MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION

August 29, 2024

PERMIT TO INSTALL
91-07G

ISSUED TO
Dow Silicones Corporation

LOCATED AT
Michigan Operations
2514 Building
Midland, Michigan 48686

IN THE COUNTY OF
Midland

STATE REGISTRATION NUMBER
A4043

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environment, Great Lakes, and Energy. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **July 12, 2024**	
DATE PERMIT TO INSTALL APPROVED: **August 29, 2024**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfunction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H_2S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO_x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO_2	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUTHROX	Thermal oxidizer with heat recovery unit consisting of a burner, quencher, absorber, and 2 stage ionizing wet scrubbers (IWS) in series, and a stack.	2007/2022	FGTHROX
EUTOX	Thermal oxidizer unit consisting of a burner, quencher, absorber/scrubber, venturi scrubber, and wet electrostatic precipitator (WESP) in series, and a stack.	TBD	FGTHROX

FLEXIBLE GROUP SPECIAL CONDITIONS

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG432BOILERS	Three natural gas-fired boilers: EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD. The most recent PTI for this flexible group is PTI No. 91-07G.	EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERMACT-NG
FGSITESCRUBBERS	Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes prior to discharge to atmosphere when FGTHROX is not operating properly. FGSITESCRUBBERS is also used as a control device for emission units EU502-01 (Methyl Vent System) and EU502-07 (Trichlorosilane Distillation). The most recent PTI for this flexible group is PTI No. 91-07G.	EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU325-01, EU502-01, EU502-02, EU502-07, EU502-09, EU502-11, EU502-13, EU505-01, EU505-11, EU508-01, EU515-01, EURULE290, FGHAP2012A2A, FG304VENTRECOVERY, FG337SCRUBBER, FGMONMACT
FGTHROX	Site-wide thermal oxidizer system. EUTHROX and EUTOX will remove VOC, HAPs, PM10, PM2.5, Hydrogen Chloride, and other toxic air contaminants prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF. EUTHROX and EUTOX will typically operate simultaneously and in parallel, but either unit will be capable of controlling the entire waste gas load whenever the other unit is removed from service (e.g., during planned maintenance events). If both EUTHROX and EUTOX are unavailable, emissions will be bottled up or diverted to FGSITESCRUBBERS. The most recent PTI for this flexible group is PTI No. 91-07G.	EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU325-01, EU502-01, EU502-02, EU502-04, EU502-07, EU502-09, EU502-11, EU502-13, EU505-01, EU505-11, EU508-01, EU515-01, EU601-01, EU2515-01, EU2703-01, EU2703-03, EU2703-17, EURULE290, EUTHROX, EUTOX, FGHAP2012A2A, FG304VENTRECOVERY, FG337SCRUBBER, FGMONMACT

FG432BOILERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three natural gas-fired boilers: EUBOILER12, EUBOILER13, and EUBOILER14; each rated at 103 MMBTU/hr with low-NOx burners. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart DDDDD.

The most recent PTI for this flexible group is PTI No. 91-07G.

Emission Unit: EUBOILER12, EUBOILER13, EUBOILER14, FGBOILERMACT-NG

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	0.041 lb/MMBTU	24-hour rolling average as determined each hour	Each boiler included in FG432BOILERS	SC VI.3 & VI.5, and measurements obtained by the certified CEM, as specified in VI.2	R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.44b(a)(1)
2. CO	81.2 tpy	12-month rolling time period as determined at the end of each calendar month	FG432BOILERS	SC VI.6, and See "Compliance Method" below	R 336.1205(3)
Compliance Method: Test results from the most recent test for CO shall be used to develop an emission factor in terms of pounds of pollutant per million cubic feet of natural gas for the three normal operating load scenarios for the boilers. The permittee shall use the worst-case emission factor from the most recent stack test. The emission factors shall be applied to the monthly fuel use to ensure compliance with the 12-month rolling average.					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FG432BOILERS unless a plan that describes how emissions will be minimized during startup(s), shutdown(s) and malfunction(s) has been approved by the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. Modifications to this plan may be made by the permittee and must be submitted to the AQD District Supervisor for approval. A copy of the current plan must also be maintained at the facility. Unless notified by the District Supervisor within 30 business days, the original plan and any future modified plans shall be deemed approved. **(R 336.1912)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each boiler included in FG432BOILERS with a low-NOx burner. **(R 336.1205(1), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(j))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor the fuel usage for each of the three boilers included in FG432BOILERS on a continuous basis. **(R 336.1205(1))**

2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the NOx emissions for each of the three boilers included in FG432BOILERS on a continuous basis and according to the procedures outlined in Appendix A and 40 CFR 60.48b(b)(1), (c), (d), (e), (f). **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR 60.48b)**

3. The permittee shall keep, in a satisfactory manner the following records for each boiler included in FG432BOILERS, for each calendar day pursuant to the requirements of 40 CFR 60.49b:
   a) Calendar date;
   b) Average hourly NOx emission rate in lb/MMBTU heat input;
   c) 30-day average NOx emission rate in lb/MMBTU heat input, calculated at the end of each operating day from the hourly NOx emission rates for the preceding 30-days;
   d) Excess emissions, reasons for excess emissions, and description for corrective actions taken;
   e) Identification of the operating days for which NOx data has not been obtained, reasons for not obtaining the data and description of corrective actions taken;
   f) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
   g) Identification of the “F” factor used for calculations, method of determining the “F” factor and type of fuel combusted;
   h) Identification of the times when the NOx concentration exceeds full span of the continuous emission monitoring system;
   i) Description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specification 2.

   All records shall be kept on file for a period of at least five years and made available to the Department upon request. Reports of the above information shall be submitted to the EPA Administrator and the AQD District Supervisor every six months in accordance with 40 CFR 60.49b(v) and (w). **(40 CFR 60.49b(g), (i), (o), (v), (w))**

4. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average fuel use records and the annual capacity factor for each boiler included in FG432BOILERS. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each month. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), 40 CFR 60.49b(d))**

5. The permittee shall keep, in a satisfactory manner, 24-hour rolling average NOx emission records for each boiler included in FG432BOILERS, as required by SC I.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(1), 40 CFR 52.21(j), 40 CFR Part 60, Subpart Db)**

6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling average CO calculation records for FG432BOILERS, as required by SC I.2. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**

7. The permittee shall keep, in a satisfactory manner, annual records of the normal operating range for each of the three boilers included in FG432BOILERS. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(3))**

8. The permittee shall comply with the continuous emission monitoring requirements (including the operation and maintenance plan) specified in paragraphs 1 through 4 of Appendix B, as they apply to FG432BOILERS. **(Act 451 Section 324.5503(b))**

VII. REPORTING

1. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1) for PTI No. 112-06. The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal.[1] **(R 336.1225(4))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVBOILER12	42	50	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVBOILER13	42	50	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVBOILER14	42	50	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Db, as they apply to the equipment in FG432BOILERS. **(40 CFR Part 60, Subparts A and Db)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGSITESCRUBBERS
FLEXIBLE GROUP CONDITIONS

Site-wide water scrubber system. FGSITESCRUBBERS will remove HCl and chlorosilanes prior to discharge to atmosphere when FGTHROX is not operating properly. FGSITESCRUBBERS is also used as a control device for emission units EU502-01 (Methyl Vent System) and EU502-07 (Trichlorosilane Distillation).

The most recent PTI for this emission unit is 91-07G.

Emission Units: EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU325-01, EU502-01, EU502-02, EU502-07, EU502-09, EU502-11, EU502-13, EU505-01, EU505-11, EU508-01, EU515-01, EURULE290, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: FGHAP2012A2A, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Site-wide water scrubber system comprised of two identical units. One unit typically controls incoming process vent gas while the alternate unit remains on standby. However, these units may also operate simultaneously and in parallel.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGSITESCRUBBERS unless a malfunction abatement plan (MAP) as described in Rule 911(2) has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
   a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
   b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
   c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911)**

2. The permittee shall not vent to FGSITESCRUBBERS unless either one or both scrubbers are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes operating parameters as described in the table below: **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1910)**

Parameter	Units	Value[a]	Averaging Period
Site scrubbers flow rate to both the top (spray tower section) and bottom sections (baffle system)	Gallons per minute (gpm)	> 50 gpm to each section when handling emissions, and > 40 gpm total flow when on standby	15 minutes
[a]Or any subsequent value determined during the most recent performance test and approved by the AQD District Supervisor.			

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain the site wide water scrubbers with water flow meters. **(R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. Whenever FGSITESCRUBBERS is receiving process gas, the permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the water flow rates for the site wide water scrubbers on a continuous basis. For the purposes of this condition, “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. **(R 336.1910)**

2. The permittee shall keep, in a satisfactory manner, continuous records of scrubber flow rates for FGSITESCRUBBERS. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1910)**

3. The permittee shall keep, in a satisfactory manner, continuous records of when vents are diverted from FGTHROX to FGSITESCRUBBERS. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2512-001	6[1]	65[1]	R 336.1225
2. SV2512-002	6[1]	65[1]	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

FGTHROX
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Site-wide thermal oxidizer system consisting of EUTHROX and EUTOX. EUTHROX and EUTOX will remove VOC, HAPs, PM10, PM2.5, Hydrogen Chloride, and other toxic air contaminants prior to discharge to atmosphere. This flexible group is subject to the requirements of 40 CFR Part 63, Subpart FFFF.

EUTHROX and EUTOX will typically operate simultaneously and in parallel, but either unit will be capable of controlling the entire waste gas load whenever the other unit is removed from service (e.g., during planned maintenance events). If both EUTHROX and EUTOX are unavailable, emissions will be bottled up or diverted to FGSITESCRUBBERS.

The most recent PTI for this flexible group is PTI No. 91-07G.

Emission Unit: EUTHROX, EUTOX, EU303-01, EU303-02, EU303-06, EU303-09, EU303-11, EU303-15, EU303-16, EU303-19, EU304-02, EU321-01, EU325-01, EU502-01, EU502-02, EU502-04, EU502-07, EU502-09, EU502-11, EU502-13, EU505-01, EU505-011, EU508-01, EU515-01, EU601-01, EU2515-01, EU2703-01, EU2703-03, EU2703-17, EURULE290, FG304VENTRECOVERY, FG337SCRUBBER

Flexible Group ID: FGHAP2012A2A, FGMONMACT

POLLUTION CONTROL EQUIPMENT

- Thermal oxidizer with heat recovery (EUTHROX) unit consisting of a burner, quencher, absorber, and 2 stage ionizing wet scrubbers (IWS) in series, and a stack.
- Thermal oxidizer (EUTOX) unit consisting of a burner, quencher, absorber/scrubber, venturi scrubber, and wet electrostatic precipitator (WESP) in series, and a stack.
- EUTHROX and EUTOX will typically operate simultaneously and in parallel, but either unit will be capable of controlling the entire waste gas load whenever the other unit is removed from service (e.g., during planned maintenance events)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NOx	<36 tpy	12-month rolling time period as determined at the end of each calendar month.	FGTHROX	SC VI.3, VI.11, VI.12	R 336.1205(1), 40 CFR 52.21(c) & (d)
2. CO	<90 tpy	12-month rolling time period as determined at the end of each calendar month.	FGTHROX	SC V.1, V.2, VI.12	R 336.1205(1), 40 CFR 52.21(d)
3. PM10 / PM2.5	<8.9 tpy	12-month rolling time period as determined at the end of each calendar month.	FGTHROX	SC V.1, V.2, VI.12	R 336.1205(3)
The emission limits in this table are cumulative limits that restrict the combined emissions from EUTHROX (SV2514-006) and EUTOX (SV2517-001).					

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not route process vents to EUTHROX and/or EUTOX unless the burners and associated air pollution control trains are installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining the operating parameters specified in the table below. **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

Parameter	Units	Minimum Value[b]	Averaging Period
EUTHROX combustion chamber temperature	Fahrenheit	1,800	15 minutes
EUTHROX residence time	Seconds	1.0	15 minutes
EUTHROX HCl absorber pH	pH	5	24 hours
EUTHROX IWS 1st stage[a] secondary voltage	Kilovolts (kV)	10	1 hour
EUTHROX IWS 2nd stage[a] secondary voltage	Kilovolts (kV)	15	1 hour
EUTHROX IWS secondary current	Milliamps (mA)	50	1 hour
EUTHROX packing recycle rate per stage	Gallons per minute (gpm)	324	1 hour
EUTOX combustion chamber temperature	Fahrenheit	1,800	15 minutes
EUTOX residence time	Seconds	2	15 minutes
EUTOX absorber/scrubber pH	pH	5	24 hours
EUTOX venturi scrubber water flow rate	Gallons per minute (gpm)	15	15 minutes
EUTOX WESP minimum secondary voltage	Kilovolts (kV)	25	1-hour
EUTOX WESP minimum secondary current	Milliamps (mA)	30	1-hour

[a] Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS.
[b] Or any subsequent value determined during the most recent performance test and approved by the AQD District Supervisor. For EUTOX, manufacturer's recommended values may be used prior to the initial performance test in lieu of the parameters specified above.

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 180 days after EUTOX first receives process vents, the permittee shall verify the VOC destruction efficiency of EUTHROX by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
VOCs	40 CFR Part 60, Appendix A and 40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test

results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1), R 336.1205(3), R 336.1225, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. Within 180 days after EUTOX first receives process vents, the permittee shall verify the PM10/PM2.5 and CO emission rates from EUTOX and the VOC destruction efficiency of EUTOX by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A and 40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

3. Upon request of the AQD District Supervisor, the permittee shall verify the PM10, PM2.5, and CO emission rates from EUTHROX by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM10 / PM2.5	40 CFR Part 51, Appendix M
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205(1), R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner devices to monitor and record on a continuous basis the parameters specified in the table below. The temperature monitoring device shall be calibrated once per calendar year. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

Parameter	Units
EUTHROX combustion chamber temperature	Fahrenheit
EUTHROX HCl absorber pH	pH

EUTHROX IWS 1st stage[a] secondary voltage	Kilovolts (kV)
EUTHROX IWS 2nd stage[a] secondary voltage	Kilovolts (kV)
EUTHROX IWS secondary current	Milliamps (mA)
EUTHROX IWS packing recycle rate per stage	Gallons per minute (gpm)
EUTOX combustion chamber temperature	Fahrenheit
EUTOX absorber/scrubber pH	pH
EUTOX venturi scrubber water flow rate	Gallons per minute (gpm)
EUTOX WESP minimum secondary voltage	Kilovolts (kV)
EUTOX WESP minimum secondary current	Milliamps (mA)
[a] Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS.	

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record the NOx emissions for EUTHROX and EUTOX on a continuous basis and according to the procedures outlined in Appendix A and 40 CFR Part 60.48b(b)(1), (c), (d), (e), (f). **(R 336.1205(1))**

4. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record the flue gas oxygen or carbon dioxide (CO_2) concentration for EUTHROX and EUTOX on a continuous basis and according to the procedures outlined in Appendix A and 40 CFR Part 60.48. **(R 336.1205(1))**

5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor and record THC emissions for EUTHROX and EUTOX on a continuous basis and according to the procedures outlined in Appendix A and FGMONMACT. **(40 FCR 63.2450(j)(2)(ii), 40 CFR Part 63, Subpart FFFF)**

6. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner, devices to monitor and record the gas flow rates in the wet, dry, and methyl chloride vent headers to EUTHROX and EUTOX on a continuous basis. For the purposes of this condition, "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. **(R 336.1205(3))**

7. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner devices to monitor and record the gas flow rates from EUTHROX and EUTOX on a continuous basis and according to the procedures outlined in Appendix A. **(R 336.1205(3), 40 CFR 60.48c)**

8. The permittee shall complete all required calculations/records in a format acceptable to the AQD District Supervisor and make them available by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1), R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, 40 CFR 52.21(c) & (d))**

9. The permittee shall keep, in a satisfactory manner, separate daily, monthly and 12-month rolling time period average fuel use records for EUTHROX and EUTOX. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(1))**

10. The permittee shall keep, in a satisfactory manner, continuous records of the parameters specified in the table below. The permittee shall keep these records on file at the facility and make them available to the Department upon request. **(R 336.1205(1), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

Parameter	Units
EUTHROX combustion chamber temperature	Fahrenheit
EUTHROX residence time	Seconds
EUTHROX HCl absorber pH	pH
EUTHROX IWS 1st stage[a] secondary voltage	Kilovolts (kV)
EUTHROX IWS 2nd stage[a] secondary voltage	Kilovolts (kV)
EUTHROX IWS secondary current	Milliamps (mA)
EUTHROX packing recycle rate per stage	Gallons per minute (gpm)
EUTOX combustion chamber temperature	Fahrenheit
EUTOX residence time	Seconds
EUTOX absorber/scrubber pH	pH

EUTOX venturi scrubber water flow rate	Gallons per minute (gpm)
EUTOX WESP minimum secondary voltage	Kilovolts (kV)
EUTOX WESP minimum secondary current	Milliamps (mA)
[a] Stage 1 refers to the first stage of each IWS and stage 2 refers to the second stage of each IWS.	

11. The permittee shall keep, in a satisfactory manner the following records for EUTHROX and EUTOX for each calendar day:
    a) Calendar date that EUTHROX was in operation;
    b) Calendar date that EUTOX was in operation;
    c) For each emission unit, identification of the operating days for which data for any or all of the following pollutants has not been obtained, reasons for not obtaining the data, and description of corrective actions taken: NOx, CO_2/O_2, THC, and flow;
    d) For each emission unit, identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding the data;
    e) For each emission unit, identification of the times when any or all of the following pollutant concentrations exceed full span of the continuous emission monitoring system: NOx, CO_2/O_2, THC, and flow;
    f) For each emission unit, description of any modifications to the continuous emission monitoring system that could affect the ability of the continuous emission monitor to comply with Performance Specifications 2, 3 6, and 8A.

    The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(1))**

12. The permittee shall keep, in a satisfactory manner, records necessary to demonstrate that the following pollutants are in compliance with the emission limits listed in the corresponding special conditions. These records shall include dates and times that EUTHROX was combusting vent gas containing silicon, the exhaust flow rate through the IWS, dates and times that EUTOX was combusting vent gas containing silicon, and the exhaust flow rate through the WESP. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.

Pollutant	Emission Limit Special Condition	Applicable Requirement
a. NOx	I.1	R 336.1205(1), 40 CFR 52.21(c) & (d)
b. CO	I.2	R 336.1205(1), 40 CFR 52.21(d)
c. PM10/PM2.5	I.3	R 336.1205(3)

13. The permittee shall keep, in a satisfactory manner, records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of EUTHROX; or any periods during which a continuous monitoring system or monitoring device in EUTHROX is inoperable. The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request. **(40 CFR 60.7)**

14. The permittee shall comply with the operation and maintenance plan provisions specified in Appendix B and the EUTHROX automated alert system requirements specified in Appendix C, as they apply to FGTHROX. **(Act 451 Section 324.5503(b))**

15. The permittee shall keep, in a manner satisfactory to the AQD District Supervisor, and up to date list of all emission units routed to FGTHROX. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation,

construction, reconstruction, relocation, or modification is considered to occur not later than the date EUTOX first receives process vents. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV2514-006 (THROX vent)	54	90	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1901
2. SV2517-001 (TOX vent)	30	102	R 336.1225, 40 CFR 52.21(c) & (d), R 336.1901

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources for Small Industrial-Commercial-Institutional Steam Generating Units as specified in 40 CFR Part 60, Subparts A and Dc, as they apply to the equipment in EUTHROX. **(40 CFR Part 60, Subparts A and Dc)**

Footnotes:
[1] This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

APPENDIX A. Monitoring Requirements

FG432BOILERS
NOx and CO_2/O_2 Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS.

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NOx	2
CO_2/O_2	3

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CEMS downtime and corrective action.
   c) A report of the total operating time of each boiler during the reporting period.
   d) A report of any periods that the CEMS exceeds the instrument range.
   e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

FGTHROX
NOx, THC, and CO2/O2 Monitoring
Continuous Emission Monitoring System (CEMS) Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX:

1. Within 30 calendar days after commencement of trial operation, the permittee shall submit two copies of a Monitoring Plan to the AQD, for review and approval. The Monitoring Plan shall include drawings or specifications showing proposed locations and descriptions of the required CEMS.

2. Within 150 calendar days after commencement of trial operation, the permittee shall submit two copies of a complete test plan for the CEMS to the AQD for approval.

3. Within 180 calendar days after commencement of trial operation, the permittee shall complete the installation and testing of the CEMS.

4. Within 60 days of completion of testing, the permittee shall submit to the AQD two copies of the final report demonstrating the CEMS complies with the requirements of the corresponding Performance Specifications (PS) in the following table.

Pollutant	Applicable PS
NOx	2
CO_2/O_2	3
THC	8A
Flow	6

5. The span value shall be 2.0 times the lowest emission standard or as specified in the federal regulations.

6. The CEMS shall be installed, calibrated, maintained, and operated in accordance with the procedures set forth in 40 CFR 60.13 and PS 2 and 3 of Appendix B, 40 CFR Part 60.

7. Each calendar quarter, the permittee shall perform the Quality Assurance Procedures of the CEMS set forth in Appendix F of 40 CFR Part 60. Within 30 days following the end of each calendar quarter, the permittee shall submit the results to the AQD in the format of the data assessment report (Figure 1, Appendix F)

8. In accordance with 40 CFR 60.7(c) and (d), the permittee shall submit two copies of an excess emission report (EER) and summary report in an acceptable format to the AQD, within 30 days following the end of each calendar quarter. The Summary Report shall follow the format of Figure 1 in 40 CFR 60.7(d). The EER shall include the following information:
   a) A report of each exceedance above the limits specified in the conditions of this permit. This includes the date, time, magnitude, cause and corrective actions of all occurrences during the reporting period.
   b) A report of all periods of CEMS downtime and corrective action.
   c) A report of the total operating time of each boiler during the reporting period.
   d) A report of any periods that the CEMS exceeds the instrument range.
   e) If no exceedances or CEMS downtime occurred during the reporting period, the permittee shall report that fact.

The permittee shall keep these records on file for a period of at least five years and make them available to the Department upon request.

APPENDIX B. Operation and Maintenance Plan for Continuous Emission Monitoring

FG432BOILERS and FGTHROX
Requirements from EPA Consent Decree 19-11880
Operation and Maintenance Plan Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG432BOILERS and FGTHROX.

1. Operation and Maintenance Plan. By no later than one hundred eighty (180) Days after the Effective Date of the Consent Decree 19-11880 (CD), DSC shall submit to EPA for approval pursuant to Section XI of the CD (Approval of Deliverables) an Operation and Maintenance Plan (OMP) for the continuous emission monitoring units (#27897AE, #27899AE and #2514 CEMS, respectively) at Boiler #12, Boiler #13, and EUTHROX.

2. Commencing no later than thirty (30) Days after EPA approval and continuing thereafter, DSC shall implement the OMP required by Paragraph 1, as approved by EPA, for the continuous emission monitoring units identified in Paragraph 1 above.

3. The OMP shall include the following:
   a) Schedule for monthly inspections;
   b) Unit inspection procedures and/or checklist, including calibration gas review; and
   c) Corrective action process to address any instances of deviations from operating parameter requirements, including identifying the root cause of each deviation and ensuring that corrective actions are taken to address such deviations. Each root cause analysis must include:
      (1) Description of corrective actions taken in response to the deviation or, alternatively, an explanation of why no actions were taken;
      (2) Description of actions taken by DSC to prevent future deviations from the same or similar root cause(s); and
      (3) When the root cause is unknown, a description of efforts undertaken by DSC to determine the root cause.

4. OMP Plan Report. By no later than sixty (60) Days after two (2) years of implementation of the OMP, DSC shall submit a report to EPA (OMP Plan Report) that includes a summary and analysis of all root cause analyses performed under the OMP, and identifies any trends or commonalities among the root cause analyses. If a trend or commonality exists among the root causes that is within the control of DSC to correct, DSC shall include a proposal for corrective action in the OMP Plan Report to address the underlying causes and provide a proposed schedule for implementing such corrective action. DSC shall implement the proposed corrective action in accordance with the OMP Plan Report.

APPENDIX C. EUTHROX Automated Alert System

FGTHROX
Requirements from EPA Consent Decree 19-11880
Automated Alert System Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FGTHROX.

1. By no later than eighteen (18) months after the Effective Date of Consent Decree 19-11880 (CD), DSC shall develop and thereafter continuously operate, consistent with technological limitations, manufacturers' specifications, and good engineering and maintenance practices, an automated alert system to notify process operators who work in buildings containing processes that are controlled by EUTHROX when EUTHROX stops operating for any reason (downtime events). The automated alert system shall meet the requirements of Subparagraphs 1.a and 1.b.
   a) The automated alert system shall notify all process operators before planned downtime events, and immediately after unplanned downtime events occur. Short-duration events, which would not provide sufficient time to allow initiation of secondary controls before the EUTHROX returns to operation, do not need to be communicated to the process operators.
   b) Until the automated alert system is in operation, DSC shall continue to operate its existing method of notifying process unit control room personnel when EUTHROX is not operating by following both its EUTHROX Alerts Procedure and EUTHROX Alerts Procedure Supplement. Under these procedures, environmental personnel evaluate the EUTHROX outage and, if the duration warrants, initiate a site-wide alert message; process unit control room personnel are required to respond to the alert, and security personnel follow up if one or more process unit control rooms fail to respond; and process unit control room personnel are notified at the end of the EUTHROX outage event.

2. The relevant building process operator shall start to operate and continue operating the secondary controls identified in the Renewable Operating Permit (e.g., condensers, water scrubbers) throughout the duration of each EUTHROX downtime event to ensure the required level of control at the affected process units as follows:
   a) For unplanned EUTHROX downtime events, as soon as practicable after being notified of such event through the automated alert system identified in Paragraph 1; and
   b) For a planned EUTHROX downtime event, by the date scheduled for such event.

3. By no later than ninety (90) Days after the installation of the automated alert system and continuing thereafter as necessary to train new employees, DSC shall provide training to personnel responsible for processes that are affected by EUTHROX downtime events about the alert system and required follow up actions as set forth in Paragraphs 1 and 2.

4. DSC shall notify personnel responsible for processes that are affected by EUTHROX downtime events within twenty-four (24) hours of any changes to the alert system, and DSC shall train such personnel on any new procedures within ninety (90) Days of any changes.

5. DSC shall inform EPA of the dates of completion for the installation and implementation of the automated alert system and training as required by Paragraphs 1 through 3 in the first Annual Report required by Section IX of the CD (Reporting Requirements) after installation. DSC shall inform EPA of the completion of required training as required by Paragraph 3 in the Annual Reports required by Section IX of the CD (Reporting Requirements).