



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Air Quality Division

Supplement to Sulfur Dioxide One-Hour National Ambient Air Quality Standard Nonattainment State Implementation Plan for Wayne County (partial)

Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909-7760

March 2024

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I. SUMMARY OF SIP SUPPLEMENT

This State Implementation Plan (SIP) is a supplement to Michigan's attainment SIP, which demonstrates attainment of the 2010 1-hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS) for the Wayne County nonattainment area. The attainment SIP was submitted to the United States Environmental Protection Agency (USEPA) on December 14, 2022, and was proposed to be conditional approved by the USEPA on March 23, 2023, pending submittal of three permit revisions by the Air Quality Division (AQD). The revised permits apply to United States Steel Corporation – Great Lakes Works (U.S. Steel), EES Coke Battery LLC (EES Coke), and Dearborn Industrial Generation (DIG), and incorporate the control plan contained in the Federal Implementation Plan (FIP) and the AQD SIP. These three permits were submitted to the USEPA on December 14, 2023. An emission limit in an existing permit for DIG, included in the FIP, was mistakenly left out of the revised DIG permit and public comment document, resulting in the need for this supplemental SIP revision. The SO₂ limit of 420 pph contained in 5.1d and associated requirements in 5.2 – 5.10 in the Special Conditions section of the permit, and the permit cover sheet, are being submitted for public comment and inclusion in the SO₂ SIP. The permit containing the referenced emission limit is in Appendix A of this document. The permit was public noticed for a period of 30 days, when issued in 2003.

The AQD is requesting the USEPA to approve this supplement, which will allow the USEPA, in conjunction with the three permit revisions, to approve the attainment SIP.

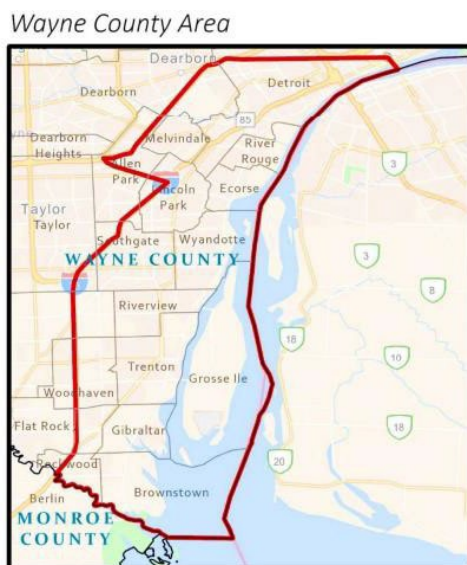
II. BACKGROUND

In 2010, the USEPA lowered the primary SO₂ NAAQS, setting a 1-hour standard of 75 parts per billion (ppb), which is attained when the 3-year average of the 99th percentile of 1-hour daily maximum concentrations does not exceed 75 ppb. The standard replaced the two primary standards initially promulgated in 1971 and was retained in a subsequent review of the standard in 1996. These previous SO₂ NAAQS were a 24-hour standard of 140 ppb and an annual standard of 30 ppb. The USEPA revoked both of these standards as part of the 2010 revision, finding that the new 1-hour standard is more protective of human health.

In October 2013, (78 FR 47191) the USEPA designated a portion of Wayne County as nonattainment under the 2010 SO₂ NAAQS. The nonattainment designation was based on ambient air quality data collected at the AQD monitoring site (Southwest Detroit monitor, AQS site ID 26-163-0015) from 2009 through 2011. The design value for this 3-year period was 90 ppb.

The figure below depicts the boundaries of the nonattainment area, which is a portion of Wayne County.

Wayne County 2010 SO₂ NAAQS Nonattainment Area.



With the designation of the portion of Wayne County as nonattainment for SO₂, the AQD undertook the task of developing a SIP to show how the area would return to attainment of the NAAQS. Such a demonstration required both monitored attainment of the NAAQS and modeled attainment using the AERMOD dispersion model. The violating air monitor began attaining the NAAQS in 2014, so the remaining requirement was to show what SO₂ reductions would be needed to model attainment, using allowable SO₂ emissions from large SO₂ sources in the area.

After several years of evaluations, modeling, and negotiations with the affected sources, the AQD produced a demonstration that showed, via modeling, attainment of the NAAQS. The SIP was submitted to the USEPA in May 2016, followed by a revision in June 2016 (the addition of a final rule containing emission limits for the U.S. Steel facility). U.S. Steel subsequently sued the AQD over the new rule, followed by months of mediated negotiations between the AQD and the company. Ultimately no resolution was reached, and the judge ruled against the AQD by voiding the rule with the U.S. Steel limits. Because of this, the SIP could no longer show, via modeling, that attainment would be reached by implementation of the other SIP controls.

The federal Clean Air Act (CAA) requires the USEPA to develop a FIP when a state cannot meet SIP requirements, and the USEPA completed development of a FIP for the Wayne County SO₂ nonattainment area in November 2022. The FIP provides for attainment of the 2010 primary SO₂ NAAQS in the Detroit SO₂ nonattainment area and meets other applicable requirements under the CAA.

The AQD, simultaneous to the FIP development, revised the attainment SIP such that it contained the same provisions as the FIP but makes the provisions state-enforceable. The AQD submitted the revised SIP to the USEPA in December 2022, and the USEPA proposed approval in March 2023 on the condition that permits for U.S. Steel, EES Coke, and DIG be

revised to incorporate the provisions of the FIP. The three permit revisions were submitted to the USEPA on December 14, 2023. However, the USEPA has requested that an existing emission limit contained in a DIG permit from 2003 receive public comment as a revision to the SO₂ SIP, and this Supplement accomplishes that.

III. PUBLIC PARTICIPATION

In accordance with section 110(a)(2) of the CAA, the AQD is required to hold a 30-day public comment period prior to the adoption of this SIP Supplement and subsequent submittal to the USEPA. The AQD must notify the public and other interested parties of an upcoming public hearing, if requested, 30 days prior to holding the hearing.

An opportunity for public comment and hearing was provided for this SIP Supplement from February 20, 2024, through March 21, 2024. A public hearing was offered. There were comments received during the public comment period.

IV. CONCLUSION

The SO₂ SIP will meet Michigan's CAA obligation with this submittal of the 2003 DIG permit. The attainment SIP can be deemed complete by the USEPA, and the proposed conditional approval on the previously submitted SIP can become a final approval because the SIP is fully consistent with the USEPA SO₂ FIP for the nonattainment area. The SIP fully demonstrates attainment of the 2010 SO₂ NAAQS through USEPA air dispersion modeling of an effective control strategy, in accordance with the requirements of section 172(c) and consistent with the USEPA FIP and the AQD SIP.

Appendix A
DIG 2003 Permit

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

September 25, 2003

NEW SOURCE REVIEW PERMIT TO INSTALL
253-02A


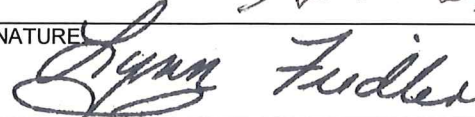
ISSUED TO
DEARBORN INDUSTRIAL GENERATION, LLC

LOCATED AT
2400 MILLER ROAD
DEARBORN, MICHIGAN

IN THE COUNTY OF
WAYNE

STATE REGISTRATION NUMBER
N6631

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. 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: June 12, 2003	
DATE PERMIT TO INSTALL APPROVED: SEPTEMBER 25, 2003	SIGNATURE: G. VINSON HELLWIG 
DATE PERMIT VOIDED: 4-14-04	SIGNATURE: 
DATE PERMIT REVOKED:	SIGNATURE:



PERMIT TO INSTALL APPLICATION

For authority to install, construct, reconstruct, relocate, or modify process, fuel-burning or refuse burning equipment and/or control equipment. Permits to install are required by administrative rules pursuant to Section 5505 of 1994 PA 451, as amended.

FOR DEQ USE ONLY
APPLICATION NUMBER

253-02A

Please type or print clearly. For further instructions, see the Application Instruction document or contact the Air Quality Division at 517-373-7023.

1. APPLICANT NAME: (Business License Name of Corporation, Partnership, Individual Owner, Government Agency)
DEARBORN INDUSTRIAL GENERATION, LLC

2. APPLICANT ADDRESS: (Number and Street)
2400 MILLER ROAD

CITY: (City or Village)
DEARBORN

STATE:
MICHIGAN

ZIP CODE:
48121

3. EQUIPMENT OR PROCESS LOCATION: (Number and Street - if different than Item 2)
2400 MILLER ROAD

CITY: (City or Village)
DEARBORN

ZIP CODE:
48121

COUNTY:
WAYNE

4. FACILITY CODES:

Standard Industrial Classification (SIC) (4-digit) OR
North American Industry Classification System (NAICS) - (Preferred)

2 2 1 1 1 2

State Registration
Number (SRN):

N 6 6 3 1

5. GENERAL NATURE OF BUSINESS:
STEAM/ELECTRIC PRODUCTION

6. EQUIPMENT OR PROCESS DESCRIPTION: (A Description MUST Be Provided Here. Include Emission Unit IDs. Attach additional sheets if necessary.)
THIS PERMIT APPLICATION IS BEING SUBMITTED TO REQUEST A REVISION TO THE CURRENTLY ALLOWED SULFUR DIOXIDE EMISSION RATES FOR THE THREE BOILERS AND TWO BLAST FURNACE GAS (BFG) FLARES ASSOCIATED WITH THE FACILITY.

THERE WILL NOT BE ANY PHYSICAL CHANGES OR CHANGE IN THE METHOD OF OPERATION OF THE PLANT, INCLUDING THE FLARES, EXCEPT THAT THE STACK HEIGHT OF EACH BOILER WILL BE INCREASED FROM 150 FEET TO 185 FEET ABOVE GROUND LEVEL.

ASIDE FROM THE REQUESTED CHANGE IN SULFUR DIOXIDE EMISSION LIMITS, NO CHANGES TO THE EMISSIONS OF OTHER CONTAMIANTS WILL OCCUR AS A RESULT OF THIS PERMIT REVISION.

BOILERS SCC: 1-02-007-04 (BLAST FURNACE GAS)
FLARES SCC: 3-01-900-24 (BLAST FURNACE GAS)

7. REASON FOR APPLICATION: INSTALLATION / CONSTRUCTION RECONSTRUCTION MODIFICATION RELOCATION

8. THE EQUIPMENT IDENTIFIED IN THE APPLICATION IS: NEW EXISTING - DATE INSTALLED: 2001

9. IS THERE AN EXISTING PERMIT TO INSTALL FOR ANY EQUIPMENT IDENTIFIED IN THIS APPLICATION? YES NO
PERMIT TO INSTALL NUMBER(S): 253-02

10. IS THERE AN EXISTING RENEWABLE OPERATING PERMIT? YES PENDING APPLICATION NOT APPLICABLE
RENEWABLE OPERATING PERMIT / APPLICATION NUMBER: 200000024

11. CONTACT: (The person DEQ should contact with questions regarding this application)
ROGER KALINOWSKY

PHONE NUMBER: (Include Area Code)
248-324-5287

12. IS THE CONTACT PERSON AUTHORIZED TO NEGOTIATE THE TERMS AND CONDITIONS OF THE PERMIT TO INSTALL? YES NO

13. AUTHORIZED EMPLOYEE:
MR. MARK FLETCHER

TITLE:
EHS COORD.

PHONE NUMBER: (Include Area Code)
313-336-7189

SIGNATURE:

DATE:
3-28-03

FOR DEQ USE ONLY - DO NOT WRITE BELOW

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

6-12-03

DATE PERMIT TO INSTALL APPROVED:

9-25-03

SIGNATURE:

DATE APPLICATION VOIDED:

4-14-04

SIGNATURE:

DATE APPLICATION DENIED:

SIGNATURE:

A PERMIT CERTIFICATE WILL BE ISSUED UPON APPROVAL OF A PERMIT TO INSTALL.

0916

RECEIVED

MAR 31 2003

AIR QUALITY DIV.



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



STEVEN E. CHESTER
DIRECTOR

September 25, 2003

Mr. Mark Fletcher
Dearborn Industrial Generation, LLC
2400 Miller Road
Dearborn, Michigan 48121

Dear Mr. Fletcher:

This letter is in reference to your Permit to Install application identified as No. 253-02A, (State Registration Number N6631), for increases in the allowable sulfur dioxide emissions from the three boilers and two blast furnace gas flares, located at 2400 Miller Road, Dearborn, Michigan.

A 30-day public comment period was held that ended August 7, 2003. A public hearing was also held on August 7, 2003. Comments were received during the comment period and at the hearing. Pursuant to the delegation of authority from the Director of the Michigan Department of Environmental Quality (MDEQ), I have approved Permit to Install No. 253-02A.

This approval is based upon and subject to compliance with all administrative rules of the MDEQ and conditions stipulated in the enclosed supplement. Please review these conditions thoroughly so that you may take the actions necessary to ensure compliance with all of these conditions.

Additionally, permit number 253-02 has been voided because the equipment covered by that permit has been incorporated into permit 235-02A.

Please contact Mr. John Vial, Air Quality Division, at 517-241-7468 if you have any questions regarding this permit, or you may contact me.

Sincerely,

G. Vinson Hellwig, Chief
Air Quality Division
517-373-7069

Enclosures

cc/enc: Honorable Chris Stockwell, Minister, Ontario Ministry of Environment
Honorable Michael D. Hurst, Office of the Mayor, Windsor
Ontario Ministry of Environment Windsor Area Office
Mr. John F. McDonald, International Joint Commission
Ms. Cathy M. Garrett, Wayne County Clerk
Mayor Michael Guido, City of Dearborn
Ms. Pamela Blakely, United States Environmental Protection Agency, Region V
Ms. Linda Hamsing, United States Environmental Protection Agency, Region V
Mr. Jerome Maynard, Attorney, Dykema Gossett PLLC
Mr. Alan F. Hoffman, Department of Attorney General
Mr. Gerald Avery, MDEQ
Ms. Mina McLemore, MDEQ
Ms. Teresa Seidel, MDEQ
Mr. Ronald Pollom, MDEQ
Ms. Karen Hanses, MDEQ

PERMIT TO INSTALL

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NEW SOURCE REVIEW PERMIT TO INSTALL

Common Abbreviations / Acronyms Used in this Permit to Install

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	HP	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NOx	Oxides of Nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns diameter
MIOSHA	Michigan Occupational Safety & Health Administration	pph	Pounds per hour
MSDS	Material Safety Data Sheet	ppm	Parts per million
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppmv	Parts per million by volume
NSPS	New Source Performance Standards	ppmw	Parts per million by weight
NSR	New Source Review	psia	Pounds per square inch absolute
PS	Performance Specification	psig	Pounds per square inch gauge
PSD	Prevention of Significant Deterioration	scf	Standard cubic feet
PTE	Permanent Total Enclosure	sec	Seconds
PTI	Permit to Install	SO ₂	Sulfur Dioxide
RACT	Reasonable Available Control Technology	THC	Total Hydrocarbons
SC	Special Condition	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile Organic Compounds
TAC	Toxic Air Contaminant	yr	Year
VE	Visible Emissions	HCl	Hydrogen Chloride

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, altered, 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. **[R336.1201(1)]**
2. If the installation, reconstruction, relocation, or alteration 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 person to whom this permit was issued, or the designated authorized agent, shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, PO Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or alteration of the equipment allowed by this Permit to Install. **[R336.1201(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 R336.1210, 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. **[R336.1201(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. **[R336.1201(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 R336.1219 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 R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
7. The owner or operator of a source, process, or process equipment shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant in excess of standards for more than one hour, or of any air contaminant in excess of standards for more than two hours, as required in this rule, to the District Supervisor, Air Quality Division. The notice shall be provided no 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 District Supervisor within ten days, with the information required in this rule. **[R336.1912]**
8. Approval of this permit does not exempt the person to whom this permit was issued from complying with any future applicable requirements which may be promulgated under Part 55 of Act 451, PA 1994 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 Act 451, PA 1994, 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 R336.1301, a person 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 R336.1303. **[R336.1301]**
 - 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 R336.1370(2). **[R336.1370]**
13. Except as allowed by Rule 285 (a), (b), and (c), permittee shall not substitute any fuels, coatings, nor raw materials for those described in the application and allowed by this permit, nor make changes to the process or process equipment described in the application, without prior notification to and approval by the Air Quality Division. **[R336.1201(1)]**
14. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUCTG1	One natural gas fired GE Model PG7241 simple cycle combustion turbine	SVCGT1
EUCTG2	One natural gas fired GE Model PG7241 combined cycle combustion turbine	SVCGT2
EUCTG3	One natural gas fired GE Model PG7241 combined cycle combustion turbine	SVCGT3
EUBOILER1	One natural gas/blast furnace gas fired boiler	SVBOILER1
EUBOILER2	One natural gas/blast furnace gas fired boiler	SVBOILER2
EUBOILER3	One natural gas/blast furnace gas fired boiler	SVBOILER3
EUBFGFLARE1	One blast furnace gas flare equipped with a natural gas pilot flame.	N/A
EUBFGFLARE2	One blast furnace gas flare equipped with a natural gas pilot flame.	N/A

Changes to the equipment described in this table are subject to the requirements of R336.1201, except as allowed by R336.1278 to R336.1290.

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGTURBINES	EUCTG1, EUCTG2 and EUCTG3	N/A
FGBOILERS	EUBOILER1, EUBOILER2 and EUBOILER3	N/A
FGBFGFLARES	EUBFGFLARE1 and EUBFGFLARE2	N/A
FGBFG	FGBOILERS and FGBFGFLARES	N/A
FGPLANT	FGBOILERS and FGTURBINES	N/A

The following conditions apply to: EUCTG1

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
1.1.a.	NO _x as NO ₂	EUCTG1	9 ppmv at 15% O ₂ on a dry basis at 100% load	Test protocol	GC 14	R336.1205(1)(a) & 40 CFR 60, Subpart GG
1.1.b.	NO _x as NO ₂	EUCTG1	60 lbs/hr at 100% load	Monthly average	GC 14, SC 1.4	R336.1205(1)(a)
1.1.c.	CO	EUCTG1	9 ppmv at 15% O ₂ on a dry basis at 100% load	Test protocol	GC 14	R336.1205(1)(a)
1.1.d.	CO	EUCTG1	30 pph at 100% load	Monthly average	GC 14, SC 1.4	R336.1205(1)(a)
1.1.e.	VOC	EUCTG1	2.8 pph	Monthly average	GC 14, SC 1.4	R336.1205(1)(a)
1.1.f.	PM ₁₀	EUCTG1	9 pph	Monthly average	GC 14, SC 1.4	R336.1205(1)(a)

Monitoring/Recordkeeping

- 1.2 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the natural gas usage rate (hourly and daily) in EUCTG1. The heating value of the natural gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to EUCTG1 on the permittee's property. Upon request, the AQD District Supervisor may authorize a different sampling method and or sampling schedule. **[40 CFR Part 75 Appendix D, R336.1205]**
- 1.3 The permittee shall maintain the following records:
- Hourly heat input to EUCTG1, MMBtu
 - Hourly NOx emission rate, lb/MMBtu and lb/hour
 - Monthly turbine operation (hours) at full load (100%) and partial loads (including startup and shutdown)
 - Total monthly turbine NOx emissions (lbs and tons), for all operating loads, including start-up and shutdown
 - Average NOx emission rate (lb/hr) at 100% load at the end of each calendar month.
 - Hourly PM₁₀ emission rate, lbs/hour, based on a monthly averaging period.
 - Hourly CO emission rate, lbs/hour, based on a monthly averaging period.
 - Hourly VOC emission rate, lbs/hour, based on a monthly averaging period.
- [40 CFR Part 75 Appendix D, R336.1205(1)(a)]**
- 1.4 The permittee shall verify compliance with the emission limitations for EUCTG1 by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. **[R336.1205(1)(a)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.5	SVCTG1	213	60	R336.1225 and 40 CFR 52.21(c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EUCTG2

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirement
2.1a.	NO _x as NO ₂	EUCTG2	9 ppmv at 15% O ₂ on a dry basis at 100% load	Monthly average	GC 14, SC 2.3, SC 2.4	R336.1205(1)(a) & 40 CFR 60, Subpart GG
2.1b.	NO _x as NO ₂	EUCTG2	63 pph at 100% load	Monthly average	GC 14, SC 2.6	R336.1205(1)(a)
2.1c.	CO	EUCTG2	9 ppmv at 15% O ₂ on a dry basis at 100% load	Test Protocol	GC 14	R336.1205(1)(a)
2.1d.	CO	EUCTG2	31 pph at 100% load	Monthly average	GC 14, SC 2.6	R336.1205(1)(a)
2.1e.	VOC	EUCTG2	2.8 pph	Monthly average	GC 14, SC 2.6	R336.1205(1)(a)
2.1f.	PM ₁₀	EUCTG2	9 pph	Monthly average	GC 14, SC 2.6	R336.1205(1)(a)

Monitoring/Recordkeeping

- 2.2 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage rate (hourly and daily) in EUCTG2. The heating value of the natural gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to EUCTG2 on the permittee's property. Upon request, the AQD District Supervisor may authorize a different method and/or sampling schedule.
[R336.1205(1)(a)]
- 2.3 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x (as NO₂) emissions from EUCTG2 on a continuous basis. Installation and operation of the continuous emission monitoring system (CEMS) shall meet the timelines, requirements and reporting detailed in 40 CFR Part 60 Appendix F.
[R336.1205(1)(a)]
- 2.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the O₂ concentration of the stack gases on a continuous basis.
[R336.1205(1)(a)]
- 2.5 The permittee shall maintain the following records:
- Hourly NO_x emission rate, lbs/hr.
 - Total daily NO_x emission rate, lbs/day, calculated at the end of each calendar day.
 - Average NO_x concentrations (ppmvd) and emission rate (lb/hr) occurring at 100% load, at the end of each calendar month.
 - Total monthly NO_x emission (tons/month), that occur under all turbine operating loads including periods of start-up and shutdown
 - Annual NO_x emission rate (tons/year) based on a 12-month rolling time period as determined at the end of each calendar month.
 - Hourly PM₁₀ emission rate, lbs/hour, based on a monthly averaging period
 - Hourly CO emission rate, lbs/hour, based on a monthly averaging period.
 - Hourly VOC emission rate, lbs/hour, based on a monthly averaging period.
- [R336.1205(1)(a)]**

- 2.6 The permittee shall verify compliance with the emission limitations for EUCTG2 by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. [R336.1205(1)(a)]

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.7	SVCTG2	210	150	R336.1225 and 40 CFR 52.21(c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: EUCTG3

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/Monitoring Method	Applicable Requirement
3.1a.	NO _x as NO ₂	EUCTG3	9 ppmv at 15% O ₂ on a dry basis at 100% load	Monthly average	GC 14, SC 3.3, and SC 3.4	R336.1205(1)(a) & 40 CFR 60, Subpart GG
3.1b.	NO _x as NO ₂	EUCTG3	63 pph at 100% load	Monthly average	GC 14, SC 3.6	R336.1205(1)(a)
3.1c.	CO	EUCTG3	9 ppmv at 15% O ₂ on a dry basis at 100% load	Test Protocol	GC 14	R336.1205(1)(a)
3.1d.	CO	EUCTG3	31 pph at 100% load	Monthly average	GC 14, SC 3.6	R336.1205(1)(a)
3.1e.	VOC	EUCTG3	2.8 pph	Monthly average	GC 14, SC 3.6	R336.1205(1)(a)
3.1f.	PM ₁₀	EUCTG3	9 pph	Monthly average	GC 14, SC 3.6	R336.1205(1)(a)

Monitoring/Recordkeeping

- 3.2 The permittee shall install calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage rate (hourly and daily) in EUCTG3. The heating value of the natural gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to EUCTG2 on the permittee's property. Upon request, the AQD District Supervisor may authorize a different method and/or sampling schedule. [R336.1205(1)(a)]
- 3.3 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x (as NO₂) emissions from EUCTG3 on a continuous basis. Installation and operation of the Continuous Emission Monitoring System (CEMS) shall meet the timelines, requirements and reporting detailed in 40 CFR Part 60 Appendix F. [R336.1205(1)(a)]
- 3.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the O₂ concentration of the stack gases on a continuous basis. [R336.1205(1)(a)]

3.5 The permittee shall maintain the following records:

- Hourly NO_x emission rate, lbs/hr.
- Total daily NO_x emission rate, lbs/day, calculated at the end of each calendar day.
- Average NO_x concentrations (ppmvd) and emission rate (lb/hr) occurring at 100% load, at the end of each calendar month.
- Total monthly NO_x emission (tons/month), that occur under all turbine operating loads including periods of start-up and shutdown
- Annual NO_x emission rate (tons/year) based on a 12-month rolling time period as determined at the end of each calendar month.
- Hourly PM₁₀ emission rate, lbs/hour, based on a monthly averaging period
- Hourly CO emission rate, lbs/hour, based on a monthly averaging period.
- Hourly VOC emission rate, lbs/hour, based on a monthly averaging period.

[R336.1205(1)(a)]

3.6. The permittee shall verify compliance with the emission limitations for EUCTG3 by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3.

[R336.1205(1)(a)]

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
3.7	SVCTG3	210	150	R336.1225 and 40 CFR 52.21(c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FGTURBINES

Emission Limits

	Pollutant	Equipment	Limit	Time Period (See Note Below)	Testing/ Monitoring Method	Applicable Requirement
4.1a.	NO _x as NO ₂	FGTURBINES	815 tpy	12-month rolling time period ¹	SC 4.3	R336.1205(1)(a)
4.1b.	CO	FGTURBINES	403 tpy	12-month rolling time period ¹	SC 4.3	R336.1205(1)(a)
4.1c.	VOC	FGTURBINES	36 tpy	12-month rolling time period ¹	SC 4.3	R336.1205(1)(a)
4.1d.	PM ₁₀	FGTURBINES	118 tpy	12-month rolling time period ¹	SC 4.3	R336.1205(1)(a)
NOTE: ¹ As determined at the end of each calendar month						

Monitoring/Recordkeeping

- 4.2 The permittee shall maintain the following records:
- Annual PM₁₀ emission rate, tons/year, based on a 12 month rolling time period as determined at the end of each calendar month.
 - Annual CO emission rate, tons/year, based on a 12 month rolling time period as determined at the end of each calendar month.
 - Annual VOC emission rate, tons/year, based upon a rolling 12 month time period, as determined at the end of each calendar month.
 - Annual NO_x (as NO₂) emission rate, tons/year, based on a 12 month rolling time period.
- [R336.1205(1)(a)]**

4.3 The permittee shall verify compliance with the emission limitations for FGTURBINES by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. **[R336.1205(1)(a)]**

Process/Operational Limits

4.4 The turbines shall not be fired with any fuel other than pipeline natural gas. **[R336.1205(1)(a)]**

The following conditions apply to: FGBOILERS

Emission Limits

	Pollutant	Equipment	Limit (See Notes Below)	Time Period (See Notes Below)	Testing/ Monitoring Method	Applicable Requirement
5.1a	PM ₁₀	FGBOILERS	22.3 pph ¹	Monthly average	SC 5.2	R336.1205(1)(a)
5.1b	NO _x	FGBOILERS	0.10 lb/MMBTU ¹	30-day rolling average	GC 14, SC 5.2	R336.1205(1)(a) &.40 CFR 60, Subpart Db
5.1c	NO _x	FGBOILERS	76.3 pph ¹	30-day rolling average	SC 5.2	R336.1205(1)(a)
5.1d	SO ₂	FGBOILERS	420 pph ²	Daily average	SC 5.2	R336.1205(1)(a)
5.1e	SO ₂	FGBOILERS	1839.6 tpy ²	12-month rolling average	SC 5.2	R336.1205(3)
5.1f	CO	FGBOILERS	64.1 pph ¹	30-day rolling average	SC 5.2	R336.1205(1)(a)
5.1g	VOC	FGBOILERS	7.5 pph ¹	Monthly average	SC 5.2	R336.1205(1)(a) & R336.1702(a)
5.1h	VOC	FGBOILERS	84 tpy ²	12-month rolling average	SC 5.2	R336.1205(3)

NOTES :

¹ Limit applies to each boiler in FGBOILERS.

² Limit applies to the combined total of all three boilers in FGBOILERS.

Monitoring/Recordkeeping

5.2 The permittee shall verify compliance with the emission limitations for FGBOILERS by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. **[R336.1205(1)(a)]**

- 5.3 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the NO_x emissions from each boiler in FGBOILERS on a continuous basis. Installation and operation of each continuous emission monitoring system (CEMS) shall meet the timelines, requirements and reporting detailed in 40 CFR Part 60 Appendix F. **[40 CFR 60, Subparts A and Db]**
- 5.4 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the SO₂ emissions from each boiler in FGBOILERS on a continuous basis. Installation and operation of each continuous emission monitoring system (CEMS) shall meet the timelines, requirements and reporting detailed in 40 CFR Part 60 Appendix F. **[R336.1205(1)(a)]**
- 5.5 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the O₂ concentration of the stack gases on a continuous basis. **[40 CFR 60, Subparts A and Db]**
- 5.6 The permittee shall install calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage rate of each boiler in FGBOILERS on a daily basis in cubic feet per day. The heating value of the natural gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to FGBOILERS on the permittee's property. Upon request, the AQD District Supervisor may authorize a different method and/or sampling schedule. **[R336.1205(1)(a)]**
- 5.7 The permittee shall install calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the blast furnace gas usage rate of each boiler in FGBOILERS on a daily basis in cubic feet per day. The heating value of the blast furnace gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to FGBOILERS on the permittee's or Rouge Steel Company's property. Upon request, the AQD District Supervisor may authorize a different method and/or sampling schedule. **[R336.1205(1)(a)]**
- 5.8 The permittee shall maintain the following records:
- Hourly NO_x and SO₂ emission rates from each boiler, lb/MMBtu and lb/hr.
 - 30-day rolling average NO_x emission rates (lb/MMBtu and lb/hr) from each boiler as determined at the end of each steam generating unit operating day
 - Total daily NO_x and SO₂ emissions (lbs.) at the end of each day
 - Total monthly NO_x and SO₂ emissions (lbs) at the end of each calendar month
 - Annual NO_x and SO₂ emission rate (tons/year), based on a 12-month rolling time period as determined at the end of each calendar month.
 - Hours each boiler operated on natural gas only on a monthly basis
 - Hours each boiler operated on a mixture of natural gas and blast furnace gas on a monthly basis
 - Caloric value of natural gas (Btu/cubic foot) on a monthly basis
 - Caloric value of blast furnace gas (Btu/cubic foot) on a monthly basis
 - Amount of natural gas consumed in each boiler in cubic feet on a monthly basis
 - Amount of blast furnace gas consumed in each boiler in cubic feet on a monthly basis.
 - Calculated PM₁₀ emission rate, lbs/hour, based upon a monthly averaging period
 - Calculated CO emission rate, lbs/hour, based upon a monthly averaging period
 - Calculated VOC emission rate, lbs/hour, based upon a monthly averaging period.
 - Calculated PM₁₀ emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month

- Calculated CO emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month
 - Calculated VOC emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month
- [40 CFR 60 Subparts A and GG, R336.1205(1)(a)]**

Process/Operational Limits

5.9 The boilers in FGBOILERS shall not be fired with any fuel other than pipeline natural gas (NG) or a mixture of pipeline natural gas and blast furnace gas (BFG). **[R336.1205(1)(a)]**

Notification

5.10 All source emissions data and operating data required to be submitted under 40 CFR Part 60, Subparts A and Db shall be submitted to the District Supervisor in an acceptable format within 30 days following the end of the calendar quarter in which the data were collected. **[40 CFR Part 60, Subparts A and Db]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
5.11a	SVBOILER1	126	185	R336.1225 and 40 CFR 52.21(c) and (d)
5.11b	SVBOILER2	126	185	R336.1225 and 40 CFR 52.21(c) and (d)
5.11c	SVBOILER3	126	185	R336.1225 and 40 CFR 52.21(c) and (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

The following conditions apply to: FGBFGFLARES

Emission Limits

	Pollutant	Equipment	Limit (See Note Below)	Time Period	Compliance Method	Applicable Requirement
6.1a	CO	FGBFGFLARES	301.2 pph	Monthly average	SC 6.4	R336.1205(1)(a)
6.1b	NO _x	FGBFGFLARES	96.6 pph	Monthly average	SC 6.4	R336.1205(1)(a)
6.1c	PM	FGBFGFLARES	7.4 pph ¹	Monthly average	SC 6.4	R336.1205(1)(a)

Equipment

6.2 Both flares in FGBFGFLARES shall be equipped with automatic ignition systems consisting of a thermocouple, or other device approved by the Department. The automatic ignition systems for the flares in FGBFGFLARES shall be operated and maintained such that blast furnace gas is continuously combusted whenever blast furnace gas is sent to the blast furnace gas flare. **[R336.1910]**

Monitoring/Recordkeeping

6.3 The permittee shall install calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the blast furnace gas usage rate of each flare in FGBFGFLARES on a daily basis in cubic feet per day. The heat value of the blast furnace gas in Btu per cubic foot shall be determined on a monthly basis from samples taken at a point in the pipeline to FGBFGFLARES on the permittee's or Rouge Steel Company's property. Upon request, the AQD District Supervisor may authorize a different method and/or sampling schedule. **[R336.1205(1)(a)]**

- 6.4. The permittee shall verify compliance with the emission limitations for FGBFGFLARES by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. **[R336.1205(1)(a)]**
- 6.5. Permittee shall keep monthly records for each blast furnace gas flare included in FGBFGFLARES of the amount of blast furnace gas consumed in million cubic feet. **[R336.1205(1)(a)]**
- 6.6. Permittee shall keep records for each blast furnace gas flare included in FGBFGFLARES of the monthly average NO_x, CO and PM emission calculations consistent with the calculation methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a)]**

The following conditions apply to: FGBFG

Emission Limits

	Pollutant	Equipment	Limit	Time Period (See Note Below)	Compliance Method	Applicable Requirement
7.1a	NO _x	FGBFG	1087.1 tpy	12-month rolling time period ²	SC 7.2	R336.1205(1)(a)
7.1b	CO	FGBFG	1798 tpy	12-month rolling time period ²	SC 7.2	R336.1205(1)(a)
7.1c	PM	FGBFG	237.1 tpy	12-month rolling time period ²	SC 7.2	R336.1205(1)(a)
7.1d	SO ₂	FGBFG	673 pph ¹	Daily average ²	SC 7.2	R336.1205(1)(a) & 40CFR52.21(c) and (d)
7.1e	SO ₂	FGBFG	2947.7 tpy	12-month rolling time period ²	SC 7.2	R336.1205(1)(a)

NOTE:

¹ Does not apply during periods of startup, shutdown and malfunction(s).

² Determined using the calculation methodologies specified in the Continuous Compliance Protocol as required in SC 7.2.

Monitoring/Recordkeeping

- 7.2. The permittee shall verify compliance with the emission limitations for FGBFG by following the procedures and methodologies contained in the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. **[R336.1205(1)(a)]**
- 7.3. The permittee shall maintain the following records:
- Calculated PM emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month
 - Calculated CO emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month

- Calculated NOx emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month
- Calculated SO₂ emission rate, tons/year, based upon a 12-month rolling time period, as determined at the end of each month.
- Calculated SO₂ emission rate, lbs/hour, based upon a daily averaging period.

[R336.1205(1)(a)]

The following conditions apply to: FGPLANT

Emission Limits

	Pollutant	Equipment	Limit	Time Period (See Note Below)	Compliance Method	Applicable Requirement
8.1a	Formaldehyde	FGPLANT	9.9 tpy	12-month rolling time period ¹	GC 14, SC 8.2	R336.1205(1)(a)
NOTE: ¹ As determined at the end of each calendar month						

Recordkeeping/Reporting/Notification

- 8.2 The permittee shall keep records of monthly and previous 12-month formaldehyde emission calculations for each boiler and turbine included in FGPLANT, consistent with the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003 or subsequent revisions to this document as provided under special condition 8.3. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a)]**
- 8.3 If it becomes necessary to revise, modify or update the document entitled "Protocol for Demonstrating Continuous Compliance with the Emission Limitations of Permit No. 253-02" dated February 18, 2003, the permittee shall re-submit the document to the District Supervisor for review and written approval before implementing such revisions, modifications, or updates. **[R336.1205(1)(a)]**