F for a one (1) hour rolling average.
 - B. The upper chamber temperature must not be less than 1,845°F for a one (1) hour rolling average.
 - C. Stack gas flow must not be greater than 17,198 acfm for more than one (1) minute.

- ii. HWC #4
 - A. The kiln temperature must not be less than 1,240°F for any one (1) minute average, except when the secondary combustion chamber is greater than 1,880°F for a one (1) hour rolling average.
 - B. The secondary combustion chamber temperature must not be less than 1,880°F for a one (1) hour rolling average.
 - C. Stack gas flow rate must not be greater than 43,000 acfm for more than one (1) minute.

- h. The Permittee must cease waste feed when operating conditions exceed limits established by this permit.

- i. During start-up and shut-down of each affected HWC, hazardous waste must not be introduced into affected HWC unless this HWC and air pollution control equipment are operating within the parameter ranges allowed by the Automatic Waste Feed Cutoff system as specified in Condition 7.1.5(j).

- j. The Permittee must operate the Automatic Waste Feed Cut-off systems so as to prevent any introduction of waste to the affected HWC under the following conditions:

- i. HWC #2 and #3
- A. Lower chamber temperature less than 1,590°F for a one minute average.
 - B. Lower chamber temperature less than 1,627°F for a 60 minute rolling average.
 - C. Upper chamber temperature less than 1,794°F for a (1) minute average.
 - D. Upper chamber temperate less than 1,845°F for a 60 minute rolling average.
 - E. Lower Chamber or Upper Chamber temperature greater than 2,400°F.
 - F. Lower chamber pressure greater than or equal to - 0.1 inches water column for 5 seconds or more.
 - G. Upper chamber pressure greater than or equal to - 0.1 inches water column for 5 seconds or more.
 - H. Spray dryer adsorber outlet temperature greater than 500°F for (1) minute average.
 - I. Baghouse pressure drop greater than 10 inches water column for (1) minute average.
 - J. Baghouse pressure drop less than 2 inches water column for (1) minute average.
 - K. Stack gas carbon monoxide (CO) concentration greater than 100 ppm for a (1) hour rolling average.
 - L. Stack gas carbon monoxide (CO) concentration greater than 500 ppm for (1) minute average.
 - M. Stack gas hydrogen chloride (HCl) concentration greater than 100 ppm for (1) hour average.

- N. Stack gas hydrogen chloride (HCl) concentration great than 500 ppm for (1) minute average.
 - O. Stack gas oxygen concentration less than 3% for (1) minute average.
 - P. Stack gas hydrocarbon concentration greater than 10 ppm for (1) minute average for the FID monitor.
 - Q. Stack gas flow rate greater 17,198 acfm.
 - R. Stack gas opacity greater than 10% for (1) minute average.
 - S. Failure of any stack gas monitor as indicated by loss of signal.
 - T. Failure of any process monitor with operating limits in this permit as indicated by loss of signal.
 - U. Failure of any waste feed measurement device as indicated by loss of signal.
 - V. Induced draft fan failure as indicated by loss of signal.
 - W. Emergency cap open.
- ii. HWC #4
- A. Kiln temperature one minute average less than 1,240°F.
 - B. Kiln temperature one hour rolling average less than 1,400°F.
 - C. Secondary combustion chamber temperature one minute average less than 1,825°F.
 - D. Secondary combustion chamber temperature one hour rolling average less than 1,880°F.
 - E. Kiln pressure greater than atmospheric.

- F. Secondary combustion chamber pressure greater than atmospheric.
- G. Stack gas flow rate greater than 43,000 acfm.
- H. Baghouse pressure drop less than 2 inches water column for (1) minute average.
- I. Baghouse pressure drop greater than 10 inches water column for (1) minute average.
- J. Tempering chamber exit gas temperature one minute average is greater than 1,200°F.
- K. Kiln or secondary combustion chamber temperature is greater than 2,400°F.
- L. SDA exit temperature one minute average is greater than 500°F.
- M. Stack gas CO concentration is greater than 100 ppm for one (1) hour rolling average.
- N. Stack gas CO concentration is greater than 500 ppm for one (1) minute average.
- O. Stack gas oxygen concentration less than 3% for one (1) minute average.
- P. Stack gas hydrocarbon concentration is less than 10 ppm for the FID monitor.
- Q. Stack gas hydrogen chloride concentration is greater than 35 ppm for one (1) hour rolling average.
- R. Stack gas hydrogen chloride concentration is greater than 500 ppm for one (1) minute average.
- S. Stack gas opacity is greater than 10% one (1) minute average.
- T. Failure of stack gas monitor.

- U. Failure of combustion air fan.
 - V. Failure of waste feed measuring or recording equipment failure.
 - W. Induced draft fan failure.
 - X. Emergency cap open.
 - Y. Surge vent open.
- k. Fugitive emissions from the combustion zone of each affected HWC must be controlled by:
- i. Keeping the combustion zone totally sealed against fugitive emissions;
 - ii. Maintaining a combustion zone pressure lower than atmosphere pressure; or
 - iii. An alternative means of control that has demonstrated to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.
- l. The emergency cap can only open in emergency situations which could endanger downstream control devices or jeopardize safety of personnel and then only after all waste feeds have been cut off. The following failure situations are emergency situations where the Permittee may manually open the emergency cap:
- i. High temperatures (greater than 500⁰F) at the outlet of the Spray Dryer Adsorber.
 - ii. Failure of the I.D. fan.
 - iii. Loss of electric power.
 - iv. Loss of air pressure.

7.1.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5.1, each affected HWC is subject to the following:

a. Hazardous Waste Incinerators (HWC ##2,3,4)

After June 30, 2004, the emissions shall not exceed the following limits, pursuant to interim standard of 40 CFR 63.1203(a):

Pollutant	Units (7% Oxygen, Dry Basis)	Emission Limits for Hazardous Waste Incinerators
PM	Mg/dscm	34
CO or Hydrocarbons	ppm	100* or 10
Dioxins/Furans	Ng TEQ/dscm	0.20; or 0.40 provided that the combustion gas temperature at the inlet to the initial particulate matter control device is 400°F or lower based on the average of the test run average temperatures. (For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400°F or lower requirement)
HCL & Chlorine Gas	ppm	77 , combined emissions, expressed as hydrochloric acid equivalents, dry basis.
Pb & Cd	µg/dscm	240 , combined emissions
Arsenic, beryllium, and chromium	µg/dscm	97 , combined emissions
Hg	µg/dscm	130

* Over an hourly rolling average (monitored continuously with a continuous emissions monitoring system), dry basis and corrected to 7 percent oxygen. If the Permittee elects to comply with this carbon monoxide standard rather than the hydrocarbon standard under 40 CFR 63.1203(a)(5)(ii), the Permittee must also document that, during the destruction and removal efficiency (DRE) test runs or their equivalent as provided by 40 CFR 63.1206(b)(7), hydrocarbons do not exceed 10 parts per million by volume during those runs, over an hourly rolling average (monitored continuously with a continuous emission

monitoring system), dry basis, corrected to 7 percent oxygen, and reported as propane.

b. Destruction and removal efficiency (DRE) standard

Pursuant to 40 CFR 63.1203(c) and 63.1205(c) each affected HWC shall achieve the following:

- i. Except as provided in 40 CFR 63.1203(c) (2) and 40 CFR 63.1205(c) (2), affected HWC must achieve a destruction and removal efficiency (DRE) of 99.99% for each principle organic hazardous constituent (POHC) designated under 40 CFR 63.1203(c) (3) and 40 CFR 63.1205(c) (3). DRE for each POHC shall be calculated from the following equation:

$$DRE = \left[1 - \left(\frac{W_{out}}{W_{in}} \right) \right] 100\%$$

Where:

W_{in} = Mass federate of one principal organic hazardous constituent (POHC) in a waste feedstream; and

W_{out} = Mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere

- ii. If the dioxin-listed hazardous wastes FO20, FO21, FO23, FO26, or FO27 are burned, each affected HWC must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principle organic hazardous constituent (POHC) that Permittee designates under 40 CFR 63.1203(c) (3) and 40 CFR 63.1205(c) (3). The Permittee must demonstrate this DRE performance on POHCs that are more difficult to incinerate than tetro-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. The Permittee must use the equation listed above to calculate DRE for each POHC. In addition, the Permittee must notify the Illinois EPA of the intent to incinerate hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27.

- iii. Principal organic hazardous constituents (POHCs).
 - A. The Permittee must treat the Principal Organic Hazardous Constituents (POHCs) in the waste feed that Permittee specifies under 40 CFR 63.1203(c)(3)(ii) and 40 CFR 63.1205(c)(3)(ii) to the extent required by 40 CFR 63.1203/1205(c)(1) and (c)(2).
 - B. The Permittee must specify one or more POHCs from the list of hazardous air pollutants established by 42 U.S.C. 7412(b)(1), excluding caprolactam (CAS number 105602) as provided by 40 CFR 63.60, for each waste to be burned. The Permittee must base this specification on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses or other data and information.

c. Significant figures.

The emission limits provided by Conditions 7.1.6(a) and (b) are present with two significant figures. Although the Permittee must perform intermediate calculations using at least three significant figures, the Permittee may round the resultant emission levels to two significant figures to document compliance.

- d. In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5.1, the affected HWC are subject to the following emission limits:

- i. HWC #2 and #3 (For Each Unit)

<u>Annual Emissions (T/yr)</u>				
<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>	<u>VOM</u>	<u>CO</u>
15.0	7.7	4.0	0.9	6.6

- ii. HWC #4

Annual Emissions (T/yr)

<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>	<u>VOM</u>	<u>CO</u>
16.92	50.76	61.6	3.1	13.68

The above limitations were established in Permits #87100024 (for HWC #3), #83120053 (for HWC #2), and 90020011 (for HWC #4) pursuant to 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits ensure that the construction and/or modification addressed in the aforementioned permit does not constitute a new major source or major modification pursuant to Title I of the CAA, specifically the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 [T1].

7.1.7 Testing Requirements

The Permittee shall fulfill the following testing requirements established in 40 CRFR 63.1207 and 63.1208:

a. Types of performance tests:

i. Comprehensive performance test. The Permittee must conduct comprehensive performance tests to demonstrate compliance with the emission standards provided by 40 CFR 63.1203, establish limits for the operating parameters provided by 40 CFR 63.1209, and demonstrate compliance with the performance specifications for continuous monitoring systems [40 CFR 63.1207(b)(1)].

ii. Confirmatory performance test. The Permittee must conduct confirmatory performance tests 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 40 CFR 63.1209(k) [40 CFR 63.1207(b)(2)].

b. Initial comprehensive performance test.

- i. Test date. Except as provided by 40 CFR 63.1207(c) (2), the Permittee must commence the initial comprehensive performance test not later than six months after the compliance date. See Compliance Schedule in Condition 7.1.14 for specific testing deadlines.
- ii. Data in lieu of the initial comprehensive performance test.
 - A. The Permittee may request that previous emissions test data serve as documentation of conformance with the emission standards of this subpart.
 - B. The Permittee must submit data in lieu of the initial comprehensive performance test in lieu of (i.e. if the data are in lieu of all performance testing) or with the notification of performance test required under 40 CFR 63.1207(e).
- c. Frequency of Testing.

Except as otherwise specified in 40 CFR 63.1207(d) (4), the Permittee must conduct testing periodically as prescribed further in this Condition. The date of commencement of the initial comprehensive performance test is the basis for establishing the deadline to commence the initial confirmatory performance test and the next comprehensive performance test. The Permittee may conduct performance testing at any time prior to the required date. The deadline for commencing subsequent confirmatory and comprehensive performance testing is based on the date of commencement of the previous comprehensive performance test. Unless the Illinois EPA grants a time extension under 40 CFR 63.1207(i), the Permittee must conduct testing as follows:

- i. Comprehensive performance testing. Except as otherwise specified in 40 CFR 63.1207(d) (4), the Permittee must commence testing no later than 61 months after the date of commencing the previous comprehensive performance test. If the Permittee submits data in lieu of the initial performance test, the Permittee must commence the subsequent comprehensive

performance test within 61 months of commencing the test used to provide the data in lieu of the initial performance test.

- ii. Confirmatory performance testing. Except as otherwise specified in 40 CFR 63.1207(d) (4), the Permittee must commence confirmatory performance testing no later than 31 months after the date of commencing the previous comprehensive performance test. If the Permittee submits data in lieu of the initial performance test, the Permittee must commence the initial confirmatory performance test within 31 months of the date six months after the compliance date. To ensure that the confirmatory test is conducted approximately midway between comprehensive performance tests, the Illinois EPA will not approve a test plan that schedules testing within 18 months of commencing the previous comprehensive performance test.
- iii. Duration of testing. The Permittee must complete performance testing within 60 days after the date of commencement, unless the Illinois EPA determines that a time extension is warranted based on Permittee's documentation in writing of factors beyond Permittee's control that prevent the Permittee from meeting the 60-day deadline.
- iv. Applicable testing requirements under the interim standards.
 - A. Waiver of periodic comprehensive performance tests. Except as provide by 40 CFR 63.1207 (c) (2), the Permittee must conduct only an initial comprehensive performance test under the interim standards. All subsequent comprehensive performance testing requirements are waived under the interim standards. The provisions in the introductory text to 40 CFR 63.1207(d) and in (d) (1) do not apply until USEPA promulgates permanent replacement standards pursuant to the Settlement Agreement notices in the Federal Register on November 16, 2001.

- B. Waiver of confirmatory performance tests. The Permittee is not required to conduct a confirmatory test under the interim standards. The confirmatory testing requirements are waived under the interim standards. The provisions in the introductory text to 40 CFR 63.1207(d) and in (d)(2) do not apply until USEPA promulgates permanent replacement standards pursuant to the Settlement Agreement notices in the Federal Register on November 16, 2001.

- d. Notification of performance test and CMS performance evaluation, and approval of test plan and CMS performance evaluation plan [40 CFR 63.1207(e)].
 - i. The provisions of 40 CFR 63.7(b), (c), and 40 CFR 63.8(e) apply, except:
 - A. Comprehensive performance test. The Permittee must submit to the Illinois EPA a notification of Permittee's intention to conduct a comprehensive performance test and CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan at least one year before the performance test and performance evaluation are scheduled to begin.
 - 1. The Illinois EPA will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plant within 9 months after receipt of the original plan.
 - 2. The Permittee must submit to the Illinois EPA a notification of Permittee's intention to conduct the comprehensive performance test at least 60 calendar days before the test is scheduled to begin.

 - B. Confirmatory performance test. The Permittee must submit to the Illinois EPA a notification of the Permittee 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 60 calendar days before the performance test is scheduled to begin. The Permittee will notify the Permittee of approval or intent to deny approval of the site-specific test plan and CMS performance evaluation test plan within 30 calendar days after receipt of the original test plans.

- ii. After the Illinois EPA has approved the site-specific test plan and CMS performance evaluation test plan, the Permittee must make the test plans available to the public for review. The Permittee must issue a public notice announcing the approval of the test plans and the location where the test plans are available for review.
- e. Content of performance test plan. The provisions of 40 CFR 63.7(c)(2)(i)-(iii) and (v) regarding the content of the test plan apply. In addition, the Permittee must include the following information in the test plan:
 - i. Content of comprehensive performance test plan.
 - A. An analysis of each feedstream, including hazardous waste, other fuels, and industrial furnace feedstocks, as fired, that includes:
 - 1. Heating value, levels of ash (for hazardous waste incinerators only), levels of semi-volatile metals, low volatile metals, mercury, and total chlorine (organic and inorganic); and
 - 2. Viscosity or description of the physical form of the feedstream.
 - B. For organic hazardous air pollutants established by 42 U.S.C. 7412(b)(1),

excluding caprolactan (CAS number 105602)
as provided by 40 CFR 63.60:

1. An identification of such organic hazardous air pollutants that are present in the feedstream, except that Permittee does not need to analyze for organic hazardous air pollutants that would reasonably not be expected to be found in the feedstream. The Permittee must identify any constituents being excluded from analysis and explain the basis for excluding them. The Permittee must conduct the feedstream analysis according to 40 CFR 63.1208(b) (8);
 2. An approximate quantification of such identified organic hazardous air pollutants in the feedstreams, within the precision produced by the analytical procedures of 40 CFR 63.1208(b) (8);
 3. A description of blending procedures, if applicable, prior to firing the feedstream, including a detailed analysis of the materials prior to blending, and blending ratios; and
 4. The Administrator may approve on a case-by-case basis a hazardous waste feedstream analysis for organic hazardous air pollutants in lieu of the analysis required under 40 CFR 63.1207(f) (1) (ii) (A) if the reduced analysis is sufficient to ensure that the POHCs used to demonstrate compliance with the applicable DRE standard of 40 CFR 63.1203, continue to be representative of the organic hazardous air pollutants in your hazardous waste feedstreams.
- C. A detailed engineering description of the hazardous waste combustor, including:

1. Manufacturer's name and model number of the hazardous waste combustor;
 2. Type of hazardous waste combustor;
 3. Maximum design capacity in appropriate units;
 4. Description of the feed system for each feedstream;
 5. Capacity of each feed system;
 6. Description of automatic hazardous waste feed cutoff system(s);
 7. Description of design, operation, and maintenance practices for any air pollution control system; and
 8. Description of the design, operation, and maintenance practices of any stack gas monitoring and pollution control monitoring systems.
- D. A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;
- E. A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;
- F. A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste federate for each feed system, and, as appropriate, the federates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of

the hazardous waste combustor to meet the emission standards;

- G. A description of, and planned operating conditions for, any emission control equipment that will be used;
- H. Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction;
- I. A determination of the hazardous waste residence time as required by 40 CFR 63.1206(b) (11);
- J. If the Permittee request to extrapolate metal federate limits from comprehensive performance test levels under 40 CFR 63.1209(1) (1) (i) or 63.1209(n) (2) (ii) (A):
 - 1. A description of the extrapolation methodology and rationale for how the approach ensures compliance with the emission standards;
 - 2. Documentation of the historical range of normal (i.e., other than during compliance testing) metals federates for each feedstream; and
 - 3. Documentation that the level of spiking recommended during the performance test will mask sampling and analysis imprecision and inaccuracy to the extent that the extrapolated federate limits adequately assure compliance with the emission standards.
- K. If the Permittee does not continuously monitor regulated constituents in natural gas, process air feedstreams, and feedstreams from vapor recovery systems under 40 CFR 63.1209(c) (5), then include documentation of the expected levels of regulated constituents in those feedstreams;

- L. Documentation justifying the duration of system conditions required to ensure the combustor has achieved steady-state operations under performance test operating conditions, as provided by 40 CFR 63.1207(g) (1) (iii);
- M. If the Permittee proposed to use a surrogate for measuring or monitoring gas flowrate, this must be documented in the comprehensive performance test plan that the surrogate adequately correlates with gas flowrate, as required by 40 CFR 63.1207(m) (7), and 63.1209(j) (2), (k) (3), (m) (2) (i), (m) (5) (i), and (o) (2) (i);
- N. The Permittee must submit an application to request alternative monitoring under 40 CFR 63.1209(g) (1) not later than with the comprehensive performance test plan, as required by 63.1209(g) (1) (iii) (A);
- O. The Permittee must document the temperature location measurement in the comprehensive performance test plan, as required by 40 CFR 63.1209(j) (1) (i) and 63.1209(k) (2) (i);
- P. If the source is equipped with activated carbon injection, the Permittee must document in the comprehensive performance test plan:
 - 1. The manufacturer specifications for minimum carrier fluid flowrate or pressure drop, as required by 40 CFR 63.1209(k) (6) (ii); and
 - 2. Key parameters that affect carbon adsorption, and the operating limits the Permittee establishes for those parameters based on the carbon used during the performance test, if the Permittee elects not to specify and use the brand and type of carbon used during the comprehensive performance test, as required by 40 CFR 63.1209(k) (6) (iii).

3. If the source is equipped with a carbon bed system, the Permittee must include in the comprehensive performance test plan:
 4. A recommended schedule for conducting a subsequent performance test to document compliance with the dioxin/furan and mercury emission standards if the Permittee uses manufacturer specifications rather than actual bed age at the time of the test to establish the initial limit on bed age, as required by 40 CFR 63.1209(k) (7) (i)©; and
 5. Key parameters that affect carbon adsorption, and the operating limits the Permittee established for those parameters based on the carbon used during the performance test, if the Permittee elects not to specify and use the brand and type of carbon used during the comprehensive performance test, as required by 40 CFR 63.1209(k) (7) (ii).
- R. If the Permittee feeds a dioxin/furan inhibitor into the combustion system, The Permittee must document in the comprehensive performance test plan key parameters that affect the effectiveness of the inhibitor, and the operating limits The Permittee establish for those parameters based on the inhibitor fed during the performance test, if The Permittee elect not to specify and use the brand and type of inhibitor used during the comprehensive performance test, as required by 40 CFR 63.1209(k) (9) (ii).
- S. If the source is equipped with a particulate matter control device other than a wet scrubber, baghouse, or electrostatic precipitator, the Permittee

must include in the comprehensive performance test plan:

1. Documentation to support the operating parameter limits the Permittee establishes for the control device, as required by 40 CFR 63.1209(m) (1) (iv) (A) (4); and
2. Support for the use of manufacturer specification if the Permittee recommends such specifications in lieu of basing operating limits on performance test operating levels, as required by 40 CFR 63.1209(m) (1) (iv) (D).

T. Such other information as the Illinois EPA reasonably finds necessary to determine whether to approve the performance test plan.

f. Content of confirmatory test plan.

- i. A description of the Permittee's normal hydrocarbon or carbon monoxide operating levels, as specified in 40 CFR 63.1207(g) (2) (i), and an explanation of how these normal levels were determined;
- ii. A description of the Permittee's normal applicable operating parameter levels, as specified in 40 CFR 63.1207(g) (2) (ii), and an explanation of how these normal levels were determined;
- iii. A description of the Permittee's normal chlorine operating levels, as specified in 40 CFR 63.1207(g) (2) (iii), and an explanation of how these normal levels were determined;
- iv. If the Permittee uses carbon injection or a carbon bed, a description of the normal cleaning cycle of the particulate matter control device, as specified in 40 CFR 63.1207(g) (2) (iv), and an explanation of how these normal levels were determined;

- v. A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis;
 - vi. A detailed test schedule for each hazardous waste for which the performance test is planned, including date(s), duration, quantity of hazardous waste to be burned, and other relevant factors;
 - vii. A detailed test protocol, including for each hazardous waste for which the performance test is planned, the ranges of hazardous waste feedrate for each feed system, and, as appropriate, the feedrates of other fuels and feedstocks, and any other relevant parameters that may affect the ability of the hazardous waste combustor to meet the dioxin/furan emission standard;
 - viii. A description of, and planned operating conditions for, any emission control equipment that will be used;
 - ix. Procedures for rapidly stopping the hazardous waste feed and controlling emission in the event of an equipment malfunction; and
 - x. Such other information as the Illinois EPA reasonably finds necessary to determine whether to approve the confirmatory test plan must comply with the provisions of 40 CFR 63.7(e). Conducting performance testing under operating conditions representative of the extreme range of normal conditions is consistent with the requirements of 40 CFR 63.7(e)(1) to conduct performance testing under representative operating conditions.
- g. Comprehensive performance testing. Operations during testing. For the following parameters, the Permittee must operate the combustor during the performance test under normal conditions (or conditions that will result in higher than normal emissions):

- i. Chlorine federate. The Permittee must feed normal (or higher) levels of chlorine during the dioxin/furan performance test;
- ii. Ash federate. For hazardous waste incinerators, the Permittee must conduct the following tests when feeding normal (or higher) levels of ash:
 - A. The semi-volatile metal and low volatile metal performance tests; and
 - B. The dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used; and
- iii. Cleaning cycle of the particulate matter control device. The Permittee must conduct the following tests when the particulate matter control device undergoes its normal (or more frequent) cleaning cycle:
 - A. The particulate matter, semi-volatile metal, and low volatile metal performance tests; and
 - B. The dioxin/furan and mercury performance tests if activated carbon injection or a carbon bed is used.
- h. Modes of operation. Given that the Permittee must establish limits for the applicable operating parameters specified in 40 CFR 63.1209 based on operations during the comprehensive performance test, the Permittee may conduct testing under two or more operating modes to provide operating flexibility.
- i. Steady-state conditions. Prior to obtaining performance test data, the Permittee must operate under performance test conditions until reaching steady-state operations with respect to emissions of pollutants the Permittee must measure during the performance test and operating parameters under 40 CFR 63.1209 for which the Permittee must establish limits. During system conditions, the Permittee must ensure that each operating parameter for which the Permittee must establish a limit is held at the level planned for the performance test. The Permittee must include documentation in the performance test plan

under 40 CFR 63.1207(f) justifying the duration of system conditioning.

- j. Confirmatory performance testing. The Permittee must conduct confirmatory performance testing for dioxin/furan under normal operating conditions for the following parameters:
- i. Carbon monoxide (or hydrocarbon) CEMS emission levels must be within the range of the average value to the maximum value allowed. The average value is defined as the sum of the hourly rolling average values recorded (each minute) over the previous 12 months divided by the number of rolling averages recorded during that time;
 - ii. Each operating limit (specified in 40 CFR 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 12 months and the maximum or minimum, as appropriate, that is allowed. The average value is defined as the sum of the rolling average values recorded over the previous 12 months divided by the number of rolling averages recorded during that time. The average value must not include calibration data, malfunction data, and data obtained when not burning hazardous waste; must feed chlorine at normal federates or greater; and if the combustor is equipped with carbon injection or carbon bed, normal cleaning cycle of the particulate matter control device.
- k. Operating conditions during subsequent testing. Current operating parameter limits established under 40 CFR 1209 are waived during subsequent comprehensive performance testing under an approved test plan. Current operating parameter limits are also waived during pretesting prescribed in the approved test plan prior to comprehensive performance testing for an aggregate time not to exceed 720 hours of operation (renewable at the discretion of the Illinois EPA). Pretesting means:
- i. Operations when stack emissions testing for dioxin/furan, mercury, semi-volatile metals, low volatile metals, particulate matter, or

hydrochloric acid/chlorine gas is being performed; and

- ii. Operations to reach steady-state operating conditions prior to stack emissions testing under 40 CFR 63.1207(g) (1) (iii).

- 1. Time extension for subsequent performance tests.
After the initial comprehensive performance test, the Permittee may request up to a one-year time extension for conducting a comprehensive or confirmatory performance test to consolidate performance testing with other state or federally required emission testing, or for other reasons deemed acceptable by the Illinois EPA. If the Illinois EPA grants a time extension for a comprehensive performance test, the deadlines for commencing the next comprehensive and confirmatory tests are based on the date that the subject comprehensive performance test commences, must submit in writing to the Illinois EPA any request under 40 CFR 1207(i) for a time extension for conducting a performance test must include in the request for an extension for conduction a performance test the following:

- i. A description of the reasons for requesting the time extension; and
- ii. The date by which the Permittee will commence performance testing.

The Illinois EPA will notify the Permittee in writing of approval or intention to deny approval of such request for an extension for conducting a performance test within 30 calendar days after receipt of sufficient information to evaluate this request. The 30-day approval or denial period will begin after notification to the Permittee in writing that an application is complete. The Illinois EPA will notify the Permittee in writing whether the application contains sufficient information to make a determination within 30 calendar days after receipt of the original application and within 30 calendar days. When notifying the Permittee that the application is not complete, the Illinois EPA will specify the information needed to complete the application. The Illinois EPA will also provide notice of opportunity for the Permittee to present, in writing, within 30 calendar days after

notification of the incomplete application, additional information or arguments to the Illinois EPA to enable further action on the application. Before denying any request for an extension for performance testing, the Illinois EPA will notify the Permittee in writing of the Illinois EPA's intention to issue the denial, together with:

- i. Notice of the information and findings on which the intended denial is based; and
- ii. Notice of opportunity for the Permittee to present in writing within 15 calendar days after notification of the intended denial, additional information or arguments to the Illinois EPA before further action on the request.

The Illinois EPA's final determination to deny any request for an extension will be in writing and will set forth specific grounds upon which the denial is based. The final determination will be made within 30 calendar days after the presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

- m. Notification of compliance [40 CFR 63.1207(j)]. Comprehensive performance test. Within 90 days of completion of a comprehensive performance test, the Permittee must postmark a Notification of Compliance documenting compliance or noncompliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under 40 CFR 63.1209. Upon postmark of the Notification of Compliance, the Permittee must comply with all operating requirements specified in the Notification of Compliance in lieu of the limits specified in the Documentation of Compliance required under 40 CFR 63.1211(c).
- n. Confirmatory performance test. Except as provided by 40 CFR 63.1207(j)(4) and Conditions of this permit, within 90 days of completion of a confirmatory performance test, the Permittee must postmark a Notification of Compliance documenting compliance or noncompliance with the applicable dioxin/furan emission standard. See 40 CFR 63.7(g), 63.9(h), and

63.1210(d) for additional requirements pertaining to the Notification of Compliance (e.g., the Permittee must include results of performance tests in the Notification of Compliance).

- o. Time extension. The Permittee may submit a written request to the Illinois EPA for a time extension documenting that, for reasons beyond Permittee's control, the Permittee may not be able to meet the 90-day deadline for submitting the Notification of Compliance after completion of testing. The Illinois EPA will determine whether a time extension is warranted.
- p. Failure to submit a timely Notification of Compliance [40 CFR 63.1207(k)].
 - i. If the Permittee fails to postmark a Notification of Compliance by the specified date, then the Permittee must cease hazardous waste burning immediately.
 - ii. Prior to submitting a revised Notification of Compliance as provided by 40 CFR 63.1207(k)(3), the Permittee may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing and only for a maximum of 720 hours (renewable at the discretion of the Illinois EPA).
 - iii. The Permittee must submit to the Illinois EPA a Notification of Compliance subsequent to a new comprehensive performance test before resuming hazardous waste burning.
- q. Failure of performance test [40 CFR 63.1207(1)].
 - i. Comprehensive performance test.
 - A. If The Permittee determines (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that any emission standard has been exceeded during a comprehensive performance test for a mode of operation, the Permittee must cease hazardous waste burning immediately under that mode of operation. The Permittee must make this

determination within 90 days following completion of the performance test.

- B. If the Permittee has failed to demonstrate compliance with the emission standards for any mode of operation:
 - 1. Prior to submitting a revised Notification of Compliance as provided by 40 CFR 63.1207 (1)(1)(ii)(C), the Permittee may burn hazardous waste only for the purpose of pretesting or comprehensive performance testing under revised operating conditions, and only for a maximum of 720 hours (renewable at the discretion of the Administrator), except as provided by 40 CFR 63.1207(1)(3);
 - 2. The Permittee must conduct a comprehensive performance test under revised operating conditions following the requirements for performance testing of this section; and
 - 3. The Permittee must submit to the Illinois EPA a Notification of Compliance subsequent to the new comprehensive performance test.

- ii. Confirmatory performance test. If the Permittee determines (based on CEM recordings, results of analyses of stack samples, or results of CMS performance evaluations) that HWC have failed the dioxin/furan emission standard during a confirmatory performance test, the Permittee must cease burning hazardous waste immediately. The Permittee must make this determination within 90 days following completion of the performance test. To burn hazardous waste in the future:
 - A. The Permittee must submit to the Illinois EPA for review and approval a test plan to conduct a comprehensive performance test to identify revised limits on the applicable dioxin/furan operating

parameters specified in 40 CFR
63.1209(k);

- B. The Permittee must submit to the Illinois EPA a Notification of Compliance with the dioxin/furan emission standard under the provisions of 40 CFR 63.1207(j), (k), and (l). The Permittee must include in the Notification of Compliance the revised limits on the applicable dioxin/furan operating parameters specified in 40 CFR 63.1209(k); and
 - C. Until the Notification of Compliance is submitted, the Permittee must not burn hazardous waste except for purposes of pretesting or confirmatory performance testing, and for a maximum of 720 hours (renewable at the discretion of the Illinois EPA), except as provided by 40 CFR 63.1207(l)(3).
- iii. The Permittee may petition the Illinois EPA 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 must specify operating requirements, including limits on operating parameters, that Permittee determines will ensure compliance with the emission standards of this subpart based on available information including data from the failed performance test. The Illinois EPA will review, modify as necessary, and approve if warranted the interim operating requirements. An approval of interim operating requirements will include a schedule for submitting a Notification of Compliance.
- r. Waiver of performance test [40 CFR 63.1207(m)].
- i. The waiver provision applies in addition to the provisions of 40 CFR 63.7.
 - ii. The Permittee is not required to conduct performance tests to document compliance with the mercury, semi-volatile metal, low volatile metal or hydrochloric acid/chlorine gas emission standards under the conditions

specified below. The Permittee are deemed to be in compliance with an emission standard if the twelve-hour rolling average maximum theoretical emission concentration (MTEC) determined as specified below does not exceed the emission standard:

- A. Determine the feedrate of mercury, semi-volatile metals, low volatile metals, or total chlorine and chloride from all feedstreams;
 - B. Determine the stack gas flowrate; and
 - C. Calculate a MTEC for each standard assuming all mercury, semi-volatile metals, low volatile metals, or total chlorine (organic and inorganic) from all feedstreams is emitted.
- iii. To document compliance with this provision, the Permittee must:
- A. Monitor and record the feedrate of mercury, semi-volatile metals, low volatile metals, and total chlorine and chloride from all feedstream according to 40 CFR 63.1209(c);
 - B. Monitor with a CMS and record in the operating record the gas flowrate (either directly or by monitoring a surrogate parameter that The Permittee have correlated to gas flowrate);
 - C. Continuously calculate and record in the operating record the MTEC under the procedures of 40 CFR 63.1207(m)(2); and
 - D. Interlock the MTEC calculated in 40 CFR 63.1207(m)(2)(iii) to the AWFCO system to stop hazardous waste burning when the MTEC exceeds the emission standard.
- iv. In lieu of the requirement of 40 CFR 63.1207(m)(3)(iii) and (iv), the Permittee may:

- A. Identify in the Notification of Compliance a minimum gas flowrate limit and a maximum federate limit of mercury, semi-volatile metals, low volatile metals, and/or total chlorine and chloride from all feedstreams that ensures the MTEC as calculated in 40 CFR 63.1207(m) (2) (iii) is below the applicable emission standard; and
 - B. Interlock the minimum gas flowrate limit and maximum federate limit in 40 CFR 63.1207(m) (3) (iv) to the AWFCO system to stop hazardous waste burning when the gas flowrate or mercury, semi-volatile metals, low volatile metals, and/or total chlorine and chloride federate exceeds the limit in 40 CFR 63.1207(m) (4) (i).
- v. When the Permittee determines the federate of mercury, semi-volatile metals, low volatile metals, or total chlorine and chloride for purposes of this provision, except as provided by 40 CFR 63.1207(m) (6), the Permittee must assume that the analyte is present at the full detection limit when the feedstream analysis determines that the analyte is not detected in the feedstream.
 - vi. Owners and operators of hazardous waste burning cement kiln and lightweight aggregate kilns may assume that mercury is present in raw material at half the detection limit when the raw material feedstream analysis determines that mercury is not detected.
 - vii. The Permittee must state in the site-specific test plan that the Permittee submit for review and approval under 40 CFR 63.1207(e) that Permittee intends to comply with these provisions. The Permittee must include in the test plan documentation that any surrogate that is proposed for gas flowrate adequately correlates with the gas flowrate.
- s. Test Methods [40 CFR 63.1208]

- i. The Permittee must use the following test methods to determine compliance with the emissions standards of Subpart EEE:

A. Dioxins and Furans

1. The Permittee must use Method 0023A, Sampling Method for Polychlorinated Dibenzop-Dioxins and Polychlorinated Dibenzofurans emissions from Stationary Sources, EPA Publication SW-846, as incorporated by reference in 40 CFR 63.1208(a), to determine compliance with the emission standard for dioxins and furans;
2. The Permittee must sample for a minimum of three hours, and the Permittee must collect a minimum sample volume of 2.5 dscm; and
3. The Permittee may assume that nondetects are present at zero concentration.

B. Mercury. The Permittee must use Method 29, provided in Appendix A, 40 CFR Part 60, to demonstrate compliance with emission standard for mercury.

C. Cadmium and Lead. The Permittee must use Method 29, provided in Appendix A, 40 CFR Part 60, to determine compliance with the emission standard for cadmium and lead (combined).

D. Arsenic, beryllium, and chromium. The Permittee must use Method 29, provided in Appendix A, 40 CFR Part 60, to determine compliance with the emission standard for arsenic, beryllium, and chromium (combined).

E. Hydrochloric acid and chlorine gas. The Permittee may use Methods 26A, 320, or 321 provided in Appendix A, 40 CFR Part 60, to determine compliance with the emission standard for hydrochloric acid

and chlorine gas (combined). The Permittee may use Methods 320 or 321 to make major source determinations under 40 CFR 63.9(b)(2)(v).

- F. Particulate matter. The Permittee must use Methods 5 or 5I, provided in Appendix A, 40 CFR Part 60, to demonstrate compliance with the emission standard for particulate matter.
- G. Other Test Methods. The Permittee may use applicable test methods in EPA Publication SW-846, as incorporated by reference in 40 CFR 63.1208(a), as necessary to demonstrate compliance with requirements of this subpart, except as otherwise specified in 40 CFR 63.1208(b)(2)-(b)(6).
- H. Feedstream analytical methods. The Permittee may use any reliable analytical method to determine feedstream concentrations of metals, chlorine, and other constituents. It is the Permittee responsibility to ensure that the sampling and analysis procedures are unbiased, precise, and that the results are representative of the feedstream. For each feedstream, the Permittee must demonstrate:
 - 1. Each analyte is not present above the reported level at the 80% upper confidence limit around the mean; and
 - 2. The analysis could have detected the presence of the constituent at or below the reported level at the 80% upper confidence limit around the mean. (See Guidance for Data Quality Assessment-Practical Methods for Data Analysis, EPA QA/G-9, January 1998, EPA/600/R-96/084).
- I. Opacity

If the Permittee determines compliance with the opacity standard under the monitoring requirements of 40 CFR 63.1209(a)(1)(iv) and (a)(1)(v), then Method 9 shall be used.

- ii. References. When required in subpart EEE of this part, the following publication is incorporated by reference, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846 Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), III (December 1996). The Third Edition of SW-846 and Updates I, II, IIA, IIB, and III (document number 955-001-00000-1) are available for the Superintendent of Document, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800. Copies of the Third Edition and its updates are also available from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703)487-4650. Copies may be inspected at the Library, U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460; or at the Office of the Federal Register, 800 North Capital Street, N.W., Suite 700, Washington, DC.

7.1.8 Monitoring Requirements

- a. The Permittee shall maintain, calibrate and operate monitoring equipment which continuously records the operating parameters specified in this permit. The Permittee shall monitor affected HWC and record the data as follows, as established in the permits #83120053, #87100024, and #90020011:

- i. HWC #2 and #3

Parameter	Method	Monitoring Frequency	Calibration Frequency
Upper and Lower Chamber Temperature	Type K Thermocouple	Continuously	Annually

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Parameter	Method	Monitoring Frequency	Calibration Frequency
Spray Dryer Adsorber Inlet Temperature	Type K Thermocouple	Continuously	Annually
Spray Dryer Adsorber Outlet Temperature	Type K Thermocouple	Continuously	Annually
Combustion Gas Flowrate	Pitot Tube	Continuously	Annually
Stack Gas Excess Oxygen	Zirconium Oxide Fuel Cell	Continuously	Quarterly
Stack Carbon Monoxide	Extractive IR	Continuously	Quarterly
Stack Hydrocarbon	Extractive IR	Continuously	Quarterly
Stack Gas Opacity	White Light	Continuously	Quarterly
Stack Hydrogen Chloride	Extractive IR	Continuously	Quarterly
Liquid Feedrate	Mass Flow Meter	Continuously	Annually
Specialty Feeder	Scale	Continuously	Quarterly
Fabric Filter Pressure Drop	Delta P Transmitter	Continuously	Quarterly
Chamber Pressure	Pressure Transmitter	Continuously	Quarterly
Spills, Leaks, Fugitive	Visual	Daily	N/A
Waste Feed Cut-off System	Operational Inspection	Daily	Bi-Weekly
Concentrated Lime Flow	Magnetic	Continuously	Annually
Direct Inject Feeder	Scale		

ii. HWC #4

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Parameter	Method	Monitoring Frequency	Calibration Frequency
High Btu Liquid Waste Feedrate	Mass Flow Meter	Continuously	Annually
Aqueous Liquid Waste Feedrate	Mass Flow Meter	Continuously	Annually
Sludge Waste Feedrate	Mass Flow Meter	Continuously	Annually
Drummed & Bulk Solid Waste Feedrate	Scale	Each Charge	Annually
Waste Derived Fuel Feedrate	Mass Flow Meter	Continuously	Annually
Natural Gas	Limiting Orifice	Continuously	Annually
Kiln and Secondary Chamber Temperature Transmitter	Infrared Pyrometers or Thermocouples	Continuously	Annually
Spray Dryer Adsorber Inlet Temperature	Type "K" Thermocouples	Continuously	Annually
Combustion Gas Flow Rate	Pilot Tube	Continuously	Annually
Stack Gas CO	Extractive IR	Continuously	Monthly
Stack Gas Total Hydrocarbons	Extractive IR	Continuously	Monthly
Stack Gas Opacity	White Light	Continuously	Monthly
Stack Gas HCL Flow Rate	Extractive IR	Continuously	Monthly
Fabric Filter Pressure Drop	Delta P Transmitter	Continuously	Quarterly

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Parameter	Method	Monitoring Frequency	Calibration Frequency
Chamber Pressures	Pressure Transmitter	Continuously	Quarterly
Automatic Waste Feed Cut-off System	Operational Inspection	Daily	Biweekly

- b. Continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS).
- i. The Permittee must use either a carbon monoxide or hydrocarbon CEMS to demonstrate any monitor compliance with the carbon monoxide and hydrocarbon standard under Subpart EEE. The Permittee must also use an oxygen CEMS to continuously correct the carbon monoxide or hydrocarbon level to 7 percent oxygen.
 - ii. The Permittee must install, calibrate, maintain, and operate a particulate matter CEMS to demonstrate and monitor compliance with the particulate matter standards under Subpart EEE. However, compliance with the requirements in 40 CFR 63.1209 to install, calibrate, maintain, and operate the PM CEMS is not required until such time that the USEPA promulgates all performance specifications and operational requirements applicable to PM CEMS.
 - iii. Performance specifications. The Permittee must install, calibrate, maintain, and continuously operate the CEMS and COMS in compliance with the quality assurance procedures provided in the appendix to Subpart EEE and Performance Specifications 1 (opacity), 4B (carbon monoxide and oxygen), and 8A (hydrocarbons) in Appendix B of 40 CFR Part 60.
 - iv. Carbon monoxide readings exceeding the span.
 - A. Except as provided by 40 CFR 63.1209(a)(3)(ii), if a carbon monoxide CEMS detects a response that results in a one-minute average at or above the 3,000

ppmv span level required by Performance Specification 4B in Appendix B of 40 CFR Part 60, the one-minute average must be recorded as 10,000 ppmv. The one-minute 10,000 ppmv value must be used for calculating the hourly rolling average carbon monoxide level.

- B. Carbon monoxide CEMS that use a span value of 10,000 ppmv when one-minute carbon monoxide levels are equal to or exceed 3,000 ppmv are not subject to 40 CFR 63.1209(a)(3)(i). Carbon monoxide CEMS that use a span value of 10,000 are subject to the same CEMS performance and equipment specifications when operating in the range of 3,000 ppmv to 10,000 ppmv that are provided by Performance Specification 4B for other carbon monoxide CEMS, except:
 - 1. Calibration drift must be less than 300 ppmv; and
 - 2. Calibration error must be less than 500 ppmv.

- v. Hydrocarbon readings exceeding the span.
 - A. Except as provided by 40 CFR 63.1209(a)(4)(ii), if a hydrocarbon CEMS detects a response that results in a one-minute average at or above the 100 ppmv span level required by Performance Specification 8A in Appendix B, 40 CFR Part 60, the one-minute average must be recorded as 500 ppmv. The one-minute 500 ppmv value must be used for calculating the hourly rolling average HC level.
 - B. Hydrocarbon CEMS that use a span value of 500 ppmv when one-minute hydrocarbon levels are equal to or exceed 100 ppmv are not subject to 40 CFR 63.1209(a)(4)(i). Hydrocarbon CEMS that use a span value of 500 ppmv are subject to the same CEMS performance and equipment specifications when operating in the range of 100 ppmv to 500 ppmv that

are provided by Performance Specification 8A for other hydrocarbon CEMS, except:

1. The zero and high-level calibration gas must have a hydrocarbon level of between 0 and 100 ppmv, and between 250 and 450 ppmv, respectively;
 2. The strip chart recorder, computer, or digital recorder must be capable of recording all readings within the CEM measurement range and must have a resolution of 2.5 ppmv;
 3. The CEMS calibration must not differ by more than ± 15 ppmv after each 24-hour period of the seven day test at both zero and high levels;
 4. The calibration error must be no greater than 25 ppmv; and
 5. The zero level, mid-level, and high level calibration gas used to determine calibration error must have a hydrocarbon level of 0-200 ppmv, 15-200 ppmv, and 350-400 ppmv, respectively.
- vi. Petitions to use CEMS for other standards. The Permittee may petition the Illinois EPA to use CEMS for compliance monitoring for particulate matter, mercury, semi-volatile metals, low volatile metals, and hydrochloric acid/chlorine gas under 40 CFR 63.8(f) in lieu of compliance with the corresponding operating parameter limits.
- vii. Calculation of rolling averages.
- A. Calculation of rolling averages initially. The carbon monoxide or hydrocarbon CEMS must begin recording one-minute average values by 12:01 a.m. and hourly rolling average values by 1:01 a.m., when 60 one-minute values will be available for calculating the initial

hourly rolling average for those sources that come into compliance on the regulatory compliance date. Sources that elect to come into compliance before the regulatory compliance date must begin recording one-minute and hourly rolling average values within 60 seconds and 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), respectively, from the time at which compliance begins.

- B. Calculation of rolling averages upon intermittent operations. The Permittee must ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the first one-minute value is added to the previous 59 values to calculate the hourly rolling average.
- C. Calculation of rolling averages when the hazardous waste feed is cutoff.
 - 1. Except as provided by 40 CFR 63.1209(a)(6)(iii)(B), the Permittee must continue monitoring carbon monoxide and hydrocarbons when the hazardous waste feed is cutoff if the source is operating. The Permittee must not resume feeding hazardous waste if the emission levels exceed the standard.
 - 2. The Permittee is not subject to the CEMS requirements during periods of time the requirements of 40 CFR 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when the Permittee is not burning hazardous waste) are met.
- viii. Operating parameter limits for hydrocarbons. If the Permittee elects to comply with the carbon monoxide and hydrocarbon emission standard by continuously monitoring carbon

monoxide with a CEMS, the Permittee must demonstrate that hydrocarbon emissions during the comprehensive performance test do not exceed the hydrocarbon emissions standard. In addition, the limits the Permittee established on the destruction and removal efficiency (DRE) operating parameters required under 40 CFR 63.1209(j) also ensure that the Permittee maintains compliance with the hydrocarbon emission standard. If the Permittee does not conduct the hydrocarbon demonstration and DRE tests concurrently, separate operating parameter limits under 40 CFR 63.1209(j) shall be established based on each test and the more restrictive of the operating parameter limits applies.

c. Other continuous monitoring systems (CMS).

- i. The Permittee must use CMS (e.g., thermocouples, pressure transducers, flow meters) to document parameter limits under this section.
- ii. Except as specified in 40 CFR 63.1209(b)(2)(I) and (ii), the Permittee must install and operate continuous monitoring systems other than CEMS in conformance with 40 CFR 63.8(c)(3) that requires the source, at a minimum, to comply with the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system:
 - A. Calibration of thermocouples. The calibration of a thermocouple or other temperature sensor must be verified at least once every three months; and
 - B. Accuracy and calibration of weight measurement devices. The accuracy of weight measurement devices used to monitor flowrate of a feedstream (e.g., activated carbon feedrate, sorbent feedrate, nonpumpable waste) must be ± 1 percent of the weight being measured. The calibration of the device must be verified at least once every three months.

- iii. CMS must sample the regulated parameter without interruption, and evaluate the detector response at least once each 15 seconds, and compute and record the average values at least every 60 seconds.
- iv. The span of the non-CEMS CMS detector must not be exceeded. The Permittee must interlock the span limits into the automatic waste feed cutoff system required by 40 CFR 63.1206(c)(3).
- v. Calculation of rolling averages.
 - A. Calculation of rolling averages initially. Continuous monitoring systems must begin recording one-minute average values by 12:01 a.m., hourly rolling average values by 1:01 a.m. (e.g., when 60 one-minute values will be available for calculating the initial hourly rolling average), and twelve-hour rolling averages by 12:01 p.m. (e.g., when 720 one-minute averages are available to calculate a 12-hour rolling average), for those sources that come into compliance on the regulatory compliance date. Source that elect to come into compliance before the regulatory compliance date must begin recording one-minute, hourly rolling average, and 12-hour rolling average values within 60 seconds, 60 minutes (when 60 one-minute values will be available for calculating the initial hourly rolling average), and 720 minutes (when 720 one-minute values will be available for calculating the initial 12-hour rolling average) respectively, from the time at which compliance begins.
 - B. Calculation of rolling averages upon intermittent operations. The Permittee must ignore periods of time when one-minute values are not available for calculating rolling averages. When one-minute values become available again, the first one-minute value is added to the

previous one-minute values to calculate rolling averages.

- C. Calculation of rolling averages when the hazardous waste feed is cutoff.
 - 1. Except as provided by 40 CFR 63.1209(b)(5)(iii)(B), the Permittee must continue to monitor operating parameter limits with a CMS when the hazardous waste feed is cutoff if the source is operating. Feeding hazardous waste is not resumed if an operating parameter exceeds its limit.
 - 2. The source is not subject to the CMS requirements of Subpart EEE during periods of time the Permittee meets the requirements of 40 CFR 63.1206(b)(1)(ii) (compliance with emissions standards for nonhazardous waste burning sources when The Permittee are not burning hazardous waste).

d. Analysis of feedstreams

- i. General. Prior to feeding the material, the Permittee must obtain an analysis of each feedstream that is sufficient to document compliance with the applicable feedrate limits provided by this section.
- ii. Feedstream analysis plan. The Permittee must 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 feestream 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 federate limits (e.g., if The Permittee blend hazardous wastes and obtain analyses of the wastes 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 Appendix I, Part 26, of this chapter, 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.
- iii. Review and approval of analysis plan. The Permittee must submit the feedstream analysis plan to the Illinois EPA for review and approval, if requested.
- iv. Compliance with federate limits. To comply with the applicable federate limits of this section, the Permittee must monitor and record federates 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 flowrate of each feedstream by a CMS. If the Permittee determines flowrate of a feedstream by volume, the Permittee must determine and record the density of the feedstream by sampling and analysis (unless The Permittee report the

constituent concentration in units of weight per unit volume (e.g., mg/l)); and

- C. Calculate and record the mass federate of the parameter per unit time.

- v. Waiver of monitoring of constituents in certain feedstreams. The Permittee is not required to monitor levels of metals or chlorine in the following feedstreams to document compliance with the federate limits under this section provided that the Permittee documents in the comprehensive performance test 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.

- e. Performance evaluations
 - i. The requirements of 40 CFR 63.8(d) (Quality control program) and (e) (Performance evaluation of continuous monitoring systems) apply, except that the Permittee must conduct performance evaluations of components of the CMS under the frequency and procedures (for example, submittal of performance evaluation test plan for review and approval) applicable to performance tests as provided by 40 CFR 63.1207.

 - ii. The Permittee must comply with the quality assurance procedures for CEMS prescribed in the appendix to Subpart EEE.

- f. Conduct of monitoring. The provisions of 40 CFR 63.8(b) apply.

- g. Operation and maintenance of continuous monitoring systems. The provisions of 40 CFR 63.8(b) apply except:
 - i. 40 CFR 63.8(c) (3). The requirements of 40 CFR 63.1211(d), that requires CEMSs to be installed, calibrated, and operational on the compliance date, shall be complied with instead of 40 CFR 63.8(c) (3); and

- ii. 40 CFR 63.8(c)(4)(ii). The performance specifications for carbon monoxide, hydrocarbon, and oxygen CEMSs in 40 CFR Part 60, Subpart B that requires detectors to measure the sample concentration at least once every 15 seconds for calculating an average emission rate once every 60 seconds shall be complied with instead of 40 CFR 63.8(c)(4)(ii).
- h. Alternative monitoring requirements other than continuous emissions monitoring systems (CEMS).
 - i. Requests to use alternative methods
 - A. The Permittee may submit an application to the USEPA for approval of alternative monitoring requirements to document compliance with the emission standards of this subpart. For requests to use additional CEMS, however, the Permittee must use 40 CFR 63.1209(a)(5) and 40 CFR 63.8(f).
 - 1. The USEPA will not approve averaging periods for operating parameter limits longer than specified in this section unless the Permittee documents using data or information that the longer averaging period will ensure that emissions do not exceed levels achieved during the comprehensive performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.
 - 2. If the USEPA approves the application to use an alternative monitoring requirement, the Permittee must continue to use that alternative monitoring requirement until approval under this paragraph to use another monitoring requirement.

- B. The Permittee may submit an application to waive an operating parameter limit specified in this section based on documentation that neither that operating parameter limit nor an alternative operating parameter limit is needed to ensure compliance with the emission standards of this subpart.
- C. The Permittee must comply with the following procedures for applications submitted under 40 CFR 63.1209(g) (1) (i) and (ii):
1. *Timing of the application.* The Permittee must submit the application to the Illinois EPA not later than with the comprehensive performance test plan.
 2. *Content of the application.* The Permittee must include in the application:
 - Data or information justifying the Permittee's request for an alternative monitoring requirement (or for a waiver of an operating parameter limit), such as the technical or economic infeasibility or the impracticality of using the required approach;
 - A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach/technique (e.g., type of detector, monitoring location), the averaging period for the limit, and how the limit is to be calculated; and
 - Data or information documenting that the

alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard, or that it is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable.

3. *Approval of request to use an alternative monitoring requirement or waive an operating parameter limit.* The USEPA will notify the Permittee of approval or intention to deny approval of the request within 90 calendar days after receipt of the original request and within 60 calendar days after receipt of any supplementary information that The Permittee submit. The Permittee will not approve an alternative monitoring request unless the alternative monitoring requirement provides equivalent or better assurance of compliance with the relevant emission standard, or is the monitoring requirement that best assures compliance with the standard and that is technically and economically practicable. Before disapproving any request, the USEPA will notify the Permittee of out intention to disapprove the request together with:

- Notice of the information and findings on which the intended disapproval is based; and
- Notice of opportunity for the Permittee to present additional information to the USEPA before final action on the request. At the time the

USEPA notifies the Permittee of intention to disapprove the request, the USEPA will specify how much time The Permittee will have after being notified of the intended disapproval to submit the additional information.

4. *Responsibility of owners and operators.* The Permittee is responsible for ensuring and submittal of any supplementary and additional information supporting an application in a timely manner to enable the Illinois EPA to consider an application during review of the comprehensive performance test plan. Neither Permittee's submittal of an application, nor the Illinois EPA's failure to approve or disapprove an application, relieves the Permittee of the responsibility to comply with the provisions of this subpart.
 - i. Reduction of monitoring data. The provisions of 40 CFR 63.8(g) apply.
 - j. When an operating parameter is applicable to multiple standards. 40 CFR 63.1209(j) through (p) require the Permittee to establish limits on operating parameters based on comprehensive performance testing to ensure the Permittee maintains compliance with the emission standards. For several parameters, the Permittee must establish a limit for the parameter to ensure compliance with more than one emission standard. An example is a limit on minimum combustion chamber temperature to ensure compliance with both the DRE standard of 40 CFR 63.1209(j) and the dioxin/furan standard of 40 CFR 63.1209(k). If the performance tests for such standards are not performed simultaneously, the most stringent limit for a parameter derived from independent performance tests applies.

- k. DRE. To remain in compliance with the destruction and removal efficiency (DRE) standard, the Permittee must establish operating limits during the comprehensive performance test (or during a previous DRE test under provisions of 40 CFR 63.1206(b)(7) for the following parameters, unless the limits are based on manufacturer specifications, and comply with those limits at all times that hazardous waste remains in the combustion chamber (i.e., the hazardous waste residence time has not transpired since the hazardous waste feed cutoff system was activated):
- i. Minimum combustion chamber temperature.
- A. THE PERMITTEE must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan the Permittee submit under §63.1207(e);
- B. The Permittee must establish a minimum hourly rolling average limit as the average of the test run averages;
- ii. Maximum flue gas flowrate or production rate
- A. As an indicator of gas residence time in the control device, the Permittee must establish and comply with a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
- B. The Permittee must comply with this limit on an hourly rolling average basis.
- iii. Maximum hazardous waste federate
- A. The Permittee must establish limits on the maximum pumpable and total (i.e., pumpable and nonpumpable) hazardous waste

- federate for each location where hazardous waste is fed.
- B. The Permittee must establish the limits as the average of the maximum hourly rolling averages for each run.
 - C. The Permittee must comply with the feedrate limit(s) on an hourly rolling average basis.
- iv. Operation of waste firing system. The Permittee must specify operating parameters and limits to ensure that good operation of each hazardous waste firing system is maintained.
1. Dioxins and furans. The Permittee must comply with the dioxin and furans emission standard by establishing and complying with the following operating parameter limits. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specification.
- i. Gas temperature at the inlet to a dry particulate matter control device.
 - A. For hazardous waste burning incinerators and cement kilns, if the combustor is equipped with an electrostatic precipitator, baghouse (fabric filter), or other dry emissions control device where particulate matter is suspended in contact with combustion gas, the Permittee must establish a limit on the maximum temperature of the gas at the inlet to the device on an hourly rolling average. The Permittee must establish the hourly rolling average limit as the average of the test run averages.
 - B. For hazardous waste burning lightweight aggregate kilns, The Permittee must establish a limit on the maximum temperature of the gas at the exit of the (last) combustion chamber (or exit of any waste heat recovery system) on an hourly rolling average. The limit must be

established as the average of the test run averages.

ii. *Minimum combustion chamber temperature*

- A. The Permittee must measure the temperature of each combustion chamber at a location that best represents, as practicable, the bulk gas temperature in the combustion zone. The Permittee must document the temperature measurement location in the test plan under 40 CFR 63.1207(e) and (f);
- B. The Permittee must establish a minimum hourly rolling average limit as the average of the test run averages.

iii. *Maximum flue gas flow rate or production rate*

- A. As an indicator of gas residence time in the control device, the Permittee must establish and comply with a limit on the maximum flue gas flow rate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
- B. The Permittee must comply with this limit on an hourly rolling average basis.

iv. *Maximum waste feedrate*

- A. The Permittee must establish limits on the maximum pumpable and total (pumpable and nonpumpable) waste feedrate for each location where waste is fed.
- B. The Permittee must establish the limits as the average of the maximum hourly rolling averages for each run.
- C. The Permittee must comply with the feedrate limit(s) on an hourly rolling average basis.

- v. *Particulate matter operating limit.* If the combustor is equipped with an activated carbon injection or a carbon bed system, the Permittee must limit particulate matter emissions to the level achieved during the comprehensive performance test as prescribed by 40 CFR 63.1209(m);

- vi. *Activated carbon injection parameter limits.* If the combustor is equipped with an activated carbon injection system:
 - A. *Carbon feedrate.* The Permittee must establish a limit on minimum carbon injection rate on an hourly rolling average calculated as the average of the test run averages. If the carbon injection system injects carbon at more than one location, the Permittee must establish a carbon feedrate limit for each location.

 - B. *Carrier fluid.* The Permittee must establish a limit on minimum carrier fluid (gas or liquid) flowrate or pressure drop as an hourly rolling average based on the manufacturer's specifications. The Permittee must document the specifications in the test plan submitted under 40 CFR 63.1207(e) and (f).

 - C. *Carbon specification*
 - 1. The Permittee must specify and use the brand (i.e., manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan required under 40 CFR 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.

2. The Permittee may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test and conforms to the key sorbent parameters identified under 40 CFR 63.1209(k)(6)(iii)(A). The Permittee must include in the operating record documentation that the substitute carbon will provide the same level of control as the original carbon.
- vii. *Carbon bed parameter limits.* If the combustor is equipped with a carbon bed system:
- A. *Monitoring bed life.* The Permittee must:
 1. Monitor performance of the carbon bed consistent with manufacturer's specifications and recommendations to ensure the carbon bed (or bed segments for sources with multiple segments) has not reached the end of its useful life to minimize dioxin/furan and mercury emissions at least to levels required by the emission standards.
 2. Document the monitoring procedures in the operation and maintenance plan.
 3. Record results of the performance monitoring in the operating record.
 4. Replace the bed or bed segment before it has reached the end of its useful life to minimize dioxin/furan and mercury emissions at least to levels required by the emission standards.
 5. Except as provided by 40 CFR 63.1209(k)(7)(i)(c), the maximum age of the carbon in each segment of the bed before the Permittee

must replace the carbon is the age of the bed during the comprehensive performance test.

B. *Carbon specification*

1. The Permittee must specify and use the brand (i.e., manufacturer) and type of carbon used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan required under 40 CFR 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the carbon used in the performance test.
2. The Permittee may substitute at any time a different brand or type of carbon provided that the replacement has equivalent or improved properties compared to the carbon used in the performance test. The Permittee must include in the operating record documentation that the substitute carbon will provide an equivalent or improved level of control as the original carbon.

C. *Maximum temperature.* The Permittee must measure the temperature of the carbon bed at either the bed inlet or exit and the Permittee must establish a maximum temperature limit on an hourly rolling average as the average of the test run averages.

viii. *Inhibitor feedrate parameter limits.* If the Permittee feeds a dioxin/furan inhibitor into the combustion system, the Permittee must establish limits for the following parameters:

A. *Minimum inhibitor feedrate.* The Permittee must establish a limit on

minimum inhibitor feedrate on an hourly rolling average as the average of the test run averages.

B. *Inhibitor specifications*

1. The Permittee must specify and use the brand (i.e., manufacturer) and type of inhibitor used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless the Permittee documents in the site-specific performance test plan required under 40 CFR 63.1207(e) and (f) key parameters that affect the effectiveness of the inhibitor and establish limits on those parameters based on the inhibitor used in the performance test.
2. The Permittee may substitute at any time a different brand or type of inhibitor provided that the replacement has equivalent or improved properties compared to the inhibitor used in the performance test and conforms to the key parameters The Permittee identify under 40 CFR 63.1209(k) (9) (ii) (A). The Permittee must include in the operating record documentation that the substitute inhibitor will provide the same level of control as the original inhibitor.

m. Mercury [40 CFR 63.1209(1)]

The Permittee must comply with the mercury emission standard by establishing and complying with the following operating parameter limits. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.

- i. Feedrate of total mercury. The Permittee must establish a 12-hour rolling average limit for the total feedrate of mercury in all

feedstreams as the average of the test run averages, unless mercury feedrate limits are extrapolated.

- A. The Permittee may request as part of the performance test plan under 40 CFR 63.7(b) and (c) and 40 CFR 63.1207(e) and (f) to use the mercury feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates.
- B. The extrapolation methodology will be reviewed and approved, as warranted, by the Illinois EPA. The review will consider in particular whether:
 - 1. Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spike material is appropriate); and
 - 2. Whether the extrapolated feedrates the Permittee requests are warranted considering historical metal feedrate data.
- C. The Illinois EPA will review the performance test results in making a finding of compliance required by 40 CFR 63.6(f) (3) and 63.1206(b) (3) to ensure that the Permittee has interpreted emission test results properly and that the extrapolation procedure is appropriate for the source.
- D. Activated carbon injection. If a combustor is equipped with an activated carbon injection system, the Permittee must establish operating parameter limits prescribed by 40 CFR 63.1209(k) (6).

- n. Particulate matter [40 CFR 63.1209(m)]. The Permittee must comply with the particulate matter emission standard by establishing and complying with the following operating parameter limits. The Permittee must base the limits on operation during the comprehensive performance test, unless the limits are based on manufacturer specifications.
- i. Maximum flue gas flowrate or production rate.
 - A. As an indicator of gas residence time in the control device, the Permittee must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
 - B. The Permittee must comply with this limit on an hourly rolling average basis;
 - ii. Maximum ash feedrate. Owner and operators of hazardous waste incinerators must establish a maximum ash feedrate limit as the average of the test run averages.
- o. Semi-volatile metals and low volatility metals. [40 CFR 63.1209(n)]. The Permittee must comply with the semi-volatile metal (cadmium and lead) and low volatile metal (arsenic, beryllium, and chromium) emission standards by establishing and complying with the following operating parameter limits. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.
- i. Maximum inlet temperature to dry particulate matter air pollution control device. The Permittee must establish a limit on the maximum inlet temperature to the primary dry metals emissions control device (e.g., electrostatic precipitator, baghouse) on an hourly rolling average basis as the average of the test run averages.

ii. Maximum feedrate of semi-volatile and low volatile metals.

A. *General.* The Permittee must establish feedrate limits for semi-volatile metals (cadmium and lead) and low volatile metals (arsenic, beryllium, and chromium) as follows, except as provided by 40 CFR 63.1209(n) (2) (ii):

1. The Permittee must establish a 12-hour rolling average limit for the feedrate of cadmium and lead, combined, in all feedstreams as the average of the test run averages;
2. The Permittee must establish a 12-hour rolling average limit for the feedrate of arsenic, beryllium, and chromium, combined, in all feedstreams as the average of the test run averages; and
3. The Permittee must establish a 12-hour rolling average limit for the feedrate of arsenic, beryllium, and chromium, combined, in all pumpable feedstreams as the average of the test run averages. Dual feedrate limits for both pumpable and total feedstreams are not required, however, if the Permittee bases the total feedrate limit solely on the feedrate of pumpable feedstreams.

B. *Feedrate extrapolation.*

1. The Permittee may request as part of the performance test plan under 40 CFR 63.7(b) and (c) and 40 CFR 63.1207(e) and (f) to use the semi-volatile metal and low volatile metal feedrates and associated emission rates during the comprehensive performance test to extrapolate to higher allowable feedrate limits and emission rates.

2. The extrapolation methodology will be reviewed and approved, as warranted, by the Illinois EPA. The review will consider in particulate whether:
 - Performance test metal feedrates are appropriate (i.e., whether feedrates are at least at normal levels; depending on the heterogeneity of the waste, whether some level of spiking would be appropriate; and whether the physical form and species of spiked material is appropriate); and
 - Whether the extrapolated feedrates The Permittee request are warranted considering historical metal feedrate data.
 3. The Illinois EPA will review the performance test results in making a finding of compliance required by 40 CFR 63.6(f) (3) and 40 CFR 63.1206(b) (3) to ensure that the Permittee has interpreted emission test results properly and that the extrapolation procedure is appropriate for the source.
- iii. Control device operating parameter limits (OPLs). The Permittee must establish operating parameter limits on the particulate matter control device as specified by 40 CFR 63.1209(m) (1);
 - iv. Maximum total chlorine and chloride feedrate. The Permittee must establish a 12-hour rolling average limit for the feedrate of total chlorine and chloride in all feedstreams as the average of the test run averages.
 - v. Maximum flue gas flowrate or production rate

- A. As an indicator of gas residence time in the control device, the Permittee must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
 - B. The Permittee must comply with this limit on an hourly rolling average basis.
- p. Hydrochloric acid and chlorine gas. The Permittee must comply with the hydrogen chloride and chlorine gas emission standard by establishing and complying with the following operating parameter limits. The Permittee must base the limits on operations during the comprehensive performance test, unless the limits are based on manufacturer specifications.
- i. *Feedrate of total chlorine and chloride.* The Permittee must establish a 12-hour rolling average limit for the total feedrate of chlorine (organic and inorganic) in all feedstreams as the average of the test run averages.
 - ii. *Maximum flue gas flowrate or production rate*
 - A. As an indicator of gas residence time in the control device, the Permittee must establish a limit on the maximum flue gas flowrate, the maximum production rate, or another parameter that the Permittee documents in the site-specific test plan as an appropriate surrogate for gas residence time, as the average of the maximum hourly rolling averages for each run.
 - B. The Permittee must comply with this limit on an hourly rolling average basis;
 - C. *Dry Scrubber.* If your combustor is equipped with a dry scrubber, you must establish the following operating parameter limits:

1. *Minimum sorbent feedrate.* You must establish a limit on minimum sorbent feedrate on an hourly rolling average as the average of the test run averages.
2. *Minimum carrier fluid flowrate or nozzle pressure drop.* You must establish a limit on minimum carrier fluid (gas or liquid) flowrate or nozzle pressure drop based on manufacturer's specifications.
3. *Sorbent specifications:*
 - You must specify and use the brand (*i.e.*, manufacturer) and type of sorbent used during the comprehensive performance test until a subsequent comprehensive performance test is conducted, unless you document in the site-specific performance test plan required under 40 CFR 63.1207(e) and (f) key parameters that affect adsorption and establish limits on those parameters based on the sorbent used in the performance test
 - You may substitute at any time a different brand or type of sorbent provided that the replacement has equivalent or improved properties compared to the sorbent used in the performance test and conforms to the key sorbent parameters you identify under 40 CFR 63.1209(o) (4) (iii) (A). You must record in the operating record documentation that the substitute sorbent will

provide the same level of
control as the original
sorbent.

- q. Maximum combustion chamber pressure. If the Permittee complies with the requirements for combustion system leaks under 40 CFR 63.1206(c)(5) by maintaining the maximum combustion chamber zone pressure lower than ambient pressure, the Permittee must monitor the pressure instantaneously and the automatic waste feed cutoff system must be engaged when negative pressure is not maintained at any time.
- r. Operating under different modes of operation. If the Permittee operates under different modes of operation, the Permittee must establish operating parameter limits for each mode. The Permittee must document in the operating record any change in a mode of operation and begin complying with the operating parameter limit for an alternative mode of operation. The Permittee must begin calculating rolling averages anew (i.e., without considering previous recordings) when the Permittee begins complying with the operating parameter limits for the alternative mode of operation.
 - i. Operating under otherwise applicable standards after the hazardous waste residence time has transpired. As provided by §63.1206(b)(1)(ii), you may operate under otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act in lieu of the substantive requirements of this subpart
 - A. The otherwise applicable requirements promulgated under sections 112 and 129 of the Clean Air Act are applicable requirements under this subpart.
 - B. You must specify (e.g., by reference) the otherwise applicable requirements as a mode of operation in your Documentation of Compliance under 40 CFR 63.1211(c), your Notification of Compliance under 40 CFR 63.1207(j), and your title V permit application. These requirements include the otherwise applicable requirements governing emission standards, monitoring

and compliance, and notification,
reporting, and recordkeeping.

- ii. *Calculating rolling averages under different modes of operation.* When you transition to a different mode of operation, you must calculate rolling averages as follows:
 - A. *Retrieval approach.* Calculate rolling averages anew using the continuous monitoring system values previously recorded for that mode of operation (i.e., you ignore continuous monitoring system values subsequently recorded under other modes of operation when you transition back to a mode of operation);
or
 - B. *Start anew.* Calculate rolling averages anew without considering previous recordings:
 - 1. Rolling averages must be calculated as the average of the available one-minute values for the parameter until enough one-minute values are available to calculate hourly or 12-hour rolling averages, whichever is applicable to the parameter.
 - 2. You may not transition to a new mode of operation using this approach if the most recent operation in that mode resulted in an exceedance of an applicable emission standard measured with a CEMS or operating parameter limit prior to the hazardous waste residence time expiring.
 - C. *Seamless transition.* Continue calculating rolling averages using data from the previous operating mode provided that both the operating limit and the averaging period for the parameter are the same for both modes of operation.

7.1.9 Notification Requirements

The Permittee has to comply with the following established by 40 CFR 63.1210:

a. Summary of notification requirements

- i. The Permittee must submit the following notifications to the Illinois EPA:

Reference	Notification
63.9(b)	Initial notifications that you are subject to Subpart EEE
63.9(d)	Notification that the source is subject to special compliance requirements
63.9(j)	Notification and documentation of any change in information already provided under §63.9
63.1207(e), 63.9(e), 63.9(g) (1) and (3)	Notification of performance test and continuous monitoring system evaluation, including the performance test plan and CMS performance evaluation plan*
63.1210(b), 63.1207(j), 63.1207(k), 63.1207(l), 63.9(h), 63.10(d) (2) 63.10(e) (2)	Notification of compliance, including results of performance tests and continuous monitoring system performance evaluations
63.1206(b) (5) (i)	Notification of changes in design, operation, or maintenance

* You may also be required on a case-by-case basis to submit a feedstream analysis plan under §63.1209(c) (3).

- ii. You must submit the following notifications to the Administrator if you request or elect to comply with alternative requirements (request for alternative requirements described in 40 CFR 63.1214(c) shall be submitted to the USEPA only):

Reference	Notification, request, petition, or application

PROPOSED DRAFT CAAPP PERMIT
 Onyx Environmental Services
 I.D. No.: 163121AAP
 Application No.: 95090072
 November 6, 2003

Reference	Notification, request, petition, or application
63.9(i)	You may request an adjustment to time periods or postmark deadlines for submittal and review of required information.
63.10(e)(3)(ii)	You may request to reduce the frequency of excess emissions and CMS performance reports.
63.10(f)	You may request to waive recordkeeping or reporting requirements.
63.1204(d)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for cement kilns with in-line raw mills.
63.1204(e)(2)(iii)	Notification that you elect to comply with the emission averaging requirements for preheater or preheater/ precalciner kilns with dual stacks.
63.1206(b)(4), 63.1213, 63.6(i), 63.9(c)	You may request an extension of the compliance date for up to one year.
63.1206(b)(5)(i)(C)	You may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting after making a change in the design or operation that could affect compliance with emission standards and prior to submitting revised Notification of Compliance.

PROPOSED DRAFT CAAPP PERMIT
 Onyx Environmental Services
 I.D. No.: 163121AAP
 Application No.: 95090072
 November 6, 2003

Reference	Notification, request, petition, or application
63.1206(b) (8) (iii) (B)	If you elect to conduct particulate matter CEMS correlation testing and wish to have federal particulate matter and opacity standards and associated operating limits waived during the testing, you must notify the Administrator by submitting the correlation test plan for review and approval.
63.1206(b) (8) (v)	You may request approval to have the particulate matter and opacity standards and associated operating limits and conditions waived for more than 96 hours for a correlation test.
63.1206(b) (9)	Owners and operators of lightweight aggregate kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1206(b) (10)	Owners and operators of cement kilns may request approval of alternative emission standards for mercury, semivolatile metal, low volatile metal, and hydrochloric acid/chlorine gas under certain conditions.
63.1206(b) (14)	Owners and operators of incinerators may elect to comply with an alternative to the particulate matter standard.

PROPOSED DRAFT CAAPP PERMIT
 Onyx Environmental Services
 I.D. No.: 163121AAP
 Application No.: 95090072
 November 6, 2003

Reference	Notification, request, petition, or application
63.1206(b) (15)	Owners and operators of cement and lightweight aggregate kilns may request to comply with the alternative to the interim standards for mercury.
63.1206(c) (2) (ii) (C)	You may request to make changes to the startup, shutdown, and malfunction plan.
63.1206(c) (5) (i) (C)	You may request an alternative means of control to provide control of combustion system leaks.
63.1206(c) (5) (i) (D)	You may request other techniques to prevent fugitive emissions without use of instantaneous pressure limits.
63.1207(c) (2)	You may request to base initial compliance on data in lieu of a comprehensive performance test.
63.1207(d) (3)	You may request more than 60 days to complete a performance test if additional time is needed for reasons beyond your control.
63.1207(e) (3), 63.7(h)	You may request a time extension if the Administrator fails to approve or deny your test plan.
63.1207(h) (2)	You may request to waive current operating parameter limits during pretesting for more than 720 hours.

PROPOSED DRAFT CAAPP PERMIT
 Onyx Environmental Services
 I.D. No.: 163121AAP
 Application No.: 95090072
 November 6, 2003

Reference	Notification, request, petition, or application
63.1207(f) (1) (ii) (D)	You may request a reduced hazardous waste feedstream analysis for organic hazardous air pollutants if the reduced analysis continues to be representative of organic hazardous air pollutants in your hazardous waste feedstreams.
63.1207(g) (2) (v)	You may request to operate under a wider operating range for a parameter during confirmatory performance testing.
63.1207(i)	You may request up to a one-year time extension for conducting a performance test (other than the initial comprehensive performance test) to consolidate testing with other state or federally-required testing.
63.1207(j) (4)	You may request more than 90 days to submit a Notification of Compliance after completing a performance test if additional time is needed for reasons beyond your control.
63.1207(l) (3)	After failure of a performance test, you may request to burn hazardous waste for more than 720 hours and for purposes other than testing or pretesting.

PROPOSED DRAFT CAAPP PERMIT
 Onyx Environmental Services
 I.D. No.: 163121AAP
 Application No.: 95090072
 November 6, 2003

Reference	Notification, request, petition, or application
63.1209(a) (5), 63.8(f)	You may request: (A.) Approval of alternative monitoring methods for compliance with standards that are monitored with a CEMS; and (B.) approval to use a CEMS in lieu of operating parameter limits.
63.1209(g) (1)	You may request approval of: (A.) Alternative monitoring methods, except for standards that you must monitor with a continuous emission monitoring system (CEMS) and except for requests to use a CEMS in lieu of operating parameter limits; or (B.) a waiver of an operating parameter limit.
63.1209(l) (1)	You may request to extrapolate mercury federate limits.
63.1209(n) (2) (ii)	You may request to extrapolate semivolatile and low volatile metal federate limits.
63.1211(d)	You may request to use data compression techniques to record data on a less frequent basis than required by §63.1209.

b. Notification of compliance.

- i. The Notification of Compliance status requirements of 40 CFR 63.9(h) apply, except that:
 - A. The notification is a Notification of Compliance, rather than compliance status;
 - B. The notification is required for the initial comprehensive performance test

and each subsequent comprehensive and confirmatory performance test; and

- C. The Permittee must postmark the notification before the close of business on the 90th day following completion of relevant compliance demonstration activity specified in Subpart EEE rather than the 60th day as required by 40 CFR 63.9(h)(2)(ii).
- ii. Upon postmark of the Notification of Compliance, the operating parameter limits identified in the Notification of Compliance, as applicable, shall be complied with, the limits identified in the Documentation of Compliance or a previous Notification of Compliance are no longer applicable.
- iii. The Notification of Compliance requirements of 40 CFR 63.1207(j) also apply.

7.1.10 Reporting Requirements

- a. *Summary of reporting requirements.* You must submit the following reports to the Illinois EPA and USEPA:

Reference	Report
63.10(d)(4)	Compliance progress reports, if required as a condition of an extension of the compliance date granted under §63.6(i).
63.10(d)(5)(i)	Periodic startup, shutdown, and malfunction reports.
63.10(d)(5)(ii)	Immediate startup, shutdown, and malfunction reports.
63.10(e)(3)	Excessive emissions and continuous monitoring system performance report and summary report.
63.1206(c)(2)(ii)(B)	Startup, shutdown, and malfunction plan.
63.1206(c)(3)(vi)	Excessive exceedance reports.
63.1206(c)(4)(iv)	Emergency safety vent opening reports.

- b. Compliance progress reports associated with the notification of intent to comply.
- i. General. If The Permittee intend to comply with the emission standards and operating requirements of this subpart, then not later than October 1, 2001, the Permittee must comply with the following, unless The Permittee comply with paragraph (b) (2) (ii) of this section:
- A. Develop engineering design for any physical modifications to the source needed to comply with the emission standards of this subpart;
 - B. Submit applicable construction applications to the Illinois EPA; and
 - C. Document internal or external commitment of resources, i.e., funds or personnel, to purchase, fabricate, and install any equipment, devices, and ancillary structures needed to comply with the emission standards and operating requirements of this subpart.
- ii. Progress Report.
- A. The Permittee must submit to the Illinois EPA a progress report on or before October 1, 2001 which contains information documenting that the Permittee has met the requirements of 40 CFR 63.1211(b)(1). This information will be used by the Illinois EPA to determine if the Permittee has made adequate progress towards compliance with the emission standards. In any evaluation of adequate progress, the Illinois EPA may consider any delays in a source's progress caused by the time required to obtain necessary permit(s) from the Illinois EPA when the source has submitted timely and complete permit applications.
 - B. If the Permittee intends to comply with the emission standards and operating

requirements of Subpart EEE, but can do so without undertaking any of the activities described in paragraph 40 CFR 63.1211(b) (1), the Permittee must submit a progress report documenting either:

1. That the source, at the time of the progress report, are in compliance with the emission standards and operating requirements; or
 2. The steps the Permittee will take to comply, without undertaking any of the activities listed in 40 CFR 63.1211(b) (1) (i) through (b) (1) (iii).
- C. If the Permittee does not comply with 40 CFR 63.1211(b) (1) or (b) (2) (ii), the Permittee must stop burning hazardous waste on or before October 1, 2001.

iii. Schedule.

- A. The Permittee must include in the progress report a detailed schedule that lists key dates for all projects that will bring the source into compliance with the emission standards and operating requirements of Subpart EEE for the time period between submission of the progress report and the compliance date of the emission standards and operating requirements of Subpart EEE.
- B. The schedule must contain anticipated or actual dates for the following:
 1. Bid and award dates, as necessary, for construction contracts and equipment supply contractors;
 2. Milestones such as ground breaking, completion of drawings and specifications, equipment deliveries, intermediate construction completions, and testing;

3. The dates on which applications will be submitted for operating permits or licenses;
4. The dates by which approvals of any permits or licenses are anticipated; and
5. The projected date by which the Permittee expects to comply with the emission standards and operating requirements of Subpart EEE.

7.1.11 Recordkeeping Requirements

- a. *Summary of recordkeeping requirements.* You must retain the following in the operating record:

Reference	Document, data, or information
63.1200, 63.10(b) and (c)	General. Information required to document and maintain compliance with the regulations of Subpart EEE, including data recorded by continuous monitoring systems (CMS), and copies of all notifications, reports, plans, and other documents submitted to the Administrator.
63.1204(e) (2) (ii)	Documentation of compliance with the emission averaging requirements for preheater or preheater/precalciner kilns with dual stacks.
63.1206(b) (1) (ii)	If you elect to comply with all applicable requirements and standards promulgated under authority of the Clean Air Act, including Sections 112 and 129, in lieu of the requirements of Subpart EEE when not burning hazardous waste, you must document in the operating record that you are in compliance with those requirements.

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Reference	Document, data, or information
63.1206(b) (5) (ii)	Documentation that a change will not adversely affect compliance with the emission standards or operating requirements.
63.1206(b) (11)	Calculation of hazardous waste residence time.
63.1206(c) (2)	Startup, shutdown, and malfunction plan.
63.1206(c) (2) (v) (A)	Documentation of your investigation and evaluation of excessive exceedances during malfunctions.
63.1206(c) (3) (v)	Corrective measures for any automatic waste feed cutoff that results in an exceedance of an emission standard or operating parameter limit.
63.1206(c) (3) (vii)	Documentation and results of the automatic waste feed cutoff operability testing.
63.1206(c) (4) (ii)	Emergency safety vent operating plan.
63.1206(c) (4) (iii)	Corrective measures for any emergency safety vent opening.
63.1206(c) (5) (ii)	Method used for control of combustion system leaks.
63.1206(c) (6)	Operator training and certification program.
63.1206(c) (7) (i) (D)	Operation and maintenance plan.
63.1209(c) (2) 63.1209(k) (6) (iii), 63.1209(k) (7) (ii), 63.1209(o) (4) (iii)	Feedstream analysis plan. Documentation that a substitute activated carbon, dioxin/furan formation reaction inhibitor, or dry scrubber sorbent will provide the same level of control as the original material.
63.1209(k) (7) (i) (C)	Results of carbon bed performance monitoring.
63.1209(q)	Documentation of changes in modes of operation.
63.1211(c)	Documentation of compliance.

- b. Annual emissions of regulated air pollutants and HAP's regulated by Subpart EEE and calculated based on the compliance procedures of Condition 7.1.13.
- c. Documentation of compliance
 - i. By the compliance date, the Permittee must develop and include in the operating record a Documentation of Compliance.
 - ii. The Documentation of Compliance must identify the applicable emission standards under Subpart EEE and the limits on the operating parameters under 40 CFR 63.1209 that will ensure compliance with those emission standards.
 - iii. The Permittee must include a signed and dated certification in the Documentation of Compliance that:
 - A. Required CEMs and CMS are installed, calibrated, and continuously operating in compliance with the requirements of Subpart EEE; and
 - B. Based on an engineering evaluation prepared under the Permittee's direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation, and considering at a minimum the design, operation, and maintenance characteristics of the combustor and emissions control equipment, the types, quantities, and characteristics of feedstreams and available emissions data:
 - 1. The source is in compliance with the emission standards of Subpart EEE; and
 - 2. The limits on the operating parameters under 40 CFR 63.1209 ensure compliance with the emission standards of Subpart EEE.

- iv. The Permittee must comply with the emission standards and operating parameter limits specified in the Documentation of Compliance.

- c. Data compression. The Permittee may submit a written request to the Illinois EPA for approval to use data compression techniques to record data from CMS, including CEMS, on a frequency less than that required by 40 CFR 63.1209. The Permittee must submit the request for review and approval as part of the comprehensive performance test plan.
 - i. The Permittee must record a data value at least once each ten minutes.

 - ii. For each CEMS or operating parameter for which the Permittee requests to use data compression techniques, the Permittee must recommend:
 - A. A fluctuation limit that defines the maximum possible deviation of a new data value from a previously generated value without requiring the Permittee to revert to recording each one-minute value.
 - 1. If a fluctuation limit is exceeded, the Permittee must record each one-minute value for a period of time not less than ten minutes.

 - 2. If neither the fluctuation limit nor the data compression limit are exceeded during that period of time, the Permittee may reinitiate recording data values on a frequency of at least once each ten minutes;

 - B. A data compression limit defined as the closes level to an operating parameter limit or emission standard at which reduced data recording is allowed.
 - 1. Within this level and the operating parameter limit or emission standard, the Permittee must record each one-minute average.

2. The data compression limit should reflect a level at which the Permittee is unlikely to exceed the specific operating parameter limit or emission standard, considering its averaging period, with the addition of a new one-minute average.

7.1.12 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.1.13 Compliance Procedures

- a. Compliance with emission limits established in this permit for affected hazardous waste combustors is assumed to be achieved by compliance with operating, control, and testing requirements and procedures established pursuant to 40 CFR Part 63, Subpart EEE. Specific emission factors for the regulated air pollutants shall be established based on the data of initial stack testing performed.
- b. The standard emission factors for emissions shall be used prior to new controlled emission data being retrieved from the stack testing. For these purposes, the following AP-42 emission factors shall be used:

Pollutant	Emission Factor, lb/ton of waste charged
HCL	1.0*
PM	4.67**
NO _x	3.56**
CO	2.95**

* Low Energy Scrubber (AP-42, Table 2.3-3)

** Uncontrolled Emissions (AP-42, Tables 2.3-1, 2.3-2)

7.1.14 Compliance Schedule

COMPLIANCE SCHEDULE FOR COMPLYING WITH 40 CFR PART 63
 SUBPART EEE FOR HAZADOUS WASTE INCINERATORS OPERATED BY
 ONYX ENVIRONMENTAL

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Project	Description	Date
Carbon Injection System	Complete Software Programming	8/1/03
Control System and Programming	Operation of new system	6/30/04
Continuous Emission Monitors and Performance Testing	Selection of CEM Model	10/31/03
	Purchase of CEM's	10/31/03
	Non-mandatory performance testing with a possibility of establishing and accepting this data in lieu of the initial CPT	12/31/03
	Installation of CEMS at 3 incinerators	03/31/04
	Perform initial certification of CEMS	4/30/04
	Integration of CEM's into incinerators	5/30/04
	Initial comprehensive performance test	12/31/04
Reporting and/or notification requirements	Submission to IEPA a protocol for proposed non-mandatory performance testing	60 days prior to actual testing date but no later than 10/31/03
	Documentation of Compliance (40 CFR 63.1211(c))	06/30/04
	Notification of intention to conduct initial comprehensive emission testing along with CMS performance evaluation and a site-specific test plan and CMS performance evaluation test plan [(40 CFR 63.1207(e) (1) (i))]	within 1 year before initial comprehensive emission testing but no later than 12/31/03
	Notification of Compliance documenting compliance with the emission standards and continuous monitoring system requirements, and identifying operating parameter limits under 63.1209 [(40 CFR 63.1207(j))]	within 90 days of completion of a comprehensive performance test but no later than 5/30/05 if tests being conducted on 12/31/04

7.2 Unit 2: Material Processing Areas

7.2.1 Description

Material processing occurs at MP-1 and MP-2 processing unit and the Lab Pack Repack Unit. Material processing involves the repackaging of containerized solid and/or liquid wastes into manageable "charges" for subsequent incineration. Some solid wastes also include free liquids, which may be aqueous or organic. Free liquids are fixed with an inert absorbent to facilitate repackaging. MP-2 waste processing is also used for processing a benzene waste.

7.2.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 2:	Waste Processing Units (MP-1 and MP-2)	Carbon Adsorption Unit
	Lab Pack Repack Unit	None

7.2.3 Applicability Provisions and Applicable Regulations

- a. i. The "affected waste processing unit" for the purpose of these unit-specific conditions, is an emission unit used for repackaging of wastes into smaller containers, for subsequent incineration.
- ii. For the purposes of 40 CFR Part 63, Subpart DD and PP waste processing unit MP-2, MP-1 and Lab Pack Repack Unit utilize interim containers for further treatment (incineration).
- b. The affected waste processing unit is subject to the following requirements of 35 IAC 219.301:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Sections 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation applies only to photochemically reactive material.

- c. The affected waste processing unit (MP-1 and MP-2) are subject to requirements of 40 CFR Part 63, Subpart DD and PP. These requirements are discussed further in this Section.

7.2.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected waste processing unit not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected benzene waste processing unit is subject to a NESHAP proposed after November 15, 1990, pursuant to 40 CFR 64.2(b)(1)(i).
- b. The affected waste processing unit MP-2 is not subject to requirements of 40 CFR Part 61, Subpart FF, because no treatment of benzene waste occurred during repackaging of incoming waste.

7.2.5 Operational and Production Limits and Work Practices

- a. 40 CFR 63.688 requirements:

For a container having a design capacity greater than 0.1 m³ and less than or equal to 0.46 m³ the owner or operator must control air emissions from the container in accordance with the following requirements in either 40 CFR 63.688(b)(1)(i) or (b)(1)(ii):

- i. The owner or operator controls air emissions from the container in accordance with the standards for Container Level I controls as specified in 40 CFR Part 63, Subpart PP "National Emission Standards for Containers".
- ii. As an alternative to meeting the requirements in 40 CFR 63.688(b)(1)(i), an owner or operator may choose to control air emissions from the container in accordance with the standards for either Container Level 2 controls or Container Level 3 controls as specified in 40 CFR Part 63, Subpart PP "National Emission Standards for Containers".

7.2.6 Emission Limitations

None

7.2.7 Testing Requirements

To determine the average VOHAP concentration for off-site material streams at the point-of-delivery, the testing methods and procedures shall be used as specified in 40 CFR 63.694(b).

7.2.8 Monitoring Requirements

Owners and operators of containers using either Container Level 1 or Container Level 2 controls shall inspect the container and its cover and closure devices as described in 40 CFR 63.926(a).

7.2.9 Recordkeeping Requirements

- a. Amount of waste processed (gal/mo and gal/yr);
- b. Emissions of VOM and HAPs calculated based on the procedures of Condition 7.2.12.

7.2.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected waste processing unit with the permit requirements, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

7.2.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.2.12 Compliance Procedures

VOM/HAP emissions from affected waste processing units shall be calculated based on the most recent version of the TANKS program and considering those emissions (losses) as a working losses.

7.3 Unit 3: Drum Crusher

7.3.1 Description

Drums that are unsuitable for reuse are crushed at the drum crusher. Empty drums may contain residual organic wastes, therefore VOM/HAPs may be emitted from the drum crusher.

7.3.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 3	Drum Crusher	None

7.3.3 Applicability Provisions and Applicable Regulations

- a. The "affected drum crusher" for the purpose of these unit-specific conditions, is an emission unit used for crushing of unsuitable drums.
- b. An affected drum crusher is subject to 35 IAC 212.321(b) (1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 1) [35 IAC 212.321(a)].

- c. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 219.302, 219.303, and 219.304 and the following exception: If no odor nuisance exists this limitation shall apply only to photochemically reactive material.

7.3.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected drum crusher not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major

Stationary Sources, because the affected drum crusher does not use an add-on control device to achieve compliance with an emission limitation or standard.

- b. The affected drum crusher is not a waste management unit as defined in 40 CFR Part 61 Subpart FF and 40 CFR Part 63 Subpart DD. Therefore, the affected drum crusher is not regulated by these rules.

7.3.5 Operational and Production Limits and Work Practices

None

7.3.6 Emission Limitations

None

7.3.7 Testing Requirements

None

7.3.8 Monitoring Requirements

None

7.3.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for the affected drum crusher to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

- a. Annual throughput of crushed drums (drums/yr);
- b. Number of drums crushed in one hour (drums/hr);
- c. Hourly and annual VOM emissions calculated based on the compliance procedures in Condition 7.3.12.

7.3.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected drum crusher with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

Emissions of VOM from affected drum crusher in excess of the limits specified in Condition 5.5.1 and Condition 7.3.3.

7.3.11 Operational Flexibility/Anticipated Operating Scenarios

None

7.3.12 Compliance Procedures

- a. Compliance with the particulate matter limitations of Condition 7.3.3(b) is assured and achieved by the work-practices inherent in operation of the affected drum crusher.
- b. Compliance of the affected drum crusher with VOM emission limitations of Conditions 5.5.1 and 7.3.3 (c) shall be based on the recordkeeping requirements of Condition 7.3.9 and use of equations listed below:

i. Hourly VOM emissions

$$E_h = I_h \times W_i \times V \times D \times F_r \times 1 \text{ yr/hours of operation}$$

ii. Annual VOM emissions

$$E_a = I_a \times W_i \times V \times D \times F_r \times 1 \text{ ton/2000 lb}$$

Where:

E_a = Annual VOM emissions (ton/yr)

E_h = Hourly VOM emissions (lb/hr)

I_a = Annual throughput of crushed drums (drums/yr)

I_h = Number of drums crushed in one hour

W_i = Volatile organic weight fraction, 0.67

V = Total volume of residue per drum, 0.49 gallon/drum

D = Residue density, 7.745 lb/gal

F_r = Fraction of crushed drums that contain residue, 0.25

7.4 Unit 4: Storage Tanks for Liquids Wastes

7.4.1 Description

The storage of bulk liquid wastes occurs at Tank Farm #1 and Tank Farm #3. All tanks are vertical, fixed roof tanks. Tank Farm #1 supplies bulk liquid waste to HWC #2 and #3, while Tank Farm #3 supplies HWC #4.

7.4.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 4:	<p style="text-align: center;">Tank Farm Nos. 1</p> Storage Tanks #2, 4, 6, 8, 10, 20, 30, 40, 50, 60	Carbon Canisters (All Tanks)
	<p style="text-align: center;">Tank Farm #3</p> Storage Tanks Nos. 300, 302, 304, 306, 308, 310, 312, 314	Carbon Canisters (All Tanks)
	All affected liquid waste storage tanks with the maximum design capacity in the range of 4,931 gal to 30,000 gal	

7.4.3 Applicability Provisions and Applicable Regulations

- a. The "affected liquid waste storage tank" for the purpose of these unit-specific conditions, is a storage tank used for storage of liquid wastes prior to incineration by HWC.
- b. Each affected liquid waste storage tank is subject to the emission standards and requirements established in 40 CFR Part 61, Subpart FF "National Emission Standards for Hazardous Air Pollutants for Benzene Waste Operations" if it receives the waste transferred to the affected liquid waste storage tank from a chemical manufacturing plant, petroleum refinery, or coke-product recovery plant subject to 40 CFR Part 61, Subpart FF "National Emission Standards for Hazardous Air Pollutants for Benzene Waste Operations", and the owner or operator of the facility from which the waste is transferred complies with the provisions of 40 CFR 61.342(f). However, the Illinois EPA does not object the Permittee's actions

to voluntary apply more stringent control requirements of Subpart FF to all wastes placed into the affected tanks, regardless of the nature and source of these off-site wastes. This is consistent with Condition 5.3(b) of this permit.

- c. The affected storage tanks with a capacity more than 40 m³ but less than 75 m³ are subject to the recordkeeping requirements of 40 CFR 60.116b(b) only.
- d. The affected storage tanks with a capacity between 75 m³ and 151 m³ are subject to the recordkeeping requirements of 40 CFR 60.116b(c) only.

7.4.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected storage tanks not being subject to 35 IAC 215 Subpart B "Organic Emissions from Storage and Loading Operations", because the storage tanks are less than 151 m³ (40,000 gal) capacity. [35 IAC 215.121]
- b. This permit is issued based on the affected storage tanks not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I, because the affected storage tanks are not associated with the manufacture of organic chemicals.
- c. This permit is issued based on the affected storage tanks not being subject to 40 CFR 63, Subpart DD, based on the 40 CFR 63.683(b)(2)(i).
- d. This permit is issued based on the affected storage tanks not being subject to 40 CFR 63, Subpart OO, based on the 40 CFR 63.900.
- e. This permit is issued based on the affected storage tanks not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the affected storage tanks are subject to a NESHAP proposed after November 15, 1990, pursuant to 40 CFR 64.2(b)(1)(i).

7.4.5 Operational and Production Limits and Work Practices

The owner or operator shall install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to a control device, pursuant to 40 CFR 61.343.

a. The fixed-roof shall meet the following requirements:

- i. The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h).
- ii. Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair.
- iii. If the cover and closed-vent system operate such that the tank is maintained at a pressure less than atmospheric pressure, then paragraph (a) (1) (i) (B) of this section does not apply to any opening that meets all of the following conditions:
 - A. The purpose of the opening is to provide dilution air to reduce the explosion hazard;
 - B. The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h); and
 - C. The pressure is monitored continuously to ensure that the pressure in the tank remains below atmospheric pressure.

- b. The closed-vent system and control device shall be designed and operated in accordance with the requirement of 40 CFR 61.349.

7.4.6 Emission Limitations

None

7.4.7 Testing Requirements

- a. Test methods and procedures established in 40 CFR 61.355 shall be used for determination of the total benzene quantity from the facility and from affected tanks in particular.
- b. Testing requirements of 40 CFR Part 63, Subpart 00 are not applicable to the affected storage tanks, because of non-applicability of entire Subpart 00, as described in Condition 7.4.4.

7.4.8 Monitoring Requirements

The Permittee shall comply with the following monitoring requirements as established in 40 CFR 61.354(d):

For a carbon adsorption system that does not regenerate the carbon bed directly on site in the control device (e.g., a carbon canister), either the concentration level of the organic compounds or the concentration level of benzene in the exhaust vent stream from the carbon adsorption system shall be monitored on a regular schedule, and the existing carbon shall be replaced with fresh carbon immediately when carbon breakthrough is indicated. The device shall be monitored on a daily basis or at intervals no greater than 20 percent of the design carbon replacement interval, whichever is greater. As an alternative to conducting this monitoring, an owner or operator may replace the carbon in the carbon adsorption system with fresh carbon at a regular predetermined time interval that is less than the carbon replacement interval that is determined by the maximum design flow rate and either the organic concentration or the benzene concentration in the gas stream vented to the carbon adsorption system.

7.4.9 Recordkeeping Requirements

- a. Requirements of 40 CFR 61.356 (benzene waste operations):

- i. An owner or operator using control equipment in accordance with 40 CFR 61.343 through 61.347 shall maintain engineering design documentation for all control equipment that is installed on the waste management unit. The documentation shall be retained for the life of the control equipment. If a control device is used, then the owner or operator shall maintain the control device records required by 40 CFR 61.356(f) [40 CFR 61.356(d)].

- ii. An owner or operator using a closed-vent system and control device in accordance with 40 CFR 61.349 shall maintain the following records, pursuant to 40 CFR 61.356(f). The documentation shall be retained for the life of the control device:
 - A. A statement signed and dated by the owner or operator certifying that the closed-vent system and control device is designed to operate at the documented performance level when the waste management unit vented to the control device is or would be operating at the highest load or capacity expected to occur.

 - B. Specifications, drawings, schematics, and piping and instrumentation diagrams prepared by the owner or operator, or the control device manufacturer or vendor that describe the control device design based on acceptable engineering texts. The design analysis shall address the following vent stream characteristics and control device operating parameters:

For a carbon adsorption system that does not regenerate the carbon bed directly on-site in the control device, such as a carbon canister, the design analysis shall consider the vent stream composition, constituent concentration, flow rate, relative humidity, and temperature. The design analysis

shall also establish the design exhaust vent stream organic compound concentration level or the design exhaust vent stream benzene concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

- iii. For each control device, the owner or operator shall maintain documentation that includes the following information regarding the control device operation:
 - A. Dates of startup and shutdown of the closed-vent system and control device.
 - B. A description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters). This documentation shall be kept for the life of the control device.
 - C. Periods when the closed-vent system and control device are not operated as designed including all periods and the duration.
 - D. If a carbon adsorber that is not regenerated directly on site in the control device is used, then the owner or operator shall maintain records of dates and times when the control device is monitored, when breakthrough is measured, and shall record the date and time then the existing carbon in the control device is replaced with fresh carbon.

b. Other requirements:

- i. Total organic liquid wastes processed, t/mo and t/yr;
- ii. Average VOM/HAP content of received wastes, wt.%;
- iii. Average vapor pressure of received liquid wastes, psia; and
- iv. Emissions calculated in accordance with Condition 7.4.12.

7.4.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section, of deviations of the affected storage tanks with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

7.4.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.4.12 Compliance Procedures

VOM/HAP emissions from the storage tanks shall be calculated based on the most recent version of the TANKS program.

7.5 Unit 5: Bulk Solid Waste Storage Facility

7.5.1 Description

The offsite bulk solid wastes (including benzene contaminated wastes) and the incinerator ash from units 2 and 3 are stored in four pits in the bulk feed building. A clam shell moves bulk solid wastes from the bulk feed building through an enclosed gallery to the incinerator #4. The building is equipped with a cyclone, two baghouses, and carbon adsorption system. Except the time when bulk solid wastes are unloaded into the pits, all doors of the building are closed and all operations are enclosed inside the building.

7.5.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 5	Storage of Bulk Solid Wastes (in Pits) Prior to Incineration in HWC #4	Cyclone, Baghouses, Carbon Adsorption Unit

7.5.3 Applicability Provisions and Applicable Regulations

- a. The "affected bulk solid waste storage facility " for the purpose of these unit-specific conditions, is an emission unit described in Conditions 7.5.1 and 7.5.2.
- b. The affected bulk solid waste storage facility is subject to 35 IAC 212.321(b) (1), which provides that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

- c. The affected bulk solid waste storage facility is subject to either requirements of 35 IAC Part 219, Subpart G:

- i. No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lbs/hr) of organic material into the atmosphere from any emission source, except as provided in Sections 219.302, 219.303, 219.304 and the following exception: If no odor nuisance exists the limitation of this Subpart shall apply only to photochemically reactive material [35 IAC 219.301].
- ii. Emissions of organic material in excess of those permitted by 35 IAC 219.301 are allowable if such emissions are controlled by a vapor recovery system which adsorbs at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere [35 IAC 219.302(b)].

7.5.4 Non-Applicability of Regulations of Concern

- a. The affected bulk solid waste storage facility is not subject to requirements of 40 CFR Part 63, Subpart DD "National Emission Standard for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations", based on 40 CFR 63.680(b)(2).
- b. The operation of the affected bulk solid waste storage facility is not associated with any waste management unit described under 40 CFR 61.341 and subject to emission standards of 40 CFR 61.343 through 61.348. Therefore, affected bulk solid waste storage facility is not subject to requirements of 40 CFR Part 61, Subpart FF "National Emission Standard for Benzene Waste Operations".

7.5.5 Operational and Production Limits and Work Practices

- a. Except the time when bulk solid wastes are unloaded into the pits, all doors of the building shall be closed and all operations shall be enclosed inside the building.
- b. Unless total VOM emissions from affected bulk solid waste storage facility exceed 8 lb/hr limit, it is up to the Permittee's discretion to utilize carbon adsorption system.

- c. The Permittee shall follow good operating practices for an air pollution control equipment, including periodic inspection, routine maintenance and repair of defects.

7.5.6 Emission Limitations

None

7.5.7 Testing Requirements

None

7.5.8 Monitoring Requirements

None

7.5.9 Recordkeeping Requirements

- a. Amount of accepted soil wastes, t/day and t/year.
- b. Maintenance records of air pollution control devices.
- c. Daily and annual VOM/HAP emissions calculated in accordance with Compliance procedures in Condition 7.5.12.

7.5.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations in Conditions 5.5.1 and 7.5.3 as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

7.5.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.5.12 Compliance Procedures

- a. Compliance with Conditions 7.5.3(c) and (d) is assumed to be achieved by compliance with operating and control requirements established in this permit.
- b. Emissions from the affected bulk solid waste storage facility shall be calculated based on the following:

VOM/HAP Emissions

- i. VOM/HAP emissions from the pits occur as VOM/HAP from contaminated soil evaporates during storage. These emissions were estimated using Thibodeaux-Hwang model for VOM emissions from the soil.
- ii. VOM evaporation rate from the pits is established at 0.0269 grams per second based on this equation.
- iii. HAP evaporation rate is established at weight fraction of 0.485 from the VOM 0.0269 grams per second rate.

7.6 Unit 6: Fugitive Emissions

7.6.1 Description

Fugitive emissions of VOM occur facility-wide. The most significant source of fugitive emissions are equipment leaks from the pipelines that handle organic liquid wastes and fuels.

7.6.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Fugitive VOM/HAP Emissions	Pumps, Valves, Open-End Lines and Compressors	None

7.6.3 Applicability Provisions and Applicable Regulations

- a. The "affected leaking equipment" for the purpose of these unit-specific conditions, are units described in Conditions 7.6.1 and 7.6.2.
- b. The affected leaking equipment subject to and complying with 40 CFR 61 Subpart V and 40 CFR Part 61 Subpart J are hereby shielded from compliance with 35 IAC 219 Subpart C. This shield is issued to streamline the applicable requirements for the source, based on the Illinois EPA's finding that compliance with Subparts H or J assures compliance with 35 IAC 219 Subpart C. Each owner and operator subject to Subpart J shall comply with standards and requirements of Subpart V.

7.6.4 Non-Applicability of Regulations of Concern

- a. This permit is issued based on the affected leaking equipment not being subject to the New Source Performance Standards (NSPS) for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 60, Subparts VV, III, NNN, and RRR; the National Emission Standards For Hazardous Air Pollutants for the Synthetic Organic Chemicals Manufacturing Industry, 40 CFR 63, Subparts F, G, H, and I; or the Organic Material Emission Standards and Limitations for the Chicago Area, 35 IAC 218, Subparts Q and RR, because the affected leaking equipment are not associated with the manufacture of organic chemicals.

- b. This permit is issued based on the affected leaking equipment not being subject to the National Emission Standards For Hazardous Air Pollutants for benzene, 40 CFR 61, Subparts Y, BB, and FF, because affected leaking equipment is not is not a part of benzene production facility, bulk terminal, chemical manufacturing plant, coke by-product recovery plant, or petroleum refinery.
- c. This permit is issued based on the affected leaking equipment not being subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because no air pollution control devices are used.

7.6.5 Operational and Production Limits and Work Practices

The Permittee shall comply with the following standards of either 40 CFR Part 61, Subpart V:

40 CFR Part 61, Subpart V:

- i. 61.242-1: General
- ii. 61.242-2: Pumps
- iii. 61.242-3: Compressors
- iv. 61.242-6: Open-ended valves or lines
- v. 61.243-1: Alternative standards for valves in VHAP service- allowable percentage of valves leaking

7.6.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5, the affected leaking equipment are subject to the following:

None

7.6.7 Testing Requirements

The Permittee shall comply with test methods and procedures requirements of either 40 CFR 61.245.

7.6.8 Monitoring Requirements

Monitoring shall comply with the requirements established in either 40 CFR 61.245(b).

7.6.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected leaking equipment to demonstrate compliance with Conditions 5.5.1 and 7.4.5, pursuant to Section 39.5(7)(b) of the Act:

- a. If complying with 40 CFR Part 61, Subpart V: An owner or operator of more than one process unit subject to the provisions of 40 CFR Part 61, Subpart V may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by each process unit.
- b. When each leak is detected as specified in 40 CFR 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following requirements apply:
 - i. A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
 - ii. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 242-7(c) and no leak has been detected during those 2 months.
 - iii. The identification on equipment, except on a valve, may be removed after it has been repaired.
- c. When each leak is detected as specified in 40 CFR 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
 - i. The instrument and operator identification numbers and the equipment identification number.

- ii. The date the leak was detected and the dates of each attempt to repair the leak.
 - iii. Repair methods applied in each attempt to repair the leak.
 - iv. "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 61.245(a) after each repair attempt is equal to or greater than 10,000 ppm.
 - v. "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - vi. The signature of the owner or operator (or designate) whose decision it was that repair could not be affected without a process shutdown.
 - vii. The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days unrepaired.
 - viii. Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - ix. The date of successful repair of the leak.
- d. The following information pertaining to all equipment to which a standard applies shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for equipment (except welded fittings) subject to the requirements of this subpart.
 - ii. A. A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background.
B. The designation of this equipment for no detectable emissions shall be signed by the owner or operator.

- iii. A. The dates of each compliance test required in 40 CFR 61.242-2(e), 61.242-3(i), 61.242-4, 61.242-7(f), and 61.135(g).
 - B. The background level measured during each compliance test.
 - C. The maximum instrument reading measured at the equipment during each compliance test.
- e. The following information pertaining to all valves subject to the requirements of 40 CFR 61.242-7(g) and (h) and to all pumps subject to the requirements of 61.242-2(g) shall be recorded in a log that is kept in a readily accessible location:
- i. A list of identification numbers for valves and pumps that are designated as unsafe to monitor, an explanation for each valve or pump stating why the valve or pump is unsafe to monitor, and the plan for monitoring each valve or pump.
 - ii. A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.
- f. The following information shall be recorded in a log that is kept in a readily accessible location:
- i. Design criterion required in 40 CFR 61.242-2(d)(5), 61.242-3(e)(2), and 61.135(e)(4) and an explanation of the design criterion; and
 - ii. Any changes to this criterion and the reasons for the changes.
- g. Emissions of VOM calculated in accordance with compliance procedures in Condition 7.6.12.

7.6.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of the affected leaking equipment with the permit requirements as

follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

- b. If complying with 40 CFR Part 61, Subpart V:
- i. An owner or operator of any piece of equipment to which this subpart applies shall submit a statement in writing notifying the Administrator that the requirements of §§61.242, 61.245, 61.246, and 61.247 are being implemented.
 - ii. In the case of an existing source or a new source which has an initial startup date preceding the effective date, the statement is to be submitted within 90 days of the effective date, unless a waiver of compliance is granted under 40 CFR 60.11, along with the information required under 40 CFR 61.10. If a waiver of compliance is granted, the statement is to be submitted on a date scheduled by the Administrator.
 - iii. The statement is to contain the following information for each source:
 - A. Equipment identification number and process unit identification.
 - B. Type of equipment (for example, a pump or pipeline valve).
 - C. Percent by weight VHAP in the fluid at the equipment.
 - D. Process fluid state at the equipment (gas/vapor or liquid).
 - E. Method of compliance with the standard (for example, "monthly leak detection and repair" or "equipped with dual mechanical seals").
 - iv. A report shall be submitted to the Administrator semiannually starting 6 months after the initial report required in paragraph

(a) of this section, that includes the following information:

- A. Process unit identification.
- B. For each month during the semiannual reporting period:
 - 1. Number of valves for which leaks were detected as described in 40 CFR 61.242-7(b) of 40 CFR 61.243-2.
 - 2. Number of valves for which leaks were not repaired as required in 40 CFR 61.242-7(d).
 - 3. Number of pumps for which leaks were detected as described in 40 CFR 61.242-2(b) and (d) (6).
 - 4. Number of pumps for which leaks were not repaired as required in 40 CFR 61.242-2 (c) and (d) (6).
 - 5. Number of compressors for which leaks were detected as described in 40 CFR 61.242-3(f).
 - 6. Number of compressors for which leaks were not repaired as required in 40 CFR 61.242-3(g).
 - 7. The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

7.6.11 Operational Flexibility/Anticipated Operating Scenarios

The Permittee is authorized to make the following physical or operational change with respect to the affected leaking equipment without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

Changes in the material processed or the number of affected components, provided that the source wide emission limitations in Condition 5.5.1 are not exceeded and the affected leaking equipment remain in compliance with this permit and 40 CFR 61 Subpart V.

7.6.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 7.6.9 and the emission factors and formulas listed below:

VOM emissions from the affected leaking equipment shall be calculated based on the following emission factors and control efficiencies:

<u>Component</u>	<u>VOM Emission Factor (lb/hr/component)</u>	<u>Control Efficiency (%)</u>
Pumps	0.0439	93
Valves	0.0089	97
Open-End Lines	0.0038	97
Connectors/Flanges	0.0005	30
Relief Valves	0.2293	97

These are the emission factors for uncontrolled fugitive equipment in SOCFI light liquid service, EPA Document, EPA-453/R-93-026, June 1993, Page 2-10 and control efficiencies for Texas Natural Resources Conservation Commission Leak Detection and Repair Programs, 28MID, Technical Guidance Package for Chemical Sources, Equipment Leak Fugitives, March 1995.

7.7 Unit 7: Boiler

7.7.1 Description

The boiler is used primarily for heat and steam supply for the facility's needs.

7.7.2 List of Emission Units and Air Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
Unit 3	Natural Gas-Fired Boiler with a Maximum Heat Capacity 10.46 mmBtu/hr	None

7.7.3 Applicability Provisions and Applicable Regulations

- a. The "affected boiler" for the purpose of these unit-specific conditions, is an emission unit used for heat and steam supply for the facility's needs.
- b. The affected boiler is subject to 35 IAC 216.121. No person shall cause or allow the emission of carbon monoxide into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected 50 percent excess air.
- c. The affected boiler is subject to the NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subparts A and Dc, because the affected boiler has a maximum design heat input capacity of 29 MW (100 mmBtu/hr) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr) and construction, modification, or reconstruction of the affected boiler commenced after June 9, 1989. Subject only to the daily fuel recordkeeping requirements of 40 CFR 60.48c(g).

7.7.4 Non-Applicability of Regulations of Concern

- a. The affected boiler is not subject to 35 IAC 217.121, emissions or nitrogen oxides from new fuel combustion emission sources, because the actual heat input of each of these affected boilers is less than 73.2 MW (250 mmBtu/hr).

- b. Pursuant to 35 IAC 215.303, fuel combustion emission units are not subject to 35 IAC 215.301, Use Of Organic Material.

7.7.5 Operational and Production Limits and Work Practices

- a. The affected boiler shall only be operated with a natural gas as the fuel.
- b. Natural gas usage by the affected boiler shall not exceed 7.6 mmscf/mo and 91.1 mmscf/yr.

7.7.6 Emission Limitations

In addition to Condition 5.2.2 and the source wide emission limitations in Condition 5.5.1, the affected boiler is subject to the following limits:

NO _x		CO	
<u>(T/mo)</u>	<u>(T/yr)</u>	<u>(T/mo)</u>	<u>(T/yr)</u>
0.38	4.55	0.32	3.83

The above limitations contain revisions to previously issued Permit 95080025. The source has requested that the Illinois EPA establish conditions in this permit that allow various refinements from the conditions of this aforementioned permit, consistent with the information provided in the CAAPP application. The source has requested these revisions and has addressed the applicability and compliance of Title I of the CAA, specifically 35 IAC Part 203, Major Stationary Sources Construction and Modification and/or 40 CFR 52.21, Prevention of Significant Deterioration (PSD). These limits continue to ensure that the construction and/or modification addressed in this permit does not constitute a new major source or major modification pursuant to these rules. These limits are the primary enforcement mechanism for the equipment and activities permitted in this permit and the information in the CAAPP application contains the most current and accurate information for the source. Specifically, an updated standard emission factors have been used with a decrease of allowable emissions for NO_x and increase of allowable emissions for CO [T1R].

7.7.7 Testing Requirements

None

7.7.8 Monitoring Requirements

None

7.7.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for the affected boiler to demonstrate compliance with conditions of this permit, pursuant to Section 39.5(7)(b) of the Act:

- a. Daily records of natural gas usage (40 CFR 60.48c(g));
- b. Natural gas usage (mmscf/mo and mmscf/yr); and
- c. Emissions of regulated air pollutants as calculated in accordance with compliance procedures in Condition 7.7.12.

7.7.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance with the emission limitations as follows pursuant to Section 39.5(7)(f)(ii) of the Act:

If there is an exceedance of the emission limitations of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.

7.7.11 Operational Flexibility/Anticipated Operating Scenarios

N/A

7.7.12 Compliance Procedures

Compliance with the emission limits established in Conditions 5.5.1 and 7.7.6 of this permit shall be based on the recordkeeping requirements of Condition 7.7.9 and the emission factors listed below:

PROPOSED DRAFT CAAPP PERMIT
Onyx Environmental Services
I.D. No.: 163121AAP
Application No.: 95090072
November 6, 2003

Natural Gas Mode

Pollutant	Emission Factor (lb/mmscf)
PM	7.6
NO _x	100.0
VOM	5.5
CO	84.0

These are the emission factors for uncontrolled natural gas combustion in small boilers (< 100 mmBtu/hr), Tables 1.4-1 and 1.4-2, AP-42, March 1998.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after November 20, 2002 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Programs

As of the date of issuance of this permit, there are no such economic incentive, marketable permit or emission trading programs that have been approved by USEPA.

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

- a. The changes do not violate applicable requirements;
- b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;
- c. The changes do not constitute a modification under Title I of the CAA;
- d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and
- e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:
 - i. Describe the physical or operational change;
 - ii. Identify the schedule for implementing the physical or operational change;
 - iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;
 - iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and
 - v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the

result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing the required monitoring results, as specified in the conditions of this permit, shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

<u>Monitoring Period</u>	<u>Report Due Date</u>
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

- a. The name and identification of the affected unit(s);
- b. The person(s) who will be performing sampling and analysis and their experience with similar tests;
- c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the source and any control equipment will be determined;
- d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;

- e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;
- f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and
- g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum [Section 39.5(7) (e) (i) of the Act]:

- a. The name and identification of the affected unit(s);
- b. The date and time of the sampling or measurements;
- c. The date any analyses were performed;
- d. The name of the company that performed the tests and/or analyses;
- e. The test and analytical methodologies used;
- f. The results of the tests including raw data, and/or analyses including sample calculations;
- g. The operating conditions at the time of the sampling or measurements; and
- h. The name of any relevant observers present including the testing company's representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

- a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

PROPOSED DRAFT CAAPP PERMIT
Onyx Environmental Services
I.D. No.: 163121AAP
Application No.: 95090072
November 6, 2003

- i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234
 - iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506
 - iv. USEPA Region 5 - Air Branch

USEPA (AE - 17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604
- b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 ("Title I provisions") and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule [Section 39.5(7)(j)(iv) of the Act].

9.1.2 In particular, this permit does not alter or affect the following:

- a. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority 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 Section 408(a) of the CAA; and
- d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the CAA.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application [Section 39.5(7)(o)(i) of the Act].

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition [Section 39.5(6)(c) of the Act].

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto [Section 39.5(7)(o)(vi) of the Act]. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

- a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- d. Sample or monitor any substances or parameters at any location:
 - i. At reasonable times, for the purposes of assuring permit compliance; or
 - ii. As otherwise authorized by the CAA, or the Act.
- e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and
- f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply with Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or

resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege [Section 39.5(7)(o)(iv) of the Act].

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes [Section 39.5(12)(b)(iv) of the Act].

9.6.3 Retention of Records

- a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for

continuous monitoring instrumentation, and copies of all reports required by this permit [Section 39.5(7)(e)(ii) of the Act].

- b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 - Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

- a. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.
- c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit [Section 39.5(7) (o) (ii) of the Act].

9.10.2 Emergency Provision

- a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:
 - i. An emergency occurred as provided in Section 39.5(7) (k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;
 - ii. The permitted source was at the time being properly operated;
 - iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and
 - iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.
- b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition [Section 39.5(7)(o)(iii) of the Act].

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

- a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;
- c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; and
- d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to the Illinois EPA copies of records required to be kept by this permit, or for information claimed to be confidential, the Permittee may furnish such records directly to USEPA along with a claim of confidentiality [Section 39.5(7)(o)(v) of the Act].

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force [Section 39.5(7)(i) of the Act].

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions [Section 39.5(5)(1), (n), and (o) of the Act].

10.0 ATTACHMENTS

10.1 Attachment 1 Allowable Emissions of Particulate Matter

Process Emission Units for Which Construction or Modification Commenced On or After April 14, 1972

a. No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 [35 IAC 212.321(a)].

b. The emissions of particulate matter into the atmosphere in any one hour period from the affected coating lines shall not exceed the allowable emission rates specified in the following equation:

$$E = A(P)^B$$

where:

P = process weight rate;
 E = allowable emission rate; and,

i. For process weight rates of 408 Mg/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

ii. For process weight rates in excess of 408 Mg/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

- c. Limits for Process Emission Units for which Construction or Modification Commenced On or After April 14, 1972 [35 IAC 212.321(c)]:

<u>Metric</u>		<u>English</u>	
<u>P</u>	<u>E</u>	<u>P</u>	<u>E</u>
<u>Mg/hr</u>	<u>kg/hr</u>	<u>T/hr</u>	<u>lb/hr</u>
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.2	1.10
0.3	0.64	0.30	1.35
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.0	3.9	10.00	8.70
13.0	4.8	15.00	10.80
18.0	5.7	20.00	12.50
23.0	6.5	25.00	14.00
27.0	7.1	30.00	15.60
32.0	7.7	35.00	17.00
36.0	8.2	40.00	18.20
41.0	8.8	45.00	19.20
45.0	9.3	50.00	20.50
90.0	13.4	100.00	29.50
140.0	17.0	150.00	37.00
180.0	19.4	200.00	43.00
230.0	22.0	250.00	48.50
270.0	24.0	300.00	53.00
320.0	26.0	350.00	58.00
360.0	28.0	400.00	62.00
408.0	30.1	450.00	66.00
454.0	30.4	500.00	67.00

10.2 Attachment 2 Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

10.3 Attachment 3 - Guidance on Revising This Permit

The Permittee must submit an application to the Illinois EPA using the appropriate revision classification in accordance with Sections 39.5(13) and (14) of the Act and 35 IAC 270.302. Specifically, there are currently three classifications for revisions to a CAAPP permit. These are:

1. Administrative Permit Amendment;
2. Minor Permit Modification; and
3. Significant Permit Modification.

The Permittee must determine, request, and submit the necessary information to allow the Illinois EPA to use the appropriate procedure to revise the CAAPP permit. A brief explanation of each of these classifications follows.

1. Administrative Permit Amendment
 - Corrects typographical errors;
 - Identifies a change in the name, address, or phone number of any person identified in the permit, or provides a similar minor administrative change at the source;
 - Requires more frequent monitoring or reporting by the Permittee;
 - Allows for a change in ownership or operational control of the source where no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittees has been submitted to the Illinois EPA;
 - Incorporates into the CAAPP permit a construction permit, provided the conditions of the construction permit meet the requirements for the issuance of CAAPP permits; or
 - Incorporates into the CAAPP permit revised limitations or other requirements resulting from the application of an approved economic incentives rule,

marketable permits rule, or generic emissions trading rule.

2. Minor Permit Modification

- Do not violate any applicable requirement;
- Do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;
- Do not require a case-by-case determination of an emission limitation or other standard, or a source-specific determination of ambient impacts, or a visibility or increment analysis;
- Do not seek to establish or change a permit term or condition for which there is no corresponding underlying requirement and which avoids an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - A federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the CAA; and
 - An alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the CAA.
- Are not modifications under any provision of Title I of the CAA; and
- Are not required to be processed as a significant permit modification.

An application for a minor permit modification shall include the following:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
- The source's suggested draft permit/conditions;
- Certification by a responsible official that the proposed modification meets the criteria for use of

minor permit modification procedures and a request that such procedures be used; and

- Information as contained on form 271-CAAPP for the Illinois EPA to use to notify USEPA and affected States.

3. Significant Permit Modification

- Applications that do not qualify as either minor permit modifications or as administrative permit amendments;
- Applications requesting a significant change in existing monitoring permit terms or conditions;
- Applications requesting a relaxation of reporting or recordkeeping requirements; and
- Cases in which, in the judgment of the Illinois EPA, action on an application for modification would require decisions to be made on technically complex issues.

An application for a significant permit modification shall include the following:

- A detailed description of the proposed change(s), including all physical changes to equipment, changes in the method of operation, changes in emissions of each pollutant, and any new applicable requirements which will apply as a result of the proposed change. Note that the Permittee need only submit revised forms for equipment and operations that will be modified.

The Illinois EPA requires the information on the following appropriate forms to be submitted in accordance with the proper classification:

- Form 273-CAAPP, REQUEST FOR ADMINISTRATIVE PERMIT AMENDMENT FOR CAAPP PERMIT; or
- Form 271-CAAPP, MINOR PERMIT MODIFICATION FOR CAAPP PERMIT; or
- Form 200-CAAPP, APPLICATION FOR CAAPP PERMIT (for significant modification).

PROPOSED DRAFT CAAPP PERMIT
Onyx Environmental Services
I.D. No.: 163121AAP
Application No.: 95090072
November 6, 2003

Application forms can be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms>.

Note that the request to revise the permit must be certified for truth, accuracy, and completeness by a responsible official.

Note that failure to submit the required information may require the Illinois EPA to deny the application. The Illinois EPA reserves the right to require that additional information be submitted as needed to evaluate or take final action on applications pursuant to Section 39.5(5)(g) of the Act and 35 IAC 270.305.



Illinois Environmental Protection Agency
 Division Of Air Pollution Control -- Permit Section
 P.O. Box 19506
 Springfield, Illinois 62794-9506

Application For Construction Permit (For CAAPP Sources Only)	For Illinois EPA use only
	I.D. number:
	Permit number:
Date received:	

This form is to be used by CAAPP sources to supply information necessary to obtain a construction permit. Please attach other necessary information and completed CAAPP forms regarding this construction/modification project.

Source Information		
1. Source name:		
2. Source street address:		
3. City:	4. Zip code:	
5. Is the source located within city limits? <input type="checkbox"/> Yes <input type="checkbox"/> No		
6. Township name:	7. County:	8. I.D. number:

Owner Information		
9. Name:		
10. Address:		
11. City:	12. State:	13. Zip code:

Operator Information (if different from owner)		
14. Name		
15. Address:		
16. City:	17. State:	18. Zip code:

Applicant Information	
19. Who is the applicant? <input type="checkbox"/> Owner <input type="checkbox"/> Operator	20. All correspondence to: (check one) <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Source
21. Attention name and/or title for written correspondence:	
22. Technical contact person for application:	23. Contact person's telephone number:

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Summary Of Application Contents

24.	Does the application address whether the proposed project would constitute a new major source or major modification under each of the following programs: a) Non-attainment New Source Review – 35 IAC Part 203; b) Prevention of Significant Deterioration (PSD) – 40 CFR 52.21; c) Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources – 40 CFR Part 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
25.	Does the application identify and address all applicable emissions standards, including those found in the following: a) Board Emission Standards – 35 IAC Chapter I, Subtitle B; b) Federal New Source Performance Standards – 40 CFR Part 60; c) Federal Standards for Hazardous Air Pollutants – 40 CFR Parts 61 and 63?	<input type="checkbox"/> Yes <input type="checkbox"/> No
26.	Does the application include a process flow diagram(s) showing all emission units and control equipment, and their relationship, for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
27.	Does the application include a complete process description for the emission units and control equipment for which a permit is being sought?	<input type="checkbox"/> Yes <input type="checkbox"/> No
28.	Does the application include the information as contained in completed CAAPP forms for all appropriate emission units and air pollution control equipment, listing all applicable requirements and proposed exemptions from otherwise applicable requirements, and identifying and describing any outstanding legal actions by either the USEPA or the Illinois EPA? Note: The use of "APC" application forms is not appropriate for applications for CAAPP sources. CAAPP forms should be used to supply information.	<input type="checkbox"/> Yes <input type="checkbox"/> No
29.	If the application contains TRADE SECRET information, has such information been properly marked and claimed, and have two separate copies of the application suitable for public inspection and notice been submitted, in accordance with applicable rules and regulations?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable, No TRADE SECRET information in this application

Note 1: Answering "No" to any of the above may result in the application being deemed incomplete.

Signature Block

This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete.	
30.	I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete. Authorized Signature: BY: _____ <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center; width: 45%;"> _____ <small>AUTHORIZED SIGNATURE</small> </div> <div style="text-align: center; width: 45%;"> _____ <small>TITLE OF SIGNATORY</small> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center; width: 45%;"> _____ <small>TYPED OR PRINTED NAME OF SIGNATORY</small> </div> <div style="text-align: center; width: 45%;"> _____ / _____ / _____ <small>DATE</small> </div> </div>

Note 2: An operating permit for the construction/modification permitted in a construction permit must be obtained by applying for the appropriate revision to the source's CAAPP permit, if necessary.

10.5 Attachment 5 Guidance on Renewing This Permit

Timeliness - Pursuant to Section 39.5(5)(n) of the Act and 35 IAC 270.301(d), a source must submit to the Illinois EPA a complete CAAPP application for the renewal of a CAAPP permit not later than 9 months before the date of permit expiration of the existing CAAPP permit in order for the submittal to be deemed timely. Note that the Illinois EPA typically sends out renewal notices approximately 18 months prior to the expiration of the CAAPP permit.

The CAAPP application must provide all of the following information in order for the renewal CAAPP application to be deemed complete by the Illinois EPA:

1. A completed renewal application form 200-CAAPP, APPLICATION FOR CAAPP PERMIT.
2. A completed compliance plan form 293-CAAPP, COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE FOR CAAPP PERMIT.
3. A completed compliance certification form 296-CAAPP, COMPLIANCE CERTIFICATION, signed by the responsible official.
4. Any applicable requirements that became effective during the term of the permit and that were not included in the permit as a reopening or permit revision.
5. If this is the first time this permit is being renewed and this source has not yet addressed CAM, the application should contain the information on form 464-CAAPP, COMPLIANCE ASSURANCE MONITORING (CAM) PLAN.
6. Information addressing any outstanding transfer agreement pursuant to the ERMS.
7. a. If operations of an emission unit or group of emission units remain unchanged and are accurately depicted in previous submittals, the application may contain a letter signed by a responsible official that requests incorporation by reference of existing information previously submitted and on file with the Illinois EPA. This letter must also include a statement that information incorporated by reference is also being certified for truth and accuracy by the responsible official's signing of the form 200-CAAPP, APPLICATION FOR CAAPP PERMIT and the form 296-CAAPP, COMPLIANCE CERTIFICATION. The boxes should be marked

yes on form 200-CAAPP, APPLICATION FOR CAAPP PERMIT, as existing information is being incorporated by reference.

- b. If portions of current operations are not as described in previous submittals, then in addition to the information above for operations that remain unchanged, the application must contain the necessary information on all changes, e.g., discussion of changes, new or revised CAAPP forms, and a revised fee form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT, if necessary.
- 8. Information about all off-permit changes that were not prohibited or addressed by the permit to occur without a permit revision and the information must be sufficient to identify all applicable requirements, including monitoring, recordkeeping, and reporting requirements, for such changes.
- 9. Information about all changes made under 40 CFR 70.4(b)(12)(i) and (ii) that require a 7-day notification prior to the change without requiring a permit revision.

The Illinois EPA will review all applications for completeness and timeliness. If the renewal application is deemed both timely and complete, the source shall continue to operate in accordance with the terms and conditions of its CAAPP permit until final action is taken on the renewal application.

Notwithstanding the completeness determination, the Illinois EPA may request additional information necessary to evaluate or take final action on the CAAPP renewal application. If such additional information affects your allowable emission limits, a revised form 292-CAAPP, FEE DETERMINATION FOR CAAPP PERMIT must be submitted with the requested information. The failure to submit to the Illinois EPA the requested information within the time frame specified by the Illinois EPA, may force the Illinois EPA to deny your CAAPP renewal application pursuant to Section 39.5 of the Act.

Application forms may be obtained from the Illinois EPA website at <http://www.epa.state.il.us/air/forms.html>.

If you have any questions regarding this matter, please contact a permit analyst at 217/782-2113.

PROPOSED DRAFT CAAPP PERMIT
Onyx Environmental Services
I.D. No.: 163121AAP
Application No.: 95090072
November 6, 2003

Mail renewal applications to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

AB:psj